II. Star Bank

Assets	Liabilities

Gold . . . . 5,000 oz.
 Equipment . . . . . .   100 oz.
 ——————
                 5,100 oz.
	Warehouse Receipts . . 5,000 oz.
	
	 —————————
	 Capital . . . . 100 oz.
	 ——————
	                    5,100 oz.

The warehouse receipts function and exchange as money-substitutes, *replacing*, not adding to, the gold stored in the bank. All the warehouse receipts are money certificates, 100-percent reserve has been maintained, and no invasion of the free market has occurred. The warehouse receipts may take the form of printed tickets (notes) or book credit (demand deposits) transferable by written order or "check." The two are economically identical.

But now suppose that law enforcement is lax and the bank sees that it can make money easily by engaging in fraud, i.e., by lending some of the depositors' gold (or, rather, issuing pseudo warehouse receipts for nonexistent gold and lending them) to people who wish to borrow it.[32] Let us say that the Star Bank, chafing at the mere interest return earned on its fees for warehouse service, prints 1,000 ounces of pseudo warehouse receipts and lends them on the credit market to businesses and consumers who desire to borrow money. The balance sheet of the Star Bank is now as follows:

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[32]We might ask why the owners of the bank do not really reap the spoils and lend the money to themselves. The answer is that they once did so profusely, as the history of early American banking shows. Legal regulations forced the banks to abandon this practice.

III. Star Bank

Assets	Liabilities
Gold . . . . 5,000 oz. I.O.U.'s from Debtors . . 1,000 oz. Equipment . . . . 100 oz. _____ 6,100 oz.	Warehouse Receipts . . . 6,000 oz. _____ Capital . . . . 100 oz. _____ 6,100 oz.

The warehouse receipts still function as money-substitutes on the market. And we see that new money has been created by the bank out of thin air, as if by magic. This process of money creation has also been called the "monetization of debt," an apt term since it describes the only instance where a *liability* can be transformed into money—the supreme *asset*. It is obvious that the more money the bank creates, the more profits it will earn, for any income earned on newly created money is a pure unalloyed gain. The bank has been able to alter the conditions of the free market system, in which money can be obtained only by purchase, mining, or gift. In each of these routes, productive service—either one's own or one's ancestor's or benefactor's—was necessary in order to obtain money. The bank's inflationary intervention has created another route to money: the creation of new money out of thin air, by issuing receipts for nonexistent gold.[33],[34]

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[33]This discussion is not meant to imply that bankers, particularly at the present time, are always knowingly engaged in fraudulent practices. So embedded, indeed, have these practices become, and always with the sanction of law as well as of sophisticated but fallacious economic doctrines, that it is undoubtedly a rare banker who regards his standard occupational procedure as fraudulent.

D. A Note on Some Criticisms of 100-Percent Reserve

One popular criticism of 100-percent bank reserves charges that the bank could not then earn any income or cover costs of storage, printing, etc. On the contrary, a bank is perfectly capable of operating like any goods warehouse, i.e., by charging its customers for its services to them and reaping the usual interest return on its operations.

Another popular objection is that a 100-percent-reserve policy would eliminate all credit. How would businessmen be able to borrow funds for short-term investment? The answer is that businessmen can still borrow *saved funds* from any individual or institution. "Banks" may still lend their own saved funds (capital stock and accumulated surplus) or they may borrow funds from individuals and relend them to business firms, earning the interest differential.[35] Borrowing money (e g., floating a bond) is a credit transaction; an individual exchanges his present money for a bond—a claim on future money. The borrowing bank pays him interest for this loan and in turn exchanges the money thus gathered for promises by business borrowers to pay money in the future. This is a further credit transaction, in this case the bank acting as the lender and businesses as the borrowers. The bank's income is the interest differential between the two types of credit transactions; the payment is for the services of the bank as an intermediary, channeling the savings of the public into investment. There is, furthermore, no particular reason why the *short-term*, more than any other, credit market should be subsidized by money creation.

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[34]For a brilliant discussion of fractional-reserve banking, *see* Amasa Walker, *The Science of Wealth* (3rd ed.; Boston: Little, Brown & Co., 1867), pp. 138–68, 184–232.

