

dimension, to the change in attitude adumbrated in the Third Five Year Plan with regard to scale of enterprise and location of industries. This explanation, however, is at variance with the reasonable hypothesis that the Russians indeed desire a continuation of the cold war, with its periodic recrudescence of tensions which are so congenial to dictatorial rule; but that at the same time they do not want "hot war" and feel safe in the knowledge that an attack upon them by the West is very improbable. This does not mean that the mechanics of dictatorial power might not at some juncture lead Russia into the impasse of an open military conflict, but it is unlikely that the Soviets should be willing to pay a heavy price in terms of economic cost for what must seem to them a remote contingency.

It is therefore more plausible to assume that the reform is a recurrence of the cyclical swing away from central control, except that the previous rate of Soviet economic growth as well as the great disturbances of the succession crisis served to magnify the cyclical swing out of all historical proportion. On the one hand, there was the feeling that the growing size of the Soviet industrial establishment rendered continuation of its direction from a single center more and more difficult. On the other hand, Khrushchev may have had very excellent reasons to rid himself of the ministerial bureaucrats, most of whom had been bred in loyalty to Khrushchev's competitors in the struggle for personal power. Nevertheless, if the aggregate weight of these considerations was sufficient to cause the change, it may not suffice to perpetuate it. For the centripetal forces, which for the moment seem subdued, almost inevitably will reappear and are likely to reassert themselves.

At the time of this writing (1959), the reform still receives high praise in Russia; it is even said to have accelerated the rate of industrial growth.<sup>83</sup> The satisfaction of having eliminated ministerial inefficiency dominates the picture. However, the new brooms of the Sovnarkhoz will also very soon be covered with bureaucratic cobwebs. Then the risks of decentralization, including the great difficulty of reconciling the vast decision-making power of the Sovnarkhoz with consistency in central planning, will become increasingly conspicuous. Hardly a few months passed before the Soviet press and literature

<sup>83</sup> *Sovetskaya Rossiya*, November 14, 1958.

became full of warnings against the dangers of "localism" (*massmichstvo*). The intensified intraregional division of labor is likely to proceed at the expense of specialization on a national scale and to lead to a malallocation of resources. It was a peculiarity of the industrial managers' illicit activities that they were displayed within a narrow area bounded by personal connections and acquaintances. One consequence of the reform is to enhance further this quaint element of medieval narrowness within an economy whose "modernity" is so incessantly glorified.

And what about the position of the manager within the new organizational framework? Obviously, the Sovnarkhoz will be closer to the individual enterprise than were the abolished ministries in Moscow. But it is not obvious at all that it will be close enough to give the regional authorities a real insight into the inner workings of the enterprise. Some of the regions represent formidable industrial complexes.

Moreover, the reform began in an atmosphere in which increase rather than decrease in managerial freedom seemed to be the aim.<sup>84</sup> There is, for instance, no question that the managers were accorded more flexibility in their relations with the labor force. This is bound to intensify the inflationary pressures within the economy. It will be recalled that the wartime legislation which had tied the worker to the factory for long years after the war finally melted away in the years of the Soviet thaw. As a result, the managers are able to bid for labor, with the inevitable effect upon wage rates. It would seem that the greater flexibility inherent in decentralization will make it more difficult for the authorities to resist the enterprises' demands for additional funds. Even during its periods of strictly centralized administration, the Soviet authorities found the inflationary cost and price changes of the thirties a very real obstacle to their attempts to check on whether or not resources had been used in accordance with

<sup>84</sup> On the close relation between decentralization and increase in managerial freedom, see the novel, *The Brothers Yershov*, by V. Kochetov, for some time a Soviet bestseller, directed against so-called revisionist tendencies. There the point is emphatically made that merely increasing the number of economic ministries would have led indeed to a "more flexible and less cumbersome" organization; but "an unnatural centralization would remain and the managers' hands and feet would remain swaddled." V. Kochetov, "Brat'ya Yershovy," *Neva*, no. 7 (1958).

the plan. In conditions of decentralization, the inflationary change in yardsticks by which performances are measured must reduce the central authorities to a state of groping helplessness.

More fundamental, however, than the problem of inflation is that of a high rate of investment. In the past, it was the iron grip of central authorities that forced upon the economy the low rate of output of consumers' goods. It would seem that any step along the road of decentralization is likely to relax the grip and to jeopardize adherence to the traditional policy. The managers of industrial enterprises in all likelihood will be strongly tempted by the pent-up demands for consumers' goods, and it is not clear at all that the Sovnarkhoz will know how to resist that demand and will not become a sheltering wall between the central authority and the individual enterprise. If that should happen, however, central direction of the economy by means of the plan will become quite problematic and the urge to relieve the situation by an organizational reversal will be irresistible. Mergers of two or more Sovnarkhozes would appear the most natural first steps toward such a *restitutio in integrum*.

To be sure, it is at least imaginable that the Soviet government might decide upon a radical revision of its economic policy. A drastic increase in the rate of consumption would reduce the inflationary pressures and provide the preconditions for the successful perpetuation of a decentralized economy, subject to a limited but effective degree of planned control. A Soviet economy, so transformed, would be much more readily understood and appreciated by Western observers. It would prove much less confusing to our prerevolutionary intellectual, should he wish to return for a renewed inspection tour.

Yet the chances for such an evolution are slim indeed. In the West the transition from an industrialization economy to a consumption economy has been gradually achieved. *Sine littera* and with varying ingredients, the Western economies have come to combine liberal (in the original sense) and socialist elements — that is to say, the elements of the two humanitarian movements that dominated the nineteenth century. It is doubtful that a consumption economy can be established in Soviet Russia. A decentralized economic system geared to a steady rise in levels of consumption would leave the Soviet dictatorship without a social function, without a justification

for its existence. It is much more likely that the dictatorship will continue the policy of willfully provoking one international crisis after the other and of maintaining a high rate of investment as the economic pendant to such a policy. Then a renewed curtailment of such managerial freedoms as have been granted since Stalin's death,<sup>85</sup> followed by a general reversal of the decentralization policy, should be only a matter of time, and enterprise and management in Russia should once more return to the normalcy of Soviet mercantilism, concealed beneath a generous veneer of socialist phraseology.

<sup>85</sup> It may be significant in this connection that the theses of Khrushchev's speech to the Twenty-first Congress (the Seven Year Plan) speak of increased local initiative on the part of labor and technical personnel but fail to mention the need for managerial initiative. Thus the process of curtailment already may have begun. *Sovetskaya Rossiya*, November 14, 1958. [In May 1961 the Soviet government embarked upon a further reform of industrial organization by establishing seventeen regional councils, designed to supervise and to coordinate the activities of the individual Sovnarkhozes. This does seem to be more than the first station on the road to renewed centralization of the Soviet industrial structure. See *Sovetskaya Belorussia*, July 1, 1961, and *New York Times*, February 24, 1962. For Khrushchev's somewhat bashful reference to the new reform, see his speech to the Twenty-second Congress, *Pravda*, October 19, 1961, p. 3. A. G., 1962]

## *A Neglected Source of Economic Information on Soviet Russia*



CAN fiction be considered a serious source of information on modern economic history? In an article on English novels in the 1840s, William O. Aydelotte points out that such information in the works of the four most important social novelists of that decade (Dickens, Kingsley, Disraeli, and Mrs. Gaskell) "is highly suspect for the scholar's purpose" because "it is spotty, impressionistic, and inaccurate."<sup>1</sup> This is a harsh verdict. Yet, in a somewhat milder form, it may well prove generally valid. The truth probably is that the economic historian of modern times does not need the aid of contemporaneous novels or plays. The social historian may indeed be greatly interested in finding out why certain novels were written and why they were read. But this is a different matter.

No economic historian needs Balzac's *Le Curé de village* in order to understand the working of the Napoleonic laws concerning inheritance. Inquiry into financial developments under the Second Empire does not require perusal of Zola's *L'Argent* or *La Curée*; and a student of the "merchant-employer" system in Silesia may safely forego reading Gerhart Hauptmann's *Die Weber*. No additional contribution to the knowledge of peasant conditions in Russia was made either by Turgenev, or Grigorovich, or Tolstoy; and the effects of the dust bowl on the rural population of Oklahoma would not

<sup>1</sup> "The England of Marx and Mill as Reflected in Fiction," *Journal of Economic History*, Supplement VIII, 1948 (New York, 1949), 43.

have been less clear had Steinbeck's *Grapes of Wrath* remained unwritten. Each of these authors was indeed referred to time and again in professional studies of the respective subjects, but the purpose was one of communication with the reader, that is, to strike a familiar note in the reader's mind, rather than to supply additional evidence.

Nonetheless, a fairly strong case can be made for increased preoccupation with Soviet novels, short stories, and plays on the part of Western economists who work in the field of Soviet economy. Not that the material to be found in Soviet fiction is less "spotty, impressionistic, and inaccurate" than that of Dickens' and Kingsley's. In fact, the opposite may be true. But the situation is profoundly different in other respects. Information supplied by a novelist can be disdained only if the flow from other more important sources is plentiful. This, of course, is not the case with Soviet Russia.

It has become a common practice for students of the Soviet economy to preface their writings on the subject with some sort of apology. This is understandable. Anyone devoting time and thought to problems of Soviet economic development must be painfully aware both of the narrow limits to the scope of his own knowledge and of the distressing gaps in available information. This lack of knowledge stems essentially, although not exclusively, from the restrictive information policy of the Soviet government. Since the middle of the thirties the volume of data supplied has been steadily declining. During the war an almost complete blackout prevailed; and what has been published since its end is still very inadequate even in comparison with the low point of 1940.<sup>2</sup> It is not the quantitative information alone that has deteriorated. The general descriptive Soviet literature on economic subjects has also suffered a great deal. While the volume of such literature on various portions of the current five-year plan has been very considerable, its contents on the whole have been confined to a jejune repetition of official pronouncements. As a result, the innumerable books and pamphlets all seem alike. Walter Bagehot once said, "When you have seen one Fugian, you have seen all

<sup>2</sup> The text, written in 1949, presents a fair picture of the situation in Russia well into the fifties. Since 1956, the amount of economic information has greatly increased, surpassing both in volume and (to a lesser extent) in quality what was available at the end of the 1930s. [A. G., 1962]

Fuegiens — one Tasmanian, all Tasmanians.”<sup>3</sup> The current economic literature in Soviet Russia is primitive indeed.

There is no point in exaggerating what doubtless is a very unsatisfactory situation. It is quite true that over the last decade or so a number of Western economists have impressively demonstrated that patience, imagination, and ingenuity can succeed in extracting valuable results even from such a scarce and resistant material as Soviet statistics. In order to achieve these results, the economists concerned had to pile assumption on assumption, to piece together small fragments of uncertain information into a perhaps still less certain whole, to extrapolate and interpolate, and to unfold long inferential chains from a casually given Soviet figure or statement. Even though very often these scholars must have felt like participants in the famous game of billiards from Gilbert and Sullivan's *Mikado*, which was being played

On a cloth untrue  
with a twisted cue,  
and elliptical billiard balls,

there is no doubt that their labors have materially widened our knowledge and increased our understanding of Soviet Russia.

In many respects, however, it is precisely this increase in our grasp of the Soviet economic system that reveals and aggravates the

<sup>3</sup> Walter Bagehot, *Works*, IV (Hartford, 1891), 500. The Russians are not unaware of this degradation of their economic literature. K. V. Ostrovityanov, who was Varga's successor in the reformed Institute of Economics, said at a session of the Scientific Council of the Institute: "The fear of committing an error in posing and elaborating new problems causes economists to move away from analyses of contradictions arising in the process of development of socialist economy and reduces scholarly work to a mastication of existing resolutions, or to publication of propaganda articles and pamphlets, while serious scholarly investigation of the economic problems of socialism is avoided." He added that only a few of the recent dissertations for the degree of candidate and doctor of economics were published, because the authors did not relish having their theses printed (*Voprosy ekonomiki*, 1948, no. 8, p. 74). The probable effectiveness of the speaker's admonitions for a "bolder, bolshevist approach to economic research" must be judged in the light of the sweeping and severe decree concerning disclosure of state secrets (*Pravda*, June 15, 1947), and Ostrovityanov's immoderate strictures in the same speech of "errors" committed by a number of Soviet economists.

Since 1956, there have been some narrowly confined, but not unimportant, improvements in Soviet economic literature. [A. G., 1962]

economist's predicament. As a foundation is being laid for a scholarly study of Soviet economy with the help of tools of modern economic and statistical analysis, a growing number of new and exciting problems is brought within the purview of the economist. In the process, he becomes even more conscious of the inadequacy of his material and of a basic limitation which lies in the virtual impossibility of gaining understanding of economic processes in the Soviet Union from personal association with men who are actively engaged in these processes. The planner in the Gosplan, the banker in the Gosbank or in one of the special investment banks, the manager and the union representative of an industrial plant, the chairman of a collective farm — they all are, and, barring a radical change in Soviet policy, will remain, out of reach of the Western research worker.<sup>4</sup> A scholar studying the economy of the first socialist country has not only to forego the wealth of documents which the student of capitalism once found in the British Museum; it is also unthinkable for him to have a close friend who is in charge of an industrial enterprise in the Soviet Union and moves in the very hub of the industrial life of the country. In these circumstances, no source of information, however uncertain, can be lightly rejected, and the quest for such sources deserves serious attention.

Conversations with Soviet citizens who, after the end of the war, found themselves outside Russia and her zone of influence in Europe may indeed provide valuable information. In fact, it is highly regrettable that little has been done so far to collect and to analyze information from that source, and every attempt should be made to utilize it. The matter is urgent. Memories of individuals who have suffered great tribulations in the intervening years are likely to become blurred. As time passes, and the process of their adaptation to Western ways proceeds, they must tend to lose their original viewpoints and the value of their testimonies will diminish accordingly. Finally, the accessibility of the persons concerned is dwindling

<sup>4</sup> Changes have taken place in this respect as well. But neither the larger flow of economic information nor the opportunities for personal contacts nor the considerable change in various institutional arrangements has been such as to invalidate, or even to alter materially, the position taken in this essay on the significance of Soviet literature as a source of economic information. Still, the reader will want to keep in mind that the present essay was written thirteen years ago. [A. G., 1962]

through their emigration to South America, Australia, and other distant regions. At any rate, whatever information can be gleaned from this source does not transcend the years of the war. For the postwar period and for the future, one must have recourse to other sources.

The remainder of this essay is devoted to a brief discussion of the possibilities of obtaining useful information from Soviet novels and plays and to a few illustrations taken from such recent Soviet productions.

The first question to be raised is whether or not the subject matter of Soviet literary productions is such as to arouse the economist's interest in them. The answer must be in the affirmative. Since the days of Fedor Gladkov's *Cement*, a new type of industrial novel has developed in Soviet Russia and has been subsequently paralleled by the emergence of collective-farm novels. Very deliberately and no doubt under pressure by the government, literature has been increasingly placed in the service of the economic policies of the Soviet government. Love, friendship, the inner struggles of the individual have been pushed far into the background and sometimes eliminated altogether. Construction of factories, railroads, pipelines, and power stations; increases in mining and industrial output; application of improved methods of farming—these are the subjects to which Soviet novelists have primarily addressed themselves, if the very substantial recent crop of military novels may be disregarded. Soviet belles-lettres have been dedicated to economic problems to an extent altogether unprecedented in the history of world literature, with the possible exception of the hunting songs of primitive folklore. This is a development which an economist working in the Soviet field cannot ignore.

This shift in the sphere of interest of Soviet writers, undertaken as it was under extraneous pressure, doubtless proceeded at the expense of the artistic value of their works. A pattern of monotonous uniformity has developed. Voltaire, who accepted every literary genre except the boring one, would have refused to read the average Soviet novel or play, but this is of little concern to the economist who is in search of things less exciting and more tangible than artistic values. The real problem from his point of view is whether or not

this literature has been so subordinated to the propaganda interests of the government as to become worthless as a reflection of Soviet economic reality. The present writer would like to answer the question in the spirit of restrained optimism.

That Soviet literature is not only subject to a preventive censorship, but also is positively controlled and guided by the government seems reasonably certain. Otherwise it would be difficult to explain the rapidity of literary responses to changes in the party line. A governmental action in the field of philosophy coupled with a campaign against Western influences immediately calls forth novels like Grigori Konovalov's *University*<sup>5</sup> with its brazen glorification of Russian philosophy in the face of the still valid dictum of Vladimir Soloviev that "what is philosophical in Russian works on philosophy is not Russian, and what is Russian in these works has no relation to philosophy."<sup>6</sup> The line turns against the United States and almost instantly plays like Konstantin Simonov's *Russian Question* or Kozhevnikov and Prut's *The Fate of Reginald Davis* are turned out.<sup>7</sup> The "uprooted cosmopolitan" is put under fire, and without delay Simonov serves up another play, *The Foreign Shadow*,<sup>8</sup> where the dangers of international scientific cooperation are depicted in the darkest colors, the cosmopolitan is unmasked as a spy, and, in addition, the government's policy of secrecy is glorified.

The present writer has no knowledge as to the exact nature of the actual connection: does a governmental agency actually present individual writers with specific assignments or is reliance on servility of the writers, in conjunction with general exhortation, considered sufficient? But strong as the ascendancy of the government is, it can hardly be absolute: a certain margin of freedom must be allowed, as is shown by savage postpublication attacks in the press.<sup>9</sup> And this

<sup>5</sup> "Universitet," *Oktyabr*, 1947, nos. 6, 7; subsequently published in book form.

<sup>6</sup> "Natsional'nyi vopros v Rossii" (The National Question in Russia), *Sobranie sochinenii* (Collected Works), V (St. Petersburg, n. d.), 88.

<sup>7</sup> K. Simonov, "The Russian Question," *Soviet Literature*, February 1947; V. Kozhevnikov and I. Prut, "Sud'ba Redzhinal'da Devisa," *Zvezda*, 1947, no. 4.

<sup>8</sup> K. Simonov, "Chuzhaya ten'," *Znamya*, 1949, no. 1.

<sup>9</sup> At times such attacks lead to discontinuation of the publication of a work of fiction which has been appearing serially; see, for instance, the case of Y. German's novel "Podpolkovnik meditsinskoy sluzhby" (Lt. Col. of Medical Service), *Zvezda*, 1949, no. 1.

stands to reason. Complete regimentation might easily result in such an additional decline in the value of Soviet literary output as would defeat the government's purposes altogether.

Soviet discussions of socialist realism versus socialist romanticism may be pertinent in this connection. Divested of a good deal of inane phraseology, the problem seems to be whether a Soviet writer should depict his heroes as they are or as they ought to be from the point of view of the official ideal. Presentation of society composed of Soviet *chevaliers sans peur ni reproche* should appeal to the instincts of the literary police. It may appeal to the self-preservation instincts of the authors. The result would be the "conflictless" novel as it is called in Soviet discussions of the subject.<sup>10</sup> This is romanticism with a vengeance: E. T. A. Hoffmann's *Die Elixire des Teufels* without the devil. But fortunately this ideal seems to be unattainable.

Soviet economy has been one of intensive internal conflicts. As long as the ratio between investment (including military expenditures) and consumption remains so heavily weighted in favor of the former, the day-to-day economic processes in Soviet Russia are characterized by a continuous struggle between the government and the population. There is nothing sensational about these struggles. Least of all are they political in nature. But nonetheless they are very real. The government must fight the worker who is unwilling to sustain the tempo of work in the face of inadequate increases in levels of consumption and who is trying to keep the production norms as low as possible; the government must fight the manager of industrial plants who is trying in a variety of ways to evade the plan and who, conscious of inflationary pressures in the economy, is trying to hoard raw materials so as to achieve unplanned profits and the bounties and promotions which follow in the wake of such achievements; the government, in fine, must fight the collective farms, which are unwilling to surrender to the government substantial portions of their produce at prices greatly below the kolkhoz market prices and which are employing every imaginable device to evade the obligation imposed on them.

It is not suggested that these struggles imperil the stability of the

<sup>10</sup> See, for instance, the article by N. Gribachev, "Za novyi pod'em sovetskoy poezii" (For a New Upsurge of Soviet Poetry), *Znamya*, 1949, no. 1, p. 171.

government. All that is suggested here is that a literature, which tries to present as "conflictless" an economy still subject to a high degree of stress and strain, must inevitably and very quickly transcend the limits of verisimilitude; and that thereby literary production becomes impossible. Not necessarily so, because a strike of authors should be the answer. As Chekhov once remarked, "If you beat a hare for a sufficiently long time it may learn how to use a photographic camera." It should not be too difficult to badger a Soviet writer into submission. But the unbridgeable gulf between the conflictless society in the novel and on the stage and the conflict-pregnant reality would destroy all the propaganda effect of literature. The Soviet discussions of romanticism and realism may perhaps be taken both as a mild form of rebellion against too great a regimentation of literature and as a sign that the regimentation is not absolute. To repeat: a certain margin of freedom must remain.

But is it possible for the non-Russian reader of Soviet works of literature to separate the wheat from the chaff, the reality from its distortion? And will the grains of truth be numerous enough to warrant the economist's search for them? A brief presentation of a number of illustrations from a few recent works of Soviet literature may be helpful in suggesting at least tentative answers to these questions.<sup>11</sup>

It may be advisable to mention first a rather singular case in which the validity of facts as supplied by the novelist was capable of being tested.

In 1948, the literary journal *Oktyabr'* published a novel on gold

<sup>11</sup> Most Soviet works of fiction are first published in one of the literary journals of which the following should be noted: *Novy Mir*, *Oktyabr'*, *Znamya*, and *Zvezda*. The first three journals appear in Moscow and the last one in Leningrad. For years, Vera Aleksandrova has been publishing reviews in Russian on current Soviet fiction in various periodicals, most notably in the *Sotsialisticheskii vestnik*, the magazine of the Russian Social Democratic Party in exile, now appearing in New York. While Mrs. Aleksandrova's interests do not lie specifically in the economic field, in general she addresses herself to the social significance of Soviet belles-lettres, and economists interested in the problems raised in this essay will find her reviews a most excellent introduction to Soviet fiction. It is, incidentally, very regrettable that these reviews are inaccessible to those who have no reading knowledge of Russian. A translation into English of at least a selection of these reviews would be desirable indeed.



mining in Soviet Russia.<sup>12</sup> This novel was finished just before the outbreak of the war, after its author had spent seven years in Siberia as a party functionary in one of the mines. The novel describes the efforts made to increase the output of gold at a trans-Baikalian mine sometime during the thirties. The difficulties which confronted the administration of the mine and its workers are graphically presented: the inadequacy of food supplies to the miners who had been induced to move to the permafrost region by extravagant promises; the resulting low effort on the part of the workers; the hopeless primitiveness of the technological equipment; the aloofness of engineers who preferred to stay away from the mine; the deflection of sizable portions of output into illegal channels. All this is not new to the Western economist, but this is precisely why Ganibesov's novel is of interest for the purposes of this discussion. For the Russian author's description coincides strikingly with the story of gold mining in Russia as told by a perfectly trustworthy source: John J. Littlepage, the American engineer who had served for many years in a responsible capacity in the Soviet gold mine administration.<sup>13</sup> There also exists a professional Soviet discussion of the subject,<sup>14</sup> and it is curious to see that in many respects Ganibesov's novel provides a much clearer and franker insight into the situation.

Ever since the beginning of the First Five Year Plan, the trend in the Soviet Union has been for increased power of managers of industrial plants. "Unity of control" (*yedinonachaliye*) implied vesting in the manager of the enterprise the responsibility for carrying out its plan, for all matters relating to output and to hiring and firing of workers and salaried employees of the plant. Neither the trade union through the factory committee nor the party cell were thenceforth supposed to interfere directly in the administration of industrial enterprises. This development has raised a number of interesting problems, and economists have every reason to search for evidence permitting them better to assess the present position of the manager within the framework of the Soviet economy. Soviet fiction does

<sup>12</sup> V. Ganibesov, "Starateli" (The Placer Miners), *Oktjabr'*, 1948, no. 3.

