tive political imagination and popular appeal. In the world of diplomacy and of international relations he played a part by which he will not least be remembered. The master who had written The American Commonwealth, the ready talker and eager inquirer, the great repository of knowledge, he was naturally a great ambassador to the American people; and his work in interpreting this people and the English people to one another was a basis for a new era of mutual understanding. In his latter days he interested himself deeply in the problems of international peace; he followed both the American and the British plans for the solution of those problems, corresponding particularly with friends in America; and he may be counted among those whose labors helped to produce the new international spirit of our days.

ERNEST BARKER

Consult: Fisher, H. A. L., James Bryce, 2 vols. (New York 1927); Barker, Ernest, "Lord Bryce" in English Historical Review, vol. xxxvii (1922) 219–24; Gooch, G. P., "Lord Bryce" in Contemporary Review, vol. cxxi (1922) 304–13; Becker, Carl, "Lord Bryce on Modern Democracies" in Political Science Quarterly, vol. xxxvi (1921) 663–75; Pollock, Sir Frederick, "James Bryce" in Quarterly Review, vol. ccxxxvii (1922) 400–14; Shaw, Albert, "James Bryce as we knew him in America" in Review of Reviews, vol. lxv (1922) 277–84; Rockow, Lewis, Contemporary Political Thought in England (London 1925) ch. ix; Murray, R. H., Studies in the English Social and Political Thinkers of the Nineteenth Century, 2 vols. (London 1929) vol. ii, ch. viii.

BUBBLES, SPECULATIVE. The term bubble came into use early in the eighteenth century as descriptive of the more highly speculative joint stock undertakings of the period. Blackstone narrowly defines as bubbles "all unwarrantable undertakings by unlawful subscription." But the term has since acquired a more general application, and is used with reference to any situation in which the cumulative effect of widespread speculation has been to enhance prices to a point having no apparent relation to the object of the speculation.

The three outstanding bubbles in history are the tulip mania in Holland, the Mississippi scheme in France and the South Sea bubble in England. All three came before any considerable development of organized speculation. They were made possible in large measure by general ignorance concerning economic phenomena, particularly the little understood but rapidly expanding field of credit.

The tulip mania in Holland reached its height in 1636 and 1637 toward the end of a prolonged period of prosperity. The culture of tulips began to assume importance in Holland early in the seventeenth century, and until the beginning of 1634 trading was limited to professional growers and experts. In 1634 the public entered the market. All classes of the population joined in the excitement; in fact the speculation was carried on chiefly by persons quite outside the ordinary tulip trade. The mania spread to some extent to London and Paris. Starting in the middle of 1635 prices advanced with increasing rapidity. A pound Witte Croonen, for example, which cost \$50, was sold for \$1440. The markets underwent a rapid evolution. During the boom period in 1636 neither payment nor delivery was made at the time of closing the transaction. By the middle of 1636 most transactions took place without basis on either side. The seller sold bulbs which he did not possess for a promise of money which the purchaser did not possess. Paper profits were therefore tremendous and contributed greatly toward heightening the mania. Speculation degenerated into sheer craze during the autumn of 1636, and the crisis came suddenly on February 3, 1637. Prices collapsed. The government endeavored unsuccessfully to straighten out the resulting chaos of broken agreements and canceled contracts. The situation was only gradually cleared as various cities took steps of one kind or another. While the crisis was a shock to the economic structure, it did not have serious after effects. Few important merchants or large companies had been involved. It had been built up largely on a credit basis among individuals, and the collapse of the structure resulted more in psychological than in economic anguish.