[35]Swiss banks have successfully and for a long time been issuing debentures to the public at varying maturities, and banks in Belgium and Holland have recently followed suit. On the purely free market, such practices would undoubtedly be greatly extended. Cf. Benjamin H. Beckhart, "To Finance Term Loans," *The New York Times*, May 31, 1960.

Finally, an important criticism of a governmentally enforced policy of 100-percent reserves is that this measure, though beneficial in itself, would establish a precedent for other governmental intervention in the monetary system, including a change in this very requirement by government edict. These critics advocate "free banking," i.e., no governmental interference with banking apart from enforcing payment of obligations, the banks to be permitted to engage in any fictitious issues they desire. Yet the free market does not mean freedom to commit fraud or any other form of theft. Quite the contrary. The criticism may be obviated by imposing a 100-percent-reserve requirement, not as an arbitrary administrative fiat of the government, but as part of the general legal defense of property against fraud. As Jevons stated: "It used to be held as a general rule of law, that any present grant or assignment of goods not in existence is without operation,"[36] and this general rule need only be revived and enforced to outlaw fictitious money-substitutes. Then banking could be left perfectly free and yet be without departure from 100-percent reserves.[37]

7. *Gains and Losses During a Change in the Money Relation*

A change in the money relation necessarily involves gains and losses because money is not neutral and price changes do not take place simultaneously. Let us assume—and this will rarely hold in practice—that the final equilibrium position resulting from a change in the money relation is the same in all

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[36]Jevons, *Money and the Mechanism of Exchange*, pp. 211–12.

[37]Jevons stated:

> If pecuniary promises were always of a special character, there could be no possible harm in allowing perfect freedom in the issue of promissory notes. The issuer would merely constitute himself a warehouse keeper and would be bound to hold each special lot of coin ready to pay each corresponding note. (*Ibid.*, p. 208)

respects (including relative prices, individual values, etc.) as the previous equilibrium, except for the change in the purchasing power of money. Actually, as we shall see, there will almost undoubtedly be many changes in these factors in the new equilibrium situation. But even if there are not, the *movement* of prices from one equilibrium position to the next will not take place smoothly and simultaneously. It will *not* take place according to the famous example of David Hume and John Stuart Mill, where everyone awakens to find his money supply doubled overnight. Changes in the demand for money or the stock of money occur in step-by-step fashion, first having their effect in one area of the economy and then in the next. Because the market is a complex interacting network, and because some people react more quickly than others, movements of prices will differ in the speed of reaction to the changed situation.

As we have intimated above, the following law can be enunciated: When a change in the money relation causes prices to rise, the man whose selling price rises before his buying prices gains, and the man whose buying prices rise first, loses. The one who gains the most from the transition period is the one whose selling price rises first and buying prices last. Conversely, when prices fall, the man whose buying prices fall before his selling price gains, and the man whose selling price falls before his buying prices, loses.

It should be evident, in the first place, that there is nothing about rising prices that causes gains or about falling prices that causes losses. In either situation, some people gain and some people lose from the change, the gainers being the ones with the greatest and lengthiest positive differential between their selling and their buying prices, and the losers the ones with the greatest and longest negative differential in these movements. Which people gain and which lose from any given change is an empirical question, dependent on the location of changes in elements of the money relation, institutional conditions, anticipations, speeds of reaction, etc.

Let us consider the gains and losses from an increase in money stock. Suppose that we start from a position of monetary equilibrium. Every person's money relation is in equilibrium, with his stock of and demand for money being equal. Now suppose that Mr. Jones finds some new gold never known before. A change in Jones' data has taken place. He now has an excess stock of gold in his cash balance compared with his demand for it. Jones acts to spend his excess cash balance. This new money is spent, let us say, on the products of Smith. Smith now finds that his cash balance exceeds his demand for money, and he spends his excess on the products of someone else.

Jones' increased supply also increases Smith's selling price and income. Smith's selling price has increased before his buying price. He spends the money on the products of Robinson, thus raising the latter's selling prices while most buying prices have not risen. As the money is transferred from hand to hand, buying prices rise more and more. Robinson's selling price increases, for example, but already one of the products he buys—Smith's—has gone up. As the process continues, more and more buying prices rise. The individuals who are far down "on the list" to receive the new money, therefore, find that their buying prices have increased while their selling prices have not yet done so.