<sup>13</sup> John J. Littlepage, *In Search of Soviet Gold* (New York, 1938).

<sup>14</sup> A. P. Serebrovski, *Na zolotom fronte* (On the Gold Front) (Moscow-Leningrad, 1936).

shed some light on this question. A novel by Vera Panova, *Kruzhilikka* (the name of a plant), which was first published in 1947,<sup>15</sup> contains interesting material on various aspects of the question. A good deal of the novel is devoted to the relations between the manager and the chairman of the factory committee. The latter does not have much luck in his attempts to assert himself:

Usdechkin [chairman of the factory committee] . . . came to Listopad [manager] with a number of demands concerning working conditions in the factory.

"No, you stay out of these matters," said Listopad. "You leave all that to me."

"Sorry, comrade manager," said Usdechkin, "but don't you know that this is a direct function of the trade union?"

"No, I don't," said Listopad . . . "It's your business to know what your functions are" (p. 9).

The chairman of the factory committee shows some fighting spirit. He attacks the manager in the meetings of the city party committee. But the effect is nil. The manager is unassailable, and the reason is clearly shown in the novel: he has succeeded in regularly overfulfilling the production plan. The chairman of the factory committee may protest ever so loudly against the manager's transforming the "principle of unity of control" into the "principle of autocracy." The manager knows that, if the chairman should become too bothersome to him, he will not find it too difficult to get rid of this elected representative of the workers (p. 7). But would not the workers support their representative against the manager? Apparently not. And the reason is not necessarily the manager's proficiency in production. For Panova supplies an additional fact which also should be of interest to the economist. The manager had built up a secret organization of special agents who are distributed throughout the villages of the region. They watch closely the process of deliveries of agricultural products by collective farms to the governmental procurement agencies. As soon as the quota is fulfilled and a collective farm has received the right to sell its products on a free market, representatives of *Kruzhilikka*, who had been informed by their agents, appear on

<sup>15</sup> *Znamya*, 1947, nos. 11, 12. Subsequent page references are to the edition in book form (Moscow-Leningrad, 1948).

the scene, conclude the contracts, and cart away grain, potatoes, and vegetables for the factory ORS (division of workers' supplies). By the time the other factories were officially informed of completion of deliveries to the government, Listopad had bought up the available surpluses.

The action of the novel takes place in 1945; nevertheless, this practice sheds an interesting light on the operation of the "kolkhoz market" in conditions of scarcity. Such operations may have been preserved well beyond the abolition of rationing in 1947 to the extent that the latter did not necessarily mean immediate elimination of food scarcities.

It is not unlikely that the scarcities of the war period in general contributed to strengthening the position of the manager as against the workers, thus supplementing such increases in his power as resulted from the labor legislation which tied the worker to the factory and which is referred to in the novel as "wartime legislation," even though it is still on the statute book.<sup>16</sup> In Panova's novel, a youth working in the factory absents himself without permission for a week. The manager can surrender him to the court. In this particular case, he decides to place no strain on the quality of mercy, and this again seems to be illuminating: the manager's power to bind and to loose must have greatly contributed to equipping him with new paternalistic traits. It is therefore not surprising to find in *Kruzilikha* and elsewhere in Soviet fiction that the manager, in addressing subordinates, uses the time-consecrated feudal *ty* (thou) while the subordinates use the respectful *vy* (you).

A manager who is overfulfilling production plans acquires an impregnable position because of the support of his economic ministry. But Panova's novel touches on an even more important problem: the basic strength of the manager in relation to the central authorities. It describes how difficult it was to dismiss Listopad's predecessor, although, according to the novel, he had proved unable to meet the wartime plans. The manager claimed that the plans exceeded the

<sup>16</sup> The legislation which made it a penal offense for a worker to quit his job was not abrogated until May 1956. See *Direktivy KPSS i sovetskogo pravitel'stva po khozyaystvennym voprosam* (The Directives of the Communist Party of the Soviet Union on Economic Matters) (Moscow, 1958), pp. 620-626. [A. G., 1962]

factory's capacity. And in this, Panova informs us, he found support even from some members of the local party committee who thought that "it would not be so bad if the plan were to be cut by about fifteen percent. Everything would become much easier; the factory would show better performance, and come into good standing with the narkomat [ministry]" (p. 115).

The local party functionary began a struggle against the manager, in which he was not countenanced by the city party committee. Its chairman felt that this was a delicate matter to be decided between the narkom and the manager. According to the novel, the local party man in the plant succeeded in enlisting the help of some engineers, foremen, and skilled workers and prepared a report for submission to a special commission sent to the plant by the ministry. His opinion prevailed, but the story carries strong implications that without this help from inside the factory the ministry would have acquiesced in the lowering of plan goals.

Similarly, in a play by A. Sofronov, *Beketov's Career*,<sup>17</sup> combines which have been produced by a large Soviet factory regularly break down in the fields. The ministry in charge of the factory sends down a representative who instantly dismisses the manager of the factory. But the ministry's action has been provoked by a series of anonymous letters written by the factory's chief engineer, who has been aspiring to the manager's position.

This is a point well worth dwelling upon. Very frequently, in professional presentations of the modus operandi of the Soviet economy, the impression is created of a completely centralized framework within which the manager of the individual enterprise receives binding orders by the central plan as to composition and size of the plant's inputs and outputs. This may tend to disguise important developments. Even the pioneering work by Bienstock, Schwarz, and Yugow,<sup>18</sup> in which a good deal of information on the sphere of autonomy of industrial plant managers has been analyzed, perhaps underestimates the actual scope of that autonomy. It would seem that, in appraising the way in which the Soviet economy works and

<sup>17</sup> "Kar'era Beketova," *Novy Mir*, 1949, no. 4.

<sup>18</sup> Gregory Bienstock, Solomon M. Schwarz, and Aaron Yugow, *Management in Russian Industry and Agriculture* (New York, 1944).



the degree of its centralization, it may be advisable to distinguish between the administrative surface and the economic core of the problem. There is no question that the Soviet administration of the economy by central planning covers overwhelmingly large parts of that economy. It is conceivable, however, that a good deal of what formally sails under the name of central planning is in fact based on decisions taken on the level of plant management.<sup>19</sup> It is conceivable that in reality there are considerable limitations on the knowledge and foreknowledge of central authorities as to the actual conditions and developments in the individual plants. An economist who has been wondering about relationships like those touched upon in note 19 may feel that the material contained in Panova's novel or in Sofronov's play does in some measure enhance the validity of the questions raised.

In this connection another play by Sofronov, which, like *Kruzhilikha*, was awarded a Stalin Prize, is also revealing.<sup>20</sup> The

<sup>19</sup> An example may serve to illustrate the point. Production and consumption of copper is centrally planned. Copper is included in what is called in Russia "material balances," that is, balance-sheet-like juxtapositions of output and consumption of individual commodities in terms of physical quantities. In Soviet literature very much emphasis is placed on this method of planning through material balances. It is said to assure absence of disproportionalities. Now, copper remained in short supply throughout most of the thirties. Domestic production grew at too slow a rate; imports remained substantial; and the Soviet government attempted for years to reduce the consumption of copper by introduction of substitutes in less essential lines of production. These attempts showed but a moderate degree of success, until, in 1937, the government decided to increase drastically the price of copper while keeping constant the planned cost of commodities in the production of which the metal was used. Apparently, the effect was all that could be desired. Copper was thenceforth confined to more essential uses, and substitutes began to be utilized on a significant scale. See G. Kozlov, *Khomyaystvennyi raschet v sotsialisticheskoy obschestve* (Economic Accounting in Socialist Society) (Ogiz, 1945), p. 65.

This obviously raises a question: why did not the central-planning authority simply change the pattern of copper consumption in its material balances? Why did the Soviet government have to have recourse to the indirect device of a price increase, which surely is more uncertain and less transparent in its effects? There is a strong presumption in favor of believing that the Soviet government could not use the more direct method because it did not know in what segments of the copper-using industry and to what extent the restrictions should and could be applied. In other words, the central authority accepted decisions of the managers of the individual plants. Presumably, after the rise in price, the pattern of copper consumption in the material balances was adapted to the new situation.

<sup>20</sup> "Moskovskii kharakter" (The Moscow Character), *Oktyabr*, 1949, no. 1.

central figure of the play is again a successful industrial manager, Potapov. His plant, which specializes in machine-tool production for construction of agricultural machines, has been overfulfilling the plan. The play begins with Potapov's decision to fulfill the factory's current (Fourth) Five-Year Plan in three-and-a-half years. Immediately thereafter, however, he is presented with a request from the manager of a nearby textile plant. Potapov is asked to devote some of his capacity to the output of textile machinery for the neighboring enterprise. The whole plot of the play turns around the request. Potapov first refuses and it takes full four acts of suasion and persuasion, including a decision of the district party committee, to make him acquiesce in the wishes of the textile plant.

The details of the play need not occupy us, although some of them are illuminating (such as the attitude of humorous resignation which the average Russian displays toward government and party slogans). Nor is it necessary to concern ourselves with the moral of the play, the intended propaganda effect of which is clear: the Soviet government and the Communist Party are interested in production of investment goods not only for further investment but also for immediate use in consumption-goods industries; and the play contains sharp strictures on the feeling of superiority shown on the part of representatives of heavy industry toward those of light industry, a feeling presumably intensified during the war. But while all this is certainly significant, what is of interest here is that throughout the play an important decision with respect to the production program is assumed to lie within Potapov's discretion: "If you agree, the Ministry won't have any objections!" (p. 110). And, it is interesting to note, the resolution of the party committee does not urge the ministry to *instruct* Potapov to accept the order of the textile factory, but merely urges the ministry to *allow* him to do so.

This illustrates the supposition that large portions of industrial output may be in fact only very imperfectly controlled by the plan, if they are controlled at all; that the manager, and particularly the plan-overfulfilling manager, enjoys a considerable sphere within which he can make basic decisions with respect to both the type of goods to be produced and the mode of their disposal. The latter, incidentally, becomes to a large extent a matter of personal connec-

tions. As such it introduces an element of chance and narrowness into the allocation of resources as an alternative both to the comprehensive decision of the central planner and to the objective price mechanism of the market. Later we shall supply some additional illustrations for this role of personal connections in Soviet economy. Suffice it to say here that the problem is well worth further note. Could it be that the limitations on effective central planning in conjunction with absence of a free and broad market for industrial goods produce within the Soviet economy certain aspects of localism which were peculiar to the narrow economy of the medieval city?

Sofronov poses the managerial problem in Soviet Russia with a good deal of clarity, when he lets Potapov's wife tell him reproachfully: "Why do you say so often 'my factory,' 'I am the manager,' 'I am the *khozyain*' [owner, boss]? You are a *khozyaistvennik* [a responsible economic functionary], but the state, the people — that's the *khozyain*."<sup>21</sup> This indeed is the problem: the degree to which a *khozyaistvennik* tends to become a *khozyain*. Both Panova's novel and Sofronov's play provide interesting fragments of information on this problem.

The increase in the power of managers of Soviet industrial plants is sometimes regarded as an irresistible evolution, which will continue unabated in the years to come. Others may feel that such strengthening in the position of the manager as has taken place in the past has been a temporary phenomenon, occasioned primarily by the fact that development of institutional machinery designed to supervise the execution of the plan has lagged behind development of an apparatus for plan making. Naturally, fiction will provide no answer to such speculations. But the attention that at present is being devoted to the problem by Soviet fiction may be indicative of its importance and perhaps even adumbrate the approach of a period of critical decisions with regard to the relations between managers and central authorities.<sup>22</sup>

<sup>21</sup> For a very similar retort by which a manager of a railroad is reprimanded, see the play by A. Surov, "Zelenaya ulitsa" (The Green Street), *Oktyabr*, 1949, no. 5, p. 118.

<sup>22</sup> As mentioned elsewhere in this volume (Chapter 11, note 33), the organizational reform in Soviet industry (1957) was duly reflected in Soviet novels. For additional treatment of the problems surrounding industrial management, see

Soviet postwar literature includes a considerable crop of collective-farm novels and plays. Many of them serve to illustrate the fact that the struggle of the peasants to evade the obligation to deliver grain to the procurement agencies has continued unabated. Both the play by Virta, *Our Daily Bread*, and the novel by Babayevski, *Knight of the Golden Star*,<sup>23</sup> refer to the collective-farm practice of hiding grain by adding it to the "seed fund" which in the case described by Virta came to exceed the plan threefold (p. 46). In Babayevski's novel the chairman of a collective farm becomes apprehensive of a possible inspection of the seed fund and distributes the surplus among the members of the kolkhoz. His purpose is to keep the grain for sale on the kolkhoz market until the spring when prices will be high. In addition, in Virta's play, a kolkhoz chairman hides the grain by letting it escape into the offals during threshing with the intention of recovering it later in the winter. Such episodes must be viewed in the light of the fact that grain deliveries from collective farms to the government are legally computed not on the basis of harvest, and not even on the basis of area sown (as was the custom until 1940), but on the basis of the aggregate arable land of the kolkhoz; computations in relation to area sown apparently either led to a diminution of the area under cultivation in relation to total arable land or at least prevented an increase in that ratio. In 1947, the system was rendered more flexible by varying the "delivery norms" in accordance with the existing relations between total arable land of the individual kolkhoz and the number of able-bodied workers available to it.<sup>24</sup> But the principle of government deliveries on the basis of the land available rather than on the basis of the harvest was fully maintained.

The question then arises as to the purpose pursued by kolkhozes in hiding their grain. It should be noted that the deliveries mentioned in the preceding paragraph constitute only a portion of the centralized deliveries to the government. A very substantial share of the aggre-

Alexander Gerschenkron, "The Changeability of a Dictatorship," in *World Politics*, July 1962. [A. G., 1962]

<sup>23</sup> Nikolai Virta, "Khleb nash nasushchiny," *Zvezda*, 1947, no. 6; Semen Babayevski, "Kavaler zolotoy zvezdy," *Oktyabr*, 1947, nos. 4, 5.

<sup>24</sup> *Pravda*, March 7, 1947.

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gate<sup>26</sup> is delivered by the kolkhoz in the form of a payment in kind for work performed for it by the Machine Tractor Station (MTS). Such payments are computed on the basis of the harvest, but for the most part the computation is made on the basis of the biological (field) yield rather than on that of the actual (barn) yield. It is only the reaping and threshing operations for which the payment is calculated in accordance with quantities actually reaped or threshed. The aim of these arrangements obviously was to render purposeless the various devices by which the kolkhozes tried to evade their obligations. It is therefore useful to note the interest which Soviet fiction takes in those devices and to speculate as to how their continued use might be reconciled with a legal framework that *a priori* seemed to have rendered them inapplicable.

Possibly, the farm hiding grain avoids the pressure to deliver *additional* grain to the government under the so-called decentralized deliveries. More likely is the supposition that the rigid stipulations of the legislation are impossible of practical implementation and that in reality grain deliveries are determined by taking, in some manner, account of the actual production of grain. Still another possibility is that by concealment of grain the kolkhoz hopes to achieve a reduction of future obligations. Finally, there may be, of course, outright bribery of officials in charge of supervising the process of grain deliveries. In Virta's play, the maleficent chairman of the kolkhoz even goes so far as to bribe the director of the MTS station into issuing a falsified certificate concerning the quantity of grain threshed and the employee of the procurement agency into issuing a fictitious receipt for grain that never has been delivered.

In the postwar collective-farm fiction, the role of the hero is assigned to the homecoming veteran, who immediately upon his return acquires a dominant position in the collective farm or in the local soviet and with great energy leads the kolkhoz on the road of adjustment to peacetime conditions. Both in the novel and in the play, the respective heroes are able to uncover the malefactors and to reform the kolkhoz. Neither fiction nor any other source, naturally, can pro-

<sup>26</sup> For instance, 50 percent in 1937; see L. S. Galimon, *Dokhody mashino-traktornykh stantsii* (The Revenues of the Machine Tractor Stations) (Moscow, 1948), p. 8.

## A NEGLECTED SOURCE OF INFORMATION ON SOVIET RUSSIA

vide an answer to the question of the over-all quantitative significance of evasions of government regulations by the collective farms.

Of some interest is the efficient way in which Babayevski's Knight of the Golden Star, who has become chairman of the local soviet, dismisses the guilty administration of the kolkhoz. He makes up his mind as to who should succeed the old chairman and, at a late hour of night, convokes a meeting of kolkhoz membership and has the satisfaction of seeing that the person of his choice is spontaneously nominated by the assembly and instantly elected. This sidelight on the operation of kolkhoz elections is of some importance. So is the fact that at least one person in the novel protests against it and considers it a breach of the kolkhoz covenant.

In collective-farm fiction considerable attention is devoted to the problem of individual plots of land of the kolkhoz members and to the more intensive work devoted to these plots as compared with the work on kolkhoz fields. In Babayevski's novel an interesting theory is even developed by two kolkhoz chairmen independently of each other to the effect that greater sowing of cereals on individual plots would tend to spread the risk, so that a crop failure on kolkhoz fields would be compensated for by a good harvest on the individual plots. While the logical persuasiveness of this theory is probably not too great, the fact that it is being expounded provides some additional insight into the attitudes of collective farmers.

An interesting problem suggested by perusal of Soviet fiction refers to the existence of "leading" kolkhozes. A good deal of the novel by V. Ilenkov, *The High Way*, is devoted to this question.<sup>29</sup> The difference between the leading kolkhoz, which is managed by the father of the hero of the novel, and another one not far away is striking: "We distribute 12 kilograms of grain and in addition 4½ rubles per working day,<sup>27</sup> and there [in the poorer kolkhoz] it is years since they had enough bread to eat."<sup>28</sup>

The problem undoubtedly is a delicate one. The government naturally favors those kolkhozes showing an extraordinary perform-

<sup>28</sup> "Bol'shaya doroga," *Oktyabr'*, 1949, nos. 1, 2.

<sup>27</sup> "Working day" is a conventional measure of work performed by the members of the kolkhoz and is not identical with a calendar day.

<sup>29</sup> Ilenkov, p. 93.

ance. Within a certain margin, they serve as a model for the remainder of collective farms in the region or district. The record performance, as often as not, is the result of a deliberate governmental policy. The previously quoted play by Virta shows how the local soviet can affect the production results as among the individual kolkhozes by directing, in crucial moments, trucks and tractors to one kolkhoz in preference to others. Again, it may be noted parenthetically, the problem of personal connections comes in: in Ilenkov's novel one person expresses the opinion that unless at least the first secretary of the district party committee, who is the actual boss of the chairman of the regional soviet and, in fact, of the whole region, is invited to the planned bear-hunting expedition of the kolkhoz, it might be difficult to obtain gasoline for tractors during the summer.<sup>29</sup>

But the problem is a much broader one. The record performance of one kolkhoz may be achieved at the expense of losses by other kolkhozes which are greatly in excess of the increment in output realized through the record performance. During the last war the shipyards in California from time to time would produce a Liberty boat within twenty-four hours instead of the usual eighteen to twenty-one days. Impressive as such performances were, they were bought at the cost of delaying output for some fifteen boats in construction in the respective yard because all scarce equipment, such as cranes, was concentrated on the record boat. The great importance which is attributed to record performances in Soviet Russia doubtless constitutes a serious problem from the point of view of allocation of scarce resources, and one may be grateful to Soviet fiction for supplying some sidelights on the question. It may be rewarding to look for analogous literary illustrations in the field of industry and mining where the problem may well be much more acute.<sup>30</sup>

A similar difficulty appears, in a slightly different form, in Babayevski's novel. The hero proposes an electric-power station to be built by his village, which consists of three collective farms. In

<sup>29</sup> *Ibid.*, p. 59.

<sup>30</sup> The previously cited play by Surov, "The Green Street," pivots around a sharply criticized attempt on the part of a railroad administration to establish a record of performance merely for window-dressing purposes in lieu of sustained improvements in the speed of transportation and the volume of goods carried. See *Novy Mir*, 1949, no. 5.

the course of the execution of this proposal, he is promoted to chairmanship of the district soviet executive committee and immediately decides to increase the capacity of the power station so as to make serve the whole district. This action dismays the neighbors in his own village, because they had gone to great trouble in floating lumber down the river to the village for the construction of the station, and they are willing to share neither the fruits of their labor nor the glory of being the first electrically lit village of the region. The curious thing, however, is that, when the hero is approached by a representative of a neighboring district who asks him to increase the capacity of the station further, so that it may serve more than one district, he refuses bluntly. None of the arguments on the virtues of cooperation and the dangers of selfishness with which he so eloquently allays the misgivings of his neighbors seems to occur to him now. And the question is left uncertain except for a slight hint that the secretary of the district party committee may take up the matter. The desire to monopolize achievements in the Soviet economy is thus rather strikingly illustrated. The double aspect of monopolistic developments which both promote and retard progress — may appeal to the dialectically trained minds of the Soviet leaders, but it also constitutes a grave problem calling for difficult practical decisions.

Perhaps it is permissible to return for a brief moment to the role of personal connections which was touched upon earlier. For Babayevski's novel provides some additional material on the subject. When the village needs lumber for the construction of the power station, the first (although ineffectual) attempt to obtain it leads the Knight of the Golden Star to undertake a journey to a personal friend of the manager of the district consumers' cooperative, who is said to be in a position to arrange dealings of this sort: "There is no point in going to regional administration. They can't do anything without Moscow's consent . . . You had better go to Pyatigorsk. I have a friend there . . . a wonderful fellow. I'll write to him, and he'll do everything."<sup>31</sup> When that manager is subsequently sent to Moscow to secure equipment for the station, he emphasizes in his report of the trip how helpful were the personal connections he had established, and he suggests to the Knight that "a certain volume of butter," if

<sup>31</sup> Babayevski, p. 5.

taken along, "would be extremely helpful in further attempts to purchase needed materials."

In a rather similar manner, it may be added, operates Grigori Kondrashev, an architect in Simonov's novel, *The Smoke of the Fatherland*,<sup>82</sup> an additional element in this case seems to be that Kondrashev, while using personal connections for the needs of his housing projects under construction, does not forget his own person and manages to derive personal benefits from his various transactions. Interestingly enough, Simonov volunteers the information that the period of postwar distortion was particularly propitious for men of Kondrashev's type, but that Kondrashev had operated in essentially the same way before the war.

In Ilenkov's novel, the chairman of the kolkhoz, while trying to obtain copper wire, proceeds by applying to the factory in which his brother works as a foreman. It is worth noting that the request is refused because in the past the chairman of the kolkhoz had refused to release to the factory in question twenty kolkhoz members. One is struck time and again by how much economic activity is carried out independently of the plan and of central supervision.

It has not been attempted in the preceding discussion to go into the novelist's or playwright's attitude to the occurrences he relates. This is a more difficult problem and perhaps a not too relevant one from the point of view of this essay. Naturally, Babayevski and Virta both disapprove of farmers' concealing grain from the government. The perpetrators are surrendered to what presumably will be swift and merciless justice. We are told in plain words that Sofronov's manager should have complied with the demand of the textile factory and produced for them the presses they need. But it would be much more difficult to state clearly whether, for instance, Panova's sympathies are with the manager of the plant or the pathetic representative of the union whom the former bullies and badgers to his heart's content. And still more difficult would it be to express such a judgment with regard to the little facts of everyday economic life as related in fiction. Revealing as they may be to the foreign observer, the Soviet writer often takes their existence for granted and therefore

<sup>82</sup> "Dym otechestva," *Novy Mir*, 1947, no. 1, esp. pp. 32-37.

does not feel under any compulsion to label them "good" or "bad."

