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(The) monetary theories of George Frederick Warren.

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THESIS
The Monetary Theories of George Frederick Warren
by

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Part I  Introduction

Purpose of the Study

Nature of the Problem
The Financial Policies of George Frederick Warren

Introduction

Purpose of the Study

The year 1933 and the first six months of 1934 are of profound significance in the banking and fiscal history of the United States. By legislative enactment and by executive order, measures have been taken that have significantly altered our financial system; the precise nature of the changes initiated can be fully discerned only as time reveals it. One may, however, best begin a study of current monetary issues and acquire a measure of intelligent understanding of what has taken place through an investigation of the monetary theories of Dr. George Frederick Warren, whose policies have most strongly influenced President Roosevelt in the formulation of and initiation of a programme for financial recovery.

The traditional Old Economist fears several features of Dr. Warren's programme and often calls him radical; the New Economist declares he points the only way out of the economic chaos into which we fell. It will be our purpose to investigate his theories and to discover what grounds there may be for these characterizations.
The Nature of the Problem

The problem of surveying the monetary theories of Dr. George Frederick Warren seems to resolve itself into a study of whether his doctrines of money, the gold standard, inflation, deflation, and reflation are orthodox, traditional, or radical or whether some belong in one category and other in another. Is he an Old Economist or a New Economist in these matters? Are his theories revolutionary? Are they sound, scientific, scientifically valid? Does he subordinate recovery to reform? Are the measures he proposes inflationary or deflationary? Is there statistical justification for his index number theory? What is likely to be the result of adoption of these doctrines as a part of our permanent policy? Before attempting to arrive at conclusions on these points, and in order to understand Dr. Warren's objectives, it will first be necessary to survey the events leading up to the great crisis, March, 1933.
PART II

Historical Background
The dramatic event of March 4, 1933, when President Roosevelt closed the banks in every state or allowed them to operate under very severe restrictions, was the culmination of more than three years of increasingly intense economic distress. For three years prices had been declining, to increasingly lower levels; commodity surpluses had piled up; credits had become restricted; factories continued to close throughout the country; unemployment had probably reached the twelve million mark; relief for the unemployed had broken down. A desperate people, its morale undermined, to insure its self-preservation were raiding the money stocks of the country. Yet, as a nation we lacked neither natural resources nor wealth.

The causes of the "great catastrophe" were discernible beneath the surface of prosperity in the late spring and summer of 1929. Sales on the New York Stock Exchange for October, 1929, reached 141,668,000 shares. "According to the Dow-Jones index of stock prices, 30 industrials fell from an average of 364.9 to 62.7 dollars per share. A group of 20 public utilities stocks dropped from 141.9 to 28.0 dollars per share. Twenty railroad stocks declined from an average of 182.0 to 28.1 dollars per share. — According to the New York *Times* index of 50 stocks (25 industrial and 25 railroads) the average price fell from 300.52 to 58.65 dollars per share. A compilation by the Standard Statis-
tives Company (Inc.) of 421 stocks—based upon an index number of 100 as the 1926 monthly average—showed a decline from 225.2 to 49.1 from September, 1926, to January, 1933. According to the same source and during the same period, the index of 20 New York bank stocks fell from 357.8 to 67.9.\(^1\) — The monthly average of cash dividend payments at current rates for the six months period, July to December, 1929, was 2,549.6 millions of dollars; the monthly average over the full year of 1930 was 2,601.9 millions of dollars; in 1931 the monthly dropped to 2,134.7; and in 1932 it stood at 1,326.9 millions of dollars, indicating that it was not until recent months that dividends began to recede substantially in the face of wide-spread deflation in all other respects.\(^2\) — The composite index of industrial production fell from 110 in 1929 to 48 in 1932. The physical volume of trade dropped from 103 in 1929 to 62 in 1932; and to 54 in January 1933.\(^3\)

These statistics speak for themselves. The wretched condition of employment has been described above. It may be

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2. Ibid, p. 6.
added that "the Federal Reserve Board's unadjusted combined index of factory employment (with the monthly average of 1923-1925 as 100) fell from 105.4 in September, 1929, to 58.1 in January, 1933."¹ Meanwhile, the farmer had been in a serious plight. Since the war more than 450,000 full owners had lost their farms, and more than 200,000 had been reduced to the status of tenants. "Their gross farm income had dropped from approximately sixteen billions to eleven billions."² Between 1929 and 1932 occurred a still further decline of thirty-three per cent. Gross income declined by fifty-seven per cent in 1932. Prices paid to the farmer stood at 205 in 1920 and at 51 in January, 1933; while costs of what he bought dropped only from 206 in 1920 to only 105 in 1932.

The debt burden was another contributing factor in the general decline. Total debts owing in the United States in 1929 are estimated at 234 billions as compared with 362 billions of total wealth. The total interest-bearing debt was estimated at 154,761 millions of dollars in 1929. During three years of deflation and liquidation the debt fell to 134 billions of dollars in 1933 while the national income fell from eighty-five to forty billions of dollars.

Up to the spring of 1932, the temper and fortitude of the people were remarkable. From that time restlessness became

¹. Chas. A. Beard & Geo. H. E. Smith, "The Future Comes", p. 7
². Ibid.
more apparent. More than one hundred forty-four organizations in scores of communities over twenty-nine states began barter or to use "wooden money", or scrip. Violence broke out among farmers of the middle west. The law could not or did not deal with these restless elements. In the East labor grumbled more audibly than before. All through this period the people had retained belief in the soundness of the banks; propaganda in finance, in government, and among business leaders sustained it. The report of the Comptroller of the Currency showed that bank resources and deposits had not been seriously depleted between 1928 and 1931. But at the end of the fiscal year of 1932, it was discovered that a drop of nearly 13 billions of dollars in resources and of almost 11\(\frac{1}{2}\) billions in deposits in one year had occurred. The number of banks reporting had decreased 6,167 in three years.

Three weeks later the quarterly statement of the Reconstruction Finance Corporation revealed that 5,582 banks and trust companies had been borrowing three times the total amount of the railroads which were the next largest borrowers. Then the people began to mistrust the condition of the banks.

On February 14, the state of Michigan was obliged to declare a bank holiday which so alarmed the people of the country that before March 4 nearly $1,550,000,000 had been withdrawn from the Federal Reserve System. Through February and March a net
loss amounting to 282.7 millions in gold resulted before Executive Orders and Emergency legislation stopped it. We had faced one of the most serious banking crises in our history.

By March 3 a very great number of the banking institutions of the country had been closed either by order of state authorities or of the Comptroller of the Currency; authority had been granted to the Comptroller for the purpose by joint congressional resolutions on February 25 and March 3. But uniformity of procedure and centralization of authority must be achieved; so on March 6 the President proclaimed a national banking holiday which would affect Federal Reserve Banks as well as all other banking institutions and was to remain operative through March 9. Except by special permission of the Secretary of the Treasury, with the approval of the President every banking institution was forbidden to "pay out, export, earmark, or permit the withdrawal or transfer in any manner or by any device whatsoever, of any gold or silver coin or bullion or currency." Neither could they "pay out deposits, make loans or discounts, deal in foreign exchange, or transfer credits from the United States to any place abroad."

A war-time measure embodied in the Act of Congress of October 6, 1917, which had not been repealed, enabled the President to make this proclamation and also to issue many other regulations relating to banking matters through the Secretary of the Treasury. That official was empowered to allow banking institutions to
resume banking functions, to arrange for the issuance of clearing house certificates and to provide for the acceptance and separate handling of new deposits. Since a majority of the banks were really solvent the purpose was to enable the healthy banks to reopen as quickly as possible.

In his message to the Seventy-Third Congress, President Roosevelt requested legislation "to give the executive branch of the government control over banks---, authority---to open such banks as have already been ascertained to be in sound condition---and authority to reorganize and reopen such banks as may be found to require reorganization to put them on a sound basis," and for amendments to the Federal Reserve Act to provide for the issuance of whatever additional currency might be needed to meet the emergency. So Public Act No. I was passed that day granting to the President needed emergency powers, an illustration one period in our history when democratic government was not "a slow, clumsy, inflexible process in the face of modern conditions."1

The Emergency Banking Act may be outlined as follows. Its major provisions are grouped under four titles.

Title I

It

A. Confirmed what the President had done under existing legislation and upon his own initiative.
B. Broadened plenary power of the President granted October 6, 1917.
C. Added to Section 11 of the amended Federal Reserve Act a provision granting the Secretary of the Treasury power to require the surrender of all gold, bullion, and gold certificates in exchange for an equivalent amount of any other form of coin or currency issued under the laws of the United States. A penalty was enunciated against those who failed to comply. Control of the National Banking System and the Federal Reserve System was placed in the hands of the President.

Title II

It

A. Authorized the Comptroller of the Currency to appoint conservators for national banking associations anywhere in the country and any bank or trust company in the District of Columbia. This was so phrased as not to admit any impairment of the powers of the President or other officials.
Title III

This section was framed to strengthen the capital structure of the bank.

A. Any national banking association could be authorized, subject to certain conditions, to issue preferred stock in amounts and at a par value approved by the Comptroller of the Currency.

B. A maximum dividend rate, cumulative, was placed at six per cent per annum.

C. Holders of stocks were to have voting rights and were relieved from assessments to restore impaired capital of institutions.

D. A prior lien over common stocks for dividends and upon liquidation was granted preferred stock.

E. The Secretary of the Treasury might, "with the approval of the President, request the Reconstruction Finance Corporation to subscribe for preferred stock of any national banking association or any State bank or trust company in need of funds for capital purposes or to make loans to such institutions for similar purposes."¹

¹ Chas. A. Beard and Geo. H. E. Smith, "The Future Comes", p. 22.
Title IV

Comprises an amendment to the Federal Reserve Act providing "Federal Reserve Banks with additional currency in the form of 'circulating notes' to the full face value of 'any direct obligations of the United States', or 90 per cent of the estimated value 'of any notes, drafts, bills of exchange, or bankers' acceptances' acquired from any member bank or any individual, partnership or corporation, and deposited with the Secretary of the Treasury."

To supply State banks and trust companies, not members of the Federal reserve system, with an adequate amount of currency, should there be need, an amendment was passed March 24, 1933.

An Executive order, issued March 10, set all the above machinery in operation so that the Secretary of the Treasury promulgated regulations and interpretations which covered emergency conditions, later reopening Federal Reserve Banks and other financial institutions under Federal supervision. As a result, beginning March 13 an orderly reopening of banks commenced, Federal and State authorities

operating together in harmony, in spite of the tremendous confusion and technical difficulties involved so that by March 25, two hundred sixty-five national banks with total deposits of approximately $350,000,000 were prepared to open or were already doing normal banking business.¹ "By the middle of April approximately eighty per cent of the Federal Reserve member banks had reopened without restrictions, and about seventy per cent of the State banking institutions were doing business on an unrestricted basis."²

By the middle of March, "currency which had exceeded seven and a half billion dollars at the peak of withdrawals began to flow to the banks, and, by the end of May, money in circulation was reduced to 5,876 millions of dollars."³ It was reported by May 31, that nearly 12,767 banks holding approximately ninety per cent of the total amount of money on deposit, had resumed full operations without restrictions. The immediate domestic emergency had been met, and confidence was restored in the ability of our democratic government to adapt itself to terrific crises.

². Ibid.
³. Ibid.
One of the most important of the many serious problems left to be solved was the relation between gold and the nation's business and financial structure. Had we abandoned the gold standard when the banking holiday was proclaimed? Interpretation of the wording of the President's proclamation, of the emergency banking act, and of the regulations issued by the Secretary of the Treasury seemed to be diverse. The essential feature of the gold standard which is the assured right of the exchangeability of a nation's currency for gold was certainly impaired or denied after March 6 in practice, if not in law if the acts and orders pertaining to gold were strictly interpreted. Banks were either closed so gold could not be obtained; or when they reopened they were forbidden to disburse either gold or gold certificates.

The Executive Order of the President on April 5, 1933, prohibiting the hoarding of gold and requiring the delivery of all gold coin, gold bullion and gold certificates into the Federal Reserve system on or before April 28, 1933, settled the matter and definitely took the United States off the gold standard. Gold required for industry, the professions and the arts, a personal allowance not to exceed $100, rare coins, and legitimately licensed quantities
were made minor exceptions. Additional restrictions, however, were made April 20 concerning the export of gold under license. A more comprehensive order on August 29, 1933 merged all previous orders pertaining to gold and prohibited all private holdings or transactions in gold, except under strict license and provided a fine or imprisonment for all violations of the order.

A Joint Resolution, effective June 6, 1933 prohibited the payment of obligations in gold to all future obligations. Such obligations were to be met by payment "dollar for dollar, in any coin or currency, which at the time of payment is legal tender for public and private debts"1 on the ground that it was against the public policy. These constituted a host of public and private obligations which in the past and up to the spring of 1933 provided for payment in gold or gold coin, of the present standard of value, probably amounting to nearly one hundred billions of dollars were no longer redeemable in gold. The final solution of what is to be done about gold, both in relation to our business agreements and to our currency

system, will emerge in a long-time, larger Recovery Programme rather than from our emergency measures.

Between July and October the government monetary policy operated along lines that are stated in the President's July fifth message in which he declared: "The first task is to restore prices to a level at which industry and, above all, agriculture, can function profitably and efficiently. The second task is to preserve the stability of this adjustment once achieved."

During this period mechanisms of the Agricultural Adjustment Act and the National Industrial Recovery Act, including the programme of public works, were mainly utilized. The Federal Reserve System on its own initiative, rather than that of the Treasury, made large open market purchases of government securities.

The foreign exchange policy would be called passive: no attempt was made to depress the exchange rate of the dollar; it was merely allowed to fluctuate with some freedom in its own way. The intention was to keep the dollar exchange rate operating in a generally downward, rather than upward, direction.

The general price rise that began in the spring reached its high point July 15; after this, occurred a sharp recession through the remainder of the month, followed by another rise in September. A second recession followed, continuing into October. In this period of erratic price movements, there emerged three viewpoints
regarding the reason for the price recession and the failure of the price indexes to re-attain and surpass the July level. Agricultural interests and their political spokesmen, impelled by greatest relative loss of any group, advocated the expansion of the currency through the issue of greenbacks, as authorized by the Thomas Amendment. A second group asked for the devaluation of the dollar as a means of price stimulation. After September 15, and especially during the first half of October, the value of the paper dollar, as measured in gold through foreign exchanges, began to rise. Proponents of this policy urged active dollar depreciation since continuing exchange depreciation was a necessary condition for rising commodity prices, from their point of view. The improvement in the exchange rate was alarming to them. Their plan involved the establishment of government monopoly for the purchase of gold newly mined in the United States. It did not at this time propose a re-definition of the dollar in terms of its gold content nor the creation of machinery for the direct control of foreign exchange. The intention of the policy was to effect independent control of the American commodity price level. The two procedures advocated were: (1) To set the price of gold immediately at $41.34 an ounce, which would represent a fifty per cent reduction in the weight of the gold dollar—the maximum authorized under the Thomas amendment; or (2) to begin purchases of gold at a price
corresponding closely to the prevailing rate of foreign exchange and gradually to raise it toward the maximum authorized figures.\(^1\)

If the first procedure were adopted, it was predicted, American commodity prices would almost immediately rise to nearly pre-depression level; in case of the acceptance of the second procedure, the price rise would progress gradually, unaffected by speculative or other factors in the international exchange market. According to the third viewpoint, the failure of prices to respond to the measures of stimulation attempted were mainly due to the hesitation of business enterprise, resulting from uncertainty regarding monetary policies. The floating of bond issues for financing normal capital outlays was particularly difficult. It was necessary for the President to take action by adopting a definite policy with respect to the permanent gold content of the dollar.

Meanwhile domestic and foreign affairs operated to hasten the President's decision. Discontent in the Middle Western farm districts reached rather alarming proportions. Germany withdrew from the League of Nations, and France passed through another Cabinet crisis, events disturbing to our economic and monetary

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health. Fear that an upward movement of the dollar exchange rate would result from the possible return of American funds abroad seized the minds of several leaders, who looked for an unfavorable reaction on the course of commodity prices in the United States.

On announcing his decision with respect to which policy the government would adopt, the President said over the radio:

"It is the government's policy to restore the price level first. I would not know, and no one else could tell, just what the permanent valuation of the dollar will be. To guess at a permanent gold valuation now would certainly require later changes caused by later facts."

So the government adopted the plan of raising prices through direct depreciation of the paper dollar in terms of gold, and endorsed the idea that the control of American prices be freed from international influences. Thus steps were taken toward a managed currency, the gold purchase plan being put into operation October 25. At first, only domestic purchases of newly mined gold were made at official prices set at progressively higher levels. At the end of the month it was decided to extend operations to foreign markets also.
Certain Aspects of American Economic Thought

Leading up to These Events

The American Government thus became a pioneer in applying the theory that rising prices induced by monetary policies are a prerequisite to economic recovery. Certain factors in our economic history in the nineteenth and early twentieth centuries leading up to this event may well be reviewed at this point.

For sometime thinkers of a certain monetary school had maintained that factors other than credit and currency were the cause of the price-level changes and that the remedy should be a monetary one. The theory developed that it would be possible to use an inconvertible paper money instead of a currency based on a particular commodity. Such a plan would make it possible to vary the amount of the circulating medium to keep the price level as stable as possible. An index number of the prices of commodities might be determined; if that index number should tend to rise the currency authority for the country would reason that too much money was in circulation. He would immediately stop further issues of currency until the demand for it caught up with the supply and prices ceased rising. As a further device suggested to check undesired advance in prices, government securities could be sold to take money out of circulation. If a declining tendency in price averages set in, more currency would have to be sent out. To get more money
into circulation, fresh currency issues to pay the governments bills could be made and tax proceeds could be utilized together with the sale of government securities. The Currency Authority could also purchase government securities and pay with its own currency.

