lagging of consumption behind available productive capacity is thus present in varying degrees through all but one stage of the cycle, although it is most pronounced during the slump, when both business and socio-economic overproduction set in. When revival begins, profitless production disappears; and since excess capacity then ceases to exercise a depressing influence on profits or on the employment of labor, overproduction is ordinarily not thought of as existing in periods of prosperity.

The ideal profitable balanced production is only one of the contrasts to overproduction found in the prosperity-depression cycle. In addition to the disequilibrium between consumption and production of the slump period, caused by decline in consumption, there are two other types of unbalanced production in the cycle. One is the result of an excess of consumption over production, a condition reflected in the using up of old stocks of goods or, for a single national economy, in the increased import of goods from abroad; it occurs chiefly in the first and second revival stages and, as indicated above, is accompanied by a condition of overproduction—incomplete employment of productive resources—in other branches of industry. Finally, unbalanced production occurs when output falls not behind actual consumption but behind demand, which cannot be fully covered even by drawing upon old stocks or by increased import. This is the disequilibrium of the maximum prosperity stage. Overproduction is thus seen to be only one of three types of unbalanced production which are inherent in the business cycle.

All the causes of overproduction cited in the foregoing discussion are found in the free market economy of developed capitalism. The most important are technical inventions, increase of the means of production, saturation of demand, scarcity of capital and underconsumption. The characteristic type of overproduction which initiates the change from prosperity to depression in modern business cycles, and which is itself the essence of the depression, is brought about by the interaction of a number of different factors. It may be described as overinvestment, since it results from saturation of demand and scarcity of capital following an increase of productive capacity.

Overinvestment must be distinguished from another form of overproduction in the modern world which, although not yet universal, is finding its way into an increasing number of industries; this may be called prosperity overproduction, for despite the growth of demand and of consumption, overproduction persists because productive capacity outstrips capacity to consume. In most of the western world certain industries—sugar, potash, cement, brick, automobile, artificial silk, artificial nitrogen and to some extent iron, coal and nitrogen—suffer from chronic overproduction, which persists even in periods of prosperity. Here overproduction changes with the cyclical stages only in kind and degree; in prosperity the business features of overproduction disappear, but socio-economic overproduction is mitigated only slightly, and for producers' and durable consumers' goods industries. This phenomenon of prosperity overproduction lies outside the business cycle characteristic of the capitalist system in its prime; it is rather a sign of senility in the unregulated market economy of fully developed capitalism.

The course of cyclical overproduction, or overinvestment, consists of several stages, transition from one to the next being induced by attempts of entrepreneurs to escape the business incidence of overproduction. These successive stages are: the accumulation of stocks of goods; restriction of production; suspension of production; dumping, or the sale abroad of the accumulating stocks of goods at prices lower than those prevailing in the exporting country; improvement of productive processes and increase of output in order to bring down production cost per unit. A decline in prices usually marks the beginning of overproduction and accompanies it in both its socio-economic and its business aspects; only in monopolistic industries can lowering of prices be avoided. It is hardly necessary to point out that not every fall in prices is a sign of overproduction.

Despite its importance cyclical overproduction has only recently come within the focus of economic theory. Previously, in classical economic theory, overproduction was considered under two heads: the possibility of overproduction (J. B. Say's *théorie des débouchés*) and the contrast between general and partial overproduction. The key to the understanding of classical theory is the fact, curiously enough still overlooked, that it took for granted the existence of a particular economic situation, that of a partial overproduction and a corresponding partial underproduction; from this assumption it follows that the price of goods which are flooding the market declines and that of goods

which are scarce rises. When it is recognized that it is this coexistence of partial overproduction and underproduction which must be explained, the matter becomes quite simple. Now the important problem for the critic is the question whether this type of overproduction was that peculiar to the early capitalist system—which seems very doubtful.

Modern overproduction theory is concerned with the overproduction peculiar to the fully developed capitalist system. Indeed it was only toward the end of the nineteenth century that it was realized that there was a special sort of overproduction characteristic of this system, prevalent through regularly recurring depression periods, and that this type of overproduction had a clearly defined though complex pattern. Modern overproduction theory is thus an organic part of the theory of business cycles (*q.v.*): to explain the appearance of overproduction is to account for the end of prosperity and to deal with its duration is to analyze the various stages of depression.

A. SPIETHOFF

See: BUSINESS CYCLES; UNEMPLOYMENT; PRODUCTION; LARGE SCALE PRODUCTION; RAW MATERIALS; VALUE AND PRICE; PRICES; INVESTMENT; RATIONALIZATION; CARTEL; COMBINATIONS, INDUSTRIAL; VALORIZATION; STABILIZATION, ECONOMIC.