The Mississippi scheme is perhaps the greatest speculation in a single company that has ever occurred. Its creator, John Law, was a Scot who gained considerable prestige in French financial circles owing to the success of his Banque Générale, founded in 1716, which in addition to other banking operations engaged in the issue of banknotes. In 1717 Law founded the Compagnie de la Louisiane ou d'Occident, which took over the grant for Mississippi trade held by Antoine Crozat, as well as the Compagnie du Canada. Its capital was subscribed one fourth in coin and three fourths in billet d'état, the depreciated government paper of the time. At first the depreciation of government paper and the determined opposition of powerful ene compa sec His ber, 17 acquire crown. was tra notes. special and th undert receive sion re plan s rights, shares shares spread sue ea charge of sha summ the pi issue. oversi Paris the ei 000 p and (and t whicl great 5, 17 finan gnie But spec: Peor Law stocl

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ful enemies drove down the value of the new company's shares, and for about one year the 500 livre shares sold for about 300. In September, 1718, however, the Compagnie d'Occident acquired the monopoly of tobacco from the crown. Furthermore, Law's Banque Générale was transformed into the Banque Royale, with Law as director and the king guaranteeing its notes. During 1719 other companies with special grants for foreign trade were absorbed and the company obtained control of the mint, undertook the payment of the national debt and received the grant to collect taxes. This expansion required additional capital. Law adopted a plan similar to the modern method of stock rights, in which every holder of four original shares (mères) could purchase one of the new shares (filles) at a premium. Payments were spread over a twenty-month period. The first issue early in 1719 was made with a premium charge of 50 livres per 500 livre share. The price of shares rose to 750. The second issue in the summer required a premium of 500 livres, and the price advanced again. In October the third issue, made at a premium of 4500 livres, was oversubscribed, and the shares sold at 8000. Paris had become the center of speculation for the entire world. It is estimated that over 300,-000 persons came to the city during September and October, 1719. The increased population and the general recklessness in money matters which usually accompanies these bubbles led to great activity in trade and industry. On January 5, 1720, Law became controller general of the finances, and individual shares in the Compagnie d'Occident reached 18,000 livres in value. But confidence began to dwindle. Foreign speculators withdrew their gains in bullion. People began to sell shares. By various methods Law endeavored to maintain the price of the stock, and finally he declared it fixed at 9000 livres. This transferred the panic to the banknotes, and there was a rapid increase in their circulation. The bank was compelled to suspend payments, and Law went into hiding. The people were enraged, and the government endeavored to meet the situation by a number of actions against persons who in one way or another might be held responsible for the bubble. Both the bank and the company were

Perhaps the best known bubble is that connected with the South Sea Company. In 1711 there was incorporated in England a new undertaking known as the "Governor and Company

of the merchants of Great Britain, trading to the South Seas and other parts of America and for Encouragement of the fishing." The company took over nearly £ 10,000,000 of public debt, on which it was to receive 6 percent, secured by certain permanent duties. In exchange it was granted a monopoly of British trade with South America and the Pacific Islands. In 1713 the company received a monopoly of the lucrative slave traffic with Spanish America. The undertaking was only moderately successful. Late in 1719 it embarked on the more ambitious project of taking over the entire national debt. The Bank of England immediately made a counter offer; but the bid of the South Sea Company was accepted. This involved an offer to the government of £7,567,500 for the privilege of taking over the national debt of £,30,981,712, on which the government was to pay 5 percent for seven years, and then 4 percent. The aim of the directors was to persuade the persons holding the debt, of which a large part was in the form of terminable annuities, to exchange it for South Sea stock. The stock, which was to be issued at a high premium, would extinguish a large amount of annuities with a small amount (par value) of stock. The enabling act of Parliament was not passed until April, 1720.

In the meantime there was a new development, the promotion of new companies. In 1717 the share capital of existing companies had slighty exceeded £20,000,000, of which one half was in the South Sea Company and one fourth in the Bank of England. Late in 1719 people encouraged by the success of the existing companies began to purchase stock in new enterprises. Subscribing for stock was made easy, the prospective purchasers being required to pay only a small fraction of par value. During January, 1720, there was uncertainty concerning the new proposal of the South Sea Company, and the interest of speculators turned to new ventures. In February the nominal capital in new companies exceeded £30,000,000. It became evident during this month that the debt would probably be sold to the South Sea Company, and its stock advanced from 128 to 187. An inquiry into the new subscriptions was undertaken by Parliament, which undoubtedly checked somewhat the excitement of the speculators; but the advance was resumed in the middle of March. The advance was cumulative in the case of South Sea stock because the higher the market price of the stock, the greater was the profit to be made on the debt conversion.

