

cost of such vocational retraining is about one hundred dollars. An actual experiment showed that it was possible to multiply the weekly stipend 400 percent during the period of training and yet to reduce by three fourths the total compensation due at the time of the accident. To overcome the helplessness of the cripple and his tendency to exhaust his compensation before voluntarily seeking occupational training an insurance agency in Wisconsin has instituted a curative workshop, where skills are tested, trades taught, men placed and where the effectiveness of such a plan has been demonstrated. The capacity of industry to absorb handicapped men is not uniform in all trades or all forms of handicap. The employment, for instance, by Henry Ford of large numbers of crippled men is dependent on highly mechanized processes.

In the United States the federal government inaugurated in 1918 through the Vocational Rehabilitation Act an extensive program for physical and vocational rehabilitation designed to reestablish in civil life soldiers, sailors and marines crippled in the World War; and by June, 1926, 90,000 disabled ex-service men had been aided. The Federal Vocational Rehabilitation Act of 1920 extended the scope of the work of the government and provided means for the vocational rehabilitation of civilian disabled persons whatever the cause of their disability, under the direction of the Federal Board for Vocational Education which had been established by the Smith-Hughes law of 1917. By June, 1929, forty-four states were cooperating in joint rehabilitation programs; the federal and state governments share equally the expenses of the work and the states carry out the work under federal supervision. The personnel directing the work ranges from a single director of rehabilitation, as in North Dakota, to a score of highly trained persons, as in New York state. The plan and character of the work also vary from state to state. Disability resulting from industrial accidents accounts for approximately 90 percent of the rehabilitation cases in Pennsylvania and 70 percent of those in New Jersey, while in Minnesota not more than 13 percent of the rehabilitants are classed as industrial cases. Wisconsin teaches cripples between fifty and sixty kinds of craft work in its vocational schools. Virginia has divided the state into a number of orthopedic centers through which it carries on its work. Iowa uses its institutions of higher learning to train its cripples, and other states, such as New York and Ohio, use social

agencies. Most of the rehabilitants are between the ages of twenty and thirty-five years. The Federal Vocational Rehabilitation Act has, however, enabled but a small percentage of disabled persons to occupy remunerative positions. The director of the Board for Vocational Education has conservatively estimated that there are some 225,000 persons permanently disabled in the United States annually and that of this number about 112,000 are vocationally handicapped. With due allowance for those who are too far advanced in years for successful rehabilitation and for those who are hopelessly disabled he estimates a total of 84,000 possible cases for rehabilitation in the United States annually. Only from 1 to 5 percent of these are being rehabilitated. One difficulty lies in the necessity for highly individualized work in each case.

In England and Wales there are some twenty-five orthopedic centers receiving support from public authorities and from a large number of voluntary organizations. The Central Council for the Care of Cripples was established in 1919 to supervise the work for the prevention, treatment and education of crippled children. In Germany the Deutsche Vereinigung für Krüppelfürsorge, formed in 1909, supervises all work in the seventy-eight public and private institutions for cripples. Legislation has been passed requiring employers whose establishments employ more than fifty men to recruit a certain percentage of workers from among trained crippled men. The child welfare law passed in Germany entitling every child to an education "according to his physical, mental and social capacity" has resulted in special provision for the crippled child. Similar legislation is being proposed in Norway, where the handicraft school for cripples, started in Oslo in 1892, has developed into the central institute for cripples, which directs the work throughout the country.

Sweden has a central committee for the care of cripples to coordinate the work of four associations which have three institutions receiving state aid in different sections of the country. Denmark has one institution for the care of cripples founded in 1872. Austria has converted a rehabilitation center for disabled soldiers in Vienna into one for civilians. Holland has a central society for cripples and four private institutions giving treatment and training. The first vocational project for crippled adults in Europe was established in Charleroi, Belgium, in 1908. There are several private institutions for cripples

in France, all under state supervision, and a law passed in 1919 requires the segregation and treatment of cases of articular tuberculosis, which is the chief source of crippling in that country. In Italy, where rickets cripples many children, there are five principal centers for treatment and training as well as several hospices. Spain has an institute for cripples near Madrid and four asylums for crippled children elsewhere. In the Soviet Union the government is carrying out an extensive program for the rehabilitation of crippled children and adults. An international conference on crippled children was held in Geneva in July, 1929.

The program for the prevention and care of cripples is intimately related to the general economic and social movement. Progress in the work is dependent upon the advance in preventive and therapeutic medicine, upon an elimination of pessimistic and indifferent attitudes, upon a recognition on the part of employers of their responsibility for the safety of their employees, upon preventive measures to eliminate public accidents and upon the active participation of the state in extensive rehabilitation programs which will enable cripples to function in society.