But plans for varying the supply of an inconvertible government paper money were not easily popularized. Memories of French Revolutionary assignats and of our American continental notes were yet living. In the last decade of the nineteenth century the defeat of the bimetallist parties both in India and in the United States left advocates of the single gold standard in a temporary position of vantage.

Price stabilizationists, then, had to devise plans which would operate under a gold standard. They quite naturally conceived the idea of varying from time to time the gold content of the currency unit. By such a device they believed currency could be kept on a gold basis and by changing from time to time the amount of gold represented by each unit of currency, the price stability could be established. If price averages rose, the gold weight of the dollar could be increased and fewer dollars would then be coined out of a given amount of
bullion. Conversely, falling prices could be counteracted by permitting gold to be coined into more dollars. Proponents of this commodity dollar usually advocated that all gold coins be removed from circulation leaving a currency of paper certificates. These certificates should, then, be convertible into gold only in large amounts, primarily for the purpose of paying money abroad. Official proclamations would announce the changes in the gold content of the dollar since the amount of gold that could be obtained for each paper dollar would vary.

The idea of the dollar of fluctuating gold content was first suggested by an American astronomer, Simon Newcomb in 1879.¹ In 1892 an Englishman by the name of Aneurin Williams, submitted the details for a plan of this sort to the "Economic Journal."² The leading promoter of the theory in the United States has been Professor Irving Fisher of Yale University. While he has been encouraging to advocates of other plans to stabilize prices, he has been most active in propaganda for the commodity dollar since 1911. At first he used the term "compensated dollar" and then "stabilized dollar" to characterize his plan. The expression "commodity dollar" was used later and has come to replace the other terms.

². Ibid.

Farrar & Rinehart Pamphlets, No. 2.
After 1920, Federal Reserve Banks attained a position in which it was possible to base their credit operations on broad economic considerations. They were able to direct less attention to problems of protection of gold holdings, to the support of the Treasury's borrowing operations, and to earning dividends for member bank stockholders. An increasing confidence developed in the ability of the Federal Reserve Banks to stabilize price levels; consequently enthusiasm for the Fisher plan waned.

The years between 1921 and 1929 saw much controversy over the "Federal Reserve policy regarding the amount of emphasis that should be given to price level stability, as contrasted with other economic considerations; and in these discussions the advocates of utilizing the credit powers of the reserve system to combat price changes were especially vocal."¹

Among those contending that the relative stability of prices for a few years after 1923 was due almost entirely to Federal Reserve policies was Professor John R. Commons. He believed, however, that the future administrations of the system might be endowed with less wisdom than the one in office at that time and so advocated that the Federal Reserve Act be amended

to make it legally incumbent upon the system to utilize its powers to insure price-level stability in the future.

Between January, 1926 and July, 1927, the monthly All Commodities Index of the Bureau of Labor Statistics fell about ten per cent, from 104 to 94; in consequence the money market was greatly disturbed. The Federal Reserve Banks, subsequent to the latter date, set about vigorous measures to ease the money market not all of which were salutary. The Federal Reserve Bank of New York in 1927 maintained low discount rates presumably to induce flow of funds out of this country and thereby aid Great Britain and other nations in establishing more securely the gold standard thereby causing a stock market "bubble." So throughout the depression the Federal Reserve Banks managed currency vainly but energetically to being back prosperity. After July, 1927, began a rapid increase in the volume of member bank loans and investments as well as of new capital issues of business corporations. During the first half of 1928 wholesale prices strengthened slightly, a result partly attributable to the increase flow of bank credit into people's incomes. Great stimulation of the security market use of bank credit developed absorbing the energies of the reserve administration in counteracting the flow of credit into security channels. It is generally agreed that at this critical period the Reserve banks failed to restrain speculative use of credit after the stimulation of the markets greed for funds. This intensive security market activity did not decline until security prices broke of their own weight. One of the most severe deflation of commodity prices in our history followed upon the subsequent security reaction when it finally developed in
1929. In 1933, the Reserve system initiated action, which if attempted earlier, might have been more successful; it began immense open market operations to check the decline. Credit Theory economists maintain that the events of 1927 and those intervening between that period and the ultimate crash were an excellent illustration of the impossibility of sustaining commodity prices after it is understood that security prices are out of line with corporate earnings. They further emphasize the fact that it is virtually impossible to check declining commodity prices in a period of severe market recession.

Professor Irving Fisher, however, is confident that:

"If we had had a wholesale commodity price stabilization it would have meant that commodity prices, instead of going down as they did generally between 1923 and 1929, would have remained constant, and the stock market would have remained constant, and the stock market would have gone up even more than it did. The later consequences would not have been so severe as they have been, because stabilization of commodity prices would have prevented the worst results that we have had in the last few years."¹

¹ Harold L. Reed, "The Commodity Dollar", "The Farrar and Rinehart Pamphlets, No. 2", p. 34.
Returning to the opinions of Professor Commons explained above, in an attempt to translate this point of view into legislation, Representative Strong of Kansas introduced bills into the National House of Representatives, none of which passed. On May 2, 1932 Representative Goldsborough had the satisfaction of seeing his price stabilization bill pass the House. Plans to stabilize prices through the use of Federal Reserve power got no further than this before the New Deal.

Events of the depression after 1929 caused a decline in the influence of the advocates of credit control through Federal Reserve action as attempted after July, 1927. Prices declined to increasingly lower levels giving opportunity for an increase in the political influence of the "reflation" school or the inflationists. This school believed credit operations were too mild to restore prices and demanded gold revaluation. It proclaimed that the gold content of the dollar must be reduced if price levels were to be lifted and insisted that after prices had been raised to a satisfactory level, gold manipulations should be depended upon to avoid future changes in the price level. This group succeeded in winning the confidence of the government in the first year of the new administration; whereupon, the President determined upon a change of monetary tactics in the fall of 1932 and turned to the most convincing advocates of the Reflation School.
PART III

A Brief Sketch of Dr. Warren's Rise to Prominence
The new leader in this alteration of tactics was Professor George Frederick Warren, of the New York State College of Agriculture of Cornell University. It is said that to a great degree, his effectiveness may be attributed to his method. He accepts the quantity theory of money and Professor Cassel's theory of managed currency and supports his conclusions by statistical charts (the most complete set of statistics ever assembled in the study of the American monetary problem) which he interprets to show that commodity price levels depend upon gold factors. His reasoning has incited great controversy from the point of view of logic and of statistical methodology. He believes in capitalism but insists it must devise a better money system. To express his doctrine in a sentence or two: Price levels temporarily removed from their "normal" relationship to gold must eventually return to their true position. In a gold standard currency, the dollar must be depreciated in terms of gold if prices are to rise. So with the advent of Dr. Warren, the stabilizationists renewed their allegiance to the principles of the Fisher plan of 1911.

Dr. Warren was born about sixty years ago, the son of Massachusetts "rugged individualists." His father rounded the Horn en route to California in the gold rush days, later settling in Nebraska as a farmer. There the son, George Frederick, was born. In his young manhood he was graduated from the University of Nebraska and later took advanced degrees at Cornell in agriculture. He served one year as a horticulturist
at the New Jersey Experiment Station. For more than thirty years he has been student or teacher at Cornell.

Dr. Warren's special fields of instruction have been farm crops and farm management. His interest in money arose when he observed that he could not help the farmer by teaching him to be efficient and produce large crops if the farmer could not get adequate monetary payment for his labor. Three standard books on farm management have resulted from his academic and practical experience.

It is noteworthy that during and immediately after the war Dr. Warren warned farmers not to run into debt because prices were sure to fall and supported his conclusions with elaborate statistical studies made by his assistant, Frank A. Pearson. Collaborating in these studies and conclusions the two professors published "Prices" in 1933. In conclusion he made the statement: "There is, of course, a possibility that the United States will make a monetary change that will restore prices."

When Henry Morgenthau, Jr. was commissioned by the President to organize the Governors' Agricultural Commission, as a former student of Dr. Warren he naturally turned to his earlier instructor, an established authority on farm problems. Dr. Warren and his assistant came in frequent contact with the President and their views on money were made known to him.
The influence of Warren and Pearson, however, was not strong enough at this time to mold the New Deal programme, but the President became more and more impressed with the wisdom of reducing the gold content of the dollar as means of rapidly establishing a new price level basis. Holland, Switzerland, and France were the only countries remaining on the gold standard since the others had either reduced the gold content of their currency or had abandoned gold in the post-war period. Meanwhile, Dr. Warren had been made chief economist of the Committee of the Nation, a body of economists organized to advise the Government and inform the nation on economic matters.

When the United States abandoned the gold standard in the spring of 1933, there was no monetary expert among the President's advisers who really favored the plan or who understood the mechanics of currency management for a currency not based on the gold standard. Dr. Warren was an intimate friend of Henry J. Morgenthau and conversant with important features related to the problem. The President called him in conference in June and summoned him shortly to the service of the government.

So Dr. Warren joined Dr. James Harvey Rogers of Yale in working out plans for a managed currency. Four "Brain Trustees" originally worked on the plan, Adolphe Augustus Berle, Jr. and Dr. Rexford Tugwell joining Dr. Warren and Dr. Rogers.
Finally, Dr. Warren, expert on price levels, and Dr. Rogers, the expert on the technique of exchange under the gold system, gained complete control.

At first Dr. Warren calculated that the dollar should be reduced in gold content about one-third which he had been advocating for months through the Committee of the Nation. Later both the Committee and Dr. Warren came to realize that their calculations had omitted certain factors and proclaimed a fifty per cent devaluation to be necessary. During the sessions of the London Economic Conference the two economists with others were constructing "numerous and conflicting charts" to keep the President duly informed on important trends. So valuable did these currency dictators become that the President sent them to Europe to study currency conditions. The result of their investigations was the plan for the buying of gold in the domestic and world market. The President had been planning to adopt a plan similar to the British exchange equalization fund long before October, 1933.

Great Britain and the continental press strongly objected although many economists considered it only a mild imitation

2. Ibid.
of the British plan. The President found the device opportune because "encouraged by Liberty Loan experience, conversionscaresy investors had decided that the administration did not intend to inflate after all and--prompted by the European war scare and fear lest France would go off gold--were beginning to repatriate their money in America. That strengthened the dollar and caused a decline in the prices of American exports."¹

The technique of establishing the gold price operated in this fashion. In the first period of the new plan, Warren, the President, Morgenthau and sometimes Rogers met and fixed the gold price daily. Then Morgenthau bore the decision to Jesse Jones of the R. F. C. Later Morgenthau, Warren, and Rogers made the decision each day.

These, then, are the events that led to the introduction into our financial system of radically different monetary policies from any previously pursued in our history. Before entering upon a more detailed study of Dr. Warren's monetary theories, one should have a clear idea of what he means by the "index number" and the "compensated" or "commodity dollar." An "index number" may be defined as a percentage which shows the relation of the current level of prices to the level obtaining at a previous year selected as a standard or base, 1926 for present calculations.² A "compensated dollar," now known as "commodity dollar," has a variable weight of gold with a purchasing power as nearly constant as possible. The "Old Dollar," we remember had a constant weight of gold with a variable purchasing power.

¹ Unofficial Observer, "The New Dealers", p. 139.
PART IV

A BRIEF SURVEY OF DR. WARREN'S
MONETARY DOCTRINES
Preliminary to suggesting a constructive policy for dealing with the economic debacle in which we struggle, Dr. Warren offered a diagnosis of the catastrophe along the following lines and based upon theories previously presented in "Prices", in collaboration with Dr. Frank A. Pearson. It was not caused, as some have stated, by overproduction, by too much efficiency, by a business cycle, by too much democracy, by tariffs, or by lack of confidence.

It is true that before the war total production of all commodities increased at the compound rate of 4.03 per cent and that from 1915 to 1929, the rate of increase was only 2.11 per cent per year. Also before the war the total output of all commodities per capita rose 1.73 per cent per year. In the period 1915-1929, it increased .64 per cent per year. From 1865 to 1914 production had increased throughout the world at the rate of 3.15 per cent per year, but since 1914 that rate of increase was checked. The only correct forecasts of the depression came from those who found evidence of impending disaster in monetary factors not in the thesis of overproduction. He is more nearly in agreement with those who believe underconsumption rather than overproduction was a factor in the depression disaster. Overproduction can be easily dealt with by decreasing production; underconsumption, however, necessitates a program
of putting the unemployed to work so they may increase the body of consumers. It is no remedy to cut production to what our nation, with 12,000,000 or more unemployed, can buy.

It is an erroneous belief that the needs of men can be supplied by a greatly decreased work week. The total human time involved in producing a bushel of wheat or many other grown or manufactured articles has probably not decreased much more than the average increase in efficiency in the production of all goods. Many invisible factors enter into an economy such as ours. We do not have sudden and spectacular increases in the output of total goods per capita; such a condition may result from a spectacular invention in a given industry, but not in industry as a whole. Instead, increased efficiency results from a steady growth of efficiency in all industry.

From Dr. Warren's point of view, the depression has no more relationship to a business cycle than a tidal wave has to a tide, but is rather the result of a collapse in the price structure from which there is no cyclical recovery. ¹ He asserts that during such a collapse; several suppressed business cycles may occur and that such a favorable cycle in the textile and shoe industries occurred in 1932.

The factor to correct at this time is not the organization of society, but the tool in our economic system that

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is not functioning properly. To quote his exact thought: "Most of us believe in a society organized on the basis of individual initiative, that is, a capitalistic society."¹ "If we are to adopt state capitalism, socialism, or communism, it should be on the relative merits of these systems rather than because of a failure of the medium of exchange to function properly."² He warns us that unless we can invent a really stable measure of value we are in danger of having some form of socialistic state forced upon us which will take over the regulation of distribution and production.³

Furthermore, Dr. Warren asserts that neither tariffs nor lack of confidence caused the depression. Tariffs are useless in the prevention of falling prices when gold is rising in value. The movement to raise tariffs throughout the world resulted from falling prices. The only way to get rid of excessive tariffs is to restore prices. Since 1929 we have suffered more from overconfidence than from lack of confidence. The belief, developing in the fall of 1929, again in 1930, a third time in the fall of 1931, and a fourth time in the fall of 1932, that the depression was over, prevented remedial measures. Federal aid was extended to credit agencies

2. Ibid.
3. Ibid.
for the expansion of credit on this theory of lack of confidence. The idea that we can start a building boom in spite of bankrupt supplies of buildings on the market is an outstanding evidence of misplaced confidence.

Dr. Warren recognizes four factors in prices, instead of two as are commonly accepted; that is, the price of any given commodity is the ratio of the supply of that commodity and the demand for it to the supply of gold and the demand for it. Our present measure of value, then, "is a given weight of a single commodity, the value of which changes with the supply of this commodity, and the demand for it, in precisely the same way as the value of any other commodity changes."

Although the demand for commodities was good when the business collapse occurred, the increasing condition of unemployment since that time has reduced demand; but we recognize this last factor as a result rather than an initial cause of depression. Reduced demand produces further depression. The supply of gold, however, has not been adequate to meet the demands of the normal growth of business although it is sufficient to support prices at about pre-war level with all the world back on the gold basis, providing gold is used with pre-war efficiency. It was the fourth factor in price that caused the depression, demand for gold, which fell so low as to allow prices on a gold basis to double.¹

Then there developed a demand so high as to cause the de-

FIGURE 79.—INDEX NUMBERS OF THE WORLD GOLD PRODUCTION AND WORLD MONETARY STOCKS OF GOLD, 1839-1931.

1880-1914 = 100.

World gold production is very erratic. It has a slow but cumulative effect on monetary stocks.

pression.

The value of gold is, of course, determined by the world supply and the world demand. During the World War prices on a gold basis doubled because most countries abandoned the gold standard and stopped bidding for gold, causing gold to concentrate in the few countries where it is purchased freely. The gold panic of 1926 resulted from the fact that America and France followed the movement, begun in 1925, toward a return to the gold basis and America largely financed that return, not sufficiently recognizing the fact that the return of the demand for gold would raise its value and bring on a price collapse. The result was such a rise in the value of gold that the movement toward restoration had to be abandoned. The fact that gold stocks increased thirty-eight per cent between 1914 and 1928 has misled many to believe since the gold supply is larger than ever before, it must be large enough. But the fact is that if the business of the world had increased at its pre-war rate since 1914 there would be a great deficiency in gold even at pre-war prices. World production of all basic commodities increased only thirty-eight per cent between 1914 and 1928, precisely the same amount as the increase in gold. In other words, there was just enough gold in 1928 to support pre-war prices if gold were employed with pre-war efficiency. However, English prices had advanced to
forty-five per cent above pre-war prices while American prices were forty-one per cent above pre-war. Dr. Warren considered that by August, 1933, pre-war relationship was restored with prices at ninety when pre-war was one hundred. "A price level below pre-war relationship to gold was to be expected because of price momentum and inefficiency in the use of gold."¹ Should the more than thirty countries now off the gold standard decide to return to it and should the United States remain on it (as she was in April 1933), commodity prices will average below pre-war levels for the next ten years. At that time he further believed that violent price fluctuations would occur as each country strained to acquire more than its pre-war share of the world's gold supply, since each country would need almost fifty per cent more than its pre-war total. So the situation in the spring of 1933 would appear to be such as would result if the world had suddenly acquired a double supply of gold and, having become adjusted to it, had lost the extra supply in two successive collapses. In this manner, then, he would explain why prices fell.

FIGURE 83.—MONETARY CIRCULATION PLUS DEPOSITS PER DOLLAR OF GOLD IN THE UNITED STATES 1880-1932.

For 52 years, monetary circulation plus deposits per dollar of gold increased about 1 per cent per year. If any change has occurred in recent years, it appears that the rate of increase in the efficiency in the use of gold is less rapid than formerly.