If some positive conclusion may be drawn from the preceding discussion, it is that it does not seem too difficult to discern in Soviet fiction descriptions of facts and relations which appear both plausible and instructive. A good deal of material an economist may find in Soviet fiction he ought to be able to place within the framework of hypotheses and questions which he has formulated on the basis of professional studies of the Soviet economic scene. While his perusal of the works of fiction will not lead to any "proofs" of his hypotheses or unambiguous answers to his questions, the cumulative effect of recurring fragments of information, all pointing in the same direction, will tend to strengthen in some measure such tentative generalizations as he may have ventured upon. And contrariwise he may find Soviet fiction rather suggestive, and, very often, it may be from this side that the student of Russia's present economy may receive impulses and viewpoints which he may wish to apply in his study of the professional literature.

But the significance of Soviet fiction seems even to go beyond this. Fadeyev's *Young Guard* or Popov's *Steel and Slag*<sup>83</sup> may be but indifferent novels, but they still give a most vivid description of the period of evacuation in the Donbas before the wave of advancing Germans, and such a description provides an invaluable background against which the economist may place such quantitative data on evacuation of factories as are, for instance, contained in Voznesenski's book on the Soviet war economy. And, similarly, Pavlenko's *Happiness* allows at least a glimpse of the great migrations that must have taken place in Soviet Russia upon the conclusion of the war.<sup>84</sup> It is such Soviet fiction that opens to the economist the road to acquiring some sense of the everyday atmosphere of Soviet economic life and of its human fabric, without which any scholarly study must remain a lifeless shell.

<sup>83</sup> A. Fadeyev, *Molodaya gvardiya* (Moscow, 1947); V. Popov, "Stal' i shlak," *Znamya*, 1949, nos. 1, 2.

<sup>84</sup> P. Pavlenko, "Shchast'e," *Znamya*, 1947, no. 7.



## Reflections on Soviet Novels



THERE is every likelihood that future historians of the Russian novel will praise the Soviet period for the record number of volumes produced and blame it for an equally unprecedented decline in artistic standards. Yet one may hope that the twenty-first-century critic, in fairness to an unhappy past, will not overlook a redeeming feature of the Soviet novel: its considerable anthropological value. The present reflections about a few recent or fairly recent Soviet novels do not deal with their literary qualities. They are concerned exclusively with the light these novels cast upon various aspects of everyday life in Soviet Russia, including, it may be added, the life of the novel makers themselves.

### I

Leonid Leonov's *Russian Forest*,<sup>1</sup> written between 1950 and 1953, provides perhaps more illumination and more food for thought than any other Soviet product in the field since the end of the last war. (Because of its public repudiation in Russia, if not for other reasons, Pasternak's *Doctor Zhivago* may be safely excluded from the list of Soviet novels.) *Russian Forest* has both an apparent and a real theme. Though the latter is much more important, the former is by no means without interest. In addition, there are a number of political judgments strewn over the pages of the novel, some of which are worth noting.

<sup>1</sup> *Russkii les*; the page references in the text are to *Sobraniye sochinenii* (Collected Works), VI (Moscow, 1956).

The theme apparent is writ large over the title page: it is the problem of Soviet forestry politics. The hero of the novel, a professor of forestry, loves the forest and wishes the forest-covered areas of the country to be maintained unreduced and unthinned. He would not only preserve the aggregate extent of the forest, but also freeze the existing geographic distribution of forest lands. In defending his position, the professor adds to the long list of Soviet claims to invention by asserting that the concept of "sustained yield" (the concept of a forest which is "normal" as to age structure and produces year in, year out; a harvest maximized in some rational fashion) was developed by Russian students of forestry (p. 318).

In temperament and Weltanschauung, our professor — his name is Virkhov — is a direct descendant of Doctor Astrov in Chekhov's *Uncle Vanya*, except that Chekhov's *médecin de campagne* expressed himself simply, using good Russian, while the Soviet professor prefers a dubious jargon. "The forest," he teaches and preaches, "is the sum of productive forces and not of production forces" (p. 251). This obscure formulation in pseudo-scientific style sounds very much like a quotation from the official Soviet textbook of economics. But the tenor of the professor's pronouncements does imply some criticism of Soviet policy. The official Soviet line consists, first, of accusing the prerevolutionary government of barbarous destruction of forests and, second, of demonstrating how after the revolution the traditional prerevolutionary principles of forest conservation prevented, for a number of years, full utilization of timber resources. This is not a very consistent position, but it is a fact that in 1929, when Soviet policies were radically revised, forest utilization was completely subordinated to the general policy of high-speed industrialization and the amount of lumber cut for domestic use and for export came greatly to exceed natural growth.<sup>2</sup>

Thus Professor Virkhov may be regarded as a critic of Soviet policy. To be sure, the criticism is very mild. First of all, except for charges of poor workmanship, it never is made quite explicit. Nor are the Soviets likely to be very sensitive to strictures in this area. Con-

<sup>2</sup> See, for example, V. A. Popov, *Lesnaya promyshlennost' SSSR* (The Forest Industry of the USSR), 1, *Lesoksploitatatsiya* (Forest Exploitation) (Goslesbumizdat, 1957), pp. 15, 33.



sidering the extent of their general trespasses upon sound principles of resource conservation, the predatory use of forests would seem the least grievous of Soviet sins. Some permanent reduction in extent or density of forests, of course, may well have been justifiable. The problems of rational forest utilization are in general much more complex, and the choices to be made involve many more factors than Leonov and his professor seem to grasp. Not that there is any evidence that the Soviet government was guided by an accurate calculus. On the contrary, some of the elements involved, such as a reasonable "forest percent" (an interest rate with the help of which the optimum rotation, or felling age, can be determined), were proscribed in Soviet Russia for ideological reasons. Soviet ideas of forest exploitation were gross and crude. Still, quite apart from permanent changes in rotation that can be quite sensible, temporary deviations from "normalcy" are a regular phenomenon in forestry policies and can be as rational as normalcy itself. At any rate, the losses suffered need not be irreparable. Some of them can be remedied by afforestation. A log is not like a chunk of iron ore. It can be replaced, even though at some cost. It is also quite possible, and in fact likely, that by the beginning of the 1950s, when Leonov wrote his novel, the Soviet government was getting ready for a change in its forestry policy and Leonov's novel was a welcome — if not a government-inspired — vindication of the new policy.

However this may be, the wish to protect the Russian forest is painted over in the novel with such a heavy coat of Soviet patriotism that the light touches of criticism tend to disappear beneath it. Some of Leonov's interpretations of recent events are gems of Soviet metaphysics and historical accuracy and should not be overlooked. We are treated, for instance, to an analysis of the feelings of the Soviet population in the summer of 1941 after Hitler's attack on Russia: "Behind regrets about construction work that had to remain unfinished, one could discern contempt for the enemy — for this immediate enemy and also for the other — the main and hidden enemy who got scared of peaceful competition between the two systems" (p. 105; italics added). Apparently the reference is to the mythical being known as "capitalism." Or is it to the United States? The ambiguity seems intentional and the purpose is to suggest, subtly and darkly,

that the United States had stood behind Hitler's aggression and that, in doing so, it was moved by fears of Soviet achievements. In this connection, also, a perceptive view of American national character is helpful. In a conversation between Professor Virkhov and a friend who is an old Bolshevik and a model of a revolutionary hero, the latter describes some uncivilized acts which, he says, have been committed by the American army. The professor, duly horrified, asks the deeply probing question: "Who are they then? — soldiers or robbers?" and promptly receives an illuminating answer: "They are merchants. Soldier is the great title of a man who knows how to die for an idea . . . But name for me at least one idea which in the course of the last hundred years has emerged from the merchant class and was implemented in the name of life [*sic*] . . . Merchants, at the very best, grow to be pirates" (p. 680).

One must wonder whether Leonov himself realized that his perfect Communist repeated almost verbatim ideas from Werner Sombart's *Händler und Helden* (Merchants and Heroes), a book of "patriotic cogitations" written in Germany during World War I and directed against England (Munich, 1915). Even Leonov's style in those paragraphs with its nebulous haecceities sounds very much like a rendition into Russian of reactionary German writings.

In view of these deplorable characteristics, it is not surprising to learn how despicably the Americans acted during the war. Day in, day out, Professor Virkhov and his neighbors wonder where the second front will be opened; they continue to speculate for nine hundred days, until on the nine hundred and first, when the Germans attacked in the Ardennes, the Muscovites smilingly read the telegraphic prayers for help which come from their allies (p. 718). Thus the Anglo-American forces apparently managed to get to the Ardennes without ever opening a second front. The moronic effrontery of this presentation of the course of World War II in the West would be difficult to surpass. It is also hard to believe that the average Soviet reader is, or that Leonov believes him to be, so stupid, ignorant, and gullible as to accept Leonov's counterfeits for true coins. In general, it is probably more reasonable to assume that statements of this sort are to be taken within the context of Soviet mores as part of a ritual; as a somewhat pompous affirmation, that is, of loyalty to the regime.

But Leonov does seem to go further than is required by the Soviet code of proper behavior for a writer. In addition to mistreatments of the past his novel also contains some glimpses of future history. Varya, the ideal heroic figure of a young Soviet girl who loses her life fighting the Germans, places the last war in its proper historical perspective: "You see," she explains to her friend, the professor's daughter, "the fascists are just an episode in a great historical competition . . . Remember your history: if it took a full thirty years to settle the trifling dynastic conflicts between the Red and the White Roses, then it should not be surprising if it takes a century to decide the great argument between the Red and White halves of mankind. But you may assume that we have done the first twenty percent of the job" (p. 129).

This is very strong stuff indeed, and one can only conclude that the insurance premiums which Soviet writers must pay are high. Still, it seems advisable to be overinsured rather than underinsured. A writer who shows such fervent loyalty *in magnis* surely must be permitted a fleeting moment of eccentric independence of judgment *in parvis silvanis*. Leonov is widely regarded as one of the foremost Soviet novelists. It is almost frightening to see a man who aspires to the reputation of a great Russian writer cast aside all pretenses at historical veracity, and common sense, and common decency. The Soviet novel does reveal the predicament of the Soviet writer and, through him, that of the Soviet system.

All this is by no means devoid of interest. There is more to Leonov's novel, however, than cheap sentimentality in the style of Otto Ludwig's *Erbförster*, or semiliterate ideas about rational calculus of forest utilization, or shameless distortions of historical truth. It is only in a very superficial sense that Leonov's novel deals with the vicissitudes of the Russian forest. Its actual subject is the vicissitudes of Soviet man. For it is a novel about the *Lebenslauf*, the span of life, the human biography in Soviet Russia. This is the real theme of the novel and a much more rewarding one.

Professor Virkhov's forestry theories may be flat, but his view of human biography probes deeply into the very core of the Soviet social system. Progress, our professor believes, consists in an increase of moral duties which must proceed *pari passu* with an increase in the

volume of material goods; only the perfect man can achieve perfect happiness. "Hence everybody must make it his business to have a perfect biography" (p. 59). This is indeed a sentence full of significance. Unfortunately, its translation in English does not do justice to the Russian style, which uses a phrase taken from the archaic language of the tsarist ukazy. In fact, for a moment the reader hesitates, not knowing whether Leonov and his hero really mean what they say. The concept of perfect biography and the way in which it is expressed are irresistibly reminiscent of Shchedrin's celebrated satirical sallies against Imperial Russia in which he glorified *yedinomysliye*, perfect conformity in thinking, as the great ideal of the rulers of Russia. But the reader's doubts are out of place, for Leonov is very much in earnest. The problem of perfect biography is indeed a crucial problem of Soviet society. Not that it originated in Soviet Russia; but it is there that it acquired an extent and a significance which it had never possessed before. It would seem useful, therefore, to clarify the concept, before examining its application in Leonov's novel.

There are many possible criteria for classifying societies and civilizations. But the prevailing attitude toward a man's biography is far from the least important among those criteria. For it is related to another and perhaps more widely noted distinction, that between settled and migratory or immigration societies. The settled society, as the term is understood here, is one in which the whole life of an individual as a rule is passed within one fairly narrow social circle. In such societies there is no caesura in a man's ideal biography. His biography is perfect in the very specific sense in which a settled society values such perfection: it achieves a unity of life. According to a Russian proverb, no word can be thrown out of a song. No part, however small, can or need be thrown out of a man's biography in a settled society.

The values of a migratory society are radically different. This is a society in which the process of the stranger's losing his alien quality is perennially undone or renewed by the influx of new strangers. The migratory society may coincide with one growing industrial city; it may comprise a region like the valley of the Ruhr or a huge country like the United States. A society can be more or less "migratory" depending *inter alia* on its geographic extent or its rate of growth or

on the distance separating it from the areas whence the migrants come and the degree of irreversibility inherent in the act of migration. But the likelihood is that the attitude to a man's life of such a society will tend to differ greatly from that of a settled society. Naturally, such an attitude does not emerge instantaneously. In a sense, the puritanism of New England in several of its aspects was an attempt to negate the basic experience of migration. To become fully migratory, the American society had to shed much of puritan provincialism. Just because the ideas of the "old country" travel with the migrants and are brought in as specific "brain-case" imports, establishment of a migratory society is a long process even in a young country such as the United States. Once such a society has been established, however, and a new ideology peculiar to it has developed, the migratory society acquires easily discernible traits. In such a society a unity of life, a perfect biography, cannot be regarded as the ideal. The very fact of the migration, the very transformation of a peasant into a city dweller, of a European into an American, create a hiatus in biography. They tear it asunder and force the man to begin a new life. It is not an accident that it was an American philosopher who emphasized the moral characteristics of the twice-born.<sup>3</sup> In a sense, emigration is death. The emigrant, as the Parisian argot has it, *ravale son bulletin de naissance*; the naturalization certificate attests the second birth.

The newcomer to a migratory society may have very weighty reasons to forget his past. By suppressing the memory thereof he liberates himself from a record of failure or crime or humiliation. He may want to dismiss his past simply because the burden of nostalgic sentiments is too heavy to carry; or because he feels that the memories lame his energies and thwart his will in an environment that invites action and places high value upon the will to act. In such circumstances, the scriptural injunction against looking backward is filled with new significance. Goethe's urgent advice, "Stirb und werde!" should be written over the gates of immigration societies. The immigrant must obey it or pay the penalty of becoming, again in Goethe's words, "ein trueber Gast auf der dunklen Erde."

The specific "migratory" attitude toward unity of life affects

<sup>3</sup> William James, *The Varieties of Religious Experience* (New York, 1903), esp. pp. 166f.

many areas of behavior and endeavor. Examples are not far to seek. The manners of an immigration society do not favor inquiries into a man's past. One of the causes for the temporary success of Senator McCarthy must have lain in the pleasure of overstepping in public an ancient taboo, a well-established rule of private life. Business life provides many an instance of differences between settled and migratory societies. In the former, bankruptcy is likely to end a businessman's career. Even a protested bill of exchange is extremely hard to live down. In an immigration milieu, failure does not block the road to subsequent success and, in fact, success, once achieved, either obliterates the memory of the failure or even tinges it with glory. In a settled society, the jack of all trades is presumed — has been presumed since the days of the Homeric or pseudo-Homeric *Margites* — to be a tyro in all and is looked upon with disdain. The man who keeps changing from one trade to another is expected to fail; indeed, given the prevailing attitude, he is most likely to fail. In a migratory society, the virtues of specialization tend to remain unrecognized and unrewarded. The feeling of being up to any task, of being "a man and not a mollusc," is the specific attribute of a man in such a society, as was discovered by the French worker whose report about his downright un-French experience in California was quoted by Marx.<sup>4</sup> It is another matter that the organization of modern factories often requires the worker to perform a single recurring operation. Such operations are quickly learned and, in a growing and mobile society, they are as quickly abandoned and forgotten.

In an immigration society, a second marriage is much more likely to repair a previous marital failure. At any rate, the milieu does not diminish the second marriage's chance of success by refusing to accept it. (It may be easily ascertained by appropriate comparisons that specific religious injunctions are quite insufficient to explain the difference in attitudes.) An even clearer case is provided by marriages of widowed persons. They are frowned upon and viewed as attestations of disloyalty in a settled society and greeted with gladness in a migratory society. To be sure, differences in family structure, the resulting differences in the position of aged people, fear of loneliness in one case and social approval of solitude in the other — all these

<sup>4</sup> *Das Kapital*, Volksausgabe, I (Moscow, 1932), 513.

#### ECONOMIC BACKWARDNESS IN HISTORICAL PERSPECTIVE

affect the social judgment of remarriage. Still, it is the willingness to forget — the refusal to place a high value upon unity of life — that makes possible the position assumed in immigration societies. It is not surprising, therefore, that the propensity to write memoirs is so much more widespread in a settled society than in a migratory society. At the same time, such memoirs as do get written in an immigration society are much less in the nature of autobiographies in the proper sense of the word. They tend to deal with events, not with the span of a unique life. Maeterlinck once said that it is memory that presupposes and constitutes the unity of life. In the settled society it is the memoirs that as a rule are concerned with revealing a man's life as a straight line placed within limits that are both narrow and predetermined by the fixed coordinates of birth, family, social set or class, and professional endeavor.

These are significant differences which penetrate deeply into man's customs and feelings. They are the threads from which the fabric of everyday life is woven. They stem from the nature of the society in which they exist and they themselves exert a powerful influence upon the mobility and fluidity of social bodies. There is little doubt that they have direct bearing upon much of modern economic history. An immigration society and an industrial society are not coterminous. Obviously, there were immigration societies that had nothing to do with modern industry. On the other hand, a developed industrial society may have shed most of the qualities of an immigration society. Certain elements of such a shedding process have been clearly perceptible in the United States over the last quarter of a century or so. This is particularly true with regard to some of the aspects mentioned above. And yet one way of looking at the industrial evolution of the eighteenth and nineteenth centuries is to regard it as a change from a settled society to an immigration society. Every industrialization which was more than a mere development of manorial handicraft or a growth of cottage industry almost naturally tended to partake of the elements of an immigration society. Industrialization was destructive of provincialism. It metropolized the society. It broke the unity of man's life and, by so doing, tended to reduce the value attached to it.

It is true, of course, that within the old established political

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entities the transformation was slower and often less complete. To some extent, preindustrial values have been adjusted to new conditions rather than abandoned altogether. Still, no one can compare the habits of the population, say, in the teeming cities of the Ruhr Valley with those of the little towns in Mecklenburg or in any two similarly comparable areas in France, Italy, or any other European country without registering a profound difference in attitude toward a man's life. What is so peculiar about the Soviet type of industrialization is that it represents an attempt to build up an industrial society while preserving the basic features of a settled society. Revolutions, civil strife, and foreign wars have convulsed the land. The countryside has disgorged millions and millions of muzhiks into industrial employment. Large cities have been built in places where not even a tiny hamlet had anticipated the urban future. Tremendous migrations over the face of the enormous country have taken place. And still throughout this period of unprecedented change the government which has been responsible for most of the change has refused, as it were, to recognize its impact upon the course of individual lives. To repeat, this refusal is the real theme of Leonov's novel, to which we may now return.

In accordance with the established custom in Soviet novels, the "positive" hero, Professor Virkhov, has an antagonist, Professor Gratsianski. This bearer of a family name which was chosen to indicate descent from the Russian clergy bitterly attacks Virkhov's views on forestry policies. Unlike Virkhov, who is a conservationist, his opponent is in favor of placing the forest at the service of industrialization. This is reasonably straightforward. The substantive arguments used are much less so. Some of them are mere abuse and inconsistent abuse at that. While Virkhov accuses the bourgeoisie of destroying the Russian forest, Gratsianski refuses to be "scared" by the conservative rules of forest utilization invented by the bourgeoisie for its own purposes (p. 421). But there is no need to seek for clarity; arguments do not matter in reality. It is not by puncturing the opponent's logic or erudition that an argument can be won, but by puncturing his biography. Gratsianski derives most of the support for his point of view from the fact that Professor Virkhov as a boy had received a present of twenty-five rubles (about \$12.50 in old gold

dollars) from a wealthy businessman (p. 143). Furthermore, while he was a student, several payments of twenty-five rubles were made to him from a source that remained unknown. Gratsianski explains that it would be unrealistic to believe in pure philanthropic motivations on the part of the mysterious donor; it is much more natural to assume that he had some long-term designs and hoped to be recompensed at the cost of national properties at some remote future time when the former student would be holding a responsible position in forest administration. Furthermore, Virkhov had married a girl who had been raised on a gentry estate, and this circumstance, too, is used to refute Virkhov's ideas on what to do with the forests. Finally, there is an even more potent, seemingly incontrovertible argument which Gratsianski is holding in reserve as a secret weapon for the moment of the real showdown: this is his knowledge of the fact that Virkhov had adopted and raised the child of a "dekulakized" peasant.

This array of far-fetched nonsensicalities may be quite irrelevant to the point at issue. Yet they are taken seriously. Professor Virkhov's young and virtuous daughter, when informed of her father's dubious past, and particularly of the unexplained twenty-five rubles, is plunged into black despair. She tries to change the pronunciation of her name by shifting the accent to the first syllable so as to dissociate herself from her father; and she wonders whether acquaintance with the daughter of a tainted man will not be detrimental to her friend Varya. The technical expression used throughout the novel for damaging a person's reputation by associating with him or her is "to cast a shadow upon somebody."

It would be pleasant, and in fact almost liberating, if one could regard all this as a satire directed against the Soviet attitudes to biography. But unfortunately this is not possible. First of all, Leonov's "positive" character himself is the inventor of the concept of perfect biography. Second, the plot of the novel, divested of the incidentals of partisan fighting and air raids on Moscow, consists of nothing but the gradual unmasking of Gratsianski. His theories of forestry are confounded by showing that in his student days he had seduced and then heartlessly abandoned a girl and her child that was also his. And the *coup de grâce* falls when, through a series of contrived coincidences, it transpires that Gratsianski, again in his student days, stood

up an audience of workers to whom he was supposed to deliver a lecture and, in addition, betrayed to the police (somewhat unwittingly, it appears) a mutual friend of his and Virkhov's, the great revolutionary, who, as we have seen, later on was to become a student of Sombart's theories. Once these events of some thirty years ago have been revealed or are close to being revealed, Gratsianski is finished. A richly deserved punishment is in store for him, while Virkhov is rewarded by a medal and in addition recovers the wife who had left him many years earlier. (The separation, incidentally, had seemed final; still, mindful of the unity of their respective biographies, neither the professor nor his spouse entered into any new relationships.) But a man with Gratsianski's biography does not even know how to wait patiently for just retribution from society, as represented by the appropriate organs of the Soviet government. He remains an obdurate individualist and, after having composed a monograph on suicide, he himself chooses this "most despicable way of deserting from life" (p. 673). Thus virtue has triumphed and the battle of biographies has been satisfactorily decided by the victory of the less imperfect life story.

To summarize: this is an unattractive book. It contains unlearned disquisitions on forestry, brazen distortions of historical truth in supine obedience to the wishes of the dictators, a preposterous search for closets filled with skeletons, and characters drawn with the tritest means. And all this is presented in a pretentious, perfectly unnatural style and is spread thinly over nearly eight hundred pages of dense print — with frank disregard of all counsels of artistic economy. And yet it is an important book which makes a real contribution to our understanding of Soviet society. In dealing with the curiosities of imperfect biographies, it actually reveals the imperfections of Soviet industrialization.

It is not the first time in Russian history that economic development designed to close the gap between Russia and the West has westernized Russia in some respects while keeping it oriental or even "orientalizing" it in others. The reforms of Peter the Great were a great step toward westernization. But the simultaneous curtailing of the liberty of all classes of the population was a step away from the West. The unevenness of Soviet progress is its most outstanding trait.

