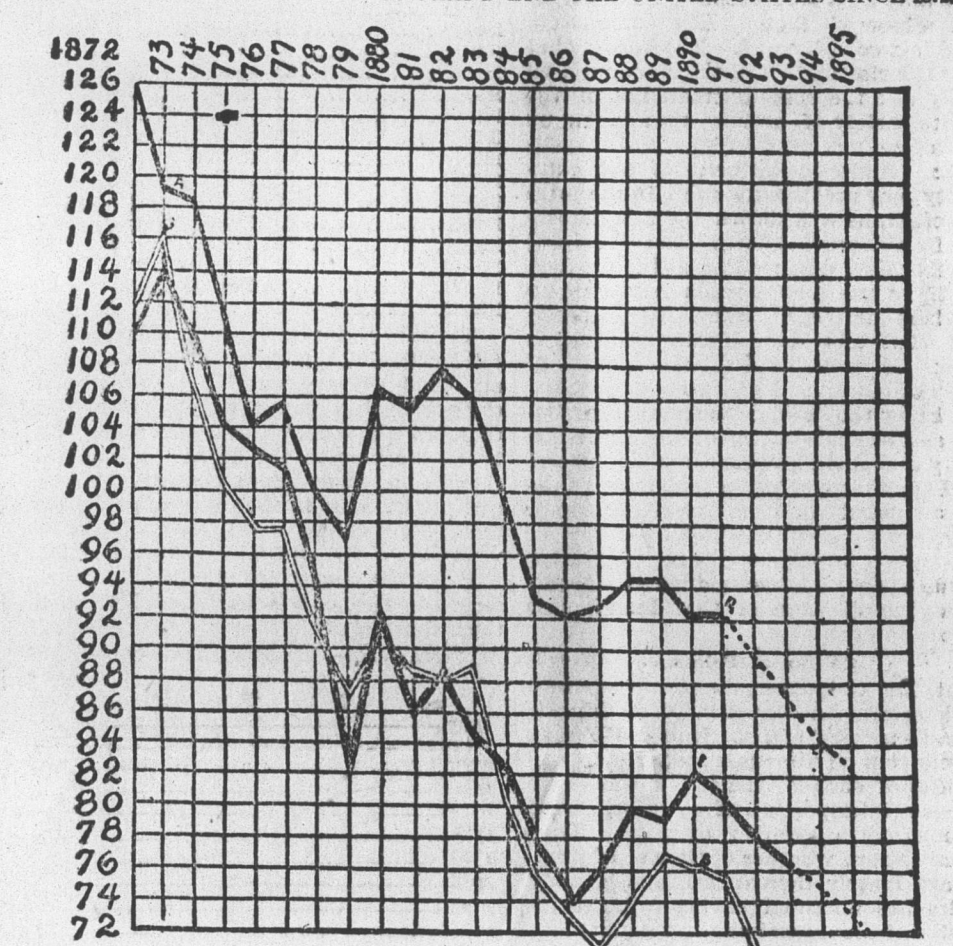


Asking you to bear in mind, as before stated, that no general law in economics can be learned except by studying broad and large results over considerable periods of time, I ask you to note how beautifully this chart exemplifies to the eye the effects of the rise of gold. The line of gold is not uniform, but its general direction is upward. The lines of silver and commodities are not entirely regular, but their general tendency is downward. The correspondence between the values of commodities and silver is very remarkable and ought to be of very interesting to gentlemen who deny the appreciation of gold and declare that there is no parallel between the prices of commodities in general and silver. You will notice that in 1890, for example, there was a sudden rise of silver and of these commodities. Naturally silver rose in a more pronounced degree than the other commodities, because in that year there was pending in congress a proposition to rehabilitate the white metal and make it as good as gold. As soon as there was a likelihood of the restoration of its full money functions it began to mount toward the point of parity, and as a necessary consequence gold began to fall.