Will gold production increase prices? The attempt to measure recovery and call it increase in gold production is fallacious for three reasons: it measures the rate of increase from an abnormally low point; it would be incorrect because it is monetary stock not gold production that affects prices; it is based on the assumption that a gold supply sufficient for pre-war prices is sufficient for business needs. "Business became adjusted to price level about fifty per cent above pre-war." To support such a price level would call for gold stocks equal to the normal supply, plus fifty per cent. Gold is an important industrial commodity, the use of which increases at about the same rate as other basic commodities.¹ To meet the needs of industry, gold stocks should increase about 3.15 per cent a year.² To accomplish this increase, 5.6 per cent of stocks must be mined since much of the production goes to industrial use. Actual production of gold is about three-quarters of the amount necessary to supply normal industrial use and add 3.15 per cent to stocks. If the majority of nations were back on the gold basis and gold were employed at pre-war efficiency, the

² Warren and Pearson, "Prices", p. 82.
Silver production is much more uniform than the production of gold. Symmetallism would give a more stable measure of value than gold, but would not be entirely stable.

present supply of world gold stocks would now be sufficient to support pre-war prices. But efficiency is not to be expected and most nations are still off the gold standard. It is necessary that individuals, banks, and nations still hold considerable reserves. "If the price level were adjusted to the gold supply, the production is about sufficient to cause prices to decline one per cent per year."¹

For many years, then, demand for gold ran low, and our debt, tax, and business structure gradually became adjusted, at least fairly well, to a commodity price nearly fifty per cent above the pre-war level. This circumstance places the nations of the world in the position of holding a gold supply of only about two thirds the amount necessary to support the price level to which business is adjusted provided the nations which have gone off the gold standard still continue to bid for it. Under such conditions demand for gold becomes so insistent that the present gold supply is inefficiently used.

The dilemma resolves itself into a question of whether the United States shall continue to deflate or shall reflate since we are faced with the necessity of raising the price level to the debt level or of lowering the debt level to the price level, a choice between two distinctly undesirable measures. A continuation of deflation entails further bankruptcies, foreclosures, and public defaults. Since at the

Figure IV

FIGURE 105.—WAGE RATES AND WHOLESALE PRICES IN THE UNITED STATES, 1790-1932.

From 1840 to 1914, wages trebled, but prices were about the same at the beginning as at the end of the period.

new price levels, public and private debts are nearly equal to national wealth, debts will have to be reduced. To maintain the present price of gold means bringing the whole debt and price structure down. Such drastic deflation as went on in the United States before the Roosevelt administration came in could not continue. Our problem following the Civil War was very different. At that time we were the only important country off the metal standard, whereas in February, 1933, we were the only important country attempting to maintain the pre-war weight of gold in its currency. In the first three and a half years following the Panic of 1873, the prices of basic commodities dropped nineteen per cent while in the corresponding period of this depression, prices of the same commodities decreased fifty-one per cent. Liquidation must be much greater.

Mr. Warren's ideas on reflation may be briefly summarized as follows. A rise in prices has the same effect without regard to cause. When price levels are restored, all prices do not rise equally.\(^1\) In last few years many prices have not declined or have declined unequally. To restore the price level would make it unnecessary for those which have not declined to take that path. Rising commodity prices will stimulate buying, open up employment, give an impetus to renting and building.\(^2\) Then payment of debts and taxes will result. Many rates, such as freight, telephone, doctors' fees


\(^2\) Ibid., p. 371-372.
and others of similar type, are already adjusted and will not rise and need not fall. Furthermore, costs of distribution will rise only slightly, so that prices paid farmers and other producers will rise much more than retail prices and so bring farm prices into adjustment with others. Re-employment, increased buying, business recovery will then follow. To make these adjustments, the price level must first be restored; the restoration of relationship of farm prices to other prices will follow automatically.

To Dr. Warren, stabilizing the commodity price level does not mean that any single commodity will be without fluctuation in price due to supply or demand. It simply means that commodity prices as a whole will be freed from sweeping fluctuation, due either to world supply of gold or frenzied changes in demand for it.

Scientific money must have a constant purchasing power for all commodities rather than a fixed weight for one commodity. Since our whole tax and debt structure rests on commodity prices it must be kept sound, and commodity prices must be kept stable, not the weight of gold for which a dollar will exchange. ¹ Such a device is to be found in the "compensated dollar", says Dr. Warren. Introduction of such a dollar would mean the establishment "by law of a currency redeemable in gold, but the weight of gold for which the dollar would

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exchange would vary with the index number of wholesale prices of all commodities; that is, if prices rose one per cent, the weight of gold for which the dollar would exchange would rise one per cent. If prices fell one per cent the dollar would exchange for one per cent less gold. The gold would be kept in bars in the Treasury and central banks. This would keep the dollar stable in buying power for the average of all commodities."

To express the idea more simply, the claim is, then, that changing the bullion dollar will tend to raise prices. When prices actually rise, the weight of the gold in the dollar will be increased in order to bring prices down. With the decline of prices, the weight of gold in the dollar will be decreased to keep prices up. The general level or average of prices changes. Active business and employment usually accompany a rising price level, and debts expand. Banks increase their loans; corporations expand their capital through the sale of bonds; cities, countries, and states promote the construction of bridges, roads, and public utilities by bond issues; farmers borrow on mortgage to buy more land and improve implements; wage and salary earners take out savings to invest in homes mortgaging heavily.

Declining business activity brings a decrease in business activity and employment. Values decline; corporations and

governments default on their interest; equities vanish; while farmers and home owners suffer foreclosure. Acute social and political unrest are an inevitable accompaniment of such misfortunes.

In other words, the rise and fall of the price level results in speculative expansion under the former conditions and depression under the latter. Such "oscillations of prosperity" and depression would be eliminated if the price level is stabilized by this commodity dollar device. The exact amount of change in the gold content of the dollar required for it to measure so that it will be stable in purchasing power is to be determined by the wholesale commodity price index. Observe that he bases his assumptions on his studies of relationship between the output of gold and the level of wholesale prices. He offers no theory of how changes in the price level are occasioned. And he does not deny or assert that the immense structure of bank credit built on the foundation of a small gold base is a factor that governs wholesale prices.
On the question of remonetization of silver, Dr. Warren expresses the belief that by the adoption of bimetallism or symetallism it is possible to set any desired price level. Symetallism as proposed by the English economist, Alfred Marshall, is preferable. His plan provides a dollar that will exchange for some given weight of gold plus a given weight of silver instead of for 23.22 grains of gold. He is confident that since silver production is less erratic than gold production and since two commodities are more stable than one, money of this composition would be more stable than gold. Once established, it would work just as the gold standard does and could be used as a basis for the compensated dollar.

Somewhat later in explaining his position on reflation more

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in detail, Dr. Warren says the United States was forced off the gold standard as surely as was England. With us domestic withdrawals from the banks were more menacing than foreign; with England, the reverse was true. Our whole credit structure from banks to life insurance companies was unable to meet the demands of its creditors. Large numbers of people both in the United States and from foreign countries rushed to convert all their credits to gold causing many credit institutions to become completely insolvent. Between February 28th and April 17th, the prices of seventeen basic commodities rose fifteen per cent. By April 19th, we had abandoned all attempt to keep the dollar at par in foreign exchange, and it immediately dropped in gold value so that by April 20th a gold ounce brought $23.20, in London, twelve per cent above par. Between April 17th and 20th the average price of seventeen basic commodities rose twelve per cent.

"At first, the more important international basic commodities wheat, lard, cotton, rubber, and copper advanced in price in gold about the same as the advance in the price of gold, but as soon as business began to improve from rising prices, the usual differences developed between commodities for which demand is fairly stable and commodities for which the demand is flexible." ¹ Between February 28th and April 17th, the price

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¹ G. F. Warren, "The New Dollar"

of wheat advanced twenty-four per cent. This is explained largely by the poor conditions of the winter wheat crop and by the speculative buying which developed in anticipation of the suspension of the gold standard. The overdepressed market on February 28th may also explain a part of the rise. On April 17th, when the dollar was at par, wheat sold at 62.5¢ at Chicago. On June 22nd, wheat sold at 75.5¢ but gold in London was 18.7 grains to the dollar, making worth 14.7 grains of gold. Since the price of wheat, then, was fairly stable in gold, the rise of twenty-five per cent was due to depreciation in the value of the dollar. In the last week of June, occurred a rise relative to gold because of drought conditions.

During the first two days after the suspension of the gold standard, the price of cotton as well as of gold rose twelve per cent. As the price of cotton continued to rise, mills increased their activity. Here again the depression of the dollar was operative, together with an increasing demand for cotton, so that print cloths rose fifty-seven per cent between April 17th and June 3d. Wool reacted in much the same way as cotton.

The prices of silver were inflated by the gold value of the dollar and by the imminent possibility of its recoinage. Silver increased in gold value, but as a whole, it followed gold rather closely. On April 17th silver was at 23.6¢; on June 22d, at 35.75¢. On both dates it took seventy-two
When prices rose, wholesale prices rose faster than the cost of living. When prices fell, wholesale prices fell more rapidly than the cost of living.

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ounces of silver to buy one ounce of gold. The rise in price, then, resulted from the lower value of the gold dollar.

In explaining the method by which equilibrium will be restored in price structure by reflation, Dr. Warren uses the following tables.

Table I

Average Prices when 1900-1914 was 100

<table>
<thead>
<tr>
<th></th>
<th>Feb.</th>
<th>May</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholesale price of all commodities</td>
<td>87</td>
<td>92</td>
</tr>
<tr>
<td>Wholesale price of thirty basic commodities</td>
<td>66</td>
<td>81</td>
</tr>
<tr>
<td>Prices paid to farmers for food</td>
<td>51</td>
<td>70</td>
</tr>
<tr>
<td>Retail prices of the same</td>
<td>97</td>
<td>103</td>
</tr>
<tr>
<td>Costs of distribution of the same</td>
<td>143</td>
<td>133</td>
</tr>
<tr>
<td>Wages of farm labor</td>
<td>72</td>
<td>___</td>
</tr>
</tbody>
</table>

The wages of the city laborer varied from 100 to more than 200.

The beginnings of a reflation leading to equilibrium were evident.

Table II (adapted)

<table>
<thead>
<tr>
<th></th>
<th>New York</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb. 15-May 15</td>
<td></td>
</tr>
<tr>
<td>&quot;</td>
<td>wheat 68¢</td>
</tr>
<tr>
<td>&quot;</td>
<td>1.02 per bu. 50%</td>
</tr>
<tr>
<td>&quot;</td>
<td>wheat on Kansas farms .28-.59 per bu. 111%</td>
</tr>
<tr>
<td>&quot;</td>
<td>corn in New York .40-.61 &quot; 53%</td>
</tr>
<tr>
<td>&quot;</td>
<td>corn in Nebraska .12-.30 150%</td>
</tr>
</tbody>
</table>

1. G. F. Warren, "The New Dollar"
"Forum" (August, 1933), Vol. 92, p. 71.
As is usual, an increased circulation per capita was followed by a rise in prices and a decreased circulation by a decline in prices.

A considerably greater reduction in the value of the dollar than that would be necessary to restore equilibrium. "To bring about equilibrium, retail prices in wheat and food will have to rise fifty per cent above pre-war prices before farm prices can come into adjustment with retail prices and costs of distribution. ¹ When farm prices are at 50; retail at 100 and costs of distribution at 150, a rise in prices restores equilibrium."²

Dr. Warren has discovered that the longtime trend of wages in the United States is to rise in purchasing power at the rate of 1.71% a year or about the same as the normal increase in output of commodities per capita.³ But the buying power of wages is, of course, dislocated by either inflation or deflation.

"If the pre-war trend of wages had continued to 1934 and if wholesale prices had remained at the 1910-1914 level, or 100, wages should be expected to rise to 144, which is the normal increase in purchasing power in 21.5 years. If the wholesale prices should return to the 1926 level, wages would be expected to be 216. A restoration of the commodity price level will gradually bring approximate equilibrium in wage rates of different kinds of work. If wholesale prices of all commodities are restored to the 1926 level and the cost-of-living index is somewhat

². Ibid, p. 72.
higher than the all commodity index, but some what lower than it was in 1929, as is to be expected--it is probable that the general level of all wages will return approximately to the 1926 level.\footnote{1} Farm labor will go to that level; construction will not.

Can we return to the Old Dollar? Professor Warren answers no because the credit structure cannot stand the strain and the social structure will not tolerate it. When prices were forty to one hundred percent above pre-war prices, our whole debt and price structure finally came into adjustment with high prices, due to the reduced demand for gold. Later, however, when several other nations tried to resume the gold standard and we attempted to maintain our pre-war currency, we had to face a collapse in commodity prices not related to a business cycle or similar to any other in history. We carried more deflation thereafter since the depression than any nation in history. Before too great a chaos resulted in our process of adjustment we were forced off the gold standard. If we should return to the Old Dollar, we should return to the chaotic condition from which we escaped in abandoning gold. "The only alternative to the reduction of debt and price structure to the value of gold is to revalue the dollar so as to raise the price structure to the level to which debts, taxes

\footnote{1. G. F. Warren, "The New Dollar", "Forum" (August, 1933), Vol. 92, p. 72.}
Figure VII

FIGURE 184.—PRICES OF 17 BASIC COMMODITIES AND THE PRICE OF GOLD,
April 18 to June 10, 1933.

Prices of basic commodities rose more than the advance in the price of gold.

and other charges are most nearly adjusted.\textsuperscript{1}

Although as explained, by 1928, the world's supply of gold had increased thirty-eight per cent over the pre-1914 level, the world's physical volume of all commodities had accumulated less rapidly than normal even though it was also thirty-eight per cent more than before the war. It is reasonable to expect pre-war prices as soon as the demand for gold reasserts itself. The crash in price structure came shortly after France resumed her currency on a gold basis. The world gold supply is adequate for pre-war prices under normal conditions; the world demand for the metal has not abated and will no doubt continue insistent for several years. It may be predicted safely that prices in any country attempting to maintain its pre-war currency will average below pre-war prices for the next decade. The present gold production is only about three-fourths of the required amount. To meet conditions will require a price decrease of one per cent per year. The present world supply of gold and world goods — production requires pre-war prices in pre-war currency with a gradual decline until new sources of gold supply are opened up.\textsuperscript{2} Since our debt, tax, and price structure is adjusted to a price level about forty per cent above pre-war, the world

\textsuperscript{1} G. F. Warren, "The New Dollar", "Forum" (August, 1933), Vol. 92, p. 73.

\textsuperscript{2} Ibid., p. 73
Gold supply is wholly inadequate for our needs if we attempt to restore pre-war currency. ¹

The rise in price level has resulted from the decline in gold value of the dollar, not from currency, credit, or government control of agriculture and industry. All these factors developed later. None can succeed except as the gold content of the dollar is reduced to the right amount. No other measure is necessary to effect the price rise. "If there had been any intention of restoring the Old Dollar there would have been no point to the invalidation of the gold clause. If an attempt were made, the results of the resumption of inflation would quickly cause such a credit and social reaction as to bring drastic if not radical legislation." ²

The problem of revaluation of the dollar is an internal problem of restoring a balance in prices, taxes, and debts and of reemployment. International considerations should be subordinated and should not be allowed to interfere with a domestic program. England is really too deflationary, and we should disregard her insistent demand that we shall not reduce as much as they.

It must be remembered that, in order to raise prices, farmers and agriculturalists receive to their normal percentage and to

². Ibid., p. 73
establish a readjustment of prices of what they buy with what they sell, the wholesale price level must be raised to a level higher than the 1926 level. Of course, the higher we can force the price level, the more rapidly we shall stimulate re-employment. Such a price level must be attained as will restore equities in city homes and in farms, or bankruptcies will continue. Prices of commodities follow changes in the price of gold; if the price of gold rises fifty per cent wholesale commodity prices will rise five per cent.

Professor Warren's theory of the rate of price change is that since basic commodity prices were low they will change quicker and will first be restored and then outrun the average of all for a time. The average of all commodity prices changes slowly, but gradually attains adjustment. Retail prices will rise by a much smaller percentage.

At the time he explained his economic theories in the above terms, Dr. Warren believed that a dollar reduced by one third or the price of gold raised fifty per cent would result in gradual recovery, but said that the Committee of the Nation recommended a raise in the price of gold to seventy-five per cent or reduction in the gold content of the dollar of 42.8 per cent which would make the dollar worth 13.27 grains of gold. A reduction to the legal limit, he believed, would result in some inflation.
A clear impression of Professor Warren's stand on the buying of gold in the world market as a means of raising the price of gold and his method of operation may be gained from the following passage in his address December 28, 1933 before the American Economic Association.

"The influence of raising the price of gold on basic commodity prices depends on whether the amount of gold required to buy commodities is changing.

"1. If a country raises the buying price of gold at about the same rate as the gold value of basic commodities falls, it will maintain approximately stable commodity prices. This was the experience of England and Sweden and many other countries for about two years.

"2. If a country raises the buying price of gold at a time when the gold value of basic commodities is stable, prices will rise in proportion to the advance in the price of gold. This has been the experience of the United States for six months.

"3. If a country raises the buying price of gold at a time when the gold value of basic commodities is rising, the price of commodities will rise more rapidly than the price of gold advances.

"4. If a country lowers the buying price of gold at a time when the gold value of basic commodities is rising, it will
increase the rapidity of the decline in commodity prices."

The principal monetary doctrines of Dr. Warren as expressed in his writings before he became a member of the Brain Trust as well as since that time may be summarized as follows:

1. Money is both a medium of exchange and a commodity. Bimetallism and symetallism are practical.

2. To maintain an ordered economic life, a stable level of wholesale prices is necessary.

3. When prices are not stable gold is at fault. There is a direct relation between prices and the demand for and supply of gold and the demand for and supply of commodities offered for sale. When demand and supply remain relatively constant, prices bear a direct relationship to the dollar price of gold.

4. Since 1925 there has arisen an abnormal demand for gold which has depressed prices below the level at which manufacture and trade can be developed at a profit. A prime and intensifying factor in this deflationary trend has been the fixed weight of the dollar.