OVERSTONE, LORD, SAMUEL JONES LOYD (1796–1883), British banker and financial expert. Educated at Eton and Trinity College, Cambridge, Loyd sat in Parliament as Liberal member for Hythe during the later years of his residence at college (1816–23) but played little active part in politics. After 1826 he centered his activities upon the banking house of Jones, Loyd and Company of Manchester, in which he succeeded his father as a partner in 1844. In 1850 he was raised to the peerage as first Baron Overstone, and during the later years of his life was considered one of the richest men in England.

As early as 1832 Loyd, who expressed his opinions emphatically and lucidly and had an equal mastery of practise and theory, was recognized as an authority on finance. His advice was sought by the government on every occasion when problems arose in this field. In 1832 he gave evidence before the Parliamentary Committee of Secrecy on the Bank of England Charter and again in 1840 before the Committee on Banks of Issue; on both occasions he emphasized the need for a single bank of issue and insisted, in accordance with the doctrine of the currency school, that the paper notes "ought to be preserved at their proper value by making them, under all circumstances, conform in amount to the coins or metallic circulation which they represent." This demand that the emission of notes should be regulated by the bullion reserve, acceptance of which involved separating the banking and issue departments of the Bank of England, was strongly opposed by Fullarton and Tooke (*q.v.*), but Peel relied so much upon the opinion of Loyd that the Bank Charter Act of 1844 was drawn up along the lines that he had suggested, although the act was subsequently modified in some important particulars. To the end of his life Loyd held the same opinions, opposing inconvertible paper, the decimal system of coinage and the development of joint stock banks.

F. CYRIL JAMES

Works: Overstone, S. J. L., *Tracts and Other Publications on Metallic and Paper Currency*, ed. by J. R. McCulloch (London 1857).

Consult: The *Times* (London, November 19, 1883) p. 8; Bagehot, Walter, *Lombard Street* (new ed. by Hartley Withers, London 1915) ch. ix.

OWEN, ROBERT DALE (1801–77), American publicist and social theorist. The eldest son of Robert Owen, he was educated in Switzerland at the school of Emanuel Fellenberg, many of whose ideas he popularized in America. He assisted his father in his socialistic colonies at New Lanark and New Harmony and from 1825 to 1828 edited with Frances Wright (*q.v.*) the *New Harmony Gazette*. Removing to New York in 1828 Owen edited the *Free Enquirer* and published the first American work on birth control. This book, which was suppressed in England in 1878 (Regina *v.* Edward Truelove), marks the beginning of the American birth control movement.

He fought after the manner of J. S. Mill for equality of the sexes and as a member of the Indiana legislature led a successful fight for a bill securing property rights for women. At a strategic moment he helped crystallize Lincoln's views on slavery. He persistently advocated free public education and helped found the Smithsonian Institution. His free thought writings though critical were temperate. His diplomatic career was undistinguished. Owen is to be remembered for his advocacy of liberalized social institutions, for his part in the organization of a Working Men's party in New York in 1829, but insufficient to keep the industry operating at capacity. Consumption may decrease also because of scarcity of capital, as a result of which producers' goods and durable consumers' goods, depending for their sale on capital seeking investment, become to a certain extent unsalable. Underconsumption must also be taken into account, particularly with regard to non-durable consumers' goods, which are bought out of income and are therefore subject to decreased consumption when incomes fall. Finally, overproduction may result from excessively high prices. Whereas in the latter two cases existing needs do not crystallize into effective demand because of lack of purchasing power, here the appearance of effective demand is inhibited by excessively high prices. It is seldom, however, that rising prices and the consequent falling off of demand originate a period of overproduction; prices rise chiefly in times of overspeculation and then only for a short while.

The causes listed above determine the character and intensity of overproduction, so that it becomes either useless production or uneconomic production. In the first case the goods or the means of producing them exceed the need for them, which is inexpansible; they are therefore simply unconsumable. In the second case the goods are not in themselves useless or unsalable, but they can be sold only uneconomically, or for less than cost. Here the demand is elastic and sales are dependent largely on price. Theoretically the lack of balance between production and consumption could be removed simply by a lowering of prices. If this is not actually done, it is because the lowering of prices would make the entire process of production unprofitable for the entrepreneur. The recognition of a particular situation as involving one or the other of these two types of overproduction is important in any attempt to correct it. If the case is one of useless production, attention must be concentrated on the creation of new needs and new uses for goods; thus capitalism has up to the present avoided the saturation of demand for producers' goods through a series of new inventions, such as the successive use for motive power of steam, gas, electricity and petroleum. Lack of success in this direction leaves as the only alternative complete cessation or restriction of production; this must be borne in mind in any evaluation of the policies of the cartel. In the case of useless production no lowering of prices can stimulate the demand. If, however, the situation is one of uneconomic production, the problem becomes that of cutting production costs sufficiently to make profitable the prices necessary for the sale of the goods. If this can be done, overproduction both on the socio-economic and on the business side will have been overcome.