Soviet industrialization conducted under the auspices of a ruthless dictatorship has not received its economic consummation: the Soviet government cannot afford to let its population enjoy the fruits of industrialization in the form of a rapid increase in the levels of consumption. But just as consumption is kept close to preindustrialization levels — thus, in effect, ignoring the changes that have taken place in the size of capital stocks, in the knowledge of technological processes, and in the skill of the workers — so the evaluation of human beings is still kept at a level consonant with small and stable preindustrial settlements rather than with the large and rapidly growing industrial centers. These provincial attitudes have been perpetuated with a vengeance. Just as serfdom in Russia was conjoined with a modern police state and hence approached outright slavery to a degree unknown in the West, the ubiquitousness of the Soviet dictatorship has raised provincialism to the level of a national dogma and, in so doing, has made it more destructive of individual freedom and happiness than genuine provincialism ever was.

It is the essence of preindustrial societies to stand upon traditionalism, to live in the past and according to the past and to value it highly. It is the essence of industrial, or at least industrializing, societies to let bygones be bygones, to live in the present and to think of the future. It is paradoxical indeed that the Soviet society, which is so strongly bent upon change, has shown such a high rate of economic growth, and claims to live for the future, should unceasingly probe into the past of its individual members; it is strange that a system which has discovered for itself that only falsifying the past yields perfect history should persist in clamoring for perfect biography. If the Soviet writers were allowed to notice these inconsistencies and to discuss them publicly, they might well be tempted to speak of "dialectics" and "historical contradictions." As it is, they prefer to think in absolutes. The government establishes a categorical distinction between good and evil in a man's past and makes it operational through the instrument of the questionnaire — the Soviet substitute for, and improvement upon, memoir writing. Perfect memory is enforced by law. The *Ivany Nepomnyashchiye*, the nonremembering Ivans, who used to roam over the Russian plain and were the bane of the tsarist police, are still not allowed to plead poor memory. They

have been taught to read and write. Accordingly, they must read the questions and write the answers, weaving the flimsy web of a flawless life story.

One does not need Leonov's book in order to know that the life of the average Russian citizen is dominated and kept in perennial jeopardy by the questionnaire — this embodiment of and the perennial menace to perfect biography. But Leonov's novel does show how the institution of the ubiquitous questionnaire translates itself into men's thinking about men, how it becomes an institutionalized and internalized piece of social ideology and, as such, an instrument of domination. It is perhaps not pretty to see a writer of reputation extol and glorify the tools of police oppression. But whatever our judgment of Leonid Leonov, his book has both clarified and enriched our judgment of the social system that exists in Soviet Russia.

## II

Relations between the sexes present an obvious field for exercises in perfect biography. Marital fidelity is of course well suited to epitomize the unity of life and to stress the stability of a provincial society. Accordingly, Soviet literature as a rule has shown no interest in matrimonial deviations and sexual irregularities. For a long time the novelists went on mass-producing cheap figurines of Baucis and Philemon, dressed up in Soviet style, and sometimes even had recourse to the Soviet Olympus for appropriate substitutions for the roles of Zeus and Hermes in the Greek story. It is one thing, however, to track down and to expose the possessor of an impure biography. It is another thing blandly to deny his existence. By depicting Soviet citizens, male and female, either as fierce virgins or monogamous maniacs, Soviet novels inevitably came into conflict with reality, which, in these particular areas, was neither fierce nor maniacal.

Fortunately, there are limits to this decline of Russian literature to the level of penny — or kopek — novelettes. Presumably, the tradition of the Russian novel — which means its competition with the Soviet novel for the interest of the modern reader — is a strong force in keeping the Soviet novel within the bounds of verisimilitude. As a result, there have been two or three ethnographically more valuable



treatments of marriage in Soviet Russia. First, the novel *Ivan Ivanovich* by Antonina Koptayeva (Moscow, 1949) produced surprise among Soviet readers by demonstrating the incredible fact that a marriage of two perfectly decent people can fall apart; and that even an energetic intervention on the part of the local party boss (first secretary of the Raykom) may fail to put it together again. Koptayeva then wrote a second novel, *Druzhba* (Friendship; Moscow, 1956), in which the tradition of the happy ending — even more deeply rooted in the Soviet novel than in the Hollywood movie — emerged triumphant. In the inferno of besieged Stalingrad, the hero, Ivan Ivanovich, a surgeon by trade and an abandoned husband by misfortune, manages to form a new attachment after having saved the life of his former wife through a skillful operation and having wavered for some time among several attractive candidates. These novels, too, contain some expressions of opinion on international politics and the course of world history. Such cogitations fully deserve to be placed beside those of Leonov which have been quoted earlier. The two books provide some sidelights on the grasping arrogance of the local party boss, who even tries to prescribe the types of operations which a surgeon may or may not perform in the local hospital; the way in which these ambitions are curbed by a successful appeal to higher party authorities is no less instructive than the threat of criminal prosecution to which a wrong diagnosis seems to expose the physician. But the novels' main interest stems from their having blazed the trail for a fuller and freer treatment of Soviet marriage.<sup>5</sup>

Such a presentation is contained in Galina Nikolayeva's *Bitva v puti* (Battle on the Road), a novel which appeared serially in 1957 in the journal *Oktyabr*.<sup>6</sup> This no doubt is one of the most revealing products of recent Soviet belles-lettres. It is not simply a novel about the risks of Soviet matrimony. Like most Soviet novels, *Battle on the Road* provides valuable insights into aspects of Soviet life which, although unflattering, are so common within the system that they are

<sup>5</sup> In what appears to be her latest novel, *Derzaniye* (Daring; Moscow, 1959), Koptayeva proceeds to wreck the second marriage of the surgeon, who leaves his wife in order to correct an error of choice made in Stalingrad a decade earlier. Fortunately for the abandoned wife, she too is put on the road to an alternative happiness.

<sup>6</sup> Nos. 3-7; in subsequent references, only the issue and page numbers will be cited.

considered perfectly natural, and their inclusion in a work of fiction is simply a sort of *Kleinmalerei*. For the same reason, they escape the blades of the censor's scissors. But Nikolayeva's novel offers a good deal more than a collection of *obiter pincta*. It bears the clear stamp of having been written after the Twentieth Party Congress, at the apogee of the rebound from the restraints of the Stalinist era. Both in being deliberately critical and in disregarding taboos, this novel is quite unusual and probably much more significant than Dudintsev's *Not by Bread Alone*, which happened to catch the eye of the reading public within and without Soviet Russia.

The novel supplies a broad canvas of Soviet life. In many respects, it confirms impressions previously gained of the way Soviet factories and collective farms operate. We have heard before about the problem of managerial honesty. Still it is interesting to note that the successful factory manager, in reporting the percentage of flawed goods in total output, deducts the permissible amounts, thus producing a more favorable picture by false means (no. 7, p. 120). A chairman of a kolkhoz caught in various prevarications insists that it is his honesty that makes him lie: "Honesty requires me to manage the kolkhoz in such a way as to yield profit to the State and to the *Kolkhozniks*. But planning sometimes is plainly directed against profit." And the writer dots the "i"s by adding that "the errors of planning and the trammels upon initiative" make it necessary for alert and dedicated men "to lie and to act deviously" (no. 5, p. 43). This is not in any sense novel information. We have known for a long time that illicit activities of the managers are designed both to evade the plan and to make its operation possible. But it is perhaps the first time that a Soviet writer has stated the complexity of the situation so sharply and so frankly.

The factory manager has an "exchange fund," that is to say, concealed stacks of goods which he can offer to the railroads as a consideration for extra-quick service; alternatively, he lets his factory shops perform special and quite unscheduled repair work for the railroads (no. 5, pp. 26, 27, 92). This again is a well-known phenomenon — a part of the Soviet concept of *blat* or *blatmeysterstvo*, terms which originally referred to the underworld and underworld operations but which in Soviet Russia have come to connote illicit economic opera-

tions.<sup>7</sup> But the description of these conditions is given a very modern, post-Stalin twist in the novel. The director of the factory, which manufactures tractors, returns from Moscow to announce that the factory will henceforth contribute its share to the output of consumers' goods by establishing workshops producing beds, frying pans, stove parts, and similar commodities. The decision reflects the promises to improve the levels of consumption made first by Malenkov and then by Khrushchev. But the reason for the director's readiness to add output of pots and pans to that of tractors should be noted: to have consumers' goods at his disposal will greatly increase his bargaining position in various *blat* operations. And equally enlightening is the fact that the director's opponent in the factory, the chief engineer — the "positive" hero of the novel — combats inclusion of consumers' goods in the production program because what Soviet factories need is efficient specialization in a few well-defined operations rather than dissipation of energies in attempts to produce a wide variety of articles. According to the chief engineer, it is bad enough that the factory must continue to produce the smallest and simplest parts that go into a tractor engine instead of receiving them from the outside (no. 5, p. 67). The difficulties in organizing efficient interfactory cooperation have long been a very sore point in Soviet industrialization. It is quite instructive to see how the half-sincere attempts to satisfy consumers by makeshift arrangements, while avoiding the requisite structural changes, are received within Soviet factories.

Nikolayeva's critique does not confine itself to the relative safety of local conditions in the factory. The target has been widened to include the powerful first secretary of the Obkom, the virtual boss of a huge region and of the ministry to which the tractor factory reports and which is accused of having lost its grasp of the enormously expanded productive machinery. In the end, the struggle within the factory is satisfactorily resolved. Both the director of the factory and the first secretary of the regional party committee are exposed and demoted. The secretary, who is described as having worshipped the infallible, mysterious, incomprehensible power of one man, the chosen

<sup>7</sup> Etymologically, the term *blat* comes from the German *Platte* — gang (of criminals or rowdies). It probably fits well into the Russian language because of the subconscious association with the Church-Slavonic *blato*, "swamp or filth."

vessel of wisdom (no. 6, p. 44), tries to speak of the "magnificent construction of our era" which make it inevitable for the Ivan Ivanovich Ivanovs to restrict themselves and even to make some sacrifices (no. 7, p. 115). But the chairman of the Central Committee meeting which sets everything right cuts the secretary short: "But some people regard those sacrifices as a grave and temporary necessity which must be terminated as quickly as possible; others regard them as a natural law which it does not pay to think about and which it is harmful to talk about" (p. 115). The practical effect of the two positions may be identical. But this remark spells the doom of the secretary and the director. The chief engineer becomes the director of the factory, eager to remedy past errors and omissions and in particular to do something about the main evil of Soviet factories and collective farms: "the mechanization without organization" (no. 4, p. 73; no. 5, p. 113; no. 7, p. 129), which certainly is an aphoristically felicitous way — thrice repeated — of pointing to a crucial problem of Soviet economic development, a disability to which much attention is likely to be devoted in the next few years.

To appreciate the full breadth of Nikolayeva's criticism, add to the foregoing, first, the fact that the husband of the heroine, a devoted party member, is arrested and executed as an "enemy of the people"; then the description of the general atmosphere of shivering cowardice, including the suggestion that members of the secret police are not above taking advantage of the wives of arrested men; and, finally, the expulsion of the heroine, even prior to her husband's execution, from the Communist youth organization on charges of being overdressed at a meeting and of having failed to greet her fellow members properly (no. 4, pp. 28-33).

Some of Nikolayeva's strictures simply justify certain reforms of the Khrushchev era. The attacks upon economic ministries which adumbrate Khrushchev's decentralization are of this kind. But, on the whole, her criticism has been bold, comprehensive, and far-reaching. To be sure, she has remained true to the Soviet tradition and has served up a happy ending in which rewards and retributions are distributed to each according to his deserts. The reader is left with the strong suggestion that the change for the better within the tractor factory is bound to be duplicated over the whole range of the Soviet

economy. The fateful knocks on the door in the dead of night belong to the past. The Soviet citizen can sleep quietly, and the future seems bright.

And yet the peculiarity of Nikolayeva's novel is that her happy ending is confined to the public sphere, as it were. At the level of private relations and in terms of individual happiness, the novel ends in gloom and despair.<sup>8</sup> It is at this level that Nikolayeva's novel represents a real innovation in Soviet literature, being the first whose central theme is adultery. The subject is introduced and treated with circumspection. "Socialist people are not made for adultery," says the hero. (no. 7, p. 93). There is no description of the pleasures of the flesh. But there is human truth in the irresistibility of the attraction which the hero — the chief engineer — and the heroine — an engineer in the same factory — feel for each other. An oft-told story is related with simplicity and dignity, and the long years of spinsterly modesty enforced upon literature by a government that trod under foot all laws of decency elevate the appearance of this story to the rank of a political sensation.

Its primary significance, however, does not lie in providing a high point on the gauge by which fluctuations in post-Stalinist liberalism can be measured. Much more important is the unusual glance into the more permanent and more stable structure of the Soviet value system which Nikolayeva's story affords. The happiness of the lovers finds a sudden termination in the fashion standardized by the second-rate French novel of the nineteenth century. By accident, the deceived wife surprises the sinful pair in the *pied-à-terre* which they have rented on the periphery of the town. By the next morning the story is the talk of the town. The party cannot remain indifferent, and the new first secretary of the Obkom hastens to the factory to comfort the new director, who bravely exhibits the "face of a fighter." And the woman? Alas, no one comforts her. She cannot return to the factory and must leave town, which she promptly does, after having confessed her sin

<sup>8</sup> In this respect, the present novel is very different from Nikolayeva's earlier novel, *Zhatva* (Harvest), for which, in 1950, she received a Stalin Prize. The high award was richly deserved. For in that fully standardized and altogether uncritical presentation of life on a postwar collective farm, public and private happy endings were indeed one and indivisible.

to her husband and having received from her lover three hundred rubles for travel expenses.

Once more the provincialism of the Soviet value system has been exposed. A settled society has little respect for privacy. Neither the town nor the factory nor the party boss is willing to regard the episode as the private affair of those immediately concerned. But what is even more striking is that in this case Soviet provincialism has not only the same form but also the same substance as the time-honored provincialism of the so-called bourgeois societies. It is the woman whose biography has received the indelible stain. The man can escape unscathed, the beauty blemish hardly affecting the perfection of his biography. His marital life will go on as before and the unity of his life will remain unbroken. Again, one can only marvel at the paradoxical complexity of Soviet society. It has allowed women to become engineers in steel mills and to perform physical jobs which in less socialistic countries are entrusted to men, and preferably to machines. But right and wrong in sexual relations are still distributed in patterns that were formed in the days when the village blacksmith was the main exponent of industrialization. Thus, when the provincial quest for perfect biography is somewhat relaxed, the underlying provincialism of the value system becomes even more apparent and even more surprising.

### III

Thanks to Nikolayeva's critical attitude, the curtain has been lifted to allow at least a glance at some hitherto concealed sides of Soviet life. It would be quite erroneous, however, to assume that novels lacking in critical spirit are necessarily uninformative and unilluminating. Vsevolod Kochetov's novels are a case in point. Here is a writer raised and steeped in the atmosphere of Soviet conformity. Through his novels, beginning with *Pod nebom rodiny* (Under the Sky of the Fatherland; Leningrad, 1955), which was written between 1947 and 1950, usually passes a member of the secret police who is a truly fine chap, possessed of all kinds of virtues. Even in a discussion between two agronomists on the structure of relative prices in the United States and Soviet Russia — the price ratio of cars and horses in the two countries is at issue — the hero quickly confounds his ad-

versary by a thinly veiled threat of denunciation to the GPU (*Pod nebom rodiny*, p. 124). It is natural for Kochetov to deprecate increases in the standard of living of the Soviet population: what matters, he says, is increase in the productivity of labor (p. 259).

In prerevolutionary Russia there was a type of writer generally characterized as belonging to the school of *Chego izvolite?* — “What can I do for you, sir?” Kochetov’s servility has been remarkable even under Soviet conditions. In his second novel, *Zhurbin* (The Zhurbins; Leningrad, 1953), published in the last year of Stalin’s life, the novelist was quick to notice the rising tide of Soviet anti-Semitism, and he obliged by assigning to a Jew the role of the only unreformed scoundrel in the book. Some scholars have preferred to withdraw from the pressures of life in Soviet Russia into pure theory. Again, Kochetov’s watchful eye is upon them — and in his third novel, *Molodost’ s nami* (Youth Is with Us; Moscow, 1957), this contemptible behavior is appropriately castigated (p. 93). In the fourth novel, *Brat’ya Yershovy* (The Yershov Brothers), which is said to have sold several hundred thousand copies, Kochetov rushed to the defense of the dictatorship against the critics of the post-Stalin era.<sup>9</sup>

In a sense, the book is a deliberate retort — novel for novel — to Dudintsev. If the latter tried to show how factory management, government bureaucracy, academic experts, and even judicial organs conspired in order to suppress an invention and punish the inventor, Kochetov puts the conspiratorial shoe on the other foot and serves up a fraudulent inventor who is engaged in criminal intrigues directed against the factory director and the party bosses. In addition, he also manages to insert into his novel (no. 6, p. 97) some brief mockery of Ehrenburg’s *The Thaw*, which was one of the first, if not the first, literary expressions of dissatisfaction with Stalin’s era. He is anxious to issue warnings against the tendency to accept with open arms the returnees from jails and forced-labor camps: “One must distinguish between those who suffered innocently and those who were released out of generosity . . . The Soviet government has a generous soul . . . It is generous because it is strong . . .” (p. 20). In short, Kochetov is a faithful servant of the regime, its willing mouthpiece. And still his novels contain much more than just a few grains of useful infor-

<sup>9</sup> *Brat’ya Yershovy* appeared in 1958 in *Neva*, nos. 6–7; in subsequent references only the issue and page numbers will be cited.

mation, the value of which is all the greater since one must assume that it has been imparted quite unwittingly. A few examples may be in order here.

It is *Brat’ya Yershovy* that most impressively and quite effortlessly gives the reader some feeling of the extent of informing and denouncing which thicken the air in Soviet Russia. The city boss, the first secretary of the Gorkom, Gorbachev, is presented as a person of excellent standing and impeccable reputation. But the enemy is on the march. The wily and false inventor composes a denunciatory epistle in which Gorbachev is accused of having used city snow plows in order to clear the street in front of his daughter’s house on the day of her wedding. The denunciation goes to the next higher party authority, the first secretary of the Obkom. The latter knows that the maligned person has a weak heart; there is no doubt about the trifling character of the complaint. But the Soviet code of action prescribes paying full attention to every accusation. Gorbachev is shown the letter, suffers a heart attack, and dies (no. 7, pp. 119 f). It is truly impressive to observe Kochetov’s uncharming naïveté which makes him believe and make believe in his turn that it is the anti-Soviet inventor who has killed Gorbachev rather than the defenselessness of the dictatorial police state against informers.

That informing is a problem not even Kochetov can pretend to ignore. Another member of Kochetov’s collection of ideal GPU men suddenly breaks out in a long tirade against the “slanderers, careerists, . . . whose denunciations clog the machinery of the party, of the soviets, and of the judiciary.” He adds, “I am afraid of them” (*Molodost’ s nami*, p. 433). The colonel’s further suggestion that “there should be a law against informing” may be a helpful one, provided that the law also institutes a different attitude to human biography.

It is in the same novel that incidentally, by way of explaining the weakness of a character, Kochetov refers to an earlier episode in his life. The character, a professor, in filling out a questionnaire, had represented himself as the son of an artisan when in reality he was the son of a miller. An amateur hunter for inconsistencies in questionnaires discovered and denounced the falsification. A long investigation followed in which an unbelievable number of various governmental agencies and party authorities participated. It was the professor’s wife whose boundless energy and perseverance beat off

the attack, but not before she had gone to the Central Committee. Her husband was saved, but he never recovered from the experience (pp. 218-19).

Nor is it merely the state and the party that are on the lookout for biographical chinks. The private citizen is well trained to do his own private investigating, as it were, in a supplementary fashion. One of the brothers of the Yershov family was a prisoner of war of the Germans. After his return to Russia he spent years in a forced-labor camp. When, finally, he is allowed to return to his home town, his own brothers subject him to a grueling, humiliating, and pointless crossexamination (no. 6, p. 80). These are indeed useful illustrations of Leonid Leonov's ideal of a perfect biography and of what it means when the concept is shifted from abstract theory to everyday life. Soviet novels explain both Soviet life and Soviet novels. With the help of Kochetov's novels one can place Leonov's ideal of a perfect biography in a perfect society in its proper perspective and learn to distinguish more clearly between the mechanics of power exercised within a dictatorial system and the trappings of an outworn ideology.

There is much said in *Brat'ya Yershovy* about art and literature. One gets some idea as to how far-reaching has been the dissatisfaction with the official art and official literature, and how important was the wave of fresh air that came rushing in from Poland and Hungary. "They say in Poland that socialist realism is good for nothing but plywood constructions," says one of the heroes in Kochetov's novel (no. 7, p. 84), possibly one of those who, again according to Kochetov, kept their mouths shut for decades and now after Stalin's dethronement have been emboldened to raise their voices in criticism (p. 94). Will this movement of long-suppressed protest bear some permanent fruit? Or will the Kochetovs and those behind them — and above them — continue to keep Russian literature within the pinfold of socialist realism under the watchful eye of dictatorial censorship? The prospect may be as cheerless as the retrospect. There is no doubt that the Soviet government can effectively preclude the revival of the Russian novel. But it is quite unlikely that it can fully succeed in obstructing the Soviet novel's revelatory function. This is the conclusion that emerges *a minori ad maius* from Vsevolod Kochetov's literary exercises.

## Notes on Doctor Zhivago

Сквозь прошлого перипетии  
И годы войн и нищеты,  
Я молча узнавал России  
Неповторимые черты.  
Борис Пастернак  
("На ранних поездах")<sup>1</sup>

Россия, страна моя . . .  
Облеченная солнцем жена . . .  
Андрей Белый  
("Христос Воскрес")<sup>2</sup>

О Русь моя! Жена моя!  
Александр Блок  
("На поле Куликовом")

AT TIMES, nothing fails like success, and art appreciation by ballot is often precarious. The vote of the Swedish Academy was swiftly followed by the landslide vote in the marketplace. As a result the novel *Doctor Zhivago*, the strangest stranger among bestsellers

<sup>1</sup> There are two alternative translations of these four lines from Boris Pasternak's poem "On Early Trains":

Through all the trials of the past,	But brooding over past reverses
The years of war and hardship,	And years of penury and war,
I silently identified	In silence I discern my people's
Russia's inimitable features.	Incomparable traits once more.

(Translated by George Reavey) (Translated by Eugene M. Kayden)

Neither rendition brings out clearly Pasternak's personification of Russia.

<sup>2</sup> "Russia, my country . . ."

The woman clad in sun rays . . ."

Andrey Bely, "Christ Has Arisen"

<sup>3</sup> "Oh my Russia! My wife!"

Alexander Blok, "On the Kulikovo Battlefield"

came into countless hands that never should have touched it and was presented to minds that were totally unprepared for its meaning and significance. The unreasoned success was bound to end in an unreasonable failure. As the din of the bazaar, produced by political journalism and inane sensationalism, is dying down, one can at length hear the multilingual chorus of literary criticism. It is saddening, but not surprising, to find that the voices of the detractors ring out so much more clearly and firmly than those of the admirers; and that they seem to be listened to approvingly by many a disappointed reader. Unfortunately, the strictures are as obtuse as has been the praise.

I hear it said over and over again that *Doctor Zhivago* is not "a great novel" and that *War and Peace* is incomparably "greater." I am not certain that Ibsen or Chekhov may no longer be regarded as great playwrights, once their inferiority to Shakespeare has been demonstrated. Moreover, the only safe test, the acid test of a book's greatness, is its inclusion, a century after publication, in a Harvard course on great novels. Let us be patient, therefore. For my part, I am content to leave the decision to posterity in the hope, of course, that the twenty-first century will not turn out to be even more barbarous than its miserable predecessor.