5. To change the price level there must be a change in the value of money. A gold buying policy which arbitrarily

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2. Atkins, "Gold and Your Money",
   p. 157 f.
3. Barnes, Harry Elmer, "Money Changes vs. the New Deal",
and artificially raises the price of the dollar of gold will lower the gold price of the dollar. To express it differently, change the weight of gold in the dollar or its price per ounce.

6. No attempt is made to present a theory of how changes in the price level come about, rather he bases his hypothesis on an observed relationship between the output of gold and the level of wholesale prices. The part played by our great structure of bank credit built on a small gold base as a factor governing wholesale price he does not deny or explicitly recognize.

7. After the required amount of depreciation has been attained, the dollar may be officially devalued to harmonize with that amount of depreciation; that is, if goal of depreciation is fifty per cent, the proportionate devaluation would necessitate a reduction of the gold content of the dollar to one half of its present weight (Jan. 1934).

8. Reflation, or a gradual but certain rise of prices to the level which is the goal of those controlling the monetary policy, will be coincident with and follow depreciation and devaluation.

9. After the desired price level is secured, stabilization should be attempted by such devices as the commodity dollar, the compensated gold dollar, or an amalgam that will be altered in value in relation to the price trends.
10. In a process of monetary reorganization and financial preparation for recovery, the normal process should be depreciation, devaluation, reflation, stabilization.
PART V

Current Impressions of the Monetary Doctrines of
Dr. George Frederick Warren
Title Page

INDEX OF THE HISTORY OF GREECE

1800

1801
Within the year much comment has been made on the doctrines and policies of Dr. Warren pertaining to monetary matters. Selecting the published discussions of some of the most reliable, typical, and broadly representative among them, we shall investigate the opinions of a statistician, the Dean of the Graduate School of Yale, a monetary expert called to the service of the Bank of England, economists, and college professors. We shall begin with an analysis or summary of Dr. Furniss's ideas as expressed in a recent number of the "Yale Review." Dr. Sprague's theories of causes of the depression, of monetary matters, of methods of recovery, and of probable future influences of the Warren doctrines will next be summarized. There will follow an analysis of the commodity index number and compensated dollar as developed by Warren and Pearson from the point of view of Dr. Tucker and comments in rejoinder by Dr. Whelden. The point of view of the statistician we shall get from Bassett Jones.
Most people concede that the justice of existing economic relationships between individuals and social classes, between debtor and creditor, between laborer and employer, and between parties to long-term contracts, presupposes as firm a degree of stability as possible in the money value unit. The significance of this value unit, the "new dollar", to business enterprise and to the ordinary citizen is determined by its purchasing power; and it is proposed by the monetary experts to control the fluctuations of the unit by stabilizing the general level of prices. Evils arising in the existing economic relations of the groups mentioned result, it is said, from the diverse behavior of individual items in the price structure during periods of general change. Since complete plasticity does not exist, the equilibrium among various factors of the economic system is disturbed by deviation of specific prices from the general average. This change in price level dislocates the balance
between cost and income upon which modern economic arrangements among individuals and social groups are based. Some prices responded with a degree of alacrity to current economic forces, but such factors as law, organized opposition of interested groups, or the inertia of custom retard the adjustment of other. Grounds for challenge of the policy of the experts and by the way, there are not supposed to be more than sixteen English speaking people competent to understand what is to happen in the manipulation of the currency which is the affect a generation to come, lie in the following conditions. In a capitalist society it is impossible to regulate each of the myriad individual items composing the price system so that they will all vary directly and proportionately with one another. Further, "in a society of free enterprise it is inexpedient even if it were practicable; for variation of individual prices in relation to one another is the factor upon which we rely to indicate the changing utility of different kinds of goods and services, to distribute labor among the various occupations with some regard to their relative social importance, to accelerate or retard the accumulation of capital and direct it into profitable channels of investment; in short, to govern the complex economic endeavor of a planless society with reference to immediate and prospective needs."¹

It is the intention of the advocates of managed currency, while controlling the average of all prices, to leave each commodity and service free to fluctuate in value in response to current market forces. It is assumed that these natural changes in the ratios of specific prices will not disturb the equilibrium among the separate parts of the price structure upon which the plans of both individuals and business groups are based; or that if such disturbances do occur, they will be slight in extent and in harmony with social welfare. These experts believe that the stabilization of the price average will remove the one prime cause of periodic dislocations of the economic system; and that the unequal flexibility of individual prices which has been the immediate source of our difficulty in times of general price change, will cease to have further significance for the reason that general changes of price never occur. Many economists deny all possibility of stabilizing the price level, saying that all previous schemes have failed. Advocates agree on the essential principles of a successful scheme, but differ radically in methods. They base all their procedures for controlling a change in price average on the same scientific law regarding the purchasing power of money and agree on the use of the device known as "index number" to determine the price average and record its movements.
Several factors tend to make the determining of the "index number" a complicated technical process lacking in validity and reliability. First, it is impossible to compute for all items in the market; so the procedure resolves itself into a selection of certain basic or outstanding commodities and assuming that their prices are representative of all the others. Furthermore, it will be vitally necessary to attempt to give each of the goods and services selected a weight in the average in proportion to its human significance. But some items originally "indexed" will become obsolete and new groups of prices of socially important goods will arise. Such changes will have a varied affect on the welfare of different citizens and social groups. "Any single 'index number', however carefully its components are selected and weighted must be an abstraction relating to a hypothetical average citizen and not to the real needs and activities of living human beings." ¹ It will be possible to so misdirect the attempt to stabilize the price level with respect to the index that the contribution to human welfare over a period of time will be slight, even negative. Further evidences of unreliability lie in the fact that the experts do not agree as to the validity of each other's determination of the "index number".

So Professor Furniss insists that not one but several "index numbers" must be computed, each to reflect the changes in one factor or group of factors in the problem. "Index numbers must be flexible, subject to alteration both as regards the component parts and the relative weights of these items in adjustment to the continuous flux of economic institutions and activities.---Making and revising "index numbers" demands the exercise of insight, discriminating judgment, and expert knowledge which the ordinary administrative officers of a government can no more hope to possess than the average citizen.---Political pressure of all sorts will be brought to bear since in making and revising the indexes affect selfish interests of individuals and groups in such a way as to render it inevitable."1 At present, "index numbers" are considered good, but it is intended to apply them in a much broader manner in business and industrial affairs beyond which their present validity and reliability warrant.

Only a dictatorship of the wisest men can grapple with such problems, whereupon there immediately arise misgivings as to the political practicability of the plan, in view of the other duties of monetary dictators. The economist is impelled to add other queries. How is it possible to organize administrative

machinery in such a manner as to assure competent officials, endowed with adequate authority and safeguarded against political influence over a prolonged period? Supposing it is possible to satisfy that condition, what shall be the procedure in the future by which a popular review of such dictators may be achieved at election times, without destroying their authority and independence? After establishing an "index number", what specific measures should be taken to force the return of a price level wandering from the base? Experts are still vigorously debating this point.

Professor Furniss stresses the point that the Quantity Theory of Money is no longer valid. The implication of the theory is that an undesired change in the price level can be controlled and even reversed by regulating the amount of currency in circulation. In the two hundred years elapsing since the presentation of the theory, commercial banking has greatly expanded and bank deposits form common currency; the direct relation between the quantity of primary money and the level of prices no longer exists. Normal expansion and contraction of the currency develop through the banks so that devices for managing the monetary system must be concerned with the increase or decrease of deposits.
With respect to the regulation of the gold content of the dollar, Professor Furniss asserts that it may have some influence upon long-run, slow-moving changes of price level, but emphasizes the fact that such an expedient is ineffective for a method of control for short time or emergency periods. He believes that the exercise of such a device presupposes an organization which will bring bank deposits under centralized control and also that "the actual condition of the money market will always be such that the central authority will be able by ordinary business procedures to regulate the credit operations of the individual banks."\(^1\) As an illustration of the necessary organization by statute which alone will make possible the use of this expedient, is cited the law impounding the gold supply in the Federal Treasury which vests the President with powers pertinent to the stabilizing currency and provides a completely centralized control of the national gold reserves, together with the power to determine and redetermine within limits the number of dollar units contained in the reserves by the procedure of changing the definition of the dollar in terms of its gold content. The statute furthermore creates an immense gold fund for the transaction independently of the money assigned to existing bank reserves.

\(^1\) Edgar L. Furniss, "Reflections on the New Dollar"; "Yale Review", Vol. 23; March, 1934; p. 457.
which the government may use to maintain any money policy it may choose.

The task of planning and administering such a device would constitute a problem very few government officials or economists are capable of. Every day such a body would have to decide what specific measures of control to apply and at the same time plan to prevent the money market as a whole from getting out of hand. "The ability of a central authority to control the credit operations of banks by manipulating the discount rate or by means of operations in the open market depends upon a combination of circumstances concerning the condition of the central and the member banks, the state of the investment and exchange market, the temper of the business world. With all this successfully negotiated, the heart of the problem will still be unsolved.

More promptly responsive devices would be open market operation and alteration of the discount rate since they would affect the reserves of the banks and influence the willingness of the bankers to expand deposits and of business men to borrow them.

In definition of the stabilized price level, the Professor states that President Roosevelt's first policy implied a

commodity dollar to be given a constant purchasing power, a price level fixed and unchanging, but that later he modified the term to mean a "reasonable stability of prices." The first objective, he believes, would aggravate evils intended to be removed. In the years immediately preceding 1929, the United States actually had what might be called a "reasonable stability of prices." His inference from a study of the period and the "index numbers" as published by the Bureau of Labor Statistics of those years, is that the relative rigidity of price average during the years 1921-1930 and 1926-1929 was a contributory cause of the breakdown. He explains his position in the following terms. "Injury results from general price change not because the average is shifting but because individual prices do not move in harmony with one another.--Economic factors play upon groups of goods and services changing their relative positions within the price structure causing the value of some to fall through the influence of technological progress and similar cost reducing developments and because of diminution of demand, and causing others to rise in value for similarly fundamental reasons. Maintenance of a constant general price level would not prevent these price changes, but would require that they be offset by compensating movements so that prices would be raised in some as they fall in others, thus producing a more serious distortion within the price structure than if nothing had been
done at all.--If agricultural prices decline because of forces in international market and not controlled by the monetary policy in the United States, agricultural areas will suffer unless prices that define their costs (industrial prices, interest and wage rates, transportation charges, etc.) move in the same downward direction.--Effort to maintain a constant price level would offer resistance to any tendency of the second group of prices to fall with the falling commodity group.--To be effective, the policy must drive the second group in the opposite direction from the first in order to correct the average, thus increasing the gap between farmer's incomes and their costs which would undermine economic security of a large part of the population. --The trend may be in the opposite direction, to the immediate injury of the industrial group.--Since sweeping price movements in different kinds of goods are inevitable, a constant general price level far from acting as a safeguard to the welfare of sectional or class interests is likely to add to the misfortunes of those already damaged.  

In place of the stable price level Professor Furniss advocates the "stabilizing price level" which the economist Keynes calls the "equilibrium price level", such a price level as will keep things in balance. He defines the stable price level as

"one which fluctuates in order to maintain equilibrium among the changing factors in the economic system."¹ The stable dollar he defines as "one whose fluctuation of physical content produces constancy of purchasing power."²

According to Dr. Furniss's theory of prices, the fact that prices arrive at a certain average at any given time, or over a considerable period of time, is no assurance that a perpetuation of that condition will maintain equilibrium within the economic system. Beneath the apparent stability of a constant or slow-moving price average, fundamental changes in the system of production may be going on which may tend to produce cumulative maladjustments which will finally disrupt the system. In a developing economic order like ours, the price level to act as a stabilizer must move in accord with fundamental trends. When technological progress tends to reduce costs of production the price level should fall in conformity with the altered conditions. Failures, at first imperceptible, of the general price level to fluctuate with production costs will result in a disequilibrium that will cause trouble.

Monetary experts, then, not in agreement on their goal, cannot safely take the first steps in the programme of price control. The political practicability of the device of the

². Ibid, p. 462.
equilibrium price level even, which is preferable from the point of view of social welfare, is doubtful. The problem of solution of the method is immensely difficult. This device presuppose a breadth of knowledge and a profundity of insight which few even of our Brain Trusters possess. Political agitation will arise from the selfish interests of individuals and classes. Our political history does not seem to teach that such a device is a feasible task of government in a representative democracy.

In concluding his reflections on the subject of governmental determination of a general price level, Professor Furniss states that the people of the United States should demand that nothing be attempted in the way of fixing the "number index" and the commodity dollar upon us until the problem of administrative organization has been solved. He does not believe their administration should be vested in the President or in the Secretary of the Treasury. In that case, the final authority would be the President who would not always be competent and who is always primarily a party leader. Not scientific economics, but sectional and partisan politics would then be in control of the policy more times than not. He also rejects the Federal Reserve Board as possible arbiter since it has often been characterized by divided counsels and vacillating decisions, is
vulnerable to political attack, and its present personnel is determined by a law passed in response to sectional pressure. To carry out such a policy the United States needs a body of masters, not advisers, comparable to the Elder Statesmen of Japan, an idea which is foreign to our political habits. They should be experts entirely removed from politics with absolute authority in their field and accountable to no one but themselves. To carry out their plans they could utilize the existing machinery of government and they must co-operate with the Secretary of the Treasury and the Federal Reserve Board. Rather than to cause failure through faulty administration it would be wiser to discard the policy at an early date. A second demand the people should make with respect to impending operation of the policy is that the dictators be content with slow and cautious progress in their programme. They should abandon the notion that it is possible to select 1926 or any other single year and to require by law that the price level be established at that point. And the enabling act should confer a broad grant of powers without such hampering restriction.
In the opinion of Professor Sprague the depression is not due to monetary causes, and no monetary policy will be sufficient to bring about trade recovery. To him the commodity dollar is an "intriguing but pernicious product of statistical ingenuity".\(^1\) Granting a stimulating effect to business of a general rise in prices, he admonishes the government official to discover, before attempting to put any plan into operation, whether it will stimulate desirable activities that can be maintained. A decline in prices of less than twenty-five per cent occurred between 1929-1933; so a really far-sighted policy of recovery should be directed toward increasing volume in the case of most industrial products, delaying to a future date an advance in prices after trade recovery has made greater progress.\(^2\) A fifty per cent increase in the general price level might be advantageous, but it should be determined that these commodities

\(^1\) C. M. W. Sprague, "Recovery and Common Sense", p.2.
in which a great increase in production and consumption is anticipated shall rise in price less than the average of commodities in general.

The gold purchasing policy of the government, based on the assumption that price level is directly responsive to changes in value of American money relative to the value of the currencies of other countries, will not at the present time develop a rise in prices that will persist and be accompanied by a full employment of labor and a higher standard of living, although over a long period these results might be possible. An intense demand for additional credit and currency must be the initiating factor in stimulating an advance in prices. Two other conditions must also be present. "Banks must not have reached limits of expansion of credit and currency fixed by statutory ratio of reserves which they must hold against liabilities, and they must be willing to meet the increased demand made upon them for accommodation whether it be from business or from the government."1 Furthermore, our present supply of money is adequate to support a much higher price level, since our gold basis for credit is (in early 1934) far greater than in 1929. It is possible that an expansion of a monetary base that is already sufficient may bring expansion and a more effective distribution of credit and currency, but it will have

little definite influence. Professor Sprague gives point to his theory by a brief survey of the wholesale price index and the stock of money in circulation between 1926 and 1933. "Between 1926 and 1933 the wholesale price index of the Bureau of Labor declined from 100 to below 70. In June, 1926, the stock of money in circulation was estimated at $4,885,000,000. By June, 1933, there had been an increase to $5,720,000,000. During the same period of time there was an increase in the cash reserves of the Federal Reserve Banks from $2,980,000,000 to $3,813,000,000."¹ He concludes that "Evidently, if the supply of money whether in the hands of the people or in the Reserve Banks, always exerted a powerful direct influence on prices, we ought now to be enjoying a far higher price level than that of 1926."² The actual decline in prices is and was partly caused by a very great decrease in the loans and investments of the American banks. To reach the 1926 price level there must be an immense increase in the loans and investments of American banks with a resultant increase in the volume of deposits subject to check. Lack of confidence of the people in the banks and the currency have greatly handicapped the recovery. All classes of people must bear the blame for the severity of debacle: the thousands of farmers who bid up the

¹. P. H. W. Sprague, "Recovery and Common Sense", p. 34.
². Ibid, p. 34.
land and then mortgaged heavily, industrialists who over-expanded, investment bankers, and even some economists who proclaimed a new era before it had arrived. The Federal Reserve System should have exercised a wise restraint from 1927 to 1929. Commercial bankers should not have adopted the policy of their clients.

The temporary insurance plan Professor Sprague believes should prove an effective means of establishing confidence in the banks and make it possible to attempt a more enterprising lending policy. Bankers have been urged to a freer extension of credit, but examiners have subjected "existing assets to valuations based on most pessimistic forecasts",¹ which has been a deflationary influence. It is questionable whether there is any public advantage from the insurance of large deposits; it would seem preferable to limit insurance to cover deposits of $2500 or some other comparatively small amount. A second deflationary influence has resulted from the liquidation of closed banks. Business enterprise has been seriously checked by the pressure exerted by receivers on borrowers and in the disposal of investments when bank failures were numerous. The prospect that the assets of banks more recently closed will be taken over for slow liquidation by the

government and a measure of immediate distribution be made to depositories will probably prove to be the most "serviceable and pervasive" of all means adopted by the government in employing funds to assist recovery.

As to the Securities Act, burdensome and unreasonable provisions must be eliminated to remove another important obstacle to an enterprising lending policy for the banks since some features of the original form distinctly obstructed the movement of savings through normal investment channels to industry.

