

FIFTH
EDITION

WESTERN

CIVILIZATIONS

*Their History and
Their Culture*

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age of coal and iron, mechanized production was restricted primarily to Great Britain, France, Belgium, and the United States; and Great Britain was far in advance of the others. After 1860 industrialization spread very rapidly until every one of the major powers had reaped a full harvest of its benefits and evils. The adoption of the new methods was especially conspicuous in Germany. Before 1860 the German states had been predominantly agrarian, with at least 60 per cent of their people obtaining their living from the soil. By 1914 the empire of the Kaisers was the greatest industrial nation in Europe, producing more steel than Great Britain and leading the world in the manufacture of chemicals, aniline dyes, and electrical and scientific equipment. For such remarkable expansion there were several main explanations. In the first place, Germany had no tradition of *laissez faire*. Her economists had been preaching for years that the state should intervene in every way possible to promote the economic strength of the nation. As a consequence it was easy for the government to bolster up feeble industries, to nationalize the railroads and operate them for the benefit of business, and even to encourage the growth of trusts. In the second place, the German people were accustomed to discipline, to the submergence of individual personalities in the groups to which they belonged. Prussia had always been a military state, and her system of inculcating order and obedience through compulsory service in the army was adopted as the foundation of the empire. As a third reason may be mentioned the German emphasis upon applied science in the schools, resulting in an abundant supply of technicians, who could be hired by industrial corporations for a low wage. The famous Krupp munitions works at Essen employed a larger staff of trained scientists than any university in the world. Last, but by no means of least importance, was the fact that Germany acquired, as a result of her victory over France in 1870, the rich iron deposits of Lorraine, which ultimately supplied her with three-fourths of the ore for her basic industry of steel manufacture.

Industrialization did not spread into eastern Europe quite so soon as it did into Germany, nor did it proceed as far. Nevertheless, by 1890 a considerable development of the factory system and of mechanized transportation had begun in Russia. The Industrial Revolution in Russia, like that in Germany, was in part the result of governmental encouragement. Through the influence of Count Serge Witte, distinguished minister under Alexander III and Nicholas II, the government of the Tsars levied prohibitive tariffs and borrowed money from France to subsidize railroads and numerous industrial enterprises. These and other efforts bore some amazing fruit. By 1914 Russia was producing more iron than France; her coal production had more than doubled; and in textiles she ranked fourth in the world. No fewer than 3,000,000 people were engaged directly in manufacturing, while some of her industrial establish-

THE SECOND INDUSTRIAL REVOLUTION

The spread of industrialization: the Industrial Revolution in Germany

The industrialization of Russia, Italy, and Japan