Chart C exhibits upon one diagram the course of prices in England as shown by The Economist and Sauerbeck tables, and in the United States as shown by the Aldrich report, already referred to. The prices are in gold, of course. The United States prices are shown in the heavy dark lines marked A, and the two English lines are indicated by their appropriate letters. The general correspondence of the three is very striking. American prices started higher than English prices and have remained so. The action of our protective tariff in stimulating production, restricting competition very largely to our own producers and upon our own standard of living and keeping out our markets for those producers has justified the policy of its advocates, of whom I claim to be as faithful as any, but it has not availed to withstand the constricting influence of the gold standard, whose sway is as "broad and general as the air." Prices had fallen in the United States about 28 per cent by 1891, and by 1895 the fall was certainly 33 1/2 per cent or more, so that the purchasing power of gold in this country is fully 50 per cent greater than it was in 1873-3.

CHART C.—FALL OF PRICES IN ENGLAND AND THE UNITED STATES SINCE 1873.



United States.—A =, based on senate report No. 1234, Fifty-second congress, second session, commonly called the Aldrich report, 223 commodities. See part I, page 61. (Gold prices.) England.—B =, based on Sauerbeck's tables adjusted to Aldrich plan. See report, part I, page 225. 45 commodities. C =, based on Economist's tables adjusted to Aldrich plan. See report, part I, page 225. 22 commodities.

The enormous fall of prices in the gold standard world I have proved. Gentlemen in this debate may hereafter seek some other explanation for the fact that which I offer as chiefly accounting for it, but nobody will deny the fact. It is an open and notorious fact, whose significance, if preponderantly due to the single gold standard, challenges the intellect, the conscience and the patriotism of this nation. Contrast it for a moment with this: The purchasing power of silver in silver using countries is today almost the same as in 1873. Consul Wernore, at Shanghai, shows this by the following index numbers based on 20 staple commodities on the Chinese markets:

Year	Aggregate value of twenty commodities—value of gold.	Silver—value of gold.
1873	2,000	2,000
1874	1,814	2,029
1875	1,757	2,078
1876	1,630	2,100
1877	2,331	2,159
1878	2,162	2,215
1879	2,023	2,301
1880	1,925	2,375
1881	1,840	2,322
1882	1,757	2,307
1883	1,616	2,330
1884	1,585	2,373
1885	1,558	2,371
1886	1,774	2,648
1887	1,701	2,732
1888	1,708	2,746
1889	1,808	2,539
1890	1,743	2,621
1891	1,850	2,580
1892	1,743	2,621

And the royal commission of 1888 declared that the purchasing power of silver in India had not fallen.

Sir, there is ample reason why prices began falling about the year 1873 and have kept falling with more or less regularity ever since. Down to that period gold and silver shared together the functions of ultimate money among the great commercial nations of the world. Together they formed one vast money reservoir, whose aggregated contents measured all exchange values and constituted the ultimate solution of all representative and credit money. England's action in going upon the gold standard in 1816 had not impaired this relation, but the sudden and nearly contemporaneous adoption of that standard about 1873 by several leading governments, followed at frequent intervals by others, made a sudden and tremendous lessening of the mint demand for silver and threw upon the volume of gold the double burden of sustaining the credits and the redemption functions formerly borne by both metals jointly. This added enormously to the strain upon gold, rendering it relatively scarcer and more difficult to obtain, increasing almost beyond conception the demand for it, while its supply did not materially alter. The inevitable result was to raise the value of gold, to make it constantly necessary to give more and more of all commodities, on the average, to get gold. The full effect was not felt all at once in 1873. The steps in the process were progressive, and the effects

were correspondingly so. Prices began falling with the cause and have fallen and are falling as the cause continues and intensifies. The following is a fairly good statement of these successive stages in the process of squeezing the expanding energies of the nineteenth century down to the narrowing measure of the gold standard:

From Bimetallism to Gold.
1873.—Norway and Sweden substitute the gold standard for the silver standard.
1873.—The United States, while on a paper basis and looking longingly toward resumption of specie payments, adopts the gold standard, although silver at the time is worth more in the market than gold, and although there has been no public demand for such action, the people and nearly every man in public life being ignorant of the real scope and object of the act, no amendment to which striking the standard silver dollar from our coinage can to this day be found of record. Thus on resumption of specie payments in 1879 we became an aggressive scrambler for a share of the gold in the world, which was now becoming more and more the object of the eager pursuit of nations. Between 1877 and 1879 we absorbed over \$50,000,000 of gold as against about \$55,000,000 in the preceding 11 years.