JOAN ROSE CUSHMAN

See: BEGGING; ACCIDENTS; CHILD; VETERANS; INDUSTRIAL HYGIENE; MEDICINE; REHABILITATION; INSTITUTIONS, PUBLIC; WORKMEN'S COMPENSATION.

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CRISES A crisis may be defined as a grave and sudden disturbance of economic equilibrium. In a dynamic society the equilibrium between the supply and demand of products and services and between the supply and demand of capital is necessarily unstable, and hence price movements occur. But from time to time a grave and sudden disturbance upsets this complex equilibrium, causing a decided slump in securities and prices. These phenomena are termed crises by economists and the general public.

Scientific research at the end of the nineteenth and the beginning of the twentieth century established the fact that the crisis occurs at the point of transition from a period of expansion to a period of contraction. Certain economists have thereby thought themselves justified in speaking of cycles. But this term labors under the disadvantage of exaggerating the regularity of the phenomenon under consideration. Economic life, like life in general, can hardly be confined within equations and statistical curves. One may speak of cycles, but with the reservation that not all the years of the period before the crisis are prosperous years and not all those after the crisis are years of depression. It is undoubtedly more correct to speak of industrial fluctuations or of alternations of expansion and contraction.

In reality it is the periods of crisis that present the greatest similarity: a sudden fall in prices of commodities (especially metals), credit stringency, suspension of payment by large banks, crashes in the stock market, failures, exceptional gold movements, followed by a decline in production and by unemployment, with repercussions on marriage and birth rates, criminality and political developments.

All crises have one essential feature: one or two rapidly expanding industries find their progress interrupted by reason of a too rapid rise in the cost of production or through an insufficient demand for their products—most often from a combination of these two factors. A decline in prospective profits and a check to expansion follow. Textile industries (at the beginning of the nineteenth century), the railroads (during most of the nineteenth century), electric and automobile industries (at the end of the nineteenth and the beginning of the twentieth century) and the construction industry have been the focal points of crises. For a certain number of years the new industries produce the wished for results. At the end of the period of expansion the costs rise and production meets with a slackened demand. A slowing down is

inevitable, hence there is less demand for equipment and a particularly intense crisis arises in metal industries which extends in concentric waves to other industries.

Crises have occurred in all periods of history. But whereas in antiquity and even as late as the eighteenth century the type of crisis most prevalent and most dreaded was that due to a shortage of goods brought about by natural and extra-economic factors, such as crop failure and political disturbances, for the last century and a half crises have been fundamentally due to superabundance or overproduction caused by forces which seem to inhere in modern economic organization. The former type was marked by a considerable rise in prices, the latter is associated with an abrupt and widespread fall in prices. Like that of shortage, the crisis of overproduction is recurrent although not periodical. The date of the preceding crisis is at the most but one element in any forecast of the next. During the whole of the nineteenth century and in the beginning of the twentieth, parallel with the development of capitalism, successive crises are recorded for 1825, 1836-37, 1847, 1857, 1866, 1873, 1882, 1890, 1900, 1907, 1913-14, 1920, 1929.

In the eighteenth and at the beginning of the nineteenth century the crisis was still a "flash in the pan." Speculation played a preponderating role: in the event of new markets for trade, scarcity of products and rising quotations of securities people bought because everything was going up in the hope that the up trend would continue. This would go far and fast. The slump was equally abrupt. In the eighteenth century in France the most typical crisis of this class was that caused by Law's banking scheme, a crisis confined to the stock market but already a perfect type of speculative crisis. In England in 1763, 1772-73, 1783, 1793, 1796, 1810, 1815 and in the war periods (Seven Years' War, wars of the revolution, Napoleonic wars) there was a general anticipation of an unlimited demand for commodities. Prices rose only to come crashing down. Goods were manufactured but found an insufficient outlet. Such crises are very aptly styled by economists periods of commercial crises, for they were chiefly the work of merchants who had become speculators, and the effects of the crises were confined to relatively small social groups. There was another significant feature: the exaggerated rise in the prices of securities would have been impossible without the aid of the banks, which advanced to mer-