Distrust and uncertainty of currency conditions have forced the banks to maintain a condition of extreme liquidity. Under these conditions depositories withdraw their deposits and borrow on their insurance policies in order to buy tangible property and equities, or they export their savings to foreign countries for safety. With respect to the monetary policies of Professor Warren adopted by the government, the Harvard economist states that the failure of measures of depreciation to be effective has not convinced their proponents that the course was wrong, but merely that stronger measures were needed. Difficulties in the path which the influence of devaluation of the dollar will exert in bringing on a trade recovery and a rise in prices are very numerous. Failure to make the distinction between permanent monetary arrangements and policies to meet immediate
needs characterizes current efforts in that direction. He further points out that an uncrirical acceptance of the increased-consumer-purchasing-power theory characterized an unwarranted tolerant attitude on the part of the National Recovery Administration toward increasing costs and prices.

Major points in Professor Sprague's criticism of the depreciation policy are as follows. There was no evidence whatever that the American dollar was overvalued relative to foreign currencies at the time we abandoned the gold standard. There is no basis for the contention that our policy is the same as that of Great Britain. Various influences tending to depreciate the dollar will tend to bring about its appreciation when the government decides to stop depreciation. "To hold the dollar at any particular point of depreciation will prove wholly impracticable unless prices shall have risen in the meantime to a level roughly approximating the depreciation which is desired to make permanent."¹

There is no instance of any other country's departure from the gold standard when its currency was not overvalued at the time gold payments were discontinued; so we attempted a radical policy under conditions contrary to tradition. The United States had a favorable balance of international payments, was

a large creditor country, possessed a comparatively small amount of foreign balances payable on demand, and our Federal Reserve Banks had one half billion dollars in gold. Obviously the United States could maintain the gold standard, but our government believed depreciation would help trade recovery. The ten per cent depreciation of May and June, 1933, became inadequate in July; so that month and August saw a twenty per cent (approximate) depreciation. A still further depreciation occurred in October and later became forty per cent. Because our dollar was not overvalued at parity, "the strong arm" method of the Thomas Amendment was adopted to enforce depreciation, but the result was only a decline of ten per cent by June. Believing that trade recovery would be hastened by cooperation with other countries with the objective of the early establishment of international monetary stability, the government sent a special commission to the World Economic Conference, but independent of it, at London, to negotiate on the matter. So far our governmental policy did not seem to be extreme, but in June came a decided change in the monetary policies of the Administration: measures adopted at the conference were abandoned and the intention to establish a new monetary system based on the commodity dollar was announced. "The psychological
effect of this unexpected change in policy was reflected in a further weakening of the dollar increasing the depreciation to something like twenty per cent."1 This depreciation, however, did not rest on a firm foundation, and there were evidences of a tendency to reverse the course and to appreciate. More determined action was taken in October when the Administration announced its programme of purchasing gold both at home and abroad at prices that would be determined daily at Washington. Sufficient speculation against the dollar and flight from the dollar has occurred which has made it unnecessary for the government to make heavy gold purchases in foreign markets.

What influences on prices are to be anticipated by depreciating dollar? So far as the policy of setting up a monetary system that will be independent of monetary movements and price fluctuations in other countries has developed, it influences our own situation only through the changes it makes in monetary relations between the United States and other countries. Contrary to the usual process, depreciation has preceded expansion in our case, whereas usually currencies depreciate as a result of excessive credit and currency expansion. The obstinacy of the dollar in depreciating results from the fact that a rise

of prices has occurred here while there has been no similar movement in other countries. "Instead if a depreciation merely registering a price situation which had already been reached, we are seeking to reach a desired situation through the influence that depreciation may exert on prices."\(^1\) Aside from speculation, the first immediate influence our changing dollar can exert on prices concerns large volume commodities of foreign trade, either exports or imports. But even then rise in prices in American currency may be offset by a decline in foreign gold prices. Only through indirect effect, then, does the increased dollar price influence prices in general and only by this means may we anticipate any movement of prices of any consequence. Another factor contributory to the inadequacy of dollar depreciation as a price-raising measure in our country is the comparatively small percentage of exports to our total production. Again, an influence on prices appears when depreciation has taken place sufficiently to make possible to export goods which may enter foreign markets in competition with goods in other countries. In the case of manufactured products, if depreciation occurs in the absence of an equivalent rise in the prices of those goods, the widening range would permit the finding of profitable markets outside the country, but would be checked by the lowering

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of prices by the foreign producer and also by the imposition of additional tariff duties. The slight influences exerted by dollar depreciation toward raising prices will be more than offset by internal influences unfavorable to it and that will strengthen if the further depreciation of the dollar is not discarded. The claim that the New Deal policies of the government made it necessary to abandon the gold standard and adopt dollar depreciation seems to have no sound basis. Higher duties would have given better returns in the attempt to safeguard those policies from the destructive influence of foreign competition. A positive deflationary influence exists alongside these lessening influences of the depreciating dollar on prices. "The banking and business community, therefore, is hesitant because it naturally fears that when the Warren programme of depreciation of the dollar is seen to be ineffective, the administration, instead of reverting to reasonably sane monetary policies, will either experiment with devaluation at the present or lower value of the dollar, as expressed in the price of gold or resort to positive inflationary measures."¹

Let us next consider Professor Sprague's views on the influence devaluation of the dollar will exert on trade recovery and

¹ O. M. W. Sprague, "Recovery and Common Sense", p. 60.
a rise of prices. Devaluation is usually the last stage in the return of a distorted currency to the gold standard and is the statutory recognition that prices have advanced far beyond the level which can be maintained if the old parity is restored. In devaluing the American dollar to the extent of its present depreciation, we assume that devaluation in itself will result rapidly in the necessary rise in prices. The revalued currency would arrive at equilibrium with those of other countries only after the price raise. We can no longer revalue in concert with foreign nations, Great Britain in particular, since our dollar measured in foreign currencies is now clearly undervalued. Other nations will probably not take similar action. The risk of American devaluation with a possibility of much greater foreign devaluation is too unwise and too dangerous. Such action on the part of foreign countries would be inevitable if American prices did not rise decidedly after the revaluation. Serious financial and monetary difficulties are implicit in devaluation to the present state of depreciation. Under certain conditions American capital, the outflow of which has been a large factor contributing to the existing depreciation, will begin to return, and gold imports might increase to such an extent as to threaten the departure of the gold standard of countries still on together with a startling decline of
currencies on a paper basis. As for the field of prices, devaluation will not increase the consumer purchasing power in the least. It would mean an increase in dollar holdings of gold in the United States Treasury and in the Federal Reserve Banks to the extent of between two or three billions. The government would then make a heavy profit of that amount which it could expend on public welfare without the resort to taxation or loans. The effect of the release of this amount through governmental channels cannot be precisely determined. On the whole, there might be expected some increased demand for capital if people were confident that devaluation at this point would mean no further depreciation of the currency. Such elimination of fear about the currency would be a major advantage to be derived from devaluation.

The present is not the time for definitive revaluation of the dollar. The more serious inflationary measures imminent, unless officials are convinced that they will accomplish nothing in causing a permanent rise in prices or a recovery in trade, are distinctly to be avoided. Positive inflation, in other words, in a period of depression when there is an abundance of credit available is undermining to the confidence of the people. Probably a rise of prices of tangible properties and equities would result rather than an increase in the demand for capital and labor for additional
construction. There seems to be no reasonable ground for the belief that inflationary measures will afford the slightest probability of the establishment of a higher reasonably permanent price level or that a full employment of labor with rising living standards will result.

In its enthusiasm for increasing consumer purchasing power, the Government displays a too tolerant attitude toward increasing costs and prices. It has permitted general increases in costs at the same time professing a desire for increase in volume. It should have done more to check increases when lower prices could be reasonably expected to encourage a greatly increased demand. Disparity in prices has been especially detrimental to the rise of general price level. A rise in the prices of agricultural and mineral products somewhat moderated the disparity between their food products and manufactured products during last spring and summer, but later the tendency was reversed, a condition which constitutes the greatest single obstacle to trade recovery. Faulty policies of the business community and of the N. R. A. call for a changed point of view and the adoption of price policies which will make conditions favorable to a sustained production and consumption of a larger volume of goods and services. A greater encouragement of the demand for materials and labor required to meet deferred maintenance, replacement, and improvement of equipment creates
confidence, especially in the railroad business. The promise of the government to establish fair competitive conditions between railroads, trucks, and other agencies of transportation and an overhauling of the rate structure would be particularly stimulating. Such boldness in enterprise may well be applied to industry in general. "Trade recovery requires that business policies be directed toward the enlargement of demand under the stimulating influence of reductions in costs and in prices, with resultant increase in volume, but without any general reduction in wages."¹ A further sound business policy to be encouraged is the lowering of interest rates and, in some instances, a reduction of the principal of debts as a stimulation to business and industrial enterprise.

The development of a long-time monetary system under which the volume of credit will increase with the growth in the volume of trade, but not so rapidly in periods of activity as to induce unhealthy advances in prices or other pernicious developments and which will function in a manner to check wide departures from economic equilibrium between the various trading countries, calls for the development of an improved international gold standard. To accomplish this objective, however, it will be necessary to strive to overcome former defects in the operation of the gold standard by specific and definite modifications

¹ O. M. W. Sprague, "Recovery and Common Sense", p. 83
of statutory limitations and better banking practices. A decline in gold production over a long period could be met by a very gradual reduction in statutory reserve requirements of the Federal Reserve Banks and of central banks in other countries. Some part of the reserves of the central banks might be silver. How far this practice may be allowed to go will have to be determined by experiment. Ten per cent will be a wise limit to begin with probably after international agreement steadies the price. When increasing the use of silver in central banks provisions should be made to establish a stable value of silver not far above its value at the time the arrangements were put into effect. "To counteract the influence of the probable increase in hoarding when the United States returns to the gold standard, it is essential that an agreement be reached between the principal countries of the world that their central banks shall only make deliveries of gold between themselves, and that arrangements be made for the exclusive purchase of new gold from the mines by the various central banks, they in turn furnishing such amounts of gold as may be required for industrial uses." An international gold standard with modification as suggested will not either of itself or by mechanical functioning result in complete stability; it does, however, narrow the field in which

intelligent management must be exercised. No monetary system can function independently of the currency systems of countries beyond its borders. Further, if we take the important step, we must assure ourselves that the other countries return to gold also at equilibrium rates; otherwise, the United States will face the same problem of adjustment that baffled her during the ten years previous. A period of trial and error should be entered by countries now on a paper basis before stabilization is attempted. After two or three years, if exchange rates can be maintained without great difficulty and if international payments seem to be reasonably balanced legal currency valuation may be attempted, but it must be recognized that practical stabilization must precede statutory stabilization. For the United States such a policy means abandonment of the policy of manipulating the exchange rates and the maintenance of sufficient control to eliminate extreme temporary fluctuations.
DR. TUCKER'S ARGUMENT THAT THERE IS NO STATISTICAL BASIS FOR THE COMMODITY DOLLAR
Dr. Tucker believes there is no statistical basis for the commodity dollar. He is in agreement with many other economists that the general price level is not identical with the average of the wholesale price level, even less with any single index of wholesale prices. He calls the Warren-Pearson Index merely an arithmetical average; though based on a much larger number of commodities than some others, it is so weighted before 1840 as to be practically an index of thirty raw materials and food stuffs. It does not reflect general conditions or monetary conditions as much as it does agricultural conditions because almost every time it differs from other indexes in a given year, a crop shortage or a surplus occurred. The trend of the index between 1799 and 1840 depends entirely on the arbitrary shifting of weight by the compilers. Yet Warren and Pearson claim that the index correctly represents the wholesale price trend in the United States and also furnishes an accurate measure of the cost of living and the purchasing power of money.

Wholesale prices do not measure prosperity. Even an accurate index would not be more than an arithmetical abstraction. An index of the general price level is the only kind of index that can measure the adequacy of the monetary medium, though it may be impossible to ascertain. An index of the wholesale price level has little significance.
in the measurement of prosperity except as it enters into the general price level. Wholesale prices are a measure only of the prosperity of the entrepreneurs; rising prices while benefitting them may injure the consumer. Dr. Tucker contends that the individual commodity may differ much more in its movements than the groups shown in Warren's diagram of the period 1910-1914. It is the price of the individual commodity that determines the profits of the producer.

The true measure of purchasing power is the relation of the price received for a specific product to prices of the commodities that one buys. Dr. Tucker maintains that the indexes of farmers' purchasing power are utterly worthless. The sixty-cent dollar and the hundred-and-fifty-cent dollar in the Bureau of Labor Statistics wholesale price index, he further contends, is utterly misleading since it does not measure purchasing power of dollars received by wage-earners or bondholders, or any kind of citizen. Most advocates of managed currency assume with no real evidence that the trend of retail and of wholesale prices is the same although it is admitted that the cyclical movements in retail prices is much less extreme. Through personal research, Dr. Tucker found that over a ninety-three-year period in England and an eighty-three-year period in United States indexes of the cost of living constructed directly
From retail prices correspond very closely with indexes constructed by simply averaging wholesale prices with wages. To him this type of index seems more accurate than an index of wholesale prices.

Dr. Carl Snyder averaged several existing indexes of wholesale prices and gave them a weight of thirty points, etc., to which Dr. Tucker made additions. The period 1791-1932 revealed an uptrend of 0.5 per cent per year while Warren and Pearson's index of wholesale prices, showed only 0.1 per cent per year and the Jevons-Sauerbeck index for England showed a down-trend of 0.2 per cent.

Dr. Tucker further maintains there is little connection between the gold supply and the general price level. "Warren deduced from the wholesale price index the conclusion that the annual gold production must equal 5.6 per cent of the monetary gold stocks. From 1791 to 1932 the United States was on the gold or bimetallic standard one hundred twenty-two years. During ninety-two years the gold produced was less than 5.6 per cent and in forty-five out of ninety-two years prices actually rose. Warren worked out a relationship between gold produced, the production of basic commodities and prices which even according to his own tables failed to work thirty-two out of fifty-three years, 1879-1932. By including years when the United States was not on the gold standard and the years for which no figures are available
for physical production except his own arbitrary extrapolations and by reducing his figures to a common denominator—"the average of 1880-1914 and drawing them on a small scale—by these herculean methods he succeeded in creating the impression that there was some connection between the production of gold and the price level in the United States between 1885 and 1915. By similar means he purported to show a relationship between world gold stocks and prices in England from 1839 to 1915—admitting that there was none from 1916 to 1931. But since his figures of physical production before 1865 are merely backward extensions of an estimated trend, there is only the period 1865-1915 to test this theory, and his own figures show that in twenty-five of these fifty years the theory was contradicted by the actual movement of the price average."¹ So Dr. Tucker considers Dr. Warren's gold theory unproved.

He does not believe there is any consistent relationship between gold and prosperity. Probably the relation of the gold supply to prosperity is more important than the relation of the gold supply to the price level. An index of American industrial activity constructed by Col. Ayres

reveals a trend above normal in forty-nine, or fifty-three per cent, of the years of gold shortage and in twenty, or sixty per cent, of the years of gold abundance. This index includes prices as one factor, consequently weighting toward the theory that rising prices are synonymous with prosperity. A more important criterion, he states, would be the real wages of the working class which advanced most rapidly in the decades when gold production is said to have been sufficient and advanced more slowly or ceased to increase in decades when gold production was considered sufficient. Dr. Tucker points out that Warren and Pearson's own diagram on page one hundred ninety-eight of "Prices" reveals this fact, but that it seems to have escaped the authors. If their index is accurate it reveals that the long down-trends of commodity prices for which the gold supply has been blamed are fully explained by the increased production of commodities. They were only symptoms of America's rapid increase in wealth and its wider distribution.

"There does not seem to be any statistical justification for the belief that a rising trend of prices indicates either the prosperity of the bulk of the population or an increase in business activity. Long-time trends are confused with cyclical fluctuations. Down-trends of prices following the collapse of an over-extended credit situation
is, of course, destructive to profits and frequently to employment, but it obviously has nothing to do with changes in the gold supply or long-time trends of prices."¹

Major business crises have occurred in the United States when the long-time trend of prices was up; for example, in the years 1797, 1808, 1857, 1907, and 1914; when they were down, as in 1839, 1884, and 1893; when the trend was up, then down, as in 1819, 1873, 1920; and when the trend from down up, as in 1896.²

To prevent crises we should prevent or decrease over-expansion of credit. But we cannot estimate the credit expansion by the commodity price level, and the commodity price level has little concern with the gold supply. Five years of unusually steady wholesale commodity prices preceded the depression in which we find ourselves. Its major cause lay in the fact that the central banks of the United States and several other countries had deliberately attempted to prevent commodity prices from decreasing. This condition had brought on or had proved an obstacle to the removal of an immense body of debt which finally collapsed of its own weight.

² Ibid.
From the above line of argument he draws the conclusions that:

1. A stable wholesale commodity price average is not so significant as its exponents would have us believe.

2. The development of the modern banking system has decreased the influence of the quantity of gold on the general price level, either immediate or long-run. If there has been any effect it has not been manifest in periods under five years, often longer.

3. History does not reveal any instance of a healthy rise in prices resulting from an artificial "easing of credit." "There is no reason to believe that the price level can be raised by manipulating the gold supply and that attempts to raise the price level by manipulating the credit supply will either fail or lead to worse disaster." The most responsive prices to "easy money" are those of the speculative commodities and securities, but they do not always respond satisfactorily.