1873.—Germany changes from the silver standard to the single gold standard, making a great demand for gold, so that by May, 1881, she had coined over \$414,000,000 worth of it, and throwing upon the market for sale as bullion large masses of her worn and demonetized silver coin, selling by 1879 more than 7,100,000 pounds weight of fine silver.

1878.—Belgian parliament authorizes the government to suspend the free coinage of silver.

1878-1874.—France and the Latin union (Italy, Switzerland, Belgium and Greece, besides France) suspend the free coinage of silver, and France substitutes the gold standard for the double standard.

1875.—Holland formally demonetizes silver, having suspended its free coinage in 1873, and adopts the single gold standard for herself and her East India colonies.

1873-1875.—The Bank of France retires \$500,000,000 worth of paper and adds greatly to its gold reserve.

1878.—The United States enacts the Bland law, compelling the government to

"I am far from denying that if the Italian government decide to carry into effect M. Luzzatti's threat of buying gold at all hazards, and if the like course be taken by the United States and France, not to speak of Germany, there might be considerable distance of values for the time. But is it likely that such proceedings will be taken by rational statesmen and rational parliaments? It is really too absurd to suppose that any country will insist upon having a gold currency at any cost."

Alas for the fallibility of genius! Even Jevons could not foresee that so many parliaments would prove irrational, and that great countries should be so smitten of the gold standard he advocated as to pay their lifeblood for it.

But no prophecy of economic effects from observed causes has probably ever been made so unique and startling in its insight and accuracy as that of Ernest Seyd, the famous bimetallicist, who in 1871 wrote: "It is a great mistake to suppose that the adoption of the gold standard by other states besides England will be beneficial. It will only lead to the destruction of the monetary equilibrium hitherto existing and cause a fall in the value of silver, from which England's trade and the Indian silver valuation will suffer more than all other interests, grievous as the general decline of prosperity all over the world will be. The strong doctrinism existing in England as regards the gold valuation is so blind that when the time of depression sets in there will be this special feature—the economical authorities of the country will refuse to listen to the cause here foreshadowed; every possible attempt will be made to prove that the decline of the commerce is due to all sorts of causes and irreconcilable matters. The workman and his strikes will be the first convenient target; then speculation and overtrading will have their turn. Later on, when foreign nations, unable to pay in silver, have recourse to protection; when a number of other secondary causes develop themselves, then many would be wise men will have the opportunity of pointing to specific reasons which, in their eyes, account for the falling off in every branch of trade. Many other allegations will be made, too, but all irrelevant to the main issue, but satisfactory to the popularizing tendency of the financial writers. The great danger of the time will then be that among all this confusion and strife England's supremacy in commerce and manufactures may go backward to an extent which cannot be redressed when the real cause becomes recognized and the natural remedy is applied."

Nothing could better show on what just philosophical principles bimetallicism rests than this picture in 1871 of events to begin with demonetization in 1873 and continue until now and as much longer as we shall permit. If the test of science is prediction and verification, surely the evils of gold monometallism are scientifically condemned. Just before the monetary conference at Rome, in 1892, the late Dr. Soetbeer, the eminent German philosopher, wrote, foretelling the cataclysm of the year 1893 and subsequent evils:

"I fear that if the English government, on the occasion of the forthcoming international monetary conference, should refuse to submit or support practicable propositions destined to extend considerably the use of silver as legal tender there will probably result a further incalculable depreciation in the value of the metals and a very serious appreciation of gold, followed by disastrous consequences."

Yet, sir, men will persist in referring the fall of prices since 1873 to the multiplication of inventions and to cheapened cost of production. It is no impugnement of my argument to admit that this may account for a relatively small proportion of the fall. But, sir, it is a very small proportion. Between 1850 and 1873 prices gradually and generally rose, a fact nobody will dispute, and yet I assert with perfect confidence that between those dates greater improvements in productive processes, compared with the condition at the beginning of the period, were made than between 1873 and the present time.