chants the necessary funds for their purchases at the enhanced prices. The banks of issue did not as yet regard themselves as regulators of economic activity. They consented to very large advances since the issue of banknotes was not monopolized. The central banks of issue, such as the Bank of England, founded in 1694, or even the Banque de France, founded in 1800, did not have the sole right to issue banknotes. Thus the crises were marked by the failure of great numbers of banks unable to redeem the notes issued during the upward trend of prices. These huge issues of notes, while not the cause of higher prices, were their indispensable condition and support. They furnished those speculating on a rise with the necessary funds for margin. Caught by a sudden decline of prices insolvent speculators found it impossible to pay back their banks. Notes were presented for redemption and could not be redeemed. In the midst of this disorder, however, one bank although as yet having no legally privileged position assumed the leadership: in England the Bank of England, in France the Banque de France. And the logic of facts caused it to assume more and more decisively the role of a reserve. In case of a crisis all turned to it; to it the government conceded advances to help liquidate crises. Crises have had a profound influence upon the development of the functions of banks of issue. The act of 1913 creating the Federal Reserve System in the United States was passed as a result of the crisis of 1907.

After 1825 crises ceased to be commercial, i.e. confined to relatively small groups of speculating merchants, and became industrial, involving ever widening spheres of productive forces. The year 1825 marked the advent of the railway, upon which depended the growth of the iron, coal and steel industries. The equipment used by the textile industry (the first of the great industries) was soon far outstripped by the requirements in metal and coal of the new means of transportation. Thereafter crises ceased to affect consumption goods and their raw materials (cotton, wool, silk) in particular and were extended to the heavy industries providing the means of production (mines, foundries, rolling mills, machinery). Speculation, no longer confined to products, extended to securities on the stock exchange. Heavy industry and the railroads could be financed only through joint stock companies. It was the period in France when the great private banks, such as Rothschild's and Hottinguer's, were no longer rich enough to

furnish manufacturers with the necessary capital. In 1852 the *Crédit Mobilier*, the first great French business bank, was created in Paris. From the beginning of the nineteenth century the banks in England had founded industrial stock companies, whose shares fed the stock market speculation and declined promptly and heavily in value in time of crisis. The banks, which frequently had kept the companies' shares in their portfolios, suffered losses which sometimes proved fatal. From that time onward all crises have been accompanied by the failure of banks whose capital has been invested in enterprises embarrassed by the crisis. They are the victims of runs by their depositors or of losses on their loans or the shares they hold.

Among the banks that have failed through such losses may be mentioned: the Royal Bank of Liverpool in 1847; the banks of Maryland and of Pennsylvania, the Western Bank of Scotland, the City Bank of Glasgow in 1857; Overend Gurney in 1866; the *Crédit Mobilier* in 1867; Jay Cooke and Company, Fisk and Hatch in 1873; the *Union Générale* in 1882; Baring's Bank in 1890; the *Leipziger Bank* in 1900; the *Knickerbocker Trust Company* (and many others) in 1907; the *Société Centrale des Banques de Province*, the *Banque Industrielle de Chine*, the *Banca Italiana di Sconto* in 1920. On the other hand, in 1929 and 1930 there was no failure of any bank of great significance despite the serious stock exchange crises and a number of lesser bank failures.

It was in the beginning of the nineteenth century that crises began to occasion very large international movements of gold, notably in England in 1825, 1836 and 1839. The excessive imports of commodities at the end of the period of expansion and the sales of securities in London had to be settled with metal once the decline had set in. In 1825 England was in debt to the continent, in 1836 and 1839 to the United States. In 1836 and 1839 the Bank of England raised its discount rate and protected its gold reserve. The act of 1833 had authorized it to fix its discount rate at a level higher than that of the legal interest rate of 5 percent. In 1839 it raised its rate to 6 percent. Crises are accompanied by credit stringency: the merchants have bought but cannot sell at all or must sell at a loss. The manufacturers have produced but they too cannot sell or must sell at a loss. Individual accounts are in arrears. To meet the difficulty recourse is had to credit. The central banks of issue, now the supreme reserve of a country's credit in case of crisis, advance to the

embarrassed trade and industry the funds for payments indispensable if too drastic a liquidation of stocks is to be avoided. The indispensable sales are distributed over a longer period of time or delayed. But to assume this role successfully the central bank must be in a position to increase its banknote circulation. Of all the nations which have had to face general crises, France was long the only one to enjoy adequate legal provisions for central banking. Even today the Bank of England is still limited by the Bank Charter Act of 1844, and it was not until 1913 that the United States established its Federal Reserve banks. The great crises of the nineteenth century have led both theorists and practical men of affairs to discern the significance of elasticity as applied to the currency. A country's reserve bank lends elasticity to its currency and credit system.