There are a number of causes which make any specific case of overproduction one of useless production: changes of fashion, of technical method, of locality, or saturation of demand. These are causes on the consumption side which eliminate needs for goods. Thus, although the sale of fashion goods, the demand for which is generally extremely elastic, may be increased by lowering prices—a situation which often results in substitution of cheap imitations to tap new layers of demand—a radical change of fashion may eliminate completely the demand for some goods, however low the price. A similar cessation of demand can result from technical changes or changes of locality or simply from the saturation of demand.

Another set of causes lead to overproduction of the uneconomic type: scarcity of capital, underconsumption and excessive prices. These operate also on the consumption side, but they are rooted in income and price relationships; they make it impossible for existing needs to be turned into effective demand. The demand, however, could be stimulated at once, if the rise in prices or the decrease in purchasing power were corrected by a lowering of prices. Even goods for which the demand is generally taken to be fairly constant, such as construction materials, could succumb to uneconomic production if scarcity of capital were the sole cause of the overproduction.

As distinct from forces on the consumption side, causes which operate on the production side—natural occurrences, technical inventions, increase of capacity—can give to overproduction the character either of useless or of uneconomic production. The result depends in any case upon the degree to which the causes are operative, what goods they affect particularly and to what extent the demand for these goods is covered normally. The demand for primary foodstuffs, such as potatoes, is so well covered that bumper crops must necessarily imply uneconomic production; lowering of prices will probably not lead to increased demand. On the other hand, usually the demand for table luxuries is completely satisfied only in the case of persons with large incomes. If in these circumstances production increases, the fate of the increased output is simply a matter of costs and prices. If without prejudice to profits prices can be lowered sufficiently to enable the whole output to be sold, then a new balanced price is created and overproduction is avoided altogether. If prices cannot be lowered to this extent, the sale is still dependent on prices and therefore uneconomic production results. If the output were increased to such an extent as to be unsalable even with prices lowered to suit the smallest incomes, the situation would be one of useless production. The demand for the most important materials entering into productive equipment is on the whole inelastic. It does not ordinarily increase when prices sink, but only when there is promise of profits from the industries in which these goods are used. The demand for such producers' goods can be increased by the lowering of their prices only in so far as this makes possible an increase in the profitable employment of the means of production which they produce; this does not usually happen to any great extent. If the production of such basic goods suddenly rises either as a result of new technical inventions or simply because of an increase in plant capacity, the resulting overproduction tends to be of the useless production type, and no lowering of prices can increase the demand.

In this discussion of the causes of overproduction the distinction between the socio-economic and the business aspects of the phenomenon has been disregarded. Actually one is almost never found without the other; to the extent that it is possible to eliminate one, this is done at the cost of aggravating the other. At this stage, however, the relative acuteness of the socio-economic or business maladjustments depends not so much upon the causes of overproduction as upon the policy of the entrepreneurs. Since their entire strength is directed against profitless production, it is not surprising that overproduction of the purely business type, with no socio-economic element, has never been observed in practise. The important practical question therefore is whether there are definite sets of causes which bring on profitless production and others which tend to overcome it. Thus changes of fashion, of technical methods, of locality, and the saturation of demand make socio-economic overproduction unavoidable. These same causes may well result also in profitless production, since with such serious falling off of demand it is improbable that output and prices can be adjusted sufficiently to restore profits. Nor is cutting down of supply practicable here, although it might work where overproduction resulted from other causes. Success or failure in every case is determined by the existing distribution of incomes and the range of prices and by the extent to which production must be cut to attract new buyers or increased to reduce unit costs. These factors, however, are related not to the general causes of overproduction, but to the specific social and technical conditions obtaining in particular branches of production.

Research into the history of overproduction and the relation between particular systems and definite forms of overproduction is in a very elementary stage. There is, for instance, no exact knowledge of the form of overproduction, generally known as the overcrowding of the handicrafts, which existed in the final stages of town economy and in the period of territorial economy. The only type of overproduction which has received much study is that peculiar to fully developed capitalism.