Gentlemen cannot have forgotten the marvelous mechanical exhibit at the centennial exposition, practically all of which related to the period in question. By far the greatest amount of this accomplishment belongs, so far as its commercial and productive aspect is concerned, to the period from about 1850. By that time the steam engine had been perfected. The old Newcomen engine of 179 with a "duty" of 5,500,000 foot pounds per one bushel of Welsh coal had developed into the improved Cornish engine of 1850 with a "duty" of 60,000,000 foot pounds. The factory system had come into systematic operation—the greatest revolution in production in the history of industry—so that when England, about 1850, changed the tariff policy under which she had grown great and started out to impose free trade upon the world it is estimated that her labor saving machinery represented the capacity of 450,000 pairs of human hands.

History of India.
In agriculture the period in question saw the perfection of the plow, the seeding machine, the grain drill and the mowing machine. The first successful reaper was McCormick's, invented in 1834, improved in 1847 and first attracting general attention at the London world's fair of 1851, where it took the gold medal, and from which time it came rapidly into use. Between 1851 and 1876 nearly 8,000 patents were taken out in this country alone for harvesters and their attachments. The threshing machine was brought to perfection in 1833. The self binder belongs to a later period, but its effect and that of improvements on the inventions named have nothing like the significance for agriculture which the devices that came in from 1850 to 1873 had. To this period also belongs the beginning of scientific agriculture and the use of imported and manufactured fertilizers on a large scale, the systematic and general breeding of cattle, horses and sheep and the inauguration and considerable development of the cheese factory system.

In manufactures it is sufficient to name the leading processes and machines that had become commercially effective in this period—the gin and spinning jenny, with their principal attachments and improvements; the power loom, calico printing and color weaving; the hot blast in iron manufacture, perfected by 1845, by which many previously refractory ores were rendered reducible and the cost of smelting was diminished nearly half; the steam hammer, rolling mill and turning lathe; the Bessemer steel process and the chief improvements in producing and refining iron, the casting, forging and rolling of the heated metal and the turning and planing of the cold metal; the jack, the slotting, key grooving, milling and shaping machines; the process of assembling, or the making of interchangeable parts of manufacture like watches, clocks and firearms; the sewing machine, dating effectively from about 1850, between when and 1876 about 2,000 patents

connected with it were granted in the United States; the pneumatic caisson in engineering, the centrifugal pump, tunneling and drilling machinery, and the use of compressed air in connection with them; scales and elevator machinery, gang and circular saws and sawmill machinery generally, about the only new departure dating from since that time being the use of the hand saw on a large scale; turning machinery, particularly Blanchard's spoke lathe for turning irregular forms; general woodworking machinery for planing mills and furniture factories, washing machines and knitting machines, the principal kinds of boot and shoe machinery, especially the McKay sewing machine, which, between 1861, when it was perfected, and 1876, had made 225,000,000 pairs of shoes in the United States alone; the Westinghouse air brake and its various adaptations, electroplating, lithography and photolithography, optical instruments, musical instruments, ice machines, the growth of India rubber manufacture, the Goodyear vulcanizing process, dating from 1844; machinery used in sugar refining and in paper, porcelain and glass manufacture, stereotyping and electrotyping processes, Bruce's and other typesetting machines, folding and addressing machines, the Gordon job press and the Adams, Campbell, Walter, Bullock and Hoe perfecting printing presses.

In this connection remember that there is no branch of industry where production has cheapened in any degree approaching that of the mining of gold in recent years. But cheapened gold mining does not seem to have cheapened gold compared with other commodities to any alarming extent.

Effects of a Changing Standard.

The method of operation and the effect of a changing money standard are not sufficiently understood. Any convenient medium of exchange to which prices had once accommodated themselves would be changed sufficiently well the mere function of a medium of exchange. But, when viewed as a measure of the values of all other things, it is of the very greatest importance that the money unit remain as nearly unvarying as possible in value over long periods of time. When a man loans another a sum of money, he loans a certain quantity of purchasing power, for that is what money is. Now, absolute justice would require that when the loan is repaid it should stand for the same purchasing power as before. But if, meantime, money has depreciated—that is, if prices have risen—the same nominal sum when repaid has less purchasing power than when borrowed, and the lender or creditor really receives less than he loaned, the borrower or debtor profiting by the difference. On the other hand, if money rises in purchasing power between the making of the loan and the repayment, so that the borrower has to find more commodities with which to buy the money to pay back than the money would buy for him when he borrowed it, then he loses the difference, and the money lender makes it.