When depreciation of the currency in the foreign exchange markets results, the prices of imported goods rise first as has been proved by recent experiences in England, Sweden, and our own country. The most important prices

1. Tucker, R. L. "Gold, Prices, and Prosperity"

"The Annalist", (Dec. 1, 1933)
in terms of social welfare rise last: wages of laborers and salaries of white collar workers. The greenback era in our own country and the post-war inflation periods in Europe are indisputable evidence. This sort of inflation is ruinous to both the small capitalist and the thrifty middle class; to both the skilled and unskilled laborers it is cruel in its oppressive results.
DR. WHELDEN'S ARGUMENTS IN SUPPORT OF THE COMMODITY DOLLAR AND IN REFUTATION OF DR. TUCKER'S POINT OF VIEW
Dr. C. H. Whelden, Jr., of Yale, seems to make the most able defense of the statistical basis of the commodity dollar. He admits that the index number is an arithmetical average of a few commodities and that the fluctuations are extreme, but he contends that with proper weighting the unreliability of such an index can be removed to a great extent. When it is remembered that until much later than 1840 the United States was mainly an agricultural country, the point that index is an average mainly of farm products ceases to be any criticism at all. Even a poorly constructed index will frequently conform in its broad movements with an index of superior mathematical form to a remarkable degree. In any discussion of the commodity dollar, or an index number dollar, the broad movements are the particularly important ones.

It is true that even a perfectly accurate index will not be a complete measure, but general changes in prosperity can be sufficiently indicated in terms of the proper interpretation of almost any index of prices. It has been known for fifteen years that the variations of wholesale prices do reflect the general movements in business activity. Investigations by Professor Wesley C. Mitchell and Professor Fred C. Mills have revealed that broad movements in an index of particular prices do reflect sufficiently the broad movements in other prices because of the high order of interconnectional
relationship within the price system.

It is absolutely misleading to maintain that an index of wholesale prices would be merely a mathematical abstraction unlike the cost of living. The latter is merely an abstraction while the course of wholesale prices is a concrete and vital thing to millions of human beings. Every index number is an average, a realistic and representative abstraction, in the degree to which it is taken from a homogeneous set of facts and in this only proper sense the general price level comes closest to being simply a mathematical abstraction.

It is not necessarily true that while wholesale prices are not a measure of prosperity, because rising prices may benefit the entrepreneurs; they injure consumers, and it is seldom completely true. Most consumers are also producers dependent for their prosperity upon the prosperity of the entrepreneurs. The command over the means of satisfying their wants possessed by consumers is closely connected with conditions of economic activity; conditions of general activity have been well reflected by changes in the level of wholesale prices. Moreover, general standards of living have been almost universally higher when wholesale prices in the process of a long rise than when they were experiencing a long decline.
In refutation of Dr. Tucker's remarks on the one-hundred-fifty-cent dollar, he says the index of general prices does not measure the purchasing power of the dollar received by any particular kind of citizen principally because of the inclusion in the index of the prices of securities. The Bureau of Labor statistics does not have the peculiar quality of measuring specifically the purchasing power of the dollars spent by business men on the average in securing their materials, supplies, equipment, and stock in trade.

Any truly realistic index of the cost of living must relate specifically to a part of the population; most are related to the case of industrial wage-earners. A measure of the cost of living is of significance only in relation to conditions of income. Few people have a narrowly fixed income over any particular period, and hardly any one has such an income in periods of rapid and severe changes in price levels. The variations in income tend to be more closely related on the average to changes in the level of wholesale prices because of the connection of the latter with the variations in business activity than to changes in the cost of living.

It is Dr. Nelder's contention that the instability of the price level has been sufficiently great to destroy any
legitimate grounds for a charge that the wholesale price level has given misleading exaggerations of instability of the unit of value. There is grounds for the accusation of social injustice and social maladjustment is the use of either measure. Dr. Warren's measure will probably accomplish some stabilization in that part of the price system which has fluctuated most widely.

Dr. Whedden believes that Dr. Tucker should improve his chart of the world monetary stock of gold, the annual production of gold, and the ratio of the latter to the former for the period 1800-1922 by supplementing it with a chart to the same graphic scale of an index of prices for comparison. With this addition the chart does not show connection between supply of gold and price level. He would then see the relation working through the associated factors of the supply-demand conditions of gold and the supply-demand conditions of other commodities, a relation between the production of gold and the price level. The general rise of prices simply registers a fall in the value of gold in the technical form of higher costs of production for sale at a fixed price, with a consequent tendency to check its production; with this reduced production tending to contribute ultimately to a recovery in the value of gold and a stimulus to its increased production, with converse
effects for a general fall of prices.\(^1\) The process does not occur directly or promptly enough to hold the fluctuations of the value of gold and of gold standard prices within sufficiently narrow limits in the course of a generation. This relation described between gold production and gold standard prices is not a relation between gold supply and price level.

Dr. Wheldon objects most particularly to Mr. Tucker's contention that the table failed to work thirty-two years out of the total number charted, etc. The relationship is intended to apply to broad tendencies of prices on the gold standard to rise or fall quite apart from cyclical or other temporary movements over periods from twenty-five to thirty years. Mr. Warren, he insists, has shown convincingly that there is a close relationship on broad movements between changes in the level of wholesale prices and the ratio of monetary stocks to the physical volume of production of basic commodities, the price level rising in trend when gold stocks grow larger in relation to production.\(^2\) Relationship rests on the trend of prices with the trend of the gold to the production ratio.\(^3\)

Two prominent authorities in the field, Professor Thorp

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and Professor Mitchell, agree that in periods of falling prices the periods of depression are slightly longer in relation to times of prosperity than in periods of rising prices. The former's qualitative analysis and the latter's measurements on five statistical indexes bear witness to that effect.

The following criticisms of Mrs. Warren and Pearson's index he considers respectively of no concern, without bearing, and nothing to do with the question in hand; that according to real wages there has been relatively more prosperity when prices actually rising; the matter of expansion of population in the country; the discussion of other major crises.

Dr. Tucker's assertion that the desirability of the wholesale commodity price has been greatly exaggerated in no way follows from his discussion and entirely misses the point. And he has not proved that there is no reason to believe the price level can be raised by manipulation. His claims, with respect to conditions, since the modern system of banking has been effective, especially his first point, is untrue in relation to broad movements of prices. His second point referring to the time span is largely immaterial except as it emphasizes the undesirable instability natural to a gold standard monetary unit.
In conclusion, Dr. Whelden states that to return to the old-fashioned gold-standard is to neglect the lessons of experience and pave the way for a repetition of those social injustices for which the gold standard was to blame in the past.
PROFESSOR REED'S IDEAS ON CURRENT MONETARY THEORIES
AND POLICIES
Professor Harold L. Reed, in discussing the probable action of the commodity dollar during periods when a rise of agricultural prices does not occur simultaneously with the rise of other prices, reminds us that Dr. Fisher at the 1911 meeting of the American Economic Association "would not recommend his (commodity dollar) plan except on the condition that an international agreement be drawn up whereby the important governments of the world would revise the gold values of their respective currencies simultaneously and in the same degree."¹ He goes on to say that by this means an index number of international prices would be drawn up, so that when the index rose, the gold content of the pound, franc, lira, mark, and dollar would all be increased; and vice versa. In that case, the dollar would not depreciate in terms of foreign currencies and export prices would not be unfavorably affected by raising the gold content of the dollar. Since the London monetary conference in 1933 possibilities of securing an international agreement for periodic currency revaluations are more removed than ever.² But if revisions of gold values of different currencies could be put into effect, the commodity dollar would be divested of the only influence upon prices that can be expected to operate

². Ibid. See also Leo Posvolsky, "Current Monetary Issues", pp. 76, 87.
promptly and decisively. Simply to change the gold base for bank credit might produce no influence for the time being.

"Without ability to affect the foreign exchanges there would be little predictable potency in the commodity dollar device."¹ Moreover such an international agreement would lessen rather than increase the power of varying the dollar to control prices.

Professor M. T. Copeland's investigation of the effects of the 1933 devaluation programme in "International Raw Commodity Prices" supports this last conclusion.² During this period our currency devaluation affected exchange rates tremendously, and the program was operating under especially favorable circumstances. His study reveals that many other "miscellaneous factors were also affecting prices even of the important articles of foreign commerce so that their response to debasement measures was by no means so uniform as had been predicted. If such were the results in a period when efforts to lift prices were getting the benefit of a dollar depreciated in the foreign exchanges, it can only be concluded that efforts to depress prices by raising the gold content of the dollar might be devoid of efficacy were foreign exchange processes made inoperative."³

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3. Ibid. p. 17.
Returning to Dr. Reed's consideration of the new dollar device as a means of increasing the supply of gold, we find he believes advocates of this expedient argue from a complete misconception of the gold standard. He points out that the Fordney-McCumber tariff was a significant factor in promoting gold "nervousness" abroad. Other trends unfavorable to the proper functioning of the gold standard he finds in the unfortunate episode of the French acquisition of immense supplies of gold after 1927. She lacked institutional facilities and willingness to lend to foreign enterprises. Except to insure domestic confidence in her paper money, gold was of little service to her. Particularly unfortunate for world prosperity was the fact that the United States attempted to benefit her exporters by increasing the value of gold; in consequence, she came to possess the highest per capita circulation of gold of any country in the world, but she also lacked the facilities of London for financing international commerce. The post-war policy of England was to fix too low a sterling price for gold until 1931. He agrees with the widely-held opinion of monetary experts that the return of the British pound to the old par was the most disastrous event in the entire financial history of the world. The American 1933 policy in increasing the dollar value of gold when she already held more than forty per cent of the world's gold supply, operated in such a
way as to draw gold from countries much weaker in gold and created very disturbing consequences. Never before had the gold standard sustained such an attack. Countries which could use gold most effectively lost it, while those which gained it, either could not or would not use it properly. Man, not gold, then, was responsible for these disturbances; no international monetary system could function properly under these conditions. The remedy lies in establishing gold values of different countries at levels that correspond with their goods' values, not in artificially increasing the money value of gold in gold-strong countries in order to offset accelerated demand. Then it is an absurdity to determine by proclamation the value of a country's money, and the gold standard should be abandoned where it is attempted. It is pointless to adopt an international monetary system in which gold movements depend on official decrees instead of upon trade and financial balances.

From Professor Reed's point of view, then, gold is a balancing item and not the initial source of purchasing power. But even as a balancing power it is not so important as previously was, its chief significance being a means whereby nations settle accounts with one another that are somewhat out of balance. The amount of this metal that will be required to balance accounts will depend much more upon financial and trade policies than upon the physical volume of trade. It is
his theory that a nation loses gold if too much credit has been extended to those who cannot sell abroad. Such loss of gold is the signal to take measures to prevent so much credit from being extended to those who buy abroad. Efforts of this nature will do away with the situation in which debts will not be cancelled by credits; if they are prompt and vigorous enough only small amounts of gold will have to be shipped abroad to settle balances. If, however, nations losing gold do not heed those signals but continue to allow credits to those who cannot sell abroad, the gold standard is not functioning normally. If instead of placing reliance on banking action it is placed on import restrictions and on currency devaluation, unbalanced trade will remain in that state. Of course other nations will feel free to adopt the same devices. A worse hazard will be the erection by other countries of high tariffs and import restrictions. In this situation after trade has been throttled, the gold standard is often believed to be the cause. But gold is not to blame when trade and investment are unbalanced; it has performed its task when it has given warning that inward and outward payments are out of balance. To say that nations should be "supplied with more gold in such a situation is merely to contend that trade that cannot clear should be financed."^1

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If gold is to be considered purchasing power we shall never have enough of it if policies are adopted which destroy clearance. There is far more gold in the world than is required to balance accounts if wiser financial and trade policies are reestablished. The basic causes of unbalanced trade must be overcome if prosperity is to be restored. And the gold standard will be merely a device to extend the orthodox principles of banking to the broader sphere of international trade.
THE IDEAS OF BASSETT JONES ON THE RELIABILITY AND VALIDITY OF THE INDEX NUMBER
The Ideas of Bassett Jones on the Reliability and Validity of the Index Number

The liberally-inclined mathematical statistician, Bassett Jones, attacks the conception of index numbers and price levels as possessing little or no scientific validity. He contends that there is much confusion regarding the actual meaning of the wholesale price index originally prepared by the Bureau of Labor Statistics and extended and modified by Warren and Pearson. He states that attempts to correlate their index series with statistical series have led to what seem meaningless results. He comes to the conclusion as a result of his studies of the index of wholesale price series that the indexes were not of wholesale prices but of something else. Time correlations found between these indexes and other series of relatives lend to contradictions and confusion in the attempt at interpretation into economic meanings. But suppose we let the statistician explain his point

1. Bassett Jones, "Horses and Apples"
See also Warren and Pearson, "Prices", Chapter V.
of view in his own language.

"Warren and Pearson have actually stated that within the obvious approximations introduced in setting up both index series, gold stocks must equal the square of the total cost of production multiplied by some constant. Double the total cost of production and gold stocks quadruple.

"The fallacy of Warren and Pearson's whole discussion of prices lies in the fact that neither they, nor so far as the writer knows, anyone else, has actually determined an average price level, or the actual relation of such a price level to any other factors in the system. The discussion is based on something that does not exist." ¹

"The assumption that prices in any given market are primarily a matter of the relative quantity of goods offered in that market is decidedly questionable. -- In all probability prices in any market are affected quite as much, if not more, by the prices in other markets. If the quantity theory of money be even reasonably correct, and the 'law' of supply and demand has any generality and bearing on the matter, this is an obvious conclusion. Then the relative importance of any market in determining prices as a whole would be proportional to the number of dollars available in all markets including services and securities. Were this correct

¹ Bassett Jones, "Horses and Apples", p. 97.
then since the number of dollars involved in the wholesale commodity market is but a fraction of the whole, the importance of the prices in this market relative to general prices is of comparative insignificance. Again, probably the purchasing power of the dollar varies among the different markets, in which case an entirely different factor is introduced into the problem of setting up price standards. Then a new element in weighting the statistics is required. The prices in different markets can be combined into a general price level only when weighted accordingly. But this introduces another problem. How shall the correct weighting factors dependent on the purchasing power of the dollar be determined, and how shall these be combined on a common basis of measure into a general purchasing power?"¹

"The exchange measure of commodities, or what is called the purchasing power of the commodities, 'is usually calculated by dividing the index number of prices by the average prices of all commodities at wholesale'.² The purchasing power of wages in dollars is found by dividing the index number of wages by the index number of prices."³⁴

¹ Bassett Jones, "Horses and Apples", pp. 98, 99.
² "Prices", Warren and Pearson, p. 72.
³ Ibid., p. 196.
⁴ Bassett Jones, op. cit., p. 100.
"Now since the so-called index number of prices is actually an index number of total dollars, the process of dividing this index into any other index (assuming both indexes are properly related on a common measure basis so the result is not like dividing horses by apples or, for that matter even horses by horses) gives an index of so much of the quantity represented by such other index per dollar. This is determining as above the index of purchasing power of commodities on the assumption that the average price is an average price and not something else, what has actually resulted is an index of average price per dollar involved in the wholesale commodity market-whatever that means. In determining the purchasing power of wages as above described, the result is an index of dollars paid in wages per dollar involved in the wholesale commodity market. Perhaps this can be taken to mean the per cent of each dollar involved in the commodity market that is paid in wages. It may be concluded from this that the per cent of commodities marketed, at the average price then prevailing, that the wages paid can buy, is represented by this percentage. But in this statement the expression at the average price then prevailing must be included since the average price does not occur in the index of total dollars. Only if the average price at the time be
known does the resultant index give any idea as to how much of the commodities a dollar of wages will buy which, after all, is a very fundamental matter. Consequently it may be said that this index of 'the purchasing power of wages' means little if anything short of an accompanying index of average prices, qua prices.

"Perhaps enough has been said to indicate that none of these resultant indexes obtained by operating on the so-called Wholesale Price Index means what they are claimed to mean. If under such delusive circumstances any market procedure is established, the result is practically certain to be different from expectations, and these differences may well be quite destructive in their reactions.

"So when it is stated that prices have changed a given amount up or down, what has actually been said is that the number of dollars represented by the product of price times quantity of commodities has changed so much up or down. If it be stated that the purchasing power of wages has changed so much up or down what has actually been said is that the per cent of the total dollars obtained by multiplying price times quantity of commodities that represents wages paid has changed so much up or down. Nothing has been said about the purchasing power of the dollar—as to whether the dollar will buy more or less of any commodity as a result of these changes.
"Any attempt to increase 'prices' on this basis merely represents an attempt to increase prices times quantity of commodities.

Furthermore, and whatever it may be, the result has no precise meaning unless all quantities involved in setting up the indexes are related in terms of a common measure having some meaning in the premises and are not as meaningless as putting together the products or sums of horses and apples.

"At the end of every inquiry the item of average prices presents itself as an unknown quantity. It seems to be the missing link which might relate together a number of matters on some understandable basis. Obviously price, qua price, is the link between the amount of commodities and services, and the dollars available for purchase.

"Evidently an average price is not only unknown, but possibly also indeterminable. Perhaps we have been chasing a will-o'-the-wisp, because the words 'average price' have no more meaning than 'the average color of a painting' or 'the average sound of an orchestra'. One might as well discuss the average velocity of all bodies in a dynamic system leaving direction of motion out of the account. Is not price but one of the factors in purchasing power, apart from which it means nothing? Only when horses and apples can be added
together can we add the price of horses to the price of apples and obtain a result that means anything both in the market for horses and in the market for apples. However, we can add together the dollars required for all horses for sale and the dollars required for all apples for sale after which we can discuss a much more important question, namely whether the consumer of horses and apples has that many dollars to spend and, what is more, even if he has the dollar, whether he wants or can use, that many horses and that many apples at any number of dollars per horse or per apple. Has any consumer any hankering for the number of horses and apples at so many dollars apiece that he bought in 1926?—Would it be possible to create again the wholesale market of 1926 as to numbers of dollars, much less to set up a new market in which as a function of time, the number of dollars spent will be as much larger than those spent in 1926 as the market of 1926 was larger in total dollars say than the market of 1900? Yet, in effect is not this exactly what our industrial authority proposes shall be done? Whence, and by what route, is the necessary purchasing power to come?"1

PART VI

A Review of the Monetary Programme of Dr. Warren
and His School

and

Main Points of Attack upon it by Its Opponents
The Age of Financial Hierarchy and Speculation, then, between 1911-1929, crashed in the bottomless fall of inflated stock values, the collapse of badly managed banks, the effects of misguided foreign policy in demanding debt payments in gold instead of buying goods; unsound foreign loans and the beginning of downward rush of the process of deflation, on a worldwide basis. In extricating the country from the great debacle the New Dealers attempted measures of a "planned society", controlling even the purchasing power, the stability of prices, and currency, naming their devices "an intelligence control and man-made shelter against the winds and weathers of chance and disorganization in economics."¹

Dr. Warren and his supporters contend that there was speculation in gold as an international medium of exchange among Europeans in particular, speculation in currencies as Americans know speculation in stocks. The interest of these international bankers in the gold standard and a stable rate of exchange arises mainly from their connection with banking commissions and in international capital movements, whereas internal financial soundness is more vital to the masses of the people than rates of exchange. He insists that the American gold dollar

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¹ J. George Frederick, "A Primer of 'New Deal' Economics", p. 139.
has been far more useful and stabilizing to bankers and to foreign nations than to the United States; so his plan has reversed the method of expressing values in terms of gold into the method of expressing the value of the dollar in terms of commodity prices. The intention is to plan a dollar that always represents a certain fixed relation to commodity prices while fluctuations are taken care of in the Treasury Department at Washington by the simple procedure of lowering or raising the gold content of the dollar. Since the Federal Reserve has raised and lowered interest rates for years according to price, why not raise the gold content of the dollar or the gold price with equal facility? Both operations are considered equally simple.