In this developed capitalistic economy there appears to be a regular alternation of upward and downward swings—running from a slump through two revival stages into a period of maximum prosperity, followed by one of capital scarcity and a crisis leading to another slump. The slump and first revival stage are often described as periods of depression; and second revival, maximum prosperity, capital scarcity and crisis as periods of prosperity. Lack of balance occurs not only in the overproduction which brings about the change from prosperity to depression; it characterizes the entire business cycle. The balanced profitable production mentioned above as a contrast to overproduction is a phenomenon of short duration occurring only at the height of prosperity. Perhaps indeed it is only an ideal which is never actually realized. The maximum output of one prosperity period is exceeded only in the following spell of prosperity when production is at its highest; in the interval therefore some plant capacity must lie idle. Indeed since productive capacity is always being increased—or, to be more accurate, since it declines in a slump but is expanded at a greater than average rate in the first and second revival stages—the maximum output of the preceding period of prosperity may be exceeded before the existing productive capacity is fully employed, and hence some of it must lie idle even at the beginning of the maximum prosperity stage. Overproduction caused by the

Overhead Costs (Chicago 1923); Church, A. H., *Overhead Expense in Relation to Costs, Sales and Profits* (New York 1930); Marshall, Alfred, *Industry and Trade* (3rd ed. London 1920) bk. ii, chs. i–iv, bk. iii, chs. ii–vi, Appendix M; Hadley, A. T., *Railroad Transportation* (New York 1885); Ripley, W. Z., *Railroads: Rates and Regulation* (new ed. New York 1913); Watkins, G. P., *Electrical Rates* (New York 1921); Clark, J. B. and J. M., *The Control of Trusts* (2nd ed. New York 1912); Pigou, A. C., *The Economics of Welfare* (3rd ed. London 1929), especially pt. 3, chs. xiv–xv, xvii.

OVERPRODUCTION has existed to some extent at all times and in every economic epoch, but it has become a characteristic element of the economic system only under fully developed capitalism. The term overproduction can be interpreted in two ways: it can be considered either from the socio-economic or from the business standpoint. In the first case it means an excess of production or of productive resources above consumption. The resultant sinking of prices and decrease of profits, even to the point of direct loss, constitute the range of phenomena included in the business meaning of the term. Although in practise the two sets of phenomena run concurrently, in theory it is possible to separate them.

In its business aspect overproduction may be identified with profitless production. A case of purely business overproduction would be one where existing productive resources are fully employed and the balance between production and consumption is maintained, but the prices at which the output must be sold do not yield the usual profit or even entail losses. Although such a case is theoretically possible, there is none on record; this is not to be wondered at, since it would imply conduct on the part of entrepreneurs directly contrary to their striving for profit.

Overproduction of the purely socio-economic type is conceivable where reduction of profits or the incurring of losses is avoided by a proper adjustment of prices, output and production costs, the necessary extent of price change for different goods depending on the relative elasticity of their demand. Purely socio-economic overproduction may therefore be characterized as adjusted production. Such a condition, allowing for the maintenance of profits, is the aim of entrepreneurs in periods of overproduction; in isolated cases it has actually been achieved.

In contrast to overproduction, whether of the profitless, the adjusted or the combination type, is profitable balanced production wherein, with profits at a customary level, balance is preserved between productive resources and output on the one hand and consumption on the other.

The historical instances of overproduction are much more varied than is generally supposed. A generalized conception of overproduction must abstract from the concrete historical setting and derive from an analysis of its causes and of the different degrees of intensity of its forms.

Lack of balance between production and consumption may be caused by forces operating on either side or on both and resulting in an increase in production or a decrease in consumption. On the production side there are three chief sets of causes for overproduction: first, natural occurrences, such as particularly good crops, either of raw materials or of foodstuffs, which greatly augment production without any widening of the area under cultivation; second, technical inventions which make possible increasing productivity; and, third, actual increase of the means of production—cultivation of additional land, more intensive exploitation of natural resources, the construction of new or the enlargement of capacity of old manufacturing plants—with the resultant disproportional increase of output.

On the consumption side the causes of overproduction are even more numerous. Changing fashion may result in the complete disappearance of the demand for any particular product. More lasting is the effect of technical changes or improvements which may entirely eliminate the consumption of some particular product, as central heating, for instance, displaced tiled stoves. Again, changes of locality may affect consumption and so result in overproduction. Emigration of consumers can leave local producers with no demand for their goods. The transfer of workmen, officials or troops can result in overproduction for the whole trade and housing system of a town. In the same way the transfer of an industry to a new location can cause a shutdown of the local industries dependent upon it. Furthermore consumption may fall off as a result of the saturation of demand. The demand for productive equipment and for durable consumers' goods is not continuous; and when an economy has been fully supplied with such goods, the plant and machines which produced them are thrown out of work. Once the iron industry of a country has produced the necessary railways, mere repair and upkeep are