Now, in either case the changing standard takes something from one man without his deserving to lose it and gives it to another who has no right to it. In either case it is a case of robbery. The ideal standard would preserve the rights of both debtors and creditors. But if a deliberate choice had to be made between a gradually falling and a gradually rising standard all writers of authority agree, and it is consonant with common sense, that morally, economically, politically and socially the falling standard would be preferable. Its inevitable losses fall on the creditor, the lender, who can better than the debtor endure its effects, and it encourages enterprise, while the certain hardships of the rising standard fall on the borrower, the debtor, the investor, the captain of industry, who cannot so well sustain the burden, who has no surplus, but is most frequently wiped from the face of the industrial world by the vanishing of the margin between his property and the automatically enlarging lien upon it.

In the latter case the absolutely unavoidable result must be, if the evil is permitted to run, that all property will eventually belong to those who shall control the ultimate money of the world, and thrift and enterprise, if enterprise and thrift can belong to a race of slaves, would plan and save and toil to further fatten the overfed fatness of their masters. This is no exaggeration of language. It is the speech of truth and soberness. Said Sir Richard James Balfour, the real head of the present Conservative government of England, an earnest bimetallicist and one of the profoundest thinkers in Europe, in a speech at Manchester Oct. 27, 1892:

"But of all conceivable systems of currency that system is assuredly the worst which gives you a standard steadily, continuously, indefinitely appreciating, and which by that very fact throws a burden upon every man of enterprise, upon every man who desires to promote the agricultural or the industrial resources of the country and benefits no human being whatever but the owner of fixed debts in gold."

Falling prices of agricultural products deprive the farmer of the means of buying his usual conveniences and necessities, and these accumulate on the hands of the manufacturer and retailer, who in turn curtail expenses to the uttermost, discharging labor, which then loses its power to consume, and limiting their own consumption to the barest needs. Thus farmer, manufacturer, tradesman, transporter, laborer, all lose patronage and employment, while taxes, interest and principal of mortgages, fixed charges, bonded indebtedness and rents are constantly and remorselessly measuring off increasing equivalences in all human products. Under such circumstances there is no inducement to enterprise or to investment in producing enterprises. No man wants to borrow money to use in a business in which the fall of prices is sure to eat up his profits. On the other hand, the man with money for the same reason does not want to put it into business, but prefers either to invest it in gilt edged securities or let it lie idle and grow. This collects the money in the large financial centers and emphasizes the absolute power of the money lender, who must be sought in his lair, and who can make his own terms with borrowers. It is a bad symptom when "breeding" money, to use Shylock's phrase, is regarded as better business policy than embarking it in productive industry.

The results of an appreciating standard are so hidden in the very processes of ordinary business that until we stop to look carefully for them we are not aware how serious—nay, how fatal—they may become. My time will permit only a few illustrations. Between 1874 and 1885 gold appreciated so that the holders of the public debt of England could buy in the latter year £200,000,000 worth more of all commodities on the average with the principal of the debt as it was in 1874 than they could have bought with it in 1874. In other words, the property and industry of England were robbed of \$1,000,000,000 in 11 years and present made of it to the holders of her bonds.

The Manufacturer of Feb. 1, 1896, shows that the gold standard has presented

English trade since 1890 with a gratuity of nearly \$250,000,000; also that the value of farm live stock in the United States has fallen in three years \$632,000,000.

The United States paid off about \$750,000,000 of her debt between 1870 and 1884, yet, as President Andrews has shown, if we reckon it in the eight commodities, beef, corn, wheat, oats, pork, cotton, coal and bar iron, the debt was nearly 50 per cent larger afterward than before.

It is said that in 1896 we could have paid the national debt of this country with 14,000,000 bales of cotton. In 1894 it would have taken 61,000,000 bales to pay what remained due, although meantime we had paid 94,000,000 bales on it in principal and interest. In 1866 we could have paid it with 1,000,000,000 bushels of wheat. Last fall we still owed 2,000,000,000 bushels, after paying 5,000,000,000 bushels in principal and interest.