As capitalism expands, as crises recur and as their industrial character is accentuated, the industries themselves attack this problem and concern themselves with the stabilization of business. The crisis is now seen to be a concomitant of overproduction: the supply exceeds the demand. Thus, as Juglar pointed out, the crisis ceases to be regarded as a result of the abuse of credit. It has its roots more deeply in supply of, and in demand for, goods. The abuse of credit is itself grafted upon other excesses less apparent but more decisive: upon the excessive development of the means of production and of production itself. The sudden and abrupt drop in prices is not the result solely or chiefly of bull speculations, whose standard dénouement is expressed by a slump and often by a crash. One should distinguish crises of overproduction from speculative crashes. The crisis is distinguished from the crash by its widespread character, by the period of depression that accompanies it and the period of expansion that precedes it. The crisis ceases to be an accident and becomes a link in the chain of the evolution of capitalistic societies. From the middle of the nineteenth century crises have had this aspect.

With the recognition of the economic character of recurrent crises the problem of finding means for their prevention or attenuation came to occupy the attention of the business world. As early as the beginning of the twentieth century the great banks of issue looked upon the discount rate as something more than a mere means of protecting the reserves: the raising of the discount rate became a warning to the business world of the approaching dangers of a

crisis of overproduction. In the years following the war the policy of preventing crises by the instrumentality of credit was designated credit control. The central banks now give warnings to the market irrespective of any modification in the rate of discount; they intervene more directly still by means of open market operations.

The remedial efforts go beyond the organization of credit and the manipulation of the discount rate. Industry attempts to help itself by eliminating competition and by the formation of combinations, thereby gaining a more or less complete control of production and sale. By a rational policy of production and prices it aims to minimize if not eliminate crises of overproduction. The formation of cartels was considered a step in the direction of eliminating crises. As early as 1857 the coal mines of Yorkshire had attempted to check the decline in prices by entering into agreements, but it was the crisis of 1890 that stimulated the multiplication of such cartels, chiefly in Germany, in the industries most affected by conditions of overproduction, namely, mining and metal industries. From their very beginning the cartels sought to minimize crises by a policy which was inspired by the modern conception of this phenomenon. The crisis marks the end of a period of expansion and ushers in an era of depression. The cartels seek to check both the abnormal rise during prosperity and the decline in times of crisis by stabilizing prices, regulating production in accordance with demand and thus avoiding overproduction. The German cartels remained faithful to this policy which inspired their creation. The trust has more complex origins, but it too aims to control and regulate the market. American legislation has made the trusts more discreet as regards the policy to be pursued in case of crises. But very often they maintain prices at a high level after the crisis has arrived. In 1909 and 1929 they based production on demand as did the cartels. The cartel and the trust appear today nearly everywhere as useful instruments for the control of markets. But the stabilization of business by industry itself presupposes a conception of the phenomenon of crises and a theory regarding their nature and cause. The policy of cartels elaborated half a century ago starts with too naive, empirical and shortsighted an idea: in a crisis they limit production, check the decline of prices and even have recourse to "dumping."

As a matter of fact the phenomena of overproduction are bound up with the shrinkage in

the demand. This shrinkage bears a close relation to the fact that at the end of the period of prosperity costs have risen and the increased production meets less intense needs. To revive the demand, to stimulate it, costs must be reduced; needs that have grown less intense must be met by lowering prices. There is but one means: to reduce the prices of equipment, the prices of raw materials, the selling prices to the consumer. The policy practised by the cartels in Germany and adopted very frequently in the United States in the domain of selling prices in case of a crisis is contrary to economic rationale. Again and again the American trusts have maintained their prices in a crisis, in 1907 and in 1929-30; while the German cartels similarly resisted a decline in the crises of 1900, 1907, 1913 and 1930. This error seems to be of capital importance. In order to reduce costs the prices of iron, steel and equipment must be reduced. This reduction will permit of a reduction in the price of automobiles, rails, cars, turbines. Consumers will be again attracted in spite of the reduction of savings and reserves occasioned by the crisis. The affected industries will recover. Credit is but an element of cost, and cheap credit by itself is ineffective.

Besides the general crises of overproduction there are crises that affect the market for a single product, e.g. coffee, sugar, copper, coal; isolated stock exchange crises; banking crises independent of the general crises; monetary crises (decline in the value of a metal, inflation, deflation). But the general crises in a way synthesize the principal types of crisis. Even the disorders provoked by inflation and deflation are reminiscent of the phenomena found in a period of expansion and a period of depression.

Being a part of a dynamic economic society there is no fixity attached to the characteristics and the behavior of crises. They change with the change in economic organization. In comparing the crises of the beginning of the nineteenth century with recent ones it will be noted that they have affected wider industrial and geographical areas but declined in acuteness.