Hence I do not propose to waste my time on a discussion of the obvious, but not very interesting, shortcomings of the novel. It would have been more pleasant if Dr. Zhivago's and his partners' conversational style were not so hopelessly stilted. It would have looked better if the large chunks of which the novel consists were not nailed together in such a crude and haphazard way, leaving the large clefts in motivations and events either uncalked or filled by hastily contrived coincidences. Over the last generation or so, the technique of writing novels has been enormously improved and employed to great advantage by writers who had little or nothing to say. Accordingly, the modern reader has been raised to believe that the "structure of the novel" is everything and to forget that fine carpentry may betray the hand of a skilled artisan but not the touch of a great artist. Pasternak is not a Tolstoy, nor is he a Shakespeare; but a good deal of this type of faultfinding recalls Tolstoy's preposterously persuasive attempt to

show the complete absence of "naturalness," "logic," and "common sense" in *King Lear*. As Shakespeare survived Tolstoy's contumely, Pasternak in all likelihood will survive the strictures of our less illustrious contemporaries.

Nor do I wish to participate in micrological expeditions through Pasternak's pages in search for real or imaginary allusions. Again, I realize that modern poets have conditioned this weak and suggestible generation to confuse appreciation of art with a merry egg hunt. The maker of verse or stories — a parental figure — hides a number of eggs, very small in size and of varying degrees of freshness, and lets them be joyously discovered by the readers, who get thoroughly rejuvenated in the process. To refer to a thought expressed in a recent seminar discussion,<sup>4</sup> Pasternak's Lara may, through negligent pressing, let her whole wardrobe go up in holy smoke, and still the proposition may be false that the farther a critic has to go to fetch a tortured egg the better it will taste. *Laissons ces enfantillages!*

For the purpose of these remarks, *Doctor Zhivago*, then, is neither a bluebook to be graded nor a collection of puzzles over which to exercise our ingenuity and to exhibit our erudition. If any eggs are to be found in the following, their size will be extra-large. Most of what I have to say is related to my belief that in several important respects the novel is a return to the Russian literary tradition that only a short time ago seemed to be dead and buried and forgotten, at least by the members of the Union of Soviet Writers. It is easy, if one so desires, to regard *Doctor Zhivago* as an anti-Soviet novel. The letter of rejection which the former editorial board of *Novy Mir* claims to have addressed to Pasternak may be genuine or a latter-day falsification, wholly or in part. Still, unless the thaw of those days was to be followed by a real spring (which, of course, it never was), there was every political reason not to publish the novel in Soviet Russia. The editorial board's instinct for self-preservation was blissfully undeceived about that. And yet much more important than the anti-Soviet character of *Doctor Zhivago* is its pre-Soviet

<sup>4</sup> The suggestion is that Lara's name alludes to St. Larisa, who was tortured and burned at the stake and that this is indicated in the novel by smoke or the smell of smoke around Lara.



character; or, to put it somewhat differently, what is so anti-Soviet about the novel is its being so clearly pre-Soviet. Its language, its central figure, and its main theme all belong to a main strain of Russian literature of the nineteenth century.

The language above all! The translation by Max Hayward and Manya Harari is excellent indeed. Edmund Wilson may have scored a dozen times in pointing out omissions, weaknesses, and errors. What are they compared with thousands — literally thousands — of cases in which most difficult problems of rendition have been solved successfully and often brilliantly? The English translation of *Doctor Zhivago* supplies one of the strongest pieces of corroborative evidence for the “translatability thesis” which Georges Mounin has expounded with such zeal (and strangely un-French pedantry) in *Les belles infidèles* (Paris, 1955). Nonetheless, as one listens to criticism of the novel by those who have read it in English, one almost wonders whether it might not have been the better part of wisdom to leave the novel untranslated — into English or any other language. Such thoughts must be suppressed as soon as they are uttered, but the point remains that certain things about the novel that seem to bear crucially upon its meaning and message are lost beyond retrieve in translation. The novel must be read in Russian, and both the knowledge of contemporary literary Russian style and the remembrance of Pasternak’s more remote antecedents must be strong upon the reader. Only then can he perceive and appreciate the miracle of Pasternak’s language.

After a generation of Russian writers have debased themselves and their craft in writing Russian with a Georgian accent; after every unhackneyed word or unusual phrase, artistic image, or anything that surpassed the literary ability — or debility — of the dictator has come to be regarded as prima-facie evidence of counterrevolutionary conspiracy, one finds in Pasternak’s novel the old Russian language in all its pristine glory, emerging unreduced and unweakened from the long years of its bewitched sleep. How can any translator hope to render the wonders of this reawakening?

In George M. Trevelyan’s *History of England* (Book I, chap. 8), there is an inspired passage on the vicissitudes of the English

language. For three centuries after the Conquest it had been trodden under foot as the villainous jargon of an illiterate peasantry, only to return transfigured, with added grace and suppleness and force, in Chaucer’s *Tales* and Wycliffe’s *Bible*. All analogies limp. One generation is not ten, and Pasternak’s language may be an echo of the past rather than the reveille of the new day. Still, the reappearance of the despised “jargon” of the Russian intelligentsia after several decades and after millions of pages of the dreariest prose in the history of world literature bears witness to the immortality of the spirit:

Nicht alle sind tot, die begraben sind;  
Denn sie töten den Geist nicht, ihr Brüder!

In Pasternak’s work, literary Russia (like England in Taine’s phrase<sup>6</sup>) has recovered her voice. The translation can reveal Dr. Yuri Zhivago as the central figure. It cannot reveal the fact that the “Word,” the language of the novel, is its hero in a sense that is antecedent and basic to Zhivago’s role. For this story of a Russian intellectual, that is to say, the story of the Russian intelligentsia, is conveyed through a medium which was created by generations of Russian intellectuals to be continually recreated and remolded.

Even so, the theme of the novel and its philosophical problem, though perhaps not the solution offered, are recreations of Russian literary tradition. In particular, Pasternak must remain unintelligible without Blok. Pasternak has called *Doctor Zhivago* a “novel in prose.”<sup>8</sup> But the allusion, properly understood, should be to Alexander Blok rather than to Alexander Pushkin. The novel should be seen as a “poem in prose,” a retelling, that is, of a poem by Blok.<sup>7</sup>

<sup>6</sup> H. Taine, *Histoire de la littérature anglaise*, I (Paris, 1866), 162.

<sup>7</sup> *An Essay in Autobiography* (London, 1959), p. 119.

<sup>8</sup> I have not seen an English translation of this poem. The following French translation (by Serge Karsky) may serve as an ersatz:

Russie, misérable Russie. . . .

Je ne sais pas te plaindre  
Et porte ma croix précieusement . . .  
A l'enchanteur que tu voudras  
Fais don de ta beauté sauvage!

Россия, нищая Россия . . .  
 Тебя жалеть я не умею,  
 И крест свой бережно несу . . .  
 Какому хочешь чародею  
 Отдай разбойную красу!  
 Пускай заманит и обманет—  
 Не пропадешь, не сгинешь ты,  
 И лишь разлука затуманит  
 Твои прекрасные черты . . .

Is this not Dr. Zhivago talking to Lara and saying things he never was made to say so clearly in the novel? Was not Lara tempted and carried away by the two sorcerers, Komarovski and Antipov-Strel'nikov? Komarovski's features were etched in steel by the very course of Russia's social and economic history: selfish and possessive, pleasure-loving and cruel, he is responsible for the death of Zhivago's father and for Lara's debasement; yet, intelligent and efficient, though neither farsighted nor wise, he appears as a savior in the hour of danger, offering travel on comfortable trains to a life of material contentment at the expense of brutally erased memories and frustrated yearnings. Not evil enough and not great enough to be "ein Teil von jener Kraft, die stets das Böse will und stets das Gute schafft," he does not shrink from sinning frequently and grievously, while his atonements are rare and ambiguous. Twice he tried to hold Lara and failed.

By contrast, Antipov's charms — his *charm* — are not of this world. He is the incarnation of purity and goodness. The filth of his lowly origins left no spot on his white garments. Nor was his rise from abject poverty marred by greed for money or power. Learning is the way of the righteous. It liberated and elevated Antipov and made him worthy to be chosen by Lara. But without creative power, knowledge — in two disciplines — is barren, and the desperate resort to heroism and self-sacrifice in war and civil war only shows the futility of destroying *because* one cannot create.

Qu'il te séduise et qu'il te trompe  
 Tu ne sombreras pas dans le néant,  
 Seul le souci déposera un voile  
 Sur les traits si beaux. . . .

From Nina Berberova, *Alexandre Blok et son temps* (Paris, 1947), pp. 23-33.

Thus the two *charodei* with whom Lara was united in marriage have no power over her. The charms are soon broken. A *razboynaya krasa* — a lawless beauty — is not made for matrimony blessed by church or state. Neither the vigor of capitalism nor the dreamlike image of proletarian virtue has lasting attraction. What does last is the free bond with Dr. Zhivago, the bond between real Russia and the intelligentsia. For Lara is real Russia. She is not westernized Russia as is Tonia, the wedded wife, who is so properly shunted away to France where she belongs. "I was born to make life simple and to look for sensible solutions; she to make life more complicated and create confusion," writes Tonia in her farewell letter to Zhivago. But her complaints are futile, and Western rationalism has no chance. Its recipes are wholesome but inapplicable. For the torture of crucifixion is not sensible, and the miracle of resurrection is not simple. Hence the future, the resurrection, and the life in Russia belong to the child of Zhivago's creative spirit and Lara's passive beauty.

General Evgraf Zhivago, the *good* go-getter and trouble-shooter (as distinguished from Komarovski, whose efficiency was not accompanied by high ethical standards) will serve as the guardian angel of the new generation — an arrangement which makes very good sense. Since capitalism proved less than perfectly satisfactory and socialism so altogether unsatisfactory, it would seem quite natural to entrust the young (or rejuvenated) woman to the cares of the army.

Thus the main theme of *Doctor Zhivago* goes back to Blok and beyond Blok to the great Russians of the past century. In one form or another, Russia's historical road and the intelligentsia's task always were the dominating problem. Pasternak's novel is an addition to a long series of *geschichtsphilosophische Betrachtungen* in the guise of novels. It came after a long hiatus. The hiatus itself was filled to the brim with world history. One must not be surprised, therefore, that while *Doctor Zhivago* raises the traditional questions, the answers it gives are somewhat different from those to which the generations of the nineteenth century had listened so eagerly.

In a sense, Dr. Zhivago (the man, not the novel) is still another picture in the crowded gallery of *lishniye lyudi* — "the superfluous people" of Russian literature. Onegin and Pechorin, Belto and Oblomov, Rudin and Nezhdanov — these are some of Zhivago's

literary predecessors. All of them were failures as men of practical action, unable to help Russia and the Russian people. Zhivago was "superfluous" in the revolution and civil war of which he was a casual observer. It is not for nothing that Tonia charged him with "complete absence of will." If he had not died in 1929, he would have been as superfluous in the task of Soviet superindustrialization as was his creator. But at this point the continuity breaks or, at least, seems to break. A hundred years ago Russian novelists considered the superfluousness of a Russian intellectual a burden and a curse. Useful life was life dedicated to the collective, to the people. For Pasternak, this type of redundancy has deep and positive meaning. An *Umwertung der Werte* has occurred.<sup>8</sup> For the Russian radicals of the 1860s a pair of good boots was a far more useful commodity than the Venus de Milo. For Pasternak and his alter ego, one poem may be more important than all the problems of economic progress: To write poetry and, perhaps, to cure men — did not Christ speak in parables and heal the lame and the blind? — this is the true meaning of life, and what may seem superfluous to the collectively organized world may be a deeply felt necessity to the individual.

In a deeper sense, however, the continuity is still unbroken. However strong the intelligentsia's commitment to the weal of the people and to an ideal society, its Weltanschauung was always conceived as free decisions of free men and as such reflected the intelligentsia's fundamental individualism. It is not paradoxical to suggest that, precisely because its thinking was so often warped by a "false ambition of consistency" and thereby driven into many a dogmatic

<sup>8</sup> Perhaps nothing epitomizes the change more succinctly than a comparison of Turgenev's and Pasternak's views on Hamlet. For Turgenev, Hamlet was a superfluous intellectual, a selfish skeptic, eternally and uselessly preoccupied with himself (I. S. Turgenev, "Gamlet i Don-Kikhot," *Sobraniye sochinenii* [Hamlet and Don Quixote, Collected Works], XI [Moscow, 1949], 8, 13). But for Pasternak, Hamlet is a drama of "duty and self-denial" and Hamlet himself "a judge of his time" and "a servant of the future" (Boris Pasternak, "Translating Shakespeare," *I Remember* [New York, 1959], pp. 130-31). In the very first of Dr. Zhivago's poems, the figure of Hamlet the son merges with that of the Son of Man. For a perceptive interpretation of this deep and difficult poem in which also Hamlet as dramatic persona and the actor who plays the part tend to become one, as do Pasternak and his hero, see Nils Åke Nilsson, "Life as Ecstasy and Sacrifice: Two Poems by Boris Pasternak," *Stando Slavica*, V (Copenhagen, 1959), 191-98.

impasse, the intelligentsia could not exist except in an atmosphere of free creative activity. When that freedom vanished, decay, disintegration, and, finally, death became inevitable. It is therefore not an accident that Zhivago's last years resemble the *Lebensabend* of the most superfluous of all the "superfluous" characters produced by Russian literature, that is, that of Goncharov's Oblomov. Nor is it surprising that Zhivago dies in 1929, the year so well described by Stalin as *god velikogo pereloma* — the year of the Great Break. In the world in which Stalin, the very negation of freedom and individual dignity, emerged victorious, there was no room for the intelligentsia. Its heart broke when its creative powers were destroyed.

Zhivago's death, however, is not a mere dissolution and disappearance. Nor is it just the predetermined effect of blindly working forces; it is not simply the angina pectoris within him and the anguish of life in Stalin's Russia around him that kills Pasternak's hero. His death is also an act of will, although a sacrifice rather than a suicide. This I take to be the meaning of the last poem appended to the novel, "The Garden of Gethsemane."<sup>9</sup>

Но книга жизни подошла к странице,  
Которая дороже всех святынь.  
Сейчас должно написанное сбыться  
Пусть же сбудется оно, аминь.

Ты видишь, ход веков подобен притче  
И может загореться на ходу.  
Во имя страшного ее величья  
Я в добровольных муках в гроб сойду.

Я в гроб сойду и в третий день восстану.

<sup>9</sup> The American edition of *Doctor Zhivago* (Pantheon, 1958) contains the following informative translation of these lines by Bernard G. Guernsey:

But now the book of life has reached a page  
Which is more precious than all holies.  
That which was written now must be fulfilled.  
Fulfilled be it then. Amen.

Seest thou, the passing of the ages is like a parable  
And in its passing it may burst to flame.  
In the name then of its awesome majesty  
I shall, in voluntary torments, descend into my grave.  
I shall descend into my grave. And on the third day rise again.

When the hour on the Mount of Olives had drawn to its close; when all the doubts have been resolved, the fears suppressed, and the last hopes extinguished; when what has been written is about to be fulfilled, it is still "in voluntary pain" to glorify "the terrible majesty" of what has been preordained as the "march of centuries" that Jesus is ready for his cross.<sup>10</sup> And this is the last word and the

Here again, Alexander Blok's poem has been the guiding beacon:

Когда в листья охрой и ржавой  
Рябины заалевает гроздь,—  
Когда палец рукой костлявой  
Вобьет в ладонь последний гвоздь,—  
Когда над рыбою рек свинцовой,  
В охрой и серой высоте,  
Прядь ликом родины суровой  
Я закачаю на кресте,—  
Тогда—просторно и далеко  
Смотрю сквозь кровь предмертных слез,  
И вижу по реке широкой  
Ко мне плывет в челне Христос,  
В глазах такие же надежды,  
И то же рубище на нем.  
И жалко смотрит из одежды  
Рука пробитая гвоздем,  
Христос! родной простор печален!  
Изнемогаю на кресте!  
И челн твой—будет ли причален  
К моей распятой высоте?

The following translation is by Babette Deutsch (*A Treasury of Russian Verse*, ed. A. Yarmolinski [New York, 1949], pp. 150-51):

When mountain ash in clusters reddens,  
Its leafage wet and stained with rust,  
When through my palm the nail that deadens  
My bony hands is shrewdly thrust,

When o'er the rippling, leaden river,  
Nailed to the cross, in agony,  
Upon the wet gray height I quiver,  
While, stern, my country watches me,

Then far and wide in anguish staring  
My eyes, grown stiff with tears, will see  
Down the road river slowly faring,  
Christ in a skiff approaching me.

summary of the parable which is thus so rightly pointed out (in his essay in *Partisan Review*). The philosophy of *Doctor Zhivago* is very different from that of *War and Peace*. The short spring term which Pasternak had spent in Marburg at the feet of Hermann Cohen was never forgotten. Cohen taught him well "was der Alte meinte"<sup>11</sup> in propounding the Third Antinomy in the *Critique of Pure Reason*. The causal determination of the phenomena and the normative freedom of the noumena receive their active resolution in the methodological dichotomy of *Sein und Sollen*.<sup>12</sup> Man is a norm-making creature. He may know a great deal about the causal world; he may be deeply impressed with the grandeur of the creation and with what he believes to be the world's predetermined course, and he may mold his norms accordingly. Yet the attempt to obliterate the duality of causality and imputation by substantive *Gleichschaltung* must fail. Norm-making in its deepest essence is and remains a free activity. Whatever the strength of the causal world and its power over the individual, it cannot destroy the normative world of individual freedom. Also, *amor fati* is a revocable act of choice. At times, the Russian intelligentsia may have masochistically abused its freedom in this respect—in addition to overestimating its own ability to scrutinize the paths of destiny; but its history, taken for all in all, bears eloquent witness for its aversion from tyranny in all forms. Thus, Osip Mandelstam, whose life thread

And in his eyes the same hopes biding,  
And the same rags from Him will trail,  
His garment piteously hiding  
The palm pierced by the final nail.

Christ! saddened are the native reaches.  
The cross tugs at my failing might,  
Thy skiff—will it achieve these beaches,  
And land here at my cruciate height?

Note the manifold significance of *ryabina*—the rowan tree or mountain ash—in *Doctor Zhivago*, and see in this connection the penetrating remarks by Renato Poggioli in "Boris Pasternak," *Partisan Review*, XXV, no. 4 (1958), 551.

<sup>11</sup> Boris Pasternak, *Safe Conduct* (New York, 1958), p. 75.

<sup>12</sup> I. Kant, *Kritik der reinen Vernunft*, *Werke in sechs Bänden* (6 vols.; Leipzig: Insel Verlag, n.d.), II, 498. The concept of the noumenon may be "problematic," "marginal," and only "negative," but the specific reality of the *Reich des Sollens* is neither problematic nor merely negative. Hermann Cohen, *Kants Begründung der Ethik* (Berlin, 1877), pp. 31, 115.

is said, for one fateful moment, to have become intertwined with Pasternak's, may have (in 1918) "glorified the intolerable oppression of the regime":

Прославим власти сумрачное бремя,  
Ее невыносимый гнет!

But it was his epigrams against the dictator that brought prison, banishment, and death upon that lover of Ovid.

It is, then, in "voluntary acceptance" of its fate that the Russian intelligentsia descended into the grave, secure in the knowledge of resurrection: the kingdom of human freedom will come. This, I think, is Pasternak's message. Its fate is uncertain. Imbedded in the context of the novel, it may pass unnoticed; torn out of it, it will hardly convince the skeptic. A message that appeals to faith can be confounded by doubt. Army generals are not necessarily the most trustworthy guardians of intellectual liberty. Yuri Zhivago is dead, and the hour of resurrection may never strike. Yet the novel called *Doctor Zhivago*, I believe, will not betray its name<sup>13</sup> and will live on as a monument to an art that, turning its back upon "les muses d'État,"<sup>14</sup> refused to be "made tongue-tied by authority" and fearlessly proclaimed the eternal truth that creative genius and freedom are as inseparable as human life and human breath.

<sup>13</sup> The Church-Slavonic name "Zhivago" relates to "life" and "living."

<sup>14</sup> Victor de Laprade, *Poèmes civiliques* (Paris, 1873), pp. 107-109.

## *The Approach to European Industrialization: A Postscript*

The gradual evolution of this writer's views on the industrial history of Europe has been presented in the first eight chapters of this volume. The purpose of the following pages is to offer a brief summary of those views; to point out certain inconsistencies, difficult to avoid in research processes which extend over a number of years and whose results are published seriatim; and most importantly, to say something about the crucial problem of the limitations to which the approach is subject and about the type of research that can profitably lead beyond those limitations.

The origin of this approach lies in two basic observations that can be formulated as follows. The map of Europe in the nineteenth century showed a motley picture of countries varying with regard to the degree of their economic backwardness. At the same time, processes of rapid industrialization started in several of those countries from very different levels of economic backwardness. Those differences in points — or planes — of departure, were of crucial significance for the nature of the subsequent development. Depending on a given country's degree of economic backwardness on the eve of its industrialization, the course and character of the latter tended to vary in a number of important respects. Those variations can be readily compressed into the shorthand of six propositions.

1. The more backward a country's economy, the more likely was its industrialization to start discontinuously as a sudden great spurt proceeding at a relatively high rate of growth of manufacturing output.<sup>1</sup>

<sup>1</sup> The "great spurt" is closely related to W. W. Rostow's "take-off" (*The Stages*

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2. The more backward a country's economy, the more pronounced was the stress in its industrialization on bigness of both plant and enterprise.

3. The more backward a country's economy, the greater was the stress upon producers' goods as against consumers' goods.

4. The more backward a country's economy, the heavier was the pressure upon the levels of consumption of the population.

5. The more backward a country's economy, the greater was the part played by special institutional factors designed to increase supply of capital to the nascent industries and, in addition, to provide them with less decentralized and better informed entrepreneurial guidance; the more backward the country, the more pronounced was the co-er-iveness and comprehensiveness of those factors.

6. The more backward a country, the less likely was its agriculture to play any active role by offering to the growing industries the advantages of an expanding industrial market based in turn on the rising productivity of agricultural labor.

As stated in Chapter 2, the differences in the levels of economic advance among the individual European countries or groups of countries in the last century were sufficiently large to make it possible to array those countries, or groups of countries, along a scale of increasing degrees of backwardness and thus to render the latter an operationally usable concept. Cutting two notches into that scale yields three groups of countries which may be roughly described as advanced, moderately backward, and very backward. To the extent that certain of the variations in our six propositions can also be conceived as discrete rather than continuous, the pattern assumes the form of a series of stage constructs. Understandably enough, this result obtains most naturally with regard to factors referred to in proposition 5, where quantitative differences are associated with qualitative, that is, institutional, variations. Then, for instance, the

of *Economic Growth*, Cambridge, Mass., 1960, chap. 4). Both concepts stress the element of specific discontinuity in economic development; great spurts, however, are confined to the area of manufacturing and mining, whereas take-offs refer to national output. Unfortunately, in the present state of our statistical information on long-term growth of national income (see Appendix III to this volume), there is hardly any way of establishing, let alone testing, the take-off hypotheses.