The Single Standard Measured.

The burden of the gold standard on the world could be fully measured only in blood and sweat and tears.

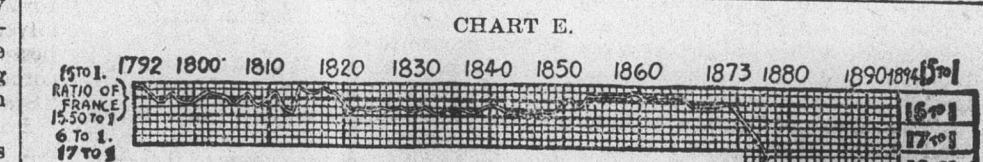
It is pertinent to this discussion, sir, to answer briefly a contention constantly repeated by the opponents of the restoration of silver—that silver has fallen because of its enormous overproduction. I do not wish to appear dogmatic, but I do say that this argument is absolutely without foundation. It has been a thousand times refuted, but continues to reappear in every discussion as fresh as ever and apparently unconscious of its discredit. The famous senator from Ohio (Mr. Sherman), in a public speech in his state a year ago, lent the support of his high name to this profound error, and in substance it was restated by the distinguished gentleman from Maine (Mr. Dingley) in opening this debate. I cannot hope to stop the circulation of this convenient and serviceable assertion, but I can easily show that it is utterly without foundation. The following table shows the world's production of gold and silver (coinage value) since 1792. I have added to the table as cited the correct figures for 1893 and 1894:

PRODUCTION OF GOLD AND SILVER IN THE WORLD, 1792 TO 1892, COPIED FROM UNITED STATES SENATE REPORT NO. 226, PAGE 103, COINAGE LAWS OF THE UNITED STATES, 1792 TO 1894.

Year	Gold (coinage value)	Silver (coinage value)
1792-1800	\$104,477,000	\$238,000,000
1801-10	118,132,000	371,877,000
1811-20	76,088,000	224,736,000
1821-30	94,479,000	191,444,000
1831-40	184,941,000	247,080,000
1841-50	291,144,000	256,520,000
1851-60	37,000,000	85,230,000
1861-70	44,480,000	30,000,000
1871-80	67,000,000	40,000,000
1881-90	132,750,000	40,000,000
1891-92	155,450,000	40,000,000
1893	127,450,000	40,000,000
1894	138,075,000	40,000,000
1895	147,000,000	40,000,000
1896	128,275,000	40,000,000
1897	124,650,000	40,000,000
1898	124,850,000	40,000,000
1899	119,250,000	40,000,000
1900	113,800,000	44,700,000
1901	107,720,000	45,200,000
1902	106,950,000	49,200,000
1903	113,000,000	61,700,000
1904	120,200,000	51,500,000
1905	121,150,000	60,000,000
1906	104,025,000	54,225,000
1907	109,025,000	60,225,000
1908	106,225,000	47,500,000
1909	100,580,000	61,575,000
1910	107,000,000	61,000,000
1911	95,800,000	65,200,000
1912	96,200,000	61,800,000
1913	90,750,000	71,500,000
1914	97,500,000	80,500,000
1915	103,700,000	87,000,000
1916	114,000,000	81,000,000
1917	119,000,000	85,000,000
1918	106,000,000	96,000,000
1919	106,500,000	96,700,000
1920	108,000,000	102,000,000
1921	102,000,000	111,800,000
1922	101,000,000	115,800,000
1923	107,700,000	105,000,000
1924	108,400,000	118,500,000
1925	106,000,000	120,000,000
1926	108,775,000	124,281,000
1927	110,107,000	140,708,000
1928	123,450,000	102,120,000
1929	118,840,000	172,235,000
1930	120,184,000	180,447,000
1931	138,800,000	108,450,000
1932	157,225,000	229,185,000
1933	181,510,000	214,861,000
Totals	\$8,001,254,000	\$5,501,075,000

Thus in the 103 years ending in 1894 the production of gold has exceeded that of silver by \$500,000,000.