The changed character and particularly the diminished acuteness of the crises is to be explained by the elaboration of a better credit policy, by the creation of monopolies of production, by a better knowledge and a keener observation of the movement of business. Errors, however, are still possible; the facts are not all discovered. Moreover, dynamism and equilibrium are two antinomic terms, and as long as

economic society remains dynamic its development will be subject to fluctuation. Nevertheless, it would seem that for the term crisis one may henceforth substitute that of depression; it is reasonable to speak today of a world depression rather than of a world crisis.

JEAN LESCURE

See: BUSINESS CYCLES; CONJUNCTURE; BUBBLES, SPECULATIVE; BOOM.

For bibliography see article on BUSINESS CYCLES.

CRISPI, FRANCESCO (1819-1901), Italian statesman. During his youth Crispi, a Sicilian by birth, was an ardent republican and follower of Mazzini. He took an active part in the Neapolitan revolutionary movements of 1848-49 and was exiled from Italy. Returning after the war of independence in 1859 he prepared and directed with the help of Garibaldi the "Expedition of the Thousand," which liberated Sicily and made it a part of the Italian kingdom. He accepted the monarchical implication of Garibaldi's slogan, "Italia e Vittorio Emanuele," and later, in 1865, as a member of the Italian parliament abandoned completely his republicanism, alienating Mazzini by his famous statement, "La repubblica ci divide, la monarchia ci unisce," in which he subordinated all other considerations to his zeal for unification. Although during the first twenty years of his parliamentary career Crispi was an outstanding champion of liberal measures he was too uncompromising an individualist to form and direct a strong party of the Left. After 1887, however, he occupied a most active and influential position in the political life of Italy, being twice president of the Council of Ministers (1887-91 and 1893-96). Crispi's imperious temperament and the opportunities which he had of manifesting it with only slight opposition in decisive moments of his country's history gave a strong Jacobin cast to his democracy. If in theory he recognized the parliamentary state and the right of the people to govern themselves, in fact he was led to place his own personality above the constitutional powers and to distort *tout par le peuple* into *tout pour le peuple*. His two administrations represent in Italy that stage of political evolution in which democracy is beginning to give way to dictatorship and Caesarism. This tendency is evidenced by Crispi's continuous efforts to carry still farther the process of state centralization and to strengthen the executive at the expense of the legislative, as well as by the severity with which he repressed in the so-called *fasci* of Sicily the

embryonic forms of Italian socialism. Like Mazzini he had a deep hostility to the socialist movement, which to him was synonymous with barbarism, tyranny and egoism and which he was particularly anxious to stamp out because of his suspicion that the movement in Italy was being fostered by France, a country with which for many reasons he felt little sympathy. His policy toward the church alternated between extreme anticlerical measures, on the one hand, prompted by his Masonic sympathies and his resentment at French influence in the Vatican, and, on the other hand, attempts at reconciliation between church and state. Crispi's authoritarian views and his ideal of a strong state, heightened by his friendship with Bismarck, ally him with the expansionist and imperialistic groups which at the close of the nineteenth century were making their influence widely felt throughout Europe. Nourishing dreams of Italian greatness amounting at times almost to megalomania, he advocated the creation of a colonial empire on a scale far beyond the vision and resources of his contemporaries. His spirited but rash ambitions for an empire in Africa came to nothing, resulting instead in his overthrow. The defeat at Andowan in 1896, marking the close of the unfortunate Abyssinian campaign which he had favored and promoted, brought to an end his political career.

GUIDO DE RUGGIERO

Works: Crispi's letters and other writings, as well as the documents relating to his public career, have been arranged and edited by Tommaso Palamenghi-Crispi in the following volumes: *Carteggi politici inediti 1860-1900* (Rome 1912); *I mille* (Milan 1911); *Politica estera* (2nd ed. Milan 1912); *Questioni internazionali* (Milan 1913); the last three tr. by Mary Prichard-Agnetti as *The Memoirs of Francesco Crispi*, 3 vols. (London 1912-14); *Ultimi scritti e discorsi; extra-parlamentari* (Rome 1913); *Lettere dall'esilio, 1850-1860* (Rome 1918); *Politica interna* (Milan 1924, 2nd ed. 1924). His parliamentary speeches may be found in *Discorsi parlamentari*, 3 vols. (Rome 1915).

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CRITICISM, SOCIAL. The development of human society has been conditioned by social criticism, which in defending or attacking the status quo has postponed or accelerated change. The most potent social criticism, however, has