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relationships existing with regard to sources of capital supply, as sketched in Chapter 1, can be expressed as follows:

Stages	Advanced area	Area of moderate backwardness	Area of extreme backwardness
I	Factory	Banks	State
II		Factory	Banks
III			Factory

Such an attempt to view the course of industrialization as a schematic stagelike process differs essentially from the various efforts in "stage making," the common feature of which was the assumption that all economies were supposed regularly to pass through the same individual stages as they moved along the road of economic progress. The regularity may have been frankly presented as an inescapable "law" of economic development.<sup>2</sup> Alternatively, the element of necessity may have been somewhat disguised by well-meant, even though fairly meaningless, remarks about the choices that were open to society.<sup>3</sup> But all those schemes were dominated by the idea of uniformity. Thus, Rostow was at pains to assert that the process of industrialization repeated itself from country to country lumbering through his pentametric rhythm. Accordingly, Soviet Russia was like everybody else and rather confidently expected in the end to be propelled by the "Buddenbrooks dynamics" into the fifth stage of "high mass consumption."<sup>4</sup> Leaving erroneous literary allusions aside, there is, within a fairly wide margin, nothing wrong in principle with an approach which concentrates upon the interspatial similarities in industrial development. The existence of such similarities is very real.<sup>5</sup> Their study yields attractive simplicities, but it does so at the price of dismissing some refractory facts which a historian will ignore at his own peril. Those who see the essence of industri-

<sup>2</sup> See, for example, Bruno Hildebrand, *Die Nationalökonomie der Gegenwart und Zukunft und andere gesammelte Schriften*, I (Jena, 1922), 357.

<sup>3</sup> See Rostow, *The Stages of Economic Growth*, pp. 118f.

<sup>4</sup> Rostow, chap. 7 and p. 162. In kindness to the memory of Thomas Mann, it should be mentioned that *Buddenbrooks* is a novel dealing with the biological decay of a family whose vitality declines from generation to generation.

<sup>5</sup> See the discussion of this point in Chapter 1.



alization in the establishment of a strong and independent manufacturing enterprise need only to look diagonally across the previous tabulation in order to find such an enterprise in existence everywhere — in advanced England as well as in lagging Germany or in very backward Russia. Seen *in latum et in longum* — which are the easy dimensions — Russia is like Germany and Germany is like England. But to say this is to debar oneself from looking into the *depth* of history, that is to say, from perceiving the industrialization in the making. What is the story of Central European industrializations without the role of the banks in the process? What is the Russian industrialization of the 1890s without the Ministry of Finance?

The point, however, is not simply that these were important occurrences which have just claims on the historian's attention. What matters in the present connection is that observing the individual methods of financing industrial growth helps us to understand the crucial problem of prerequisites for industrial development.

The common opinion on the subject has been well stated by Rostow. There is said to be a number of certain general preconditions or prerequisites for industrial growth, without which it could not begin.<sup>6</sup> Abolition of an archaic framework in agricultural organization or an increase in the productivity of agriculture; creation of an influential modern elite which is materially or ideally interested in economic change; provision of what is called social-overhead capital in physical form — all these are viewed as "necessary preconditions," except that some reference to the multifarious forms in which the prerequisites are fulfilled in the individual areas are designed to take care of the "unique" factors in development.<sup>7</sup> Similarly, the existence of a value system favoring economic progress and the availability of effective entrepreneurial groups basking in the sun of social approval have been regarded as essential preconditions of industrial growth.<sup>8</sup>

These positions are part and parcel of an undifferentiated ap-

<sup>6</sup> Rostow, chap. 3. The author expressly excludes from his generalizations the United States and some British Dominions, but this is of no interest in the present context which is confined to the industrial history of Europe.

<sup>7</sup> *Ibid.*

<sup>8</sup> It is in this sense that the discussion of entrepreneurship in economic development in Chapter 3 of this volume may be regarded as a contribution to the problem of prerequisites of industrial growth.

proach to industrial history. But their conceptual and empirical deficiencies are very considerable, even though it is by no means easy to bid farewell to this highly simplified way of viewing the processes of industrialization. It took the present writer several years before he succeeded in reformulating the concept of prerequisites so that it could be fit into the general approach premised upon the notion of relative backwardness. This, it is feared, is the area within the present volume that is most open to the charge of inconsistency. To give an example, several times the statement is made (as in Chapters 1, 6, and 7) that abolition of serfdom in Russia was a necessary or even an absolute prerequisite for industrialization.<sup>9</sup> What was meant was that the emancipation of the peasants in Russia of the 1860s very materially aided the subsequent process of industrialization. This is by no means wrong, but it should have been possible to express that thought without mobilizing high-sounding but meaningless terms. There should be a fine on the use of words such as "necessary" or "necessity" in historical writings. As one takes a closer look at the concept of necessity as it is appended to prerequisites of industrial development, it becomes clear that, whenever the concept is not entirely destitute of meaning, it is likely to be purely definitional: industrialization is defined in terms of certain conditions which then, by an imperceptible shift of the writer's wrist, are metamorphosed into historical preconditions.<sup>10</sup>

The recourse to tautologies and dexterous manipulations has been produced by, or at any rate served to disguise, very real empirical difficulties. After having satisfied oneself that in England certain factors could be reasonably regarded as having preconditioned the industrialization of the country, the tendency was, and still is, to elevate them to the rank of ubiquitous prerequisites of all European industrializations. Unfortunately, the attempt was inconsistent with two empirical observations: (1) some of the factors that had served as prerequisites in England either were not present in less advanced countries or at best were present to a very small extent; (2) the big

<sup>9</sup> These chapters were written before Chapter 2, in which the concept of prerequisites has been discussed in a more orderly fashion.

<sup>10</sup> It is not surprising, therefore, to see Rostow at one point (p. 49) mix conditions and preconditions of industrial development very freely.

spurt of industrial development occurred in those countries despite the lack of such prerequisites.

If these observations are not ignored or shrugged away, as is usually done, they quite naturally direct research toward a new question: in what way and through the use of what devices did backward countries *substitute* for the missing prerequisites? This crucial question, on which Chapter 2 of this volume is based, has yielded significant answers. It appears, on the one hand, that some of the alleged prerequisites were not needed in industrializations proceeding under different conditions. On the other hand, once the question has been asked, whole series of various substitutions become visible which could be readily organized in a meaningful pattern according to the degree of economic backwardness. To revert once more to the illustration shown in the previous tabulation, it is easy to conceive of the capital supplied to the early factories in an advanced country as stemming from previously accumulated wealth or from gradually plowed-back profits; at the same time, actions by banks and governments in less advanced countries are regarded as successful attempts to create *in the course* of industrialization conditions which had not been created in the "preindustrial" periods precisely because of the economic backwardness of the areas concerned.

It was shown in Chapter 2 that the area of capital supply is only one instance of substitutions for missing prerequisites. As one looks at the various patterns of substitution in the individual countries, taking proper account of the effects of gradually diminishing backwardness, one is tempted to formulate still another general proposition. The more backward was a country on the eve of its great spurt of industrial development, the more likely were the processes of its industrialization to present a rich and complex picture — thus providing a curious contrast with its own preindustrial history that most often was found to have been relatively barren. In an advanced country, on the other hand, the very richness of its economic history in the preindustrial periods rendered possible a relatively simple and straightforward course in its modern industrial history.

Thus, the concept of prerequisites must be regarded as an integral part of this writer's general approach to the industrial history of Europe. At the same time, it is important to keep in mind the

heuristic nature of the concept. There is no intention to suggest that backward countries necessarily engaged in deliberate acts of "substitution" for something that had been in evidence in more advanced countries. Men in a less developed country may have simply groped for and found solutions that were consonant with the existing conditions of backwardness. In fact, one could conceivably start the study of European industrializations in the east rather than in the west of the Continent and view some elements in English industrial history as substitutions for the German or the Russian way of doing things. This would not be a very good way to proceed. It would make mockery of chronology and would be glaringly artificial. True, some artificiality also inheres in the opposite approach. It is arbitrary to select England as the seat of prerequisites. Yet this is the arbitrariness of the process of cognition and should be judged by its fruits.

The main advantage of viewing European history as patterns of substitutions governed by the prevailing — and changing — degree of backwardness lies, perhaps paradoxically, in its offering a set of predictabilities while at the same time placing limitations upon our ability to predict. To predict is not to prophesy. Prediction in historical research means addressing intelligent, that is, sufficiently specific, questions as new materials are approached.

When this writer embarked upon a study of Italian industrial development, his research was magistrally directed by the expectation of finding investment banks playing a central role in the process. This substitution pattern could be "predicted" on the basis of earlier studies of industrial growth in other countries in Central Europe, primarily in Germany. As is shown in Chapter 4, this particular prediction was well borne out by the study of the available archival materials. It might be noted that neither the contemporaneous nor the later-day literature on Italian industrial growth before World War I had contained adequate appreciation of the contribution which the banks had made to industrialization.

As the Italian case shows, substitution patterns of this kind can spread from country to country through deliberate importation. Yet it is equally true that the very concept of substitution is premised upon creative innovating activity, that is to say, upon something that is inherently unpredictable with the help of our normal apparatus of

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research. This alone should raise the important problem of the limits to which the present approach is subject. But there are other reasons as well.

Historical hypotheses are not general or universal propositions. They cannot be falsified by a single exception. Testing them largely means trying to discover the boundaries of the area within which they seem reasonably valid. When research pushes against such boundaries and the deviations from expectations become significant, there are normally two ways of meeting the situation: either the hypothesis may be discarded — not necessarily as being “wrong” but as having exhausted its explanatory value; or the deviations found can be systematized and incorporated in the hypothesis, thus enriching it and providing stimulus for further research. In this way, the developed hypothesis may come to be far removed from its origins. In a sense, the general approach as presented here can be considered as an attempt to systematize the deviations from the English paradigm by relying on the degree of backwardness as the organizing concept. But this approach, too, can and should be pushed to the limits of its applicability.

As has been intimated before, a historical approach usually has competitors for the treatment of a given set of data. Within the scope of the essays in the present volume, the individual elements of the great industrial spurt in Russia of the 1890s have been viewed as essentially determined by the backwardness of the Russian economy. It has been argued, for instance, that the Russians favored producers' goods as against consumers' goods because of the importance of technological borrowings to a very backward country in conjunction with the accidental circumstance that technological progress in the immediately preceding period had been more vehement in the production of capital goods.<sup>11</sup> This lopsidedness in the industrial structure, natural in conditions of backwardness, is said then to have been merely *accentuated* by the policies of the Russian government.

It is quite possible, however, to attempt a primarily political

<sup>11</sup> See Chapters 1 and 6. Today, having been influenced by Albert Hirschman's studies, I should add that producers' goods possessing elaborate “forward linkages” are of particular importance in a very backward country where the internal market is narrow and where the existence of active “investment for investment's sake” circuits can be of major importance in sustaining the great spurt. Albert O. Hirschman, *The Strategy of Economic Development* (New Haven, 1958), chap. 6.

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approach to the industrial history of the period and to see the stress on producers' goods as essentially determined by the immediate military needs of the government. As shown before, such an approach has long historical antecedents and certainly would be capable of considerable elaboration. It so happens, however, that, after having considered the industrial evolution in Russia not only in the 1890s but also in the years preceding the outbreak of World War I, the case for considering Russia as an integral part of an all-European pattern of industrial development has seemed very strong, and this writer at least has felt that his general approach as presented here offers a fuller and more plausible explanation of the total development. And still the fact remains that certain aspects of that development, such as some phases of railroad construction, or certain techniques of fiscal administration, or governmental decisions with regard to the field commune, would be much more naturally explicable in terms of a set of political rather than economic hypotheses.<sup>12</sup> This, no doubt, must be considered as a limitation upon the main explanatory scheme.

Some other limitations have been mentioned in the individual essays. The present approach deals with the industrial development of Europe. Yet there are geographic limitations within Europe. Throughout, the individual country has been used as a unit of observation. This does not mean, however, that industrial development in any backward European area representing an organized statehood can be expected to conform to the expectations set forth in the preceding pages. The economy of a small sovereign country may be so much enmeshed in the economy of another, more advanced, country as to be virtually an integral part of the latter area. Its economic evolution may therefore proceed without any serious discontinuities, the gradualness of its industrial growth simply mirroring the course of events in the larger country. With the lack of anything resembling a big spurt, the other specific elements of industrializations in conditions of backwardness are also likely to be absent. This appears to be the case of Denmark as referred to in Chapter 1.

On the other hand, the case of the Bulgarian industrialization

<sup>12</sup> Curiously enough, in such an explanation much weight would have to be given to a usually neglected factor: the relations between the Ministry of Finance and the Ministry of Interior.

dealt with in Chapter 8 deserves to be mentioned in this connection. For it illustrates well the fact that the present approach is not at all designed to predict that a great spurt of industrialization will occur. Such predicting — in the technical sense of the term — as is possible must remain conditional. If Bulgaria had gone through a spurt of industrial development, it would have been natural to look for certain paraphernalia thereof, including some patterns of substitution. Since the great spurt failed to materialize, all our approach can do is to attribute that failure to the inability or unwillingness of the government to discover and apply the appropriate pattern of substitution. It is plausible indeed that in the case of Bulgaria that pattern may well have consisted of a concentrated simultaneous effort by both banks and government. It is useful to be guided into these problems and to formulate some of those suppositions. Yet the main value of the Bulgarian experience lies in the fact that it strongly suggests the notion of *missed opportunity*. This would seem to be the most important aspect of the problem of limitations.

In Chapter 1 of this volume, the period in a backward country preceding the great spurt has been described as one of mounting tension between the prevailing economic conditions and the promise offered by rapid industrial developments. This accumulation of potential energies<sup>13</sup> was not seen as a merely gradual process. Significant political events, such as national unification or thoroughgoing judicial or administrative reforms, could indeed lead to relatively sudden multiplication of the existing opportunities<sup>14</sup> and might at times trigger the great spurt. At the same time, however, the flow of technological progress in more advanced countries kept enriching the fund upon which the backward country could draw for its technical equipment and know-how. In its technological borrowings the back-

<sup>13</sup> The present writer was pleased recently to come across a passage in a forgotten pamphlet by the great German sociologist, Georg Simmel (*Der Krieg und die geistigen Entscheidungen*, Munich-Leipzig, 1917, pp. 22-23), containing a very similar conception of German industrial development. Simmel speaks explicitly of the immense accumulation of *wirtschaftliche Spannkraft*, which for a long time could not be discharged.

<sup>14</sup> Dealing with the optimistic forward-looking world of the nineteenth century, one was on the whole less ready to consider the contingency of decreases of tension consequent upon destructive wars or anti-industrial legislation.

ward country was to utilize decades or even centuries of progress most of which had proceeded *occulto aevo* — in the quiet lapse of time. In the light of this process, the tension preceding the great spurt appeared ever-increasing and the backward country was seen as steadily accumulating the advantages of backwardness.

This view of the development would seem in need of some reconsideration in the light of the Bulgarian and Italian studies; the latter is particularly relevant here. In Chapter 4, some attention has been devoted to the question of why the rate of industrial growth in Italy during 1896-1908 did not climb to still higher levels, which might have been reasonably expected in view of the degree of Italy's economic backwardness at that time. In discussing the problem, some weight had to be attributed to the ill-advised economic policies of the Italian government which persisted in favoring less promising branches of industrial endeavor at the expense of those in which the country's comparative advantage was greatest. But there were also other factors. In particular, it was suggested that the virtual completion of railroad construction prior to the initiation of the great spurt in the mid-nineties exercised a damping effect upon the subsequent rate of growth. The intensification of labor conflicts worked in the same direction. In this view, Italy's industrial development had its great chance in the 1880s; but the upswing of those years remained abortive, mainly, it is believed, because the modern investment bank had not yet been established in Italy.

If this conception is at all correct, it would mean that accumulation of "advantages of backwardness" can, at least at times, be paralleled by an accumulation of disadvantages of backwardness. If the latter proceeds at uneven rates, then certain historical moments in a country's development should be considered as particularly propitious for industrialization, as its *Sternstunden*. To change — and to lower — the metaphor, the bus that is supposed to take a country across its great spurt of industrialization sometimes comes at odd hours and can be missed. And the next bus may not be as large or as convenient or as fast as its predecessor. At any rate, the wait for it can be fairly long. In other words, both the timing of a country's great spurt and its character can be affected.

There is little doubt that "missed opportunities" can constitute

real limitations upon this general approach to the industrial development of Europe. Some of those opportunities vanish in a way that is erratic and unpredictable, at least from an economist's point of view. The manifold structural difficulties and disabilities of the interwar period in a country like Bulgaria are a case in point. They were essentially political in nature or the consequence of political events. There are, however, other situations and other factors which are likely to lend themselves better to organized study and be more amenable to generalized conclusions.

Shifting attention to the study of the difficulties and obstacles that accumulate with the increase in the degree of economic backwardness may well lead to the formation of a more general concept of "nodal points" at which the advantages of backwardness reach optimal levels and beyond which lies at least a limited period of declining promise and growing disability. Such a study would involve *inter alia* a much closer scrutiny of the relations that exist between the pace of technological progress and the dominant innovations, on the one hand, and their impact upon the industrializing economies of backward countries, on the other. The present research plans of this writer do indeed point in this direction.

It is possible that, as a result of such additional explorations, the deviations from the norm once more would be brought into a system and our approach to the industrial history of Europe rendered more complex but also more illuminating. Yet, as has been said before, the nature of the deviations may be such as to require and perhaps suggest an organizing principle very different from the variations in the degree of backwardness. This would mean the end of an approach. But farewell to it would be said in a grateful mood. For what more can be expected of any historical hypothesis than to have stimulated research to the point of becoming the stepping stone to a new hypothesis and to new research?

## APPENDIX I

*Description of an Index of Italian Industrial  
Development, 1881-1913*

## TWO PREVIOUS ATTEMPTS

As far as this writer has been able to ascertain, there have been two previous attempts to construct an index of Italian industrial output for a period extending back into the nineteenth century: one by Jean Dessirier and the other by Guglielmo Tagliacarne.<sup>1</sup> Dessirier's index appears in his study, "Indices comparés de la production industrielle et de la production agricole en divers pays de 1870 à 1928."<sup>2</sup> The description given by Dessirier is sketchy. The index is said to include the following entries: (1) mining (lignite, iron ore, zinc ore, sulphur); (2) metalmaking (cast iron and steel); (3) engineering (calculated on the basis of steel consumption); (4) textiles (cotton and wool consumption and production of silk); and (5) chemicals (sulphuric acid, superphosphates, calcium carbide). The author is even less specific with regard to the question of the weights employed. He says: "The index of [Italian] industrial output has been

<sup>1</sup> Upon the completion of the work which is described here, still another and very interesting attempt has come to this writer's attention: the index computation by Silvio Golzio, published in his book *Sulla misura delle variazioni del reddito nazionale italiano* (Turin, n.d., probably 1951 or 1952). This computation, which in many ways is far superior to its two predecessors and in part employs the same devices as are used in the present index, shows a degree of coverage which is considerably higher than that of the present index. Nevertheless, it is less suitable for the purpose of studying Italian industrial development prior to the outbreak of the First World War because weights pertaining to a much later period (1938) are used and because the data are presented in terms of five-year averages, which tends to blur the exact delimitations of the individual subperiods of development and accordingly makes it difficult to ascertain the rates of growth from period to period. Since Golzio's index had not become available to this writer until the present descriptions had been written, some footnote references to it have been inserted throughout, and a more detailed presentation of his methods and results has been included in a final section.

<sup>2</sup> *Bulletin de la Statistique Générale de la France*, XVIII, no. 1 (October-December 1928), 65-110.

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calculated by combining the individual series approximately in proportion to the numbers of workers employed in each industry in 1913."

It remains unexplained how the author proceeded in aggregating his subseries within the five industries included. Neither those subseries nor the numerical weights appear in the study. Nor does it contain any quantitative information on the coverage of the index. That the year 1913 rather than the census year 1911 has been chosen as the base-weighting year is somewhat surprising. Finally, it is not clear at all whether Dessirier carried out any adjustment of weights to take into account at least the considerable divergences between employment and mechanical power that existed among the industries concerned. Since there is no way of retracing the author's computations, the index must be regarded as a "take-it-or-leave-it" proposition. Still, until after the last war this was the only index of Italian production available, and so it is not surprising that the League of Nations staff in preparing its study, *Industrialization and Foreign Trade* (1945), decided to "take" it. Dessirier's year-by-year series begins in 1898 (the year, incidentally, when chemical-industry output was for the first time included in his index); for the period prior to 1898, only three numbers are given: for the years 1870, 1880, and 1890. In the League of Nations study the annual series on Italian industrial output begins in 1880, and the numbers for the years 1881-97 have been interpolated on the basis of Italian coal consumption (p. 176). It is not mentioned whether an attempt has been made to deduct from total consumption of coal the amounts used for nonindustrial purposes and particularly those for railroad locomotives and bunker coal. It may be noted, for example, that in 1889 industrial coal consumption in Italy amounted to only about 26 percent of total coal consumption.<sup>8</sup> The movement of the latter is therefore hardly apt to measure the rate of industrial change. So much for the Dessirier index. We shall return later to the rates of growth implied therein.

Tagliacarne's index was prepared for inclusion in a government document that was submitted to the Italian Constituent Assembly; it is contained in the section of that document entitled "Lo sviluppo dell'industria italiana ed il commercio estero."<sup>4</sup> Tagliacarne's index has the great advantage of being accompanied by a much more explicit statement concerning the method of its construction. Its main features are as follows.

The index includes the following series and subseries:

<sup>8</sup> L. Bodio, *Di alcuni indici misuratori del movimento economico in Italia* (Rome, 1891), p. 42. Incidentally, the League of Nations figure contains a typographical error: the number for 1899 should be 60 rather than 66; furthermore, the numbers for 1899 and 1898 are Dessirier's original figures and are not results of interpolations, as is erroneously indicated in the study (p. 132).

<sup>4</sup> Ministero per la Costituente, *Rapporto della Commissione Economica presentato all'Assemblea Costituente: II. Industria, I. Relazione*, II (Rome, 1947), 80.

## AN INDEX OF ITALIAN INDUSTRIAL DEVELOPMENT

Series	Subseries
(1) Raw silk	—
(2) Raw cotton imports	—
(3) Beer and sugar	Beer and sugar
(4) Metallmaking and mineral processing	Pig iron, iron and steel, lead and mercury
(5) Mining	Iron ore, lead ore, zinc ore, mineral fuel, iron pyrites, sulphur
(6) Shipbuilding	—
(7) Sulphuric acid	—

The series (3), (4), and (5) contain subgroups which in all cases have been combined by a simple, that is, unweighted, addition of tonnage data in which the original data were expressed. Accordingly, beer and sugar have been added ton per ton, as have been iron ore and raw sulphur or lead, pig iron, and iron and steel. This, of course, is a rather crude procedure which, along with some other disabilities of the index, must be explained in terms of great pressures for the speedy completion of an *ad hoc* assignment.

Tagliacarne does not provide an exact derivation of the weights by dint of which he combined his seven series into an index of aggregate industrial output. He says that in some cases payroll data and in others the amount of horsepowers installed have been used for the purpose; these data, he adds (p. 48), were obtained from the 1938 census. But he does supply a full tabulation of the weights used (pp. 48, 80-81):

Series	Weights	Weights in percent
Silk	1	4.8
Cotton	2	9.5
Foodstuffs	4	19.0
Metallmaking and mineral processing	5	23.9
Mining	3	14.3
Shipbuilding	4	19.0
Chemical products	2	9.5
	21	100.0

With the help of these weights, the individual series have been combined through weighted geometric averages. Something more will be said later about Tagliacarne's results and the rates of growth implied in his series.

The index shows a number of prima-facie shortcomings. The main questionable points are these:

- (1) The previously mentioned unweighted aggregation of subseries.
- (2) The attempt to measure the rate of progress in the engineering industry by the rate of change in a single branch of that industry — ship-



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building. Since the group contained a fair number of new and rapidly developing industries, the use of a series pertaining to an older industry as a gauge for the change of the group as a whole seemed patently inadequate.