It must be borne in mind that a disproportionate production for any one year or a few successive years in the case of the precious metals is far less significant as affecting relative value than would a similar disproportion be in any other kind of commodities. The metals are so durable and their existing mass so large compared to the production of any one year that the value of the whole will show little variation. The disproportionate production,



MARKET PRICE OF SILVER FROM 1792 TO 1894 SHOWING SUBSTANTIAL CORRESPONDENCE WITH FRENCH RATIO (15 1/2 to 1) FOR 80 YEARS AND RUINOUS EFFECTS OF DEMONETIZATION IN 1873 AND SUBSEQUENT YEARS.

to have any visible effect, must continue long enough to change materially the relative bulk or mass of the whole supply in existence.

The following table shows how barren must be the attempt to connect the fall of silver with an alleged disproportionate production:

Year	Production of gold	Production of silver
1792-1849	\$221,038,000	\$1,224,217,000
1850-1859	1,570,000,000	875,300,000
1860-1869	1,190,175,000	615,225,000
1870-1879	2,410,048,000	2,687,585,000

HIGHEST AND LOWEST VARIATIONS IN MARKET RATIO.

Year	Ratio
1792-1849	16.25 to 1—15 to 1
1850-1859	15.75 to 1—15.19 to 1
1860-1869	15.92 to 1—15.37 to 1
1870-1879	22.56 to 1—16.17 to 1

In the first period twice as much silver as gold was produced; in the second, three times as much gold as silver; in the third, twice as much gold as silver; in the fourth, only 10 per cent more silver than gold. Yet during the enormously disproportionate production of the first three periods all the variations in the market ratio are embraced within 1 1/2 points, while in the last period, when production was almost identical in both metals, the ratio sank

more than 16 points. To say that this 1 per cent difference caused such vast disturbance, while differences hundreds of times greater caused no disturbance at all, is to do violence to the primary suggestions of the reason. Note upon the following chart (to which I shall hereafter refer for another purpose) how the fall of silver began with the concerted legislative assaults upon it and continued by precipitous decline as those assaults were repeated and consider, for example, how steep the decline was between 1873 and 1880, although those years the gold production was \$385,650,000 and the silver production only \$990,100,000.

Now, sir, I ask the attention of gentlemen to chart D, which is the last one I shall exhibit, about a chart which, in my judgment, is absolutely unanswerable on the single gold theory. Some of its arrangement is original, but the main idea is drawn from a document many will recognize. I do not know whether I am correctly informed, but I understand that a distinguished gentleman is to follow me with the purpose of answering this argument. I hope he can. I do not say that it is unanswerable. I simply say that I am stating propositions which seem to me like axioms, and that if the gentleman who follows me can show I am wrong he will at least have made one convert from a most pernicious error.

On this chart the production of silver in any given period covered by it is taken as the space between the zero line and the silver line (marked S) and the production of gold during the same period is indicated by the colored ground. From this it will appear that from 1800 to 1810 about 39 per cent as much gold as silver was produced; from 1810 to 1820 about 32 per cent as much gold as silver; from 1820 to 1830 about 49 per cent as much gold as silver; from 1830 to 1840 about 55 per cent as much gold as silver; from 1840 to 1850 about 13 1/2 per cent more gold than silver; from 1850 to 1860 about 260 per cent more gold than silver; from 1860 to 1870 about 280 per cent more gold than silver; from 1870 to 1880 about 11 per cent more gold than silver; from 1880 to 1885 about 83 per cent as much gold as silver and from 1885 to the present time about 75 per cent as much gold as silver.

This table also shows that from 1800 to 1820, when about one-third as much gold as silver was produced, but while there were in the world of coin and bullion from 39 to 38 tons (ounces would do as well) of silver to one ton of gold, you could go into the market and buy an ounce of gold for 15.55 ounces of silver, and that from 1820 to 1873 while production oscillated as we have seen, and while the relative number of tons of silver in the world's stock was all the time becoming less in proportion to the stock of gold, falling from 31.1 tons of silver to 1 of gold to about 22 tons of silver to 1 of gold, still the market price remained closely by the rate established by the open mints of France, but that when the onslaught on silver was commenced in 1873, and the mints were shut in its face, notwithstanding that production has continued from that day to this nearer equal than at any time in 100 years, and though the bulk of the world's stock of silver in tons has for