This kind of "honest" dollar, the "managed" dollar, we are told, will tend to smoother business cycles and may do away with panics. It is no longer tied up with the gold currencies and exchanges of the world, but is actually a national rather than an international coin. The plan, then, is to employ the managed dollar based on commodity price indexes and kept domestically stable but allowed to do what it will on foreign exchanges, the theory being that domestic currencies should be made strong before attempting foreign coordination. Thus a dollar in wages, it is said, will regularly be dependable in
terms of the standard of living and much of the disturbances over wages, real wages, the cost of living, and prices will become obsolete. The economic system will be steadied and there should not be such shifts as occurred in the purchasing power of the dollar in 1897, 1920, 1929, and May, 1933: low, 45 in 1920, high 149 in 1897, 73 in 1929, and 108, in May, 1933.

There is no intention of ceasing to base money on gold, but the idea is to use it as collateral for dollars and not as a medium of international exchange. Gold should be kept within the nation as bullion to back the currency instead of being sent in great shipments abroad "to protect" the dollar or to shift balances. The monetary dictator says that when the American domestic purchasing power is stabilized with its currency, international exchange rates will take care of themselves. Foreign nations seek stability of their currencies and since theirs have been so generally valued in terms of American dollars they are anxious to have the American dollar fixed as soon as possible in gold. This the monetary dictators cannot do without deserting their entire programme for a managed currency since the gold content of the new managed or "laboratory" dollar probably will not become "fixed" for several years; that is, until commodity prices in some measure may be considered stabilized.
From the point of view of Dr. Warren and his school, the many grave defects of the gold standard have caused a peacetime breaking down and it is not automatic in operation. It fails to level prices and its flow does not vary according to changing price levels, but sometimes does the opposite. "Large quantities of gold stock have not tended to increase prices—nor have they safeguarded inflation of commodity prices or capital values, not corrected adverse balances of trade, nor is gold the decisive factor in the volume of monetary supply. Finally it has fluctuated as much as commodity prices:"¹ during the last thirty years, the stock of gold has fluctuated 8.2 per cent. He contends that psychologically speaking the United States has been off the gold standard and on a "multiple economic product and service standard"² for decades during which Americans did not concern themselves about gold or ever saw gold coins. America should not hesitate to go off the gold standard following the example of England whose financial policy has always been conservative and usually wise. It would have been to her interest, however, if we had remained on. These arguments, then, are for being off a "fixed" gold standard and do not mean that there will not be "a more or less fixed gold stabilization,"³ though not yet and not unless and until commodity prices also reach a stable level.

¹ J. George Frederick, "A Primer of 'New Deal' Economics," p. 145.
² Ibid.
³ Ibid., p. 146
Major points of attack upon Dr. Warren's monetary doctrines are: his adherence to the Quantity Theory of Money, the validity and reliability of his wholesale price index, his programme of devaluation and the commodity dollar, in the attempt to raise purchasing power possibilities of uncontrolled inflation contingent upon them, and the theory that the United States can adopt economic nationalism in currency management disregarding international exchange.

Cassel's theory, amplified and modified by Dr. Warren, that gold production must average three per cent of gold stocks to prevent commodity prices from falling, on the assumption that the price level of 1910 was the same as 1850, is declared worthless. At least three important defects are pointed out in the Warren thesis that the decline in prices during a depression is caused by a shortage in the world supply of gold relative to the demand for it and that the remedy lies in reversing the process and restoring of the pre-depression price level by raising the price of gold enough to overcome the shortage. First, it is based on pre-war rates of growth of gold stocks in relation to production of commodities and does not give sufficient consideration to the changes in industry and monetary technique in that period or the economics introduced in the use of gold through central banking and other devices since 1919. Secondly, it does not take into account, the more significant overexpansion of credit and credit abuses. In Warren's theory credit is reduced to a minor role while he
emphasizes stability in the rate of growth of the production and the variability in the monetary demand for and supply of gold. Thirdly, it does not recognize the greater significance of the maldistribution of gold in causing stringency and world breakdown due to war debts, reckless private lending, tariffs, and the delay of some central banks in checking credit expansion.¹

In conflict with the theories which emphasize money, credit, and velocity of money incomes and the unspent margin as the dominating factors on the money side of the equation of exchange, Dr. Warren emphasizes stability in the rate of growth of the production and variability in the monetary demand for the supply of gold. To bring these conflicting theories in harmony, Dr. Warren and his gold theorists have to prove that money and credit times velocity change proportionally with the gold supply.²

That a managed currency is futile is a point stoutly maintained by several economists. Experiments of the silver bloc in the United States between 1930 and 1933 are cited showing that they have not worked out as intended. They further maintain that the gold exchange and gold bullion standards in force between 1923 and 1929 were responsible for the financial

² Ibid, p. 133.
crash to a great extent. Not only is this theory of inflation by devaluation based on the theory of money control futile; it is obsolete. Professor Fisher sponsored it before the establishment of the Federal Reserve Bank system. It was intended by changing the gold content of the dollar by small amounts "to increase or decrease bank reserves, the volume of credit and prices. It was intended to permit credit expansion when prices started down and to restrain it when they started up with the hope that this would stabilize the price level. After the Federal Reserve system was established, bank reserves were made more elastic by rediscount and open market operations, and this type of control advocated by Fisher was made unnecessary. Until December he seemed to have given up the plan and had urged instead that the discount policy of the Federal Reserve System be used to regulate member bank reserves in order to control the expansion or contraction of credit."¹ Economists of this school contend that it is a fatal defect in this type of price control that it assumes the existence of a constant demand for credit, and they emphasize that new gold reserves affect prices only if and when they result in new loans which increase the demand for goods. In the light of the history of inflation, it has been determined that when active demand ceased and prices cease to rise, they do not stabilize but begin to recede. So far as there is

any rational basis for manipulation, it rests on the ground that there exists a pressure demand for credit and that the existing business structure is in perfect static equilibrium ready to respond by absorbing new funds.\(^1\) Business and price structure, however, are not balanced: so devaluation merely delays the period of basic readjustment which must be attained through the purposeful activity of business and financial and political leadership.

Furthermore, the price raising acts of the N.R.A. and the A.A.A. are mutually exclusive.\(^2\) The A.A.A. adopted the programme of raising prices for farm products, but the N.R.A. pursued a policy of higher prices for manufactured goods which the farmers must consume. Part of the rise in prices paid by farmers reflects the advance in farm prices themselves, but the greater part is simply significant of the success of the N.R.A. in neutralizing to a marked degree the progress of the A.A.A.

A less immediate effect of devaluation attacked by opponents of that policy is the possible precedent established for currency manipulation by the government in favor of particular classes under political pressure.\(^3\)

As to the international repercussions of an American managed domestic currency, stress is laid upon the point that exchange

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3. Ibid.
rates are not determined by the gold content of currencies, but by supply and demand of bills of exchange. Over a long period, under a reasonable degree of freedom of trade, currency payments are determined roughly by relative price levels or by purchasing power parities. Under these conditions, exchange rates and price levels tend to coincide. If, however, rates are forced out of line with prices, either international or American, prices must rise or the price for money must eventually fall. Thus exchange rates are a reflection of relative prices, not of gold content.--Dr. Warren's assumption is that exchange rates will reflect the gold-content of various currencies.--Such students of exchange operations contend that if our internal prices do not double or our exchange rate halve, the tendency will be for gold to move out of the gold standard countries and that the United States will simply become a hoarder of gold while gold standard countries will be forced off gold and the gold content of world currencies will again become irregular. These authorities state that to assume that American prices will rise relative to other prices as fast as exchange rates fall is to neglect the facts. Devaluation in the United States, they believe, will probably force all countries off gold and exchange rates will be
determined, in the long run, by the balance of payments and relative price level and in the short run by specie and capital movements.

Some economists go so far as to say that "the only practical means of maintaining stable foreign exchanges is through the operation of an international gold standard based upon fixed gold ratios, unlimited redemption of paper currency in gold at a fixed rate for purposes of international payments and, in unlimited market for gold at a fixed price, and free exports and imports of the metal."\(^1\) They point out that the determination of the United States to develop economic nationalism and "to raise domestic prices by independent monetary action makes it impossible for the world as a whole to establish stable exchanges and to the normal functioning of an international monetary system."\(^2\) It is further indicated that at the World Monetary and Economic Conference meeting at Geneva in January, 1933, the discussion of experts led to the conclusion that internationally there can be no probability of a satisfactory resumption of

1. Leo Pasvolsky, "Current Monetary Issues", p. 130

See also, J. H. Williams, "The World's Monetary Dilemma" Proceedings of the Academy of Political Science", Vol. 16, (April, 1934) p. 65. See also in "Proceedings of the Academy of Political Science", Sir Arthur Salter, "International Aspects of Recovery", p. 120

2. Ibid. (Pasvolsky) p. 131.
credit relations until an international standard of value is resumed.\(^1\) "Independent movements of national price levels under the impetus of unco-ordinated domestic price-raising measures would merely serve to increase the already existing maladjustments in the world price structure and thus retard rather than promote general economic recovery through a curtailment of international trade."\(^2\) It has been their experience that when important commercial nations attempt to control foreign trade through currency depreciation there inevitably results a fall in gold prices: several countries which were still on the gold standard found themselves forced to meet the competition of non-gold countries by reducing the prices of their exports. Recommendations of experts at the conclusion of the Conference comprised: "the re-establishment of an international gold standard, free from restraints of foreign exchange control, with very little admixture of price management, and without any dilution of gold with silver.\(^3\)

As to the efficacy of the experiment in price regulation in the light of the experience of six countries, Great Britain, Japan, Sweden, France, Italy, and the United States, Dr. Pasvolsky asserts that "according to the theory in the case of France, the price level should have become almost five times that of the United States, then on an unchanged currency unit, and should

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have moved from 1927-1932 in exact proportion with American prices of five to one. Similarly the Italian lira has had a gold content equal to slightly less than one-fourth of its pre-war rate; hence, the Italian price level should have adjusted itself at about four times the American level.1 Dr. Warren in "Prices" on page 171 says that this occurred. "France reduced the weight of gold in the franc so that her prices are about five times pre-war when prices in the United States are at pre-war.---Italy reduced the weight of gold in the lira so that her price level is nearly 400 when prices in the United States are 100." But "the data which they present on page 17 and show graphically on page 171 of their book ("Prices") do not support this assertion. While French and Italian prices have in fact been much higher than American prices, the ratios have shown neither uniformity nor mathematical precision. As shown by the Warren and Pearson diagram, the ratio between the French and American price levels varied, during the years 1927-32, from 4.2:1 to 4.4:1; the ratio between the Italian and American price levels fluctuated between 3.0:1 and 3.6:1."2

Concluding his survey of the experience of the six countries, he says: "It is evident that whether the period of depreciation of the currency unit has been only a few months as in the United States, or a year and a half as in Great Britain, Sweden, and Japan, there is no close correspondence between changes in the commodity price level. Even over a period of years following a


2. Ibid, p. 119.
definite devaluation of currency units, when any lagging tendency would be completely overcome, there is no mathematically precise relationship between commodity prices and the reduced content of the currency unit.\(^1\)

The Wholesale Price Index Number\(^2\) as advocated by Warren and Pearson is attacked on the ground that it is lacking in scientific validity and reliability. First of all, there is confusion as to the actual meaning of the Wholesale Price Index as originally prepared by the Bureau of Labor Statistics and extended and modified by Warren and Pearson. Attempts to correlate their index series with statistical series have led to results that are meaningless, and some have come to the conclusion that the indexes are not really of wholesale prices, but of something else. Furthermore, time correlations found between these indexes and other series of relatives have led to contradictions and confusion when attempts are made to interpret them in terms of economics.

A fallacy in their discussion is the fact neither they nor any other economist has ever determined an average price level or the relation of such a price level to any other factors in this system. We are told that the discussion is based on something that does not exist. And, as a matter of fact, only if an average price at a given time can be known does a resultant index give any idea as to

\(^1\) Leo Pasvolsky, "Current Monetary Issues," p. 119.
how much of commodities a dollar of wages will buy. But average price is unknown and indeterminable. It would seem that the resultant indexes obtained by use of the Wholesale Price Index do not mean what they purport to mean. If market procedure is attempted, results will probably diverge from expectation, and may become destructive in reaction.  

After the selection the basic and outstanding commodities assumed to represent all others, the process of computation involves the weighting of each of the goods and services in the average in proportion to its human significance. Meanwhile some of the items are becoming obsolete and other groups of prices of new socially important goods will appear. After all the complicated technical process is completed, the result is an abstraction relating to a mythical average citizen and not to actual needs and activities of real human beings. It is important to remember that experts do not agree among themselves as to the validity of their determinations of the index number. In point of fact, several index numbers must be computed, each reflecting the changes in one factor or group of factors.

Our survey of the subject has shown us that there is some question concerning whether the average administrative government official possesses the expert knowledge and requisite qualities to undertake so complicated a task, especially if the selfish interests

1. See Bassett Jones, "Horses and Apples".
of individuals or of groups are able to bring political pressure to bear on the making and revising of the tables. We have found further criticism to the effect that the plan is politically impracticable in view of the manifold, arduous duties of our monetary dictators.

1. See Edgar L. Furness, "Reflections on the New Dollar."
Devaluation and commercial banking are declared mutually inconsistent. Inflation by this method necessitates the acquisition by bank systems of vast quantities of securities based on financial assets, which is a condition contrary to recognized theories of commercial banking and to legislative intention. This requires inflation of bank assets which is not in line with an administrative programme which is based on the assumption of a return to regular commercial banking. The logic back of this theory of devaluation is that by lowering the external value of the dollar, prices of exportable goods will rise and gradually all internal prices. Internal prices will rise as exchange rates fall. If this rise in prices can be induced through right psychological conditions, the price level thus attained can be preserved without an increase in credit or its velocity. But specific rises in prices do not often occur without an increase in credit and its velocity. All economic elements must be perfectly mobile to attain the coveted increase in prices. It is not a foregone conclusion that the people of the country and the banks will respond so satisfactorily to decreased dollar content as to raise internal prices accordingly. The spread of price rise is slow and uncertain, and there are too many variables and uncertainties in the situation to predict measureable success for the policy. It is maintained that the fall in the gold commodity since 1931 has not been an independent variable, as is implied by Dr. Warren, but that it has been a function of exchange depreciation in the non-gold standard countries.
It is generally agreed that depression of exchange is more beneficial to countries in which foreign trade is a more dominant element than in the United States (ten per cent in normal times) and in which deprecation is primarily due to pressure through balance of payments. That gains so far attributable to deprecation of exchanges are much less than were predicted by Dr. Warren, is noted by these observers.

With respect to price behavior since the inauguration of Dr. Warren's policies, critics contend that a rise in the general price level had already begun when the United States abandoned the gold standard. There was reason to expect such a change from the low points of February, 1933 without such action. It is impossible to determine to what extent these increases are attributable to the gold policy itself since many other factors have contributed, such as the threat of inflation. The Bureau of Labor Index of Wholesale Prices has risen only seventeen to twenty per cent since the old parity of the dollar was disturbed; only a small per cent of that amount since October twenty-second when the policy of raising general prices was put into operation. This index is biased by the inclusion of international commodities. If the Warren theory is workable, it would seem that further action by the government would by unnecessary. In view of the fact that the gold price has been raised nearly sixty-five per cent, it is logical to expect a
comparable rise in average prices or a continuous movement toward that average.\textsuperscript{1} If his gold theory is correct 'priming the pump' should now have occurred, and it should not be necessary to repeat the process continuously and to invoke other cures.\textsuperscript{1} To select fifteen to thirty basic commodities with a world market several of which are subject to speculative influence and depreciating exchanges, including some belonging to the import category is not a proof of validity. And it is no more convincing when the comparison is extended to a number of countries.\textsuperscript{2}

To the following criticisms Dr. Pearson makes categorical answer.\textsuperscript{3} First, that in changing the price of gold, certain commodities have risen more than the price of gold; others, almost in proportion to the price of gold; many, only a little; others, have made no change; while a few have declined. Secondly, it has depressed wages and salaries. Thirdly, it has developed into a method of relieving debtors at the expense of creditors.

With respect to the seemingly erratic behavior of prices, he repeats that the price of gold is only one of five factors that affect the price of a commodity; supply of and demand for the commodity, and supply of and demand for gold, constituting the other four.


\textsuperscript{2} Ibid.

This advocate of the Quantitative Theory of Money points out that a rise in the price of gold is already tending to establish equilibrium in the price structure. Those which had previously fallen most rapidly have now made a sharp advance, while those which had previously declined only slightly do not have to decline.