(3) The representation of the foodstuffs industry by only two series: beer and sugar. Since beer output was very small, the course of the series was determined by the sugar industry alone which, from the turn of the century on, grew at a most rapid pace.

(4) The use of a single series (sulphuric acid) to picture the rate of change in the whole group of the chemical industry.

(5) The use of a set of weights pertaining to the extreme end (1938) of an index period extending over more than half a century (1881-1937).

(6) Existence of some computational errors in the preparation of the index.

The decision to construct the present index was essentially determined by the desire to eliminate at least some of the deficiencies just mentioned. Nevertheless, it must be noted that some of those deficiencies appear as such only from the writer's specific interest in Italian industrial development before the outbreak of World War I. Moreover, while most of the series were obtained directly from the original sources, some portions of Tagliacarne's work have been taken over bodily into the present index. In general, the existence of that index provided a most valuable guide in the construction of the present one, which in many respects should be considered a mere modification and revision of its predecessor. This is true even though the results of the two computations differ substantially.

### THE PRESENT INDEX: GENERAL CHARACTERISTICS

The main features of the present index may be summarized as follows:

(1) The number of the main industrial groups is the same as in Tagliacarne's index.

(2) The combination of the subgroups was as a rule carried out by the use of the 1898 average unit value of output of the commodities concerned.

(3) Wherever possible, an attempt was made to eliminate double counting (thus, the pig-iron series was excluded from the index of metal-making and, in addition, gross values of output of some products were diminished by the values of at least some of the raw materials consumed in the process of production).

(4) The series of the foodstuffs industry has been "stabilized" by the introduction of a subseries reflecting changes in the output of flour mills, the latter being a dominant component of the industry, particularly with regard to its share in horsepowers used.

(5) The engineering industry has been represented by an index of

## AN INDEX OF ITALIAN INDUSTRIAL DEVELOPMENT

Italian steel consumption reduced by the amounts of steel consumed in the Italian production of rails and related materials.

(6) The sets of weights used in combining the six main series pertain to the years 1902-03, the basic data having been gleaned from the Italian industrial survey of those years. This survey, to which reference is made below, was not a real census of Italian industrial output, the first such census being taken in 1911. The survey is based on a series of monographic investigations of Italian industry which began in 1885 and were subsequently brought up to date so as to focus on the years 1902-03. The main set of weights used represents value-added estimates, prepared on the basis of the survey. In addition, two more indices have been computed by using 1902-03 data on employment and horsepower, respectively.

The other changes made in comparison with Tagliacarne's index, such as the inclusion of some additional subseries and the exclusion of others, are of lesser importance. They are reported fully in the following section.

### THE PRESENT INDEX: SUBSERIES

#### Mining

The mining industry is represented by seven subgroups: (1) iron ore, (2) zinc ore, (3) lead ore, (4) copper ore, (5) solid mineral fuel, (6) sulphur, and (7) pyrites.

(1) *Iron-ore output.* The basic output data in tons were obtained from *Annuario Statistico Italiano*, abbreviated in the following as *Annuario*. The references are as follows: for 1881-98, *Annuario* 1900, p. 477; 1899-1905, *Annuario* 1905-07, p. 434; 1906-09, *Annuario* 1911, p. 125; 1910-13, *Annuario* 1915, p. 148. The value of product in 1898 was 2,746,239 lire (*Annuario* 1900, p. 477), yielding an average unit value of 14.5 lire per ton; this price was applied to the series in tons for 1881-1913, as shown in the following table.

IRON-ORE OUTPUT

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1881	421	6,104.5	1892	214	3,103.0
1882	242	3,509.0	1893	191	2,769.5
1883	204	2,958.0	1894	188	2,726.0
1884	225	3,262.5	1895	183	2,653.5
1885	201	2,914.5	1896	204	2,958.0
1886	209	3,030.5	1897	201	2,914.5
1887	231	3,349.5	1898	190	2,746.0
1888	177	2,566.5	1899	237	3,436.5
1889	173	2,508.5	1900	247	3,581.5
1890	221	3,204.5	1901	232	3,364.0
1891	216	3,132.0	1902	241	3,494.5

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## IRON-ORE OUTPUT (cont.)

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1903	375	5,437.5	1909	505	7,322.5
1904	409	5,930.5	1910	551	7,989.5
1905	367	5,321.5	1911	374	5,423.0
1906	384	5,568.0	1912	582	8,439.0
1907	518	7,511.0	1913	603	8,743.5
1908	539	7,815.5			

(2) *Zinc-ore output.* The source references for the physical quantities of output and for the unit value in 1898 are the same as specified above for iron-ore output, except that the page reference for 1881-1913 is p. 479. The value of product in 1898 was 12,062,000 lire, yielding an average unit value of 91.3 lire per ton; this price was applied to the series in tons for 1881-1913, as shown in the following table.

## ZINC-ORE OUTPUT

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1881	72	6,573.6	1898	132	12,062.0
1882	91	8,308.3	1899	151	13,786.3
1883	100	9,130.0	1900	140	12,782.0
1884	105	9,586.5	1901	136	12,416.8
1885	107	9,769.1	1902	132	12,051.6
1886	108	9,860.4	1903	158	14,425.4
1887	93	8,490.9	1904	148	13,512.4
1888	87	7,943.1	1905	148	13,512.4
1889	97	8,856.1	1906	156	14,242.8
1890	111	10,134.3	1907	161	14,699.3
1891	121	11,047.3	1908	152	13,877.6
1892	130	11,869.0	1909	130	11,869.0
1893	133	12,142.9	1910	146	13,329.8
1894	132	12,051.6	1911	140	12,782.0
1895	122	11,138.6	1912	150	13,695.0
1896	118	10,773.4	1913	158	14,425.4
1897	122	11,138.6			

(3) *Lead-ore output.* The source references for the physical quantities of output and for the unit value in 1898 are the same as specified above for iron-ore output, except that the page reference for 1881-98 is p. 479. The value of product in 1898 was 5,221,240 lire, yielding an average unit value of 153.57 lire per ton; this price was applied to the series in tons for 1881-1913, as shown in the following table.

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## LEAD-ORE OUTPUT

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1881	40	6,142.8	1898	34	5,221.2
1882	46	7,064.2	1899	31	4,760.7
1883	46	7,064.2	1900	35	5,374.9
1884	46	7,064.2	1901	43	6,603.5
1885	40	6,142.8	1902	42	6,449.9
1886	40	6,142.8	1903	42	6,449.9
1887	38	5,835.6	1904	43	6,603.5
1888	35	5,374.9	1905	39	5,989.2
1889	37	5,682.0	1906	41	6,296.3
1890	32	4,914.2	1907	43	6,603.5
1891	30	4,607.1	1908	47	7,217.7
1892	33	5,067.8	1909	38	5,835.7
1893	29	4,453.5	1910	37	5,682.0
1894	30	4,607.1	1911	38	5,832.7
1895	31	4,760.7	1912	42	6,449.9
1896	34	5,221.3	1913	45	6,910.6
1897	36	5,528.5			

(4) *Copper-ore output.* The source references for the physical quantities of output and for the unit value in 1898 are the same as specified above for iron-ore output, except that the page reference for 1881-1913 is p. 478. The value of product in 1898 was 2,131,497 lire, yielding an average unit value of 22.43 lire per ton; this price was applied to the series in tons for 1881-1913, as shown in the following table.

## COPPER-ORE OUTPUT

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1881	26	583.2	1895	84	1,884.1
1882	24	538.3	1896	90	2,018.7
1883	24	538.3	1897	93	2,086.0
1884	27	605.6	1898	95	2,131.0
1885	27	605.6	1899	95	2,131.0
1886	25	560.8	1900	96	2,153.3
1887	44	986.9	1901	108	2,422.4
1888	47	1,054.2	1902	101	2,265.4
1889	48	1,076.6	1903	115	2,579.4
1890	50	1,121.5	1904	158	3,543.9
1891	53	1,188.9	1905	149	3,342.1
1892	102	2,287.9	1906	147	3,297.2
1893	96	2,153.2	1907	168	3,768.2
1894	93	2,086.0	1908	107	2,400.0

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## COPPER-ORE OUTPUT (cont.)

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1909	90	2,018.7	1912	86	1,928.9
1910	68	1,525.2	1913	89	1,996.3
1911	68	1,525.2			

(5) *Output of solid mineral fuel.* The data refer to output of anthracite, lignite, bituminous schist, and fossil timber. The source references for the physical quantities of output and for the unit value in 1898 are the same as specified above for iron-ore output, except that the page reference for 1881-1913 is p. 482. The value of product in 1898 was 2,429,825 lire, yielding an average unit value of 7.13 lire per ton; this price was applied to the series in tons for 1881-1913, as shown in the following table.

## SOLID MINERAL FUEL

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1881	135	962.5	1898	341	2,429.0
1882	165	1,176.4	1899	389	2,773.5
1883	214	1,525.8	1900	479	3,415.2
1884	223	1,590.0	1901	426	3,037.4
1885	190	1,354.7	1902	414	2,951.8
1886	243	1,732.6	1903	345	2,459.9
1887	327	2,331.5	1904	362	2,581.1
1888	366	2,609.5	1905	412	2,937.5
1889	390	2,780.7	1906	473	3,372.5
1890	376	2,680.8	1907	453	3,229.9
1891	289	2,060.6	1908	480	3,422.4
1892	295	2,103.4	1909	555	3,957.2
1893	317	2,260.2	1910	562	4,007.0
1894	271	1,932.2	1911	557	3,971.4
1895	305	2,174.6	1912	664	4,734.3
1896	276	1,967.8	1913	701	4,998.1
1897	314	2,238.8			

(6) *Sulphur (minerali di zolfo).* The source references for the physical quantities of output and for the unit value of output in 1898 are the same as specified above for iron-ore output, except that no data for the commodity were available prior to 1895 and that the page reference for 1895-98 is p. 483. Since it was found that data on output of raw sulphur for the years 1895-1913 corresponded closely to that of minerali di zolfo over the same period, it was assumed that the same correspondence obtained in the years 1881-94. Accordingly, the tonnage data for these years were

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obtained by applying to the 1895 output of the latter commodity the percentage changes in the output of raw sulphur for the years 1881-94 (for data on output of raw sulphur, see *Annuario* 1900, p. 489). The value of product in 1898 was 40,375,152 lire, yielding an average unit value of 12 lire per ton; this price was applied to the series in tons for 1881-1913, as shown in the following table.

## SULPHUR OUTPUT

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1881	2,522	30,264	1898	3,363	40,356
1882	2,993	35,916	1899	3,763	45,156
1883	3,027	36,324	1900	3,628	43,536
1884	2,758	33,096	1901	3,727	44,724
1885	2,859	34,308	1902	3,582	42,984
1886	2,522	30,264	1903	3,690	44,280
1887	2,287	27,444	1904	3,539	42,468
1888	2,522	30,264	1905	3,761	45,132
1889	2,487	29,844	1906	3,274	39,288
1890	2,455	29,460	1907	2,788	33,456
1891	2,657	31,884	1908	2,848	34,176
1892	2,825	33,990	1909	2,827	33,924
1893	2,791	33,492	1910	2,815	33,780
1894	2,724	32,688	1911	2,683	32,196
1895	2,381	28,572	1912	2,504	30,048
1896	2,737	32,844	1913	2,452	29,424
1897	3,314	39,768			

(7) *Pyrites.* The source reference for the physical quantities of output for 1881-98 and for the unit value of output in 1898 is *Annuario* 1900, p. 482; for 1899-1906, *Annuario* 1905-07, p. 435. The references for the remaining years are as specified above for iron ore output. The value of product in 1898 was 828,051 lire, yielding an average unit value of 12.36 lire; this price was applied to the series in tons for 1881-1913, as shown in the following table.

## PYRITES

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1881	6	74	1886	17	210
1882	7	86	1887	18	222
1883	7	86	1888	15	185
1884	8	98	1889	17	210
1885	11	135	1890	15	185

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## PYRITES (cont.)

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1891	20	247	1903	101	1,248
1892	28	346	1904	112	1,384
1893	29	358	1905	118	1,458
1894	23	284	1906	122	1,507
1895	39	482	1907	127	1,570
1896	46	569	1908	132	1,632
1897	58	716	1909	132	1,632
1898	67	828	1910	166	2,052
1899	77	952	1911	165	2,039
1900	72	890	1912	278	3,436
1901	89	1,100	1913	317	3,918
1902	93	1,149			

Summation of the seven subseries yielded the following aggregate series for mining, at constant prices of the year 1898.

Year	Millions of lire (at 1898 prices)	Present index (1900 = 100)	Year	Millions of lire (at 1898 prices)	Present index (1900 = 100)
1881	50.7	71	1898	65.8	92
1882	56.6	79	1899	63.0	88
1883	57.6	80	1900	71.7	100
1884	55.3	77	1901	73.7	103
1885	55.2	77	1902	71.3	100
1886	51.8	72	1903	76.9	107
1887	48.7	68	1904	76.0	106
1888	50.0	70	1905	77.7	108
1889	51.0	71	1906	73.6	103
1890	51.7	72	1907	70.8	99
1891	54.2	76	1908	70.5	98
1892	58.7	82	1909	66.6	93
1893	57.6	80	1910	68.4	95
1894	56.4	79	1911	63.8	89
1895	51.7	72	1912	68.7	96
1896	56.4	79	1913	70.4	98
1897	64.4	90			

It will be noted that the present index contains the same subseries as Tagliacarne's, except that a series for copper-ore output has been added here. As will be shown later, the behavior of the two indices differs very considerably.

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## Metalmaking (including oil refining).

This industry is represented by three subgroups: (1) iron and steel, (2) copper, and (3) lead. A fourth group on output of refined petroleum products — difficult to house elsewhere — has been added.

(1) *Output of iron and steel.* The source references for the physical quantities of iron output are as follows: for the years 1881-98, *Annuario* 1900, p. 487; 1899-1906, *Annuario* 1905-07, p. 440; 1907-09, *Annuario* 1911, p. 127; and 1910-13, *Annuario* 1915, p. 151. The data from 1902 on do not include output of small furnaces. Accordingly, the figures for 1902-13 have been increased by 10 percent, in order to render them roughly comparable with those of the preceding years. The value of product in 1898 was 40,865,825 lire yielding an average unit value per ton of 243.97 lire; this price was applied to the series in tons for 1881-1913, as shown in the following table.

## IRON OUTPUT

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1881	95	23,177	1898	167	40,866
1882	91	22,201	1899	198	48,306
1883	125	30,496	1900	191	46,598
1884	120	29,276	1901	181	44,159
1885	141	34,400	1902	181	44,159
1886	162	39,523	1903	195	47,574
1887	173	42,207	1904	199	48,550
1888	177	43,183	1905	226	55,137
1889	182	44,403	1906	260	63,432
1890	176	42,939	1907	273	66,604
1891	153	37,327	1908	333	81,242
1892	124	30,252	1909	309	75,387
1893	138	33,668	1910	342	83,438
1894	142	34,644	1911	333	81,242
1895	164	40,011	1912	197	48,062
1896	140	34,156	1913	157	38,032
1897	150	36,595			

The source references for the physical quantities of steel output are the same as those for iron output. The value of output in 1898 was 27,085,481 lire, yielding a price per ton of 309.66 lire; this price was applied to the series in tons for 1881-1913, as shown in the following table.

## STEEL OUTPUT

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1881	3.6	1,115	1883	3.0	929
1882	3.4	1,053	1884	4.6	1,424

# APPENDIX I

## STEEL OUTPUT (cont.)

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1885	6.4	1,982	1900	115.9	35,889
1886	23.7	7,339	1901	123.3	38,181
1887	73.0	22,605	1902	108.9	33,722
1888	118.0	36,540	1903	154.1	47,719
1889	158.0	48,926	1904	177.1	54,841
1890	108.0	33,444	1905	244.8	75,804
1891	76.0	23,534	1906	333.0	103,117
1892	57.0	17,650	1907	347.0	107,452
1893	71.0	21,986	1908	438.0	135,631
1894	55.0	17,031	1909	609.0	188,582
1895	50.3	15,576	1910	671.0	207,781
1896	65.9	20,406	1911	698.0	216,142
1897	63.9	19,787	1912	802.0	248,347
1898	87.5	27,085	1913	846.0	261,972
1899	108.5	33,598			

The output figures for iron and steel (in 1898 lire) in the two preceding tables were then reduced by the values of imported pig iron, imported scrap, and pig iron produced, so as to exclude at least some double counting and to take account of such changes in technical coefficients as may have taken place over the period under review. Data on import quantities have been obtained from *Movimento Commerciale* for the respective years and valued at 1898 unit values. Unfortunately, it proved impossible to ascertain, and similarly to deduct, the quantities of coal consumed by the iron and steel industry. An attempt to compute these quantities indirectly on the basis of some information concerning the average coal:iron and coal:steel production coefficients had to be abandoned because of the many uncertainties involved.

The calculations made are based on the assumption that the deducted portions of value of raw materials bear roughly the same ratios to value added as those that remained undeducted.

## PRODUCTION OF PIG IRON

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1880	17.3	1,813	1886	12.3	1,289
1881	27.8	2,913	1887	12.3	1,289
1882	24.8	2,599	1888	12.5	1,310
1883	24.3	2,547	1889	13.5	1,415
1884	18.4	1,928	1890	14.3	1,499
1885	16.0	1,677	1891	11.9	1,247

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## PRODUCTION OF PIG IRON (cont.)

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1892	12.7	1,330	1904	89.3	9,359
1893	8.0	818	1905	143.1	14,997
1894	10.3	1,079	1906	135.3	14,179
1895	9.2	964	1907	112.2	11,758
1896	7.0	734	1908	112.9	11,832
1897	8.4	880	1909	207.8	21,771
1898	12.4	1,300	1910	353.2	37,015
1899	19.2	2,012	1911	302.9	31,744
1900	24.0	2,515	1912	380.0	39,824
1901	15.8	1,656	1913	427.0	44,750
1902	30.6	3,207	1914	385.3	40,379
1903	75.3	7,891			

## IMPORTS OF PIG IRON

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1880	29	2,467	1898	169	14,377
1881	46	3,913	1899	192	16,333
1882	40	3,403	1900	161	13,696
1883	74	6,295	1901	160	13,611
1884	68	5,785	1902	155	13,186
1885	55	4,679	1903	127	10,804
1886	81	6,891	1904	150	12,761
1887	231	19,651	1905	176	11,546
1888	90	7,656	1906	170	14,462
1889	169	14,377	1907	231	19,651
1890	130	11,059	1808	254	21,608
1891	109	9,273	1909	248	21,097
1892	101	8,592	1910	205	17,439
1893	114	9,698	1911	235	19,991
1894	119	10,123	1912	267	22,714
1895	132	11,230	1913	222	18,886
1896	119	10,123	1914	220	18,715
1897	156	13,271			

## IMPORTS OF SCRAP

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1880	54	4,333	1884	82	6,580
1881	52	4,173	1885	78	6,259
1882	70	5,617	1886	116	9,309
1883	81	6,500	1887	174	13,963

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## IMPORTS OF SCRAP (cont.)

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1888	165	13,241	1902	199	15,969
1889	157	12,599	1903	206	16,531
1890	168	13,482	1904	246	19,741
1891	137	10,994	1905	276	22,149
1892	146	11,716	1906	345	27,686
1893	177	14,204	1907	363	29,130
1894	157	12,599	1908	326	26,161
1895	180	14,445	1909	416	33,384
1896	162	13,000	1910	387	31,057
1897	131	10,513	1911	393	31,538
1898	138	11,074	1912	344	27,606
1899	245	19,661	1913	326	26,161
1900	197	15,809	1914	255	20,463
1901	148	11,877			

The value series in the three preceding tables have been added, shifted forward six months (by adding one half of the figure for the preceding year to one half of the figure for the following year) to take account of lags, and then deducted from the aggregate gross values of iron and steel output, as shown in the following table (in thousands of lire).

Year	Total iron and steel output	Imports of pig iron plus imports of scrap plus production of pig iron (moved 6 months forward)	"Net" output of iron and steel
1881	24,292	9,806	14,493
1882	23,254	11,309	11,945
1883	31,425	13,480	17,945
1884	30,700	14,817	15,883
1885	36,382	13,454	22,928
1886	46,862	15,052	31,810
1887	64,812	26,196	38,616
1888	79,723	28,555	51,168
1889	93,329	25,299	68,030
1890	76,383	27,215	49,168
1891	60,861	23,777	37,084
1892	47,902	21,576	26,326
1893	55,654	23,189	32,465
1894	51,675	24,270	27,405
1895	55,587	25,220	30,367
1896	54,562	25,248	29,314
1897	56,382	24,260	32,122

# AN INDEX OF ITALIAN INDUSTRIAL DEVELOPMENT

Year	Total iron and steel output	Imports of pig iron plus imports of scrap plus production of pig iron (moved 6 months forward)	"Net" output of iron and steel
1898	67,951	25,607	42,344
1899	81,904	32,278	49,626
1900	82,487	35,013	47,474
1901	82,340	29,582	52,758
1902	77,881	29,753	48,128
1903	95,293	33,794	61,499
1904	103,391	38,543	64,848
1905	130,941	45,288	85,653
1906	166,549	52,521	114,028
1907	174,056	58,433	115,623
1908	216,873	60,070	156,803
1909	263,969	67,926	196,043
1910	291,219	80,881	210,338
1911	297,384	84,392	212,992
1912	296,409	86,708	209,701
1913	300,004	89,970	210,004

(2) *Output of copper and copper alloys.* The values of copper output at 1898 prices have been computed as follows. The average unit value of 1898 was applied to the series in tons for the years 1884-1913 (no copper output registered prior to 1884). Thereupon the resulting values were diminished by the value of copper-ore output plus net imports and minus net exports of copper ore (all at 1898 prices). The source references are as follows. Copper output in tons: for the years 1884-97, *Annuario* 1900, p. 488; 1898-1906, *Annuario* 1905-07, p. 440; 1906-10, *Annuario* 1911, p. 127; 1911-13, *Annuario* 1915, p. 151. The value of product in 1898 was 20,108,258 lire, yielding an average unit value per ton of 1,719 lire. For data on copper-ore output, see above. The (relatively small) values of copper-ore imports and exports were obtained from *Movimento Commerciale* for the pertinent years. The foreign-trade data were valued at 1898 prices and moved forward six months to take account of lags. The following table presents the results of these computations.

## COPPER AND COPPER ALLOYS

Year	1,000 tons	Gross value (1,000 lire)	Value of copper-ore output plus or minus net imports or net exports of ore (1,000 lire)	"Net" value of copper output (1,000 lire)
1881	—	—	334.23	—
1882	—	—	322.97	—
1883	—	—	338.67	—



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## COPPER AND COPPER ALLOYS (cont.)