On March 18, 200 was reached; and in April, when stock was offered to the public and the debt conversion had begun, the price was over 400. In a few weeks more than half the annuitants had consented to convert.

Speculation was spreading rapidly to other fields, and there was a fresh outburst of new promotions during April. The earlier period had seen for the most part ventures in fishing, insurance and finance. The new enterprises were for foreign and colonial commerce. The speculation became most intense from May 20 to June 24. South Sea stock advanced to 800, and new enterprises with any promise advanced to large premiums. The total capital of new companies floated during the single week ending June 11 was f,224,000,000. Many of these new companies were fantastic. Some of the purposes stated were: to fish for wrecks on the Irish coast, to make salt water fresh, to make oil from sun flower seeds, to import a number of large jackasses from Spain, to manufacture a wheel of perpetual motion. The directors of the South Sea Company were concerned with making more funds available for investment in their shares. They loaned funds to prospective purchasers, holding the stock as collateral, but they also used their influence to check the volume of new companies which were competing with them for capital. As a result, the Bubble Act (par. 18, 6 George 1., c. 18) was passed declaring these new enterprises subject to legal punishment if not fundamentally sound.

Late in June South Sea stock reached its peak at 1050. At this time England was interested only in security prices. Everyone came to Exchange Alley to buy and sell stock. But in August the fall began. The insiders were mostly out, and word of their withdrawal made the collapse more certain. Furthermore a legal attack brought by the South Sea Company against certain other companies was such a shock to credit that it rebounded against the value of South Sea stock. At first the decline was chiefly in the new companies; but in September, 1720, South Sea stock fell from over 700 to below 180.

Although the whole affair was primarily financial it brought serious business depression in its wake. An inquiry by Parliament disclosed fraud and corruption in the conduct of the South Sea Company. Certain government officials were fined or imprisoned. The estates of the directors were confiscated, about four fifths being devoted to the relief of the sufferers. The greatest losers were probably the annuitants who

had accepted the offer to exchange. They eventually received about one half the original value of their annuities.

Although there have been no bubbles in recent times which can compare with the three just described, speculative crazes still exist. In England prior to the crisis of 1825 the speculation in new companies was nearly as wild as in the South Sea bubble. Over 600 new joint stock companies were formed requiring £,372,000,000 share capital, and prices of established companies went skyrocketing. There was a similar era of promotion ending in 1866, but it was much less extravagant. In the United States railroad speculation approached bubble proportions between the Civil War and 1873. The mulberry tree "craze" of the thirties, the "hen fever" of the fifties, the gold or Kaffir boom in the nineties, the rubber boom in 1910 and the Florida land boom of 1925 must also be mentioned.

In recent years bubbles have often been related to new industries. In the very nature of the case there are no past records concerning similar enterprises which can be taken by prospective investors as a basis for judgment. The new companies require capital for their development, and consequently the investment bankers are often enlisted on their side, using all available methods to convince investors of the promise of the new industry. The development of turnpikes, canals and banks played an important part in the bubble which burst in 1825. The expansion of railroads during the period from the sixties to the eighties and the growth of the electrical industry both possessed the necessary appeal to the speculative interest. Since the war the development of aviation companies has followed the same course. Many investors failed to differentiate between aviation records and aviation profits. As a result the speculative period of 1928-29 saw 33 companies listed on the New York Stock Exchange and Curb Exchange whose securities reached a value of \$1,160,000,000, only to decline in the ensuing period to \$284,000,000.

At present waves in speculative interest appear to be one of the most evident characteristics of the business cycle. The marked advance in security prices during 1928–29 was supported by the psychological optimism of a period of prosperity. The marked increase in publicity given by newspapers to financial news and the application of high pressure salesmanship to securities further enhanced the intensity of the situation. On the other hand the rapid development of paraphernalia for speculation—stock

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The bubble is fundamentally a psychological phenomenon. It is based on the principle of projection. The speculator is aware of past advances of price. He is therefore convinced of future advances in prices. He purchases with no intent other than resale at a higher price, seldom considering the economic forces in the situation. He sees only the anticipated profit. The character of his position, emotional rather than rational, makes him extremely susceptible to rumor, and assures a severe crisis when the reaction sets in.

WILLARD L. THORP

See: Speculation; Crises; Boom.

Consult: Mackay, Charles, Memoirs of Extraordinary Popular Delusions, 2 vols. (2nd ed. London 1852) vol. i, p. 1-92; Posthumus, N. W., "The Tulip Mania in Holland in the Years 1636 and 1637" in Journal of Economic and Business History, vol. i (1928-29) 434-66; Oudard, Georges, La très curieuse vie de Law (Paris 1927), tr. by G. C. E. Massé (London 1928); Scott, W. R., The Constitution and Finance of English, Scottish and Irish Joint-Stock Companies to 1720, 3 vols. (Cambridge, Eng. 1910-12); Benjamin, L. S., The South Sea Bubble (London 1921); Cole, A. H., "Agricultural Crazes" in American Economic Review, vol. xvi (1926) 622-39; Mattram, R. H., A History of Financial Speculation (London 1929).

BUCARELI Y URSÚA, ANTONIO MARÍA (1717-79), viceroy of New Spain (Mexico) and "father" of the present American state of California. Bucareli was born in Spain and entered the army, rising to the rank of lieutenant general. He served also as governor and captain general of Cuba and was appointed viceroy of New Spain in 1771. A man of the highest character, he was also endowed with extraordinary abilities and is considered one of the best of the Spanish viceroys. His greatest work was on behalf of Alta California, as California was then called, where in 1769 after two hundred and fifty years of effort the Spaniards had at length founded settlements. After a precarious existence of four years these establishments were on the point of being abandoned in 1773, but were saved by a remarkable series of constructive measures on the part of Bucareli. Most important of these was the opening of a land route, which under conditions as they existed in those days was the only way that settlers and the other elements of a permanent establishment could be sent to the province. These measures culminated in the founding of San Francisco in 1776. In that same year California was taken out of his hands and included in a new government of the frontier provinces. In consequence the overland route was neglected and the development of population of the province which Bucareli's measures promised to effect never materialized. He had saved California from falling into the hands of England or Russia, which might have hindered its acquisition by the United States, but he was not permitted to give California a chance to become ineradicably Hispanic, perhaps eventually a Spanish American republic. The negligence of his successor served virtually to hold the land in trust for the later occupation by the United States.

CHARLES E. CHAPMAN

Consult: Chapman, C. E., A History of California (New York 1921) p. 269-76.

BUCHANAN, DAVID (1779–1848), Scottish economist. His most important work was his annotated edition of Adam Smith's Wealth of Nations, with a supplementary volume entitled Observations on the Subjects Treated of in Dr. Smith's Inquiry . . . (Edinburgh 1814). This volume presents many acute criticisms of Adam Smith, particularly of his rent theories, and advances an argument for progressive taxation on the ground that a proportional rate works a hardship upon the recipients of small incomes.

In 1844 he published an *Inquiry into the Taxation and Commercial Policy of Great Britain* (Edinburgh), a work in which he favored free trade and criticized the existing system of taxation. He was opposed to taxing manufactured goods, and although he accepted the income tax in principle he held that it was indefensible in practise since it allowed inequitable assessment and evasion and was inconsistent with the "spirit of freedom." Believing that rent was due to the monopolistic ownership of land Buchanan attacked in this book the Ricardian theory of differential rent as "a skilfully disguised fallacy."

W. H. Dawson

Consult: Cannan, Edwin, A History of the Theories of