As to the effect on wages and salaries, he maintains that during the period of moderate deflation many people continued to hold their positions and to profit by conditions, but with the overwhelming price collapse, a large proportion of the first group either were reduced to the ranks of the unemployed or were forced to accept cuts in wages and salaries. Relatation, he argues, will benefit these groups by stimulating employment and doubling the number of dollars at their command.

Dr. Pearson denies that price changing ultimately results in favoring the debtor at the expense of the creditor. During the early moderate deflationary period preceding the depression many creditors continued to receive complete interest and capital payments and prospered at the expense of the debtor because the value of the dollar was rising. With the increased severity of the deflation this favorable condition vanished as more and more debtors ceased to pay. Meanwhile securities broke down until even municipal bonds defaulted, and the creditor became absorbed in saving his capital rather than in the purchasing power of its income. The effect of the rising price of gold on these classes is to permit the debtors
to meet a larger part of his fixed charges and to free the creditors from the tremendous capital losses they would have been forced to endure under complete deflation. If creditors had been able to carry on, that is, to collect, probably the gold standard would not have been abandoned. The small loss in purchasing power of creditors' incomes is more than compensated by their rescue from great capital losses a continuing deflation would have brought them. On the contrary, then, the creditor class is not injured so much as benefitted by the policy of raising the price of gold to re-establish the equilibrium in the price structure and thereby restore incomes and profits. All classes will benefit.

Gold theory economists maintain it has been known for fifteen years that the variations of wholesale prices do reflect the general movements in business activity. The investigations of Professor Wesley C. Mitchell and of Professor Fred C. Mills they credit with proving this point. They maintain, therefore, a statistical basis for the commodity dollar exists. It is admitted that the index number is merely an arithmetical average of a few commodities and that fluctuations are wide, but it is contended that with proper weighting the unreliability of the index can be greatly reduced. Recognition of the fact that even a perfectly accurate index will not be a complete measure is accorded, but with this reminder, that general changes in prosperity and broad general movements in business activity can be sufficiently indicated.
With respect to the gold situation and prices Gold Economists also attempt to refute the arguments of their opponents with the following points. "There never has been a case of sudden permanent world-wide change in commodity prices in gold without a sudden increase in the supply of gold in relation to the production of other commodities." Further, there is no instance in which velocity of circulation has moved commodity prices far out of line with world price in gold or has had any permanent influence on the world price level in gold. Virtually all the increase in commodity prices in the United States has resulted from the increase in the price of gold. Countries remaining on the gold standard have not had the increase in commodity prices or improvement in business that have developed in the United States. Since we left the gold standard when prices in gold were not declining very much we had a rise in prices of basic commodities about equal to the increase in the price of gold. If it is possible for a nation, by means of its credit policy, to increase its efficiency in the use of gold enough to raise commodity prices in gold, this increase would have to be of world extent. The United States had no such increase in the five years preceding the establishment of the Federal Reserve System.


2. Ibid.

Credit Economists, who believe that price structure is simply a matter of credit did not foresee the depression; they did not understand the meaning of the gold standard. The attempt to maintain the price level and to restore the gold standard both affected the value of gold and caused increased tariffs and quotas, dumping restricted production and other plans to maintain prices when collapse was imminent. Since we began our gold purchase programme the price decline in gold seems to be checked. "The internal price level of a country is the result of the world value of gold, which is beyond the power of one nation to control, and the price of gold which is within the power of a nation to control. A nation can establish any internal price level that is desired, independent of the rest of the world."\(^1\) It is extremely desirable to have both a stable internal price level and exchange rates, but if one must be disregarded, it is preferable that it be exchange rates. The critical problem of the thirty-five countries which have changed prices of gold is to establish equilibrium in their flexible and inflexible price structure with respect to prices of gold. This accomplished, business conditions will improve in various countries, foreign trade will revive and private lending for foreign accounts

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will begin to develop. "A revival of international trade awaits a restoration of internal trade of various countries which in turn awaits restoration of their internal price equilibrium. We can maintain the equilibrium by varying the price of gold inversely with the value of gold."¹ If we had abandoned the gold standard simultaneously with England, we could have followed a more leisurely procedure of revaluation.

Yet another attack on Dr. Warren's stable price doctrine is made by those who maintain that it is questionable whether a stable price level is desirable in the United States as long as business is conducted on a capitalistic basis. First, in such a society it is impossible to regulate each of the millions of items making up the price system so that they will all vary directly and proportionally with one another. If it were practicable, it would still be inexpedient to establish such a devise. In a capitalistic society in which variations of individual prices in relation to one another are significant of the changing utility of different kinds of goods and services, they are useful in determining how to distribute labor with efficiency in socially important fields, to accelerate

or retard the accumulation of capital and direct it into profitable channels of investment. In case of war, the question arises: Will it be wiser to maintain a level price structure or to stimulate the production of goods for military purposes by raising the price structure? In periods of rapid technical improvement in the methods of production and in eras in which hitherto unsuspected resources are discovered greatly reducing the labor of producing goods for human consumption the expediency of a constant, unvarying price structure may be questioned. Since 1926, many types of business have greatly reduced costs of operation through technological improvements; to this group, the attainment of the 1926 price level would bring huge profits; to others, small profits. These opponents of the stable price level stress the necessity that the prices of certain products should rise, while others should remain stationary or even fall below their present levels.
Part VII

Probable Future Influence of Dr. Warren's Monetary Doctrines
In view of the fact that Dr. Warren's monetary doctrines have been accepted by the government to the extent of the adoption of a reflation programme including the Gold Purchase Plan, devaluation, the commodity dollar, the commodity index number, and the partial use of silver, the student is naturally led to speculate on what will be the probable future influence of those doctrines on our fiscal and monetary policies and history.
In summary, then, of the probable future influence of the government monetary policies as directed by Dr. Warren, it may be said:

We have yet to demonstrate whether economic recovery can be effectively promoted by raising commodity prices through monetary action. Study "Table IV, Indexes of Wholesale Prices, 1933" from the U. S. Bureau of Labor Statistics. The following statistics published in the "Annalist" for July 6 are of interest on this point. Prices received by farmers in mid-June had recovered over half their previous loss and stood at seventy-seven per cent of the pre-war level against a low of forty-nine in February, 1933. Prices for what they buy now stand at one hundred twenty-two per cent of pre-war level against one hundred one in February, 1933. But, notwithstanding the fifty-seven per cent rise in prices received for farm products, their exchange value has regained barely twenty-seven per cent, or about one fourth of the previous decline and has now only reached sixty-three per cent of the pre-war.

This may be partly explained by the fact that while the A.A.A. has undertaken to raise prices for farm products, the N.R.A. adopted the policy of higher prices for manufactured goods which the farmers help consume. Part of the rise in prices paid by farmers reflects the advance in farm prices themselves, the greater part, says Mr. Case,\(^1\) simply marks the success of the N.R.A.

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Table III

Indexes of Wholesale Prices, 1933

(Base: 1926 = 100)

<table>
<thead>
<tr>
<th></th>
<th>March</th>
<th>July</th>
<th>Decem.</th>
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<tbody>
<tr>
<td>Building Materials</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>70.8</td>
<td>79.5</td>
<td>85.6</td>
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<tr>
<td>Lumber</td>
<td>57.8</td>
<td>75.9</td>
<td>88.0</td>
</tr>
<tr>
<td>Cement</td>
<td>81.8</td>
<td>88.2</td>
<td>91.2</td>
</tr>
<tr>
<td>Iron and Steel</td>
<td>76.4</td>
<td>77.7</td>
<td>83.6</td>
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<tr>
<td>Petroleum Products</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>33.1</td>
<td>41.3</td>
<td>51.6</td>
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<tr>
<td>Textile Products</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>51.3</td>
<td>68.0</td>
<td>76.4</td>
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<tr>
<td>Cotton Goods</td>
<td>50.0</td>
<td>80.2</td>
<td>85.5</td>
</tr>
<tr>
<td>Silk and Rayon</td>
<td>25.5</td>
<td>37.9</td>
<td>29.6</td>
</tr>
<tr>
<td>Woolen and Worsted</td>
<td>53.2</td>
<td>72.3</td>
<td>84.3</td>
</tr>
<tr>
<td>Hides and Skins</td>
<td>41.4</td>
<td>88.7</td>
<td>74.9</td>
</tr>
<tr>
<td>Leather</td>
<td>55.6</td>
<td>78.0</td>
<td>80.1</td>
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Quoted from "Political Science Quarterly", Vol. 49, June, 1934, p. 168.
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<table>
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<td>90</td>
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in neutralizing to a considerable degree the progress of this other department of government. Prices paid by the farmer after the quiet period last autumn have risen steadily and show every appearance of a continued upward movement. In point of fact, the exchange value of farm products has maintained only a most uncertain advance in the past six months; at the present rate it will require years to reach the A.A.A. objective for the farmer. The moderate rise of exchange value does not indicate an actual improvement in the farmer's situation because exchange value completely disregards the size of crops and volume of products sold. It is possible that the program of production curtailment program of the A.A.A. has so reduced the farmer's commercial output as far more than to offset any rise in prices received.

The index of total farm purchasing power was 73.0 of the 1924-'29 level in May compared with a low of 55.3 in February 1933. There was a gain in fifteen months of thirty-two per cent or one third, a gain comparable with the rise of twenty-nine per cent in the unit exchange values of farm products. If costs had not risen, farm purchasing power would now be about eighty-seven per cent of the 1924-'29 level, instead of seventy-three.

2. Ibid.
3. Ibid.
Adapted Table of Basic Commodity Conditions

<table>
<thead>
<tr>
<th></th>
<th>of pre-war</th>
<th>June 1934</th>
<th>Low</th>
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<tbody>
<tr>
<td>Cotton (lb)</td>
<td>44% (Feb. 1933)</td>
<td>77%</td>
<td>34% (June 1932)</td>
</tr>
<tr>
<td></td>
<td>(68% with benefit payments)</td>
<td></td>
<td></td>
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<tr>
<td>Wheat</td>
<td>36% (Feb. 1932)</td>
<td>73%</td>
<td>33% (Mid-summer 1931)</td>
</tr>
<tr>
<td></td>
<td>(87% with benefit payments)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hays</td>
<td>(still below levels of 1931 until drought sent prices up)</td>
<td>72%</td>
<td></td>
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<tr>
<td></td>
<td>(40% with benefits to 1931 level)</td>
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Butter and milk, we are told were never so badly inflated and show only slight gains. Rice and tobacco show some gains partly explainable through marketing agreements. Mr. Case explains the recovery in cotton and wheat as due largely to the devaluation of the dollar which raised their value in terms of domestic currency without increasing to a proportional extent the prices of the goods for which the farmer exchanges them. Cotton was also favored by the revival of world consumption. There have been two very short wheat crops. The fall in the dollar was also a factor in the condition of rice and tobacco. These improvements in purchasing power of basic commodities are confined almost entirely to those that are concerned in world markets.

"That their prices in terms of gold dollars would fail to support such gains is beside the point so far as the farmer is

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concerned; it is in current paper dollars that his purchases are made and his debts paid.

"The less immediate effects of devaluation, the precedent for currency manipulation by a government in favor of particular classes, and under political pressure, with its threat to savings and to all financial provisions for the future, its encouragement of unhealthy speculative activity and its introduction of uncertainty into the very foundations of our economic structure, these are another matter for which payment may be exacted far into the future."1

"The inability of the administration to give an answer to the question (of agriculture) is in part due to lack of official grasp of the economic situation as a whole, and of the principles controlling it as is shown in its frivolous monetary policy and in its mutually exclusive price raising acts of the N.R.A. and the A.A.A."2

The United States Treasury is now in a position to raise huge sums simply by selling short-term certificates to banks as a result of the executive order providing for a bounty to the silver producers, the seizure of profits of gold (Gold Reserve Act, January 30, 1934) which gave the Treasury power


2. Ibid.
to expend vast sums of money without need of taxation or regulation of borrowing. Bank "portfolios" consist now quite largely of government obligations, a condition which makes it difficult for the banker to discriminate the type of business operations that are worthy of credit because their borrowings will automatically be liquidated through sale of goods. Many economists consider the position of banks an anachronism for commercial credit institutions.

Economic disturbances resulting from implications of monetary uncertainty express themselves principally, then, in connection with international trade, the capital market, and government credit uncertainty with respect to the value of currencies increases the risk in short-term credit operations upon which the conduct of foreign trade is dependent and leads usually to a complete cessation of long-term investment. The result is decreased trade.

Retaliatory measures by foreign countries are the inevitable result of an artificial stimulus to exports implied in a depreciated currency: higher tariffs, import licenses, quota systems, or competition in currency depreciation. These results have followed the same causes in nation after nation since the war. Demoralization of international trade in general and in the production of wealth everywhere has resulted. Unemployment and impoverishment have flourished.
In the capital market we recognize the resumption of capital enterprise depends primarily upon the return to normal issues of long-term securities. Uncertainty of the monetary policy has long retarded the fluctuation of these securities. Experience with inflation in other countries reveals that price advances, especially if they take place in a short-time, are neither orderly nor well-balanced. In such a case there may be danger of wild spending and we cannot be sure the banking system will be in possession of the customary controls over inflationary tendencies.

Economists believe that if increases in Federal Reserve discount rates should be decreed, the Treasury would object; hardening of money markets could restrict the Treasury from borrowing money at low rates. Such opposition prevented the Federal Reserve Banks from raising discount rates promptly after the war in 1919. It is possible for the experience to be repeated.

The volume of member-bank reserve balances may be lowered by selling government securities in the open market. The Treasury will probably oppose sales of government securities until the budget is definitely balanced.

Raising reserve requirements would be very effective device for restricting member-bank credit extensions; it would operate directly and promptly.
Central banking action cannot be counted upon to supply an effective restraint in case prices get out of hand; the controls are too difficult of operation.

From the point of view of much current comment among the economists the great need is a return to a modified gold standard and the re-establishment of a credit system on a basis which will allow time-honored practices to be resumed.
Part VIII

Conclusions Regarding Dr. Warren's Monetary Doctrines
CONCLUSIONS REGARDING DR. WARREN'S MONETARY DOCTRINES.

Having studied some of the best and most typical of the current comment on the monetary doctrines of Dr. Warren, their manner of Governmental operation, and probable influence on our future monetary history, we may now assemble the results of our survey regarding the orthodoxy, traditionalism or radicalism of his doctrines on the gold standard, inflation, deflation, reflation, regarding the soundness, the validity and reliability of his doctrines, regarding the statistical justification of his commodity dollar, and regarding whether or not his programme aids recovery or reform to the greater degree.

Most economists place Dr. Warren in the category of the Old Economist in view of his reliance on the Quantitative Theory of Money, but in the category of the New Economist on the basis of his advocacy of the commodity index number and the commodity dollar. His position on the gold standard might give him a double classification since some Old Economists support our abandonment of the metal while some New Economists believe we should return to a modified gold standard. If sixty-four members of the faculty of a well-known college of finance and commerce and other professional groups have felt it incumbent upon them to issue manifestos, before the end of December, 1933, denouncing inflation and demanding an immediate
return to the gold standard,\(^1\) we are warranted in concluding
that there is considerable lack of confidence in the gold
standard and reflation policies of our monetary dictator
throughout the country on the part of leaders conversant with
monetary affairs. Fear that uncontrolled inflation will fin-
ally result unless prices rise more quickly than they are likely
to, is expressed by most of the economists whose opinions we
have just investigated. That he is not conservative will be
easily conceded, but that he is truly radical in this experi-
mentation not all economists or New Dealers admit. We may con-
clude that going off the gold standard when the country had a
sufficient supply of gold and excellent credit was untraditional
and questionably sound.

To the New Dealers who support the contentions of Professors
Wesley C. Mitchell, Fred C. Mills, C. H. Whelden, and Thorp, the
commodity index number and commodity dollar seem to have statis-
tical bases. To other economists, the desirability of a stable
commodity price seems greatly exaggerated, and they conclude
that since modern banking systems have become effective, the
quantity of gold has had little if any influence on either the
immediate or the long-time general price level and that if ex-
traordinary increases in gold supply have affected commodity

\(^1\) H. E. Barnes, "Money Changers vs. The New Deal", p. 133
and note 1.
prices at all, which they doubt, it has taken five years or longer to manifest itself. They further conclude that there is no reason to believe the price level can be raised by manipulation of the gold supply and that attempts to raise the price level by manipulating the credit supply will either fail or lead to worse disaster. They find no instance in history of a healthy rise in prices resulting from an artificial easing of credit and no statistical basis for the commodity dollar.

Yet another eminent statistician holds that Dr. Warren, together with other economist statisticians, has become tangled in his own figures in such matters as determining average wholesale price and index numbers, and asserts that only when average price is known at the time does a resultant index tell how much of the commodities a dollar of wages will buy. The index of purchasing power of wages has little meaning except as an accompanying index of average prices. Consequently none of the resultant indexes secured by operating on the so-called Wholesale Price Index means what it claims. He further insists that any market procedure established under these conditions will bring different results than expected and they may be destructive in their reactions.
Here seems to be evidence that there are some grounds for questioning the statistical bases, and the scientific reliability and validity of the commodity index number and the commodity dollar.

Opinion as to whether or not Dr. Warren's programme will aid recovery or merely institute an innovation or reform seems to divide the economists. That bimetallism will not help many agree with him; they are not enthusiastic supports of symetallism, however. Several look upon the programme as an expedient for short-time operation and not a long-time programme. The sagacity of either group will be determined by whether or not prices rise in a moderately short time and whether credit speculation sets in after a time, or a runaway price and a higher degree of inflation. We concede that his honest intentions are to raise prices, stimulate re-employment and recovery as well as to reform our monetary policies. Quite insistent, however, seems to be the contention of many economists, bankers, and business men that those objectives cannot be attained by adopting the commodity dollar and operating a domestic currency independent of international agreement, and without regard to consequences in exchange relations.
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