Year	1,000 tons	Gross value (1,000 lire)	Value of copper-ore output plus or minus net imports or net exports of ore (1,000 lire)	"Net" value of copper output (1,000 lire)
1884	0.4	687	354.38	332.62
1885	1.6	2,750	338.68	2,411.32
1886	2.2	3,781	334.26	3,446.74
1887	3.1	5,378	750.26	4,627.74
1888	5.3	9,110	837.75	8,272.25
1889	6.9	11,861	891.55	10,969.45
1890	6.4	11,001	909.54	10,091.46
1891	5.9	10,142	964.60	9,177.40
1892	6.0	10,314	2,060.24	8,253.76
1893	6.9	11,861	1,932.26	9,928.74
1894	9.7	16,674	1,902.07	14,771.93
1895	8.5	14,611	1,758.49	12,852.51
1896	10.3	17,705	1,935.71	15,769.29
1897	11.5	19,768	2,042.26	17,725.74
1898	11.7	20,108	2,156.79	17,951.21
1899	10.2	17,533	2,184.83	15,348.17
1900	10.4	17,878	2,218.35	15,659.65
1901	9.6	16,502	2,591.75	13,910.25
1902	10.2	17,533	2,494.19	15,038.81
1903	11.2	19,253	2,790.24	16,462.76
1904	11.8	20,284	3,740.16	16,543.84
1905	16.1	27,676	3,496.87	24,179.13
1906	15.5	26,645	3,464.30	23,180.70
1907	17.5	30,083	4,073.25	26,009.75
1908	18.3	31,458	2,767.85	28,690.15
1909	20.0	34,380	2,310.29	32,069.71
1910	22.5	38,677	1,723.71	36,953.29
1911	21.3	36,615	1,674.36	34,940.64
1912	28.7	49,335	2,074.70	47,260.30
1913	26.2	45,037	2,077.05	42,959.95

(3) *Lead output.* The process of computing "net" lead output strictly paralleled that of computing "net" copper output as described in the foregoing. The source references for the physical quantities of output are as follows: for 1881-98, *Annuario* 1900, p. 489; for the subsequent years, the references are the same as those for copper output. The value of product in 1898 was 8,234,323 lire, yielding an average unit value of 336.09 per ton. For data on lead-ore output, see above. The net import and net export values for lead ore were obtained from *Movimento Commerciale* for the pertinent years, expressed at 1898 prices, and moved forward six months. The following table presents the results of these computations.

## AN INDEX OF ITALIAN INDUSTRIAL DEVELOPMENT

## LEAD

Year	1,000 tons	Gross value (1,000 lire)	Value of lead-ore output plus or minus net imports or net exports of ore (1,000 lire)	"Net" value of lead output (1,000 lire)
1881	11.7	3,932	3,447.65	484.35
1882	13.2	4,436	4,292.26	143.74
1883	13.5	4,537	4,008.16	528.84
1884	15.0	5,041	4,238.51	802.49
1885	16.5	5,545	3,647.29	1,897.71
1886	19.5	6,553	4,691.56	1,861.44
1887	17.8	5,982	5,021.68	960.32
1888	17.5	5,881	4,230.80	1,650.20
1889	18.1	6,083	4,791.29	1,291.71
1890	17.8	5,982	4,084.92	1,897.08
1891	18.5	6,217	3,954.43	2,262.57
1892	22.0	7,393	5,182.98	2,210.02
1893	19.9	6,688	5,113.85	1,574.15
1894	19.6	6,587	5,482.45	1,104.55
1895	20.3	6,823	5,474.80	1,348.20
1896	20.8	6,990	5,781.83	1,208.17
1897	22.4	7,528	6,695.63	832.37
1898	24.5	8,234	6,465.12	1,768.88
1899	20.5	6,889	5,550.26	1,338.74
1900	23.8	7,999	6,127.39	1,871.61
1901	25.8	8,671	7,409.74	1,261.26
1902	26.5	8,906	6,695.61	2,210.39
1903	22.1	7,427	5,989.19	1,437.81
1904	23.5	7,898	6,019.93	1,878.07
1905	19.1	6,419	5,405.63	1,013.37
1906	21.3	7,159	5,666.66	1,492.34
1907	23.0	7,730	6,388.51	1,341.49
1908	26.0	8,738	7,578.59	1,159.41
1909	22.1	7,427	6,265.69	1,161.31
1910	14.5	4,873	5,628.25	—
1911	16.7	5,612	4,872.89	739.11
1912	21.5	7,225	5,336.52	1,888.48
1913	20.5	6,889	5,981.50	907.50

(4) *Petroleum products.* The series on petroleum products, the output of which was relatively small during the period under review, was left unadjusted for imports of crude oil which are not sufficiently specified in the Italian trade statistics of the period. Output in the decade of the eighties was negligible. Source references for the physical quantities of output are as follows: for the years 1890-98, *Annuario* 1900, p. 490; 1899-1906, *Annuario* 1905-07, p. 440; 1907-10, *Annuario* 1911, p. 127; 1911-13,

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*Annuario* 1915, p. 151. The value of products in 1898 was 1,979,105 lire (*Annuario* 1900, p. 490), yielding an average value per ton of 392.68 lire; this price was applied to the series in tons for the years 1890-1913, as shown in the following table.

## PETROLEUM PRODUCTS

Year	1,000 tons	Value (1,000 lire)	Year	1,000 tons	Value (1,000 lire)
1881	—	—	1898	5.0	1,979
1882	—	—	1899	5.3	2,081
1883	—	—	1900	6.1	2,395
1884	—	—	1901	4.2	1,649
1885	—	—	1902	4.4	1,727
1886	—	—	1903	4.6	1,806
1887	—	—	1904	6.6	2,591
1888	—	—	1905	9.9	3,887
1889	—	—	1906	10.9	4,280
1890	0.3	118	1907	10.5	4,123
1891	0.8	314	1908	10.9	4,280
1892	1.6	628	1909	11.0	4,319
1893	2.6	1,021	1910	12.3	4,830
1894	1.6	628	1911	15.5	6,087
1895	4.2	1,649	1912	13.8	5,418
1896	2.7	1,060	1913	7.5	2,945
1897	3.4	1,335			

Summation of the four series yielded the following aggregate series for metalmaking (including oil products) at constant prices of the year 1898.

## METALMAKING

Year	Value (1,000 lire)	Present index (1900 = 100)
1881	14,977	22
1882	12,089	18
1883	18,474	27
1884	17,018	25
1885	27,237	40
1886	37,118	55
1887	44,204	66
1888	61,090	91
1889	80,291	119
1890	61,275	91
1891	48,838	72
1892	37,418	56

# AN INDEX OF ITALIAN INDUSTRIAL DEVELOPMENT

## METALMAKING (cont.)

Year	Value (1,000 lire)	Present index (1900 = 100)
1893	44,989	67
1894	43,909	65
1895	46,217	68
1896	47,351	70
1897	52,015	77
1898	64,043	95
1899	68,394	101
1900	67,400	100
1901	69,579	103
1902	67,104	99
1903	81,206	120
1904	85,831	127
1905	114,733	170
1906	142,981	212
1907	147,097	218
1908	190,933	283
1909	233,593	346
1910	252,221	374
1911	254,759	377
1912	264,268	392
1913	256,846	381

It will be noted that the present index of metalmaking differs in its composition from Tagliacarne's index. The present index contains no series for pig iron and mercury. On the other hand, it contains the copper (and oil) series which is not included in Tagliacarne's index. A comparison between the two indices is given further below.

## Textiles

As in Tagliacarne's index, the rate of change in the textile industry is represented by two series: (1) output in physical quantities of raw silk, and (2) net imports in physical quantities of raw cotton. For quantitative data on silk output, see Tagliacarne, p. 82. Data on net imports of cotton have been taken from *Movimento Commerciale*. The two series have been combined into a single index in the following fashion.

According to the report for the 1902-03 survey, the gross value of raw silk produced in 1899-1904 amounted on an average to 284 million lire (Direzione Generale della Statistica, Statistica Industriale, *Riassunto delle notizie sulle condizioni industriali del Regno*, Rome, 1906, part 1, p. 153; in the following cited as *Survey*). In 1903-04, the production of cocoons amounted to 50.4 million kilograms (p. 152). Adding to this the

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share of imported cocoons in total output (about 17.9 percent of domestic production on an average in 1899-1904), a total quantity of cocoons of 59.4 million kilograms is obtained. (p. 157) The price of cocoons in 1903 was 391.50 lire per quintal (see Ernesto Cianci, *Dinamica dei prezzi delle merci in Italia dal 1870 al 1929*, Annuali di Statistica, Serie VI: XX, 1923, 270), yielding a total value for cocoons of 232.6 million lire, which leaves an amount of "net" value in raw silk production of approximately 50 million lire. Gross value of silk fabrics produced was estimated at 100 million lire (*Survey*, p. 156). Applying to that figure the U.S. 1899 ratio of 42 percent of value added to value of product in silk fabrics, the value added by manufacturing silk fabrics in Italy in 1903-04 has been estimated at 42 million lire. There remains the item of silk waste, the price of which on the basis of U.S. statistics of the period was about 20 percent of that of raw silk, which on the basis of previously given data yields an amount of about 10 lire per kilogram. (See also, Ratan C. Rawley, *Economics of the Silk Industry, A Study in Industrial Organization*, London, 1919, p. 153.) Applying this price to the output of 8 million kilograms, an amount of 80 million lire results, which should contain about 16-17 million lire of value added. To sum up: the Italian silk output presents itself as follows.

	Million lire
Raw silk	50
Fabrics	42
Waste	17
Total value added	109

The gross value of cotton fabrics produced in 1900 is given at 301.6 million lire (*Survey*, p. 171). To this may be added the small value of exported cotton yarn amounting annually to about 2.2 million lire, yielding a total of 303.8 million lire. Applying to this figure the U.S. 1899 ratio of value added to value of product in the production of cotton goods at 47.9 percent gives a figure of 145.5 million lire for value added in cotton. Accordingly, the relative cotton:silk weights are 1.33:1 (145.5:109). Tagliacarne combined the cotton and silk series in the proportion of 2:1; this would seem to give too low a weight to silk in terms of the situation existing at the turn of the century. Such a proportion would result if one were to correct the American silk:cotton ratios for the differences in horsepower equipment as between the two industries in Italy. But in view of the very low number of horsepower per Italian silk worker (0.6), this would almost imply that further reduction of this scarce horsepower would tend to reduce output to zero, which would be altogether unrealistic for the conditions of the period. On the other hand, it is quite reasonable that the ratios accepted for the present index imply a cotton:silk ratio of value added *per worker* in Italy of 2.1:1,

# AN INDEX OF ITALIAN INDUSTRIAL DEVELOPMENT

$$\frac{145.5}{138.88} \cdot \frac{109.0}{191.6},$$

as against a U.S. 1899 ratio of only 1.28:1. This seems true in view of the fact that the American silk industry of the time was much more advanced in relation to the American cotton industry than was the Italian silk industry in relation to the Italian cotton industry.

The next table presents the two original series for cotton and silk and the combined index resulting from imparting to cotton and silk the weights of 1.33 and 1, respectively, and computing the arithmetic average of the two. It may be noted that the use of a weighted geometric average does not result in any significant differences.

It will be noted that no attempt has been made to adjust the cotton-import series for the movement of stocks within the country. Such information is available for some portions of the period,<sup>5</sup> and one receives the

Year	Raw silk (index 1900 = 100; weight = 1)	Raw-cotton imports (net) (index 1900 = 100; weight = 1.33)	Aggregate silk-cotton (index 1900 = 100)
1881	90	27	54
1882	69	41	53
1883	94	38	62
1884	84	39	58
1885	74	51	61
1886	94	43	65
1887	98	54	73
1888	99	53	73
1889	81	63	71
1890	92	71	80
1891	85	63	73
1892	79	67	72
1893	106	69	85
1894	99	89	93
1895	99	88	93
1896	97	92	94
1897	86	99	93
1898	92	109	101
1899	99	107	104
1900	100	100	100
1901	98	110	105
1902	106	120	114
1903	90	126	111
1904	110	126	119
1905	108	135	124

<sup>5</sup> See, for example, Carlo di Nola "La crisi cotoniera e l'industria del cotone in Italia," *Giornale degli Economisti*, June 1912, p. 528.

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Year	Raw silk (index 1900 = 100; weight = 1)	Raw-cotton imports (net) (index 1900 = 100; weight = 1.33)	Aggregate silk-cotton (index 1900 = 100)
1906	118	149	136
1907	120	177	153
1908	107	168	142
1909	110	156	136
1910	95	142	122
1911	92	155	128
1912	101	174	142
1913	92	165	134

impression that stocks on the whole were rather small in relation to output and that consideration of them, except in certain individual years, would not have affected the index significantly. At any rate, it has proved impossible to obtain a consistent stocks series for the period as a whole. On the other hand, it was felt that in this case the use of some smoothing-out device might have blurred not insignificant variations in output.

*Engineering*

In default of pertinent detailed information, it has been decided to use the changes in Italian iron and steel consumption in 1881-1913 as representing an index of machinery output in the country. The method is open to many strictures, but an immediate and obvious difficulty stems from the fact that a certain proportion of iron and steel produced and imported was consumed by the nonindustrial segments of the economy, such as railroad construction and maintenance. It was necessary, therefore, to obtain information on Italian production of rails and related materials during the index period. These data have been obtained from three sources: for the years 1886-94: L. Bodio, *Di alcuni indici misuratori del movimento economico in Italia* (Rome, 1896), p. 67; for the years 1895-99, the data were supplied by courtesy of the Studies Department of ILVA-Genoa; the data for the years 1900-13 were taken from ILVA, *Alti forni e acciaierie in Italia, 1897-1947* (Bergamo, 1948), p. 356. Accordingly, the output of rails and related materials (*rotaie e armamento*) was deducted from the quantities of steel produced in Italy in each of the years of the period.

No data on output for rails and related materials were available prior to 1886, the year when production of such materials was begun at Terni. But output during 1881-85 must have been quite negligible and so was, for that matter, the total output of steel. Accordingly, a very crude simplifying assumption was made with regard to that period, as can be seen from the following tables. After having obtained the "net" figures for steel output and valuing them at 309.66 lire per ton (see above, under

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## "NET" OUTPUT OF STEEL

Year	Steel output (1,000 tons)	Output of rails and related materials (1,000 tons)	"Net" output of steel (1,000 tons)	Value of "net" output of steel (1,000 lire)
1881	3.6	—	—	1,100
1882	3.4	—	—	1,100
1883	3.0	—	—	1,100
1884	4.6	—	—	1,100
1885	6.4	—	—	1,100
1886	23.7	20	3.7	1,146
1887	73.0	30	43.0	13,315
1888	118.0	67	51.0	15,792
1889	158.0	105	53.0	16,412
1890	108.0	70	38.0	11,767
1891	76.0	47	29.0	8,980
1892	57.0	31	26.0	8,051
1893	71.0	39	32.0	9,909
1894	55.0	25	30.0	9,290
1895	50.3	26	24.3	7,525
1896	65.9	22	42.9	13,594
1897	63.9	23	40.9	12,665
1898	87.5	30	57.5	17,805
1899	108.5	21	87.5	27,095
1900	115.9	8	107.9	33,412
1901	123.3	25	98.3	30,440
1902	108.9	19	89.9	27,838
1903	154.1	46	108.1	33,474
1904	177.1	23	154.1	47,718
1905	244.8	23	221.8	68,682
1906	330.0	65	265.0	82,060
1907	347.0	90	257.0	79,583
1908	438.0	84	354.0	109,620
1909	609.0	141	468.0	144,921
1910	671.0	147	524.0	162,261
1911	698.0	123	575.0	178,055
1912	802.0	147	655.0	202,827
1913	846.0	174	672.0	208,091

## "INDUSTRIAL" IRON AND STEEL CONSUMPTION (ENGINEERING)

Year	Value of "net" steel output (1,000 lire)	Value of iron output (1,000 lire)	Value of steel and iron imports (1,000 lire)	"Industrial" iron and steel consumption (1,000 lire)	Index
1881	1,100	23,177	49,545	73,822	62
1882	1,100	22,201	66,886	90,187	76
1883	1,100	30,496	78,034	109,630	92

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## "INDUSTRIAL" IRON AND STEEL CONSUMPTION (ENGINEERING) (cont.)

Year	Value of "net" steel output (1,000 lire)	Value of iron output (1,000 lire)	Value of steel and iron imports (1,000 lire)	"Industrial" iron and steel consumption (1,000 lire)	Index
1884	1,100	29,276	76,486	106,862	90
1885	1,100	34,400	76,486	111,986	94
1886	1,146	39,523	76,641	117,310	98
1887	13,315	42,207	85,157	140,679	118
1888	15,792	43,183	78,189	137,164	115
1889	16,412	44,403	54,191	115,006	96
1890	11,767	42,939	39,482	94,188	79
1891	8,980	37,327	28,024	74,331	62
1892	8,051	30,252	24,773	63,076	53
1893	9,909	33,668	25,547	69,124	58
1894	9,290	34,644	26,631	70,565	59
1895	7,525	40,011	26,166	73,702	62
1896	13,594	34,156	26,476	74,226	62
1897	12,665	36,595	28,489	77,749	65
1898	17,805	40,866	26,918	85,589	72
1899	27,095	48,306	30,324	105,725	89
1900	33,412	45,598	40,256	119,266	100
1901	30,440	44,159	44,126	118,725	100
1902	27,838	44,159	45,055	117,052	98
1903	33,474	47,574	47,223	128,271	108
1904	47,718	48,550	47,688	143,956	121
1905	68,682	55,137	48,462	172,281	144
1906	82,060	63,432	58,371	203,863	171
1907	79,583	66,604	87,789	233,976	196
1908	109,620	81,242	103,890	294,752	247
1909	144,921	75,387	91,350	311,658	261
1910	162,261	83,438	83,142	328,841	276
1911	178,055	81,242	82,524	341,821	287
1912	202,827	48,062	83,453	334,342	280
1913	208,091	38,032	78,808	324,931	272

steel), these figures were added (1) to the value of iron produced between 1881 and 1913 and (2) to the value of iron and steel imports. The latter were obtained as follows: for the years 1880-98, *Annuario* 1900, p. 616; 1899-1905, *Annuario* 1905-07, p. 551; 1906-13, *Movimento Commerciale*, annual reports. The import figures were uniformly valued with the average Italian steel price for 1898 (309.66 lire per ton), and the series was moved forward six months to take account of import-output lags (it should be noted that these imports of iron and steel did not, of course, include imports of rails, which constituted a special item in Italian statistics of foreign commerce). The foregoing adjustments and their results are

## AN INDEX OF ITALIAN INDUSTRIAL DEVELOPMENT

shown in the preceding two tables, together with an index for adjusted iron and steel consumption.

It will be noted that the foregoing adjustment is rather crude. No attempt has been made to diminish the iron and steel consumption further by deducting quantities of ferrous metals consumed in housing construction. While the quantities involved were minor prior to 1914, they seem to have been increasing fairly rapidly in the last years of the index period. It would have been desirable to deduct from iron and steel consumptions the indigenous production of other materials (wire, and such) which are consumed primarily outside the engineering industry. But the available data did not warrant such a computation, except perhaps for the very last years of the index period. In addition, there still may have been some small amount of iron rails produced for use on secondary tracks. Deficiencies of this kind must be kept in mind in appraising the validity of the method followed here for developing a gauge of machine-building output during 1881-1913.

It may be of interest to compare the adjusted iron and steel consumption series as given in the preceding with the unadjusted series of iron and steel consumption. This is done in the following table.

### IRON AND STEEL CONSUMPTION

1900 = 100

Year	Adjusted	Unadjusted
1881	62	60
1882	76	73
1883	92	89
1884	90	87
1885	94	92
1886	98	101
1887	118	122
1888	115	129
1889	96	120
1890	79	94
1891	62	72
1892	53	59
1893	58	66
1894	59	64
1895	62	67
1896	62	66
1897	65	69
1898	72	77
1899	89	91
1900	100	100
1901	100	103
1902	98	100
1903	108	116

# APPENDIX I

## IRON AND STEEL CONSUMPTION (cont.)

Year	Adjusted	Unadjusted
1904	121	123
1905	144	146
1906	171	183
1907	196	213
1908	247	261
1909	261	289
1910	276	305
1911	287	310
1912	280	309
1913	272	309

Something more will be said later on the rates of change implied in the two indices.

## Foodstuffs industry

The output of the foodstuffs industry has been represented by the subgroup outputs: beer industry, sugar industry, and flour mills. On the first two, data on output are available for the whole period under review. The source references are as follows. Beer: 1881-98, *Annuario* 1900, p. 556; 1899-1906, *Annuario* 1905-07, p. 504; 1907-10, *Annuario* 1911, p. 145; 1910-13, *Annuario* 1915, p. 172. Sugar: 1881-1906, *Annuario* 1905-07, p. 505; 1907-10, *Annuario* 1911, p. 131; 1911-13, *Annuario* 1915, p. 155.

The beer price for 1898 of 10 lire per hectoliter was obtained as the unit value of beer imports increased by the tariff and some allowance for cost of distribution. The sugar price of 142.17 lire per quintal was obtained from E. Cianci, *Dinamica dei prezzi delle merci in Italia dal 1870 al 1929* (Rome, 1933), p. 490. The data on tonnage and value for the two commodities are shown in the following table.

## BEER AND SUGAR OUTPUT

Year	Beer output (1,000 hl.)	Sugar output (1,000 q.)	Beer output (1,000 lire)	Sugar output (1,000 lire)	Beer and sugar output (1,000 lire)	Index (1900 = 100)
1881	127	0.6	1,270	85	1,355	1.7
1882	131	1.9	1,310	270	1,580	2.0
1883	122	3.3	1,220	469	1,689	2.2
1884	130	6.5	1,300	924	2,224	2.8
1885	163	1.1	1,630	156	1,786	2.3
1886	164	1.5	1,640	213	1,853	2.4

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## BEER AND SUGAR OUTPUT (cont.)

Year	Beer output (1,000 hl.)	Sugar output (1,000 q.)	Beer output (1,000 lire)	Sugar output (1,000 lire)	Beer and sugar output (1,000 lire)	Index (1900 = 100)
1887	148	1.6	1,480	227	1,707	2.2
1888	162	4.0	1,620	568	2,188	2.7
1889	145	5.7	1,450	810	2,260	2.8
1890	161	7.1	1,610	1,001	2,711	3.4
1891	158	13.1	1,580	1,862	3,442	3.8
1892	106	10.6	1,060	1,507	2,567	3.3
1893	109	10.3	1,090	1,464	2,554	3.2
1894	90	18.8	900	2,672	3,572	4.5
1895	107	23.8	1,070	3,384	4,454	5.6
1896	103	20.7	1,030	2,943	3,973	5.1
1897	112	30.0	1,120	4,265	5,385	6.8
1898	123	58.6	1,230	8,331	9,561	12.1
1899	134	207.5	1,340	29,500	30,840	39.0
1900	154	541.7	1,540	77,013	78,553	100.0
1901	159	664.2	1,590	94,429	96,019	122.0
1902	168	856.5	1,680	123,048	124,728	159.0
1903	185	1,151.2	1,850	163,666	165,516	211.0
1904	230	712.3	2,300	101,267	103,567	132.0
1905	238	855.6	2,380	121,640	124,020	158.0
1906	315	954.0	3,150	135,630	138,780	177.0
1907	401	1,212.0	4,010	172,310	176,320	225.0
1908	423	1,506.0	4,230	214,108	218,338	278.0
1909	566	1,380.0	5,660	196,195	201,855	257.0
1910	554	1,420.0	5,540	201,881	207,421	264.0
1911	695	1,659.0	6,950	235,860	242,810	309.0
1912	646	1,784.0	6,460	253,631	260,091	331.0
1913	679	2,519.0	6,790	358,126	364,916	465.0

Since direct data on flour-mill output are not available, it was decided to represent the movement of output of flour mills by a series of wheat consumption in the country. Such a series is given for the years 1884-1905 in *Annuario* 1905-07, p. 499; 1906-10, *Annuario* 1911, p. 144; 1910-13, *Annuario* 1915, p. 171. The series is based on domestic production minus seeds plus net imports. It was further reduced by using data on wheat utilization in Italy for feed as contained in *Wheat Studies* (Food Research Institute), XI, no. 7 (March 1935), 302. The data for the years 1881-83 were estimated. The resulting series was smoothed by using four-year moving averages. Information on changes in carryover was not obtainable. These computations and the index series are shown in the following table.