duced on the average at a loss. Such is alleged to have been the case in California, Australia, and Nevada,@@1 countries whose combined product has equalled in value nearly .£600,000,000.

*Value.—*In some ancient states the value of silver ap­pears to have been superior to that of gold.@@2 Agatharchides informs us that such was the case in ancient Arabia ; and Tacitus says the same of ancient Germany. Strabo alleges that the ratio of value in a country bordering that of the Sabæans was at one time one gold to two silver; and so late as the 17th century silver and gold were valued equally in Japan.@@3 Going back to a remote antiquity, silver appears to have been everywhere equal in value to gold until the silver mines showed signs of exhaustion, when, as the principal coins were of copper and silver, and prices were commonly expressed in these coins, the threatened decrease of money was probably averted and a profit secured for the state by raising the legal value of gold coins. In Greece, in the time of Herodotus (*cf*. iii. 95), gold was 13 times the value of silver, at which ratio it appears to have stood for a long period.

When the Romans acquired the placer mines of Pan­nonia, Dacia, Spain, Gaul, &c., they made their principal coins of gold ; and at a later period, when the supplies of this metal fell off, they raised the legal value of silver coins to one-tenth that of gold ones of like weight and fineness. This ratio was afterwards changed to 11, and still later to 12 silver for 1 gold. In the Arabian states of the 7th century the ratio was about 61/2 for 1 ; yet in France at the same time it was 10 for 1 ; in England during the 12th century it was 9 for 1 ; in France during the 14th century certain silver and gold coins of like weight bore the same value, hence the ratio was 1 for 1 ; in Castile and Leon in 1454-74 it was 71/2 for 1. Speaking broadly, between the rise of Mohammedanism and the opening of the silver mines of America the value of silver compared with gold gradually rose. It is evident that there were two lines of ratios, the one having an Indo-Arabic, the other a Romano-Germanic origin, and that the conflict of ratios—which only ceased when America was discovered and a great coinage of the precious metals occurred in Spain—gave rise to many of those otherwise inexplicable lowerings of coins, of one or the other metal, which charac­terize this period.

In Spain, by the edict of Medina (1497), the ratio was 103/4. When America was plundered the first fruits were gold, not silver; whereupon Spain, in 1546, and before the wealth of the silver mines of Potosi was known, raised the legal value of gold to 131/3, and, as Spain then mono­polized the supplies of the precious metals, the rest of the world was obliged to acquiesce in her valuation. During the following century Portugal obtained such immense quantities of gold from the East Indies, Japan, and Brazil that the value of her imports of this metal exceeded £3,000,000 a year, whilst those of Spain had dwindled to £500,000 in gold, and had only increased to £2,500,000 in silver. Portugal now governed the ratio, and in 1688 raised the value of gold to 16 times that of silver. Except during a brief period of forty years, this ratio has ever since been maintained in Spanish and British America and the United States. A century later the spoils of the Orient were exhausted, the Brazilian placers began to decline, and Portugal lost her importance. Spain thus again got control of the ratio, and, as her colonial produce was chiefly silver, she raised its value in 1775 from one-sixteenth to one-fifteenth and a half

that of gold for the Peninsula, permitting it to remain at one-sixteenth in the colonies. France, whose previous ratio (that of 1726) was 141/2, adopted the Spanish ratio of 151/2 in 1785, and has adhered to it ever since. These three historical ratios, and the bearing of each upon the others, have influenced all legislation on the subject, and, where there was no legislation, have governed the bullion markets for more than two centuries.

Meanwhile an economical school arose which, while conceding it to be necessary that the state should fabri­cate coins, denied it the right to limit the number of coins, or to exact payment (seigniorage) for coinage. This school found expression in the Act 18 Charles II. (1666), which permitted private persons to have coined for them an unlimited quantity of gold or silver, at the public mint, free of charge. Similar Acts were passed in Holland, France, and other countries. But the crown retained the right to regulate the nominal value of gold and silver coins, the exercise of which has had the greatest influence on the relative market value of those metals.

To check abuses of this prerogative the economical school next directed its efforts towards the adoption of one in place of two metals for full legal tender coins. The principal advocates of this change during the last century were Dutot (1739) and Desrotours (1790), and during the present one Lord Liverpool (1808), De Quincey (1849), and Chevalier (1856). The policy thus advocated was practically adopted in Holland and England during the 18th century, and by the latter definitively in 1816. It was accepted by the Monetary Conference assembled at Paris June 20, 1867, and by the Commercial Convention at Berlin October 20, 1868. In 1871 it was practically, though not definitively, adopted by Germany, and since that date by several smaller states, including distant Japan. In France (1874) and the United States (1873-78) the policy pursued has been a waiting one. Full legal tender silver coins continue to be employed for money, but the state has ceased to coin silver on private account. Either Germany, France, or the United States may, by simple enactment, and without recoinage or change of coins, return to the “ bimetallic ” basis of money.

The closure of the mints of all important commercial countries to silver, while they have remained open to the free coinage of gold at a fixed valuation, has enhanced the purchasing power of gold, compared "with either silver or other commodities, about one-fourth. The price of uncoined silver being usually quoted in gold, this pheno­menon appears as a “ fall of silver,” by which term it is commonly known. This alleged fall, its causes, conse­quences, and remedies, constitute the “ Silver Question.”

*Production.—*In the principal producing countries—the United States, Mexico, Chili, and Peru—mining is free, and there are no official returns of the production, which is therefore mere matter of conjecture. In the United States it is the custom to value silver bullion at one- sixteenth that of gold. This unduly swells the value of the conjectural product of that country more than one- fourth (see *Report* of the United States Monetary Com­mission of 1876, Appendix, pp. 1-66). From a careful consideration of the bullion movement, the total annual product of silver throughout the world at the present time is estimated at between 50 and 60 million ounces, at which figure it has remained steady upwards of ten years.

*Consumption in the Arts.—*Direct inquiries as to the quantity of silver used in the arts have met with little success, and the statistics so obtained are defective. But the total production of silver in the Western World, from the discovery of America to the present time, has been, in value, about 1400 million pounds sterling, of which about 300 million pounds remain in coins. Conse­

@@@1 DelMar, *Hist. Prec. Metals,* chap, xxxi.

@@@2 Boeckh, *Political Economy of the Athenians,* book i. chap. 6.

@@@3 Sir Edward J. Reed, *Japan,* chap. xviii. ; DelMar, *Money and*

*Civilization,* chap. xx.