Of course, the changes in the money supply and in prices may well be insignificant. But this process occurs, however large or small the change in the money stock. Obviously, the larger the increase in money stock, the greater, *ceteris paribus*, will be its impact on prices.

We have seen above that an increase in the stock of money leads to a fall in the PPM, and a decrease in the stock of money leads to a rise in the PPM. However, there is no simple and uneventful rise and fall in the PPM. For a change in the stock of money is not automatically simultaneous. *New money enters the system at some specific point* and then becomes diffused in this way throughout the economy. The individuals who receive the new

money first are the greatest gainers from the increased money; those who receive it last are the greatest losers, since all their buying prices have increased before their selling prices. Monetarily, it is clear that the gains of the approximate first half of the recipients of new money are exactly counterbalanced by the losses of the second half. Conversely, if money should somehow disappear from the system, say through wear and tear or through being misplaced, the initial loser cuts his spending and suffers most, while the last who feel the impact of a decreased money supply gain the most. For a decrease in the money supply results in losses for the first owners, who suffer a cut in selling price before their buying prices are lowered, and gains for the last, who see their buying prices fall before their income is cut.[38]

This analysis bears out our assertion above that there is no social utility in an increased supply, nor any social disutility in a decreased supply, of money. This is true for the transition period as well. An increase in gold is socially useful (i.e., beneficial to some without demonstrably injuring others) only to the extent that it makes possible an increase in the nonmonetary, direct use of gold.

If, as we have been assuming, relative prices and valuations remain the same for all throughout, the new equilibrium will be identical with the old except for an all-round price change. In that case, the gains and losses will be temporary, disappearing upon the advent of the new equilibrium. Actually, however, this will almost never occur. For even if people's values remain frozen, the shift in relative money income during the transition itself changes the structure of demand. The gainers of wealth during the transition period will have a structure of preferences and demand different from that of the losers. As a result, demand itself will shift in structure, and the new equilibrium will have a different set of relative prices. Similarly, the change

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[38]*See* Mises, *Theory of Money and Credit*, pp. 131–45.

will probably not be neutral to time preferences. The permanent gainers will undoubtedly have a different structure of time preferences from that of the permanent losers, and, as a result, there may be a permanent shift in general time preferences. What the shift will be or in which direction, it is of course impossible for economics to say.

Money changes have this "driving force," it may be noted, even in the fanciful case of the automatic overnight doubling of the supply of everyone's cash balance. For the fact that everyone's money stock doubles does not at all mean that *all prices* will automatically double! Each individual has a differently shaped demand-for-money schedule, and it is impossible to predict *how* each will be shaped. Some will spend proportionately more of their new money, and others will keep proportionately more in their cash balance. Many people will tend to spend their new cash balances on different goods from those they had bought with their old money. As a result, the structure of demand will change, and a decreased PPM will not double all prices; some will increase by more and some by less than double.[39]

8. The Determination of Prices: The Goods Side and the Money Side

We are now in a position to draw together all the strands determining the prices of goods. In chapters 4 through 9 we analyzed all the determinants of the prices of particular goods. In this chapter we have analyzed the determination of the purchasing power of money. Now we can see how both sets of determinants blend together.

A particular price, as we have seen, is determined by the total demand for the good (exchange and reservation) and the stock of the good, increasing as the former increases and decreasing as the latter increases. We may therefore call the demand a "factor of increase" of the price, and the stock a "factor of decrease."

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[39]*See* Mises *Human Action*, pp. 413–16.

The *exchange* demand for each good—the amount of money that will be spent in exchange for the good—equals the stock of money in the society minus the following: the exchange demands for all other goods and the reservation demand for money. In short, the amount spent on *X* good equals the total money supply minus the amount spent on other goods and the amount kept in cash balances.

Suppose we overlook the difficulties involved and now consider the price of "all goods," i.e., the reciprocal of the purchasing power of money. The price of goods-in-general will now be determined by the monetary demand for all goods (factor of increase) and the stock of all goods (factor of decrease). Now, when all goods are considered, the exchange demand for goods equals the stock of money minus the reservation demand for money. (In contrast to any specific good, there is no need to subtract people's expenditures on *other* goods.) The total demand for goods, then, equals the stock of money minus the reservation demand for money, plus the reservation demand for all goods.

The ultimate determinants of the price of all goods are: the stock of money and the reservation demand for goods (factors of increase), and the stock of all goods and the reservation demand for money (factors of decrease). Now let us consider the obverse side: the PPM. The PPM, as we have seen, is determined by the demand for money (factor of increase) and the stock of money (factor of decrease). The exchange demand for money equals the stock of all goods minus the reservation demand for all goods. Therefore, the ultimate determinants of the PPM are: the stock of all goods and the reservation demand for money (factors of increase), and the stock of money and the reservation demand for goods (factors of decrease). We see that this is the exact obverse of the determinants of the price of all goods, which, in turn, is the reciprocal of the PPM.

Thus, the analysis of the money side and the goods side of prices is completely harmonious. No longer is there need for an

arbitrary division between a barter-type analysis of relative goods-prices and a holistic analysis of the PPM. Whether we treat one good or all goods, the price or prices will *increase*, *ceteris paribus*, if the stock of money increases; *decrease* when the stock of the good or goods increases; *decrease* when the reservation demand for money increases; and *increase* when the reservation demand for the good or goods increases. For each individual good, the price will also increase when the specific demand for that good increases; but unless this is a reflection of a drop in the social reservation demand for money, this changed demand will also signify a decreased demand for some other good, and a consequent fall in the price of the latter. Hence, changes in specific demands will not change the value of the PPM.

In a progressing economy, the secular trend for the four determining factors is likely to be: the *money stock* increasing gradually as gold production adds to the previous total; the *stock of goods* increasing as capital investment accumulates; the *reservation demand for goods* disappearing because short-run speculations disappear over the long run, and this is the main reason for such a demand; the *reservation demand for money* unknown, with clearing, for example, working to reduce this demand over a period of time, and the greater number of transactions tending to increase it. The result is that we cannot precisely say how the PPM will move in a progressing economy, though the best summary guess would be that it declines as a result of the influence of the increased stock of goods. Certainly, the influence of the *goods* side is in the direction of falling prices; the money side we cannot predict.

Thus, the ultimate determinants of the PPM as well as of specific prices are the subjective *utilities* of individuals (the determinants of demand) and the given objective stocks of goods—thereby vindicating the Austrian-Wicksteedian theory of price for all aspects of the economic system.

A final note of warning: It is necessary to remember that *money can never be neutral.* One set of conditions tending to raise the PPM can never precisely offset another set of factors tending to lower it. Thus, suppose that an increase in the stock of goods tends to raise the PPM, while at the same time, an increase in the money supply tends to lower it. One change can never offset the other; for one change will lower one set of prices more than others, while the other will raise a different set within the whole array of prices. The degrees of change in the two cases will depend on the particular goods and individuals affected and on their concrete valuations. Thus, even if we can make an historical (*not* an economic-scientific) judgment that the PPM has remained roughly the same, the price relations have shifted within the array, and therefore the judgment can never be exact.

9. Interlocal Exchange

A. Uniformity of the Geographic Purchasing Power of Money

The price of any commodity tends to be the same throughout the entire area using it. We have seen that this rule is not violated by the fact that cotton in Georgia, for example, is priced lower than cotton in New York. When cotton in New York is a consumers' good, cotton in Georgia is a *capital good* in relation to the former. Cotton in Georgia is not the same commodity as cotton in New York because goods must first be processed in one location and then transported to the places where they are consumed.

Money is no exception to the rule that the price of every commodity will tend to be uniform throughout the entire area in which it is used. In fact, the scope for the money commodity is broader. Other commodities are produced in certain centers and must then be transported to other centers where they are consumed. They are therefore not the same "good" in different geographical locations; in the producing centers they are *capital*

goods. Money, it is true, must first be mined and then shipped to places of use. But, once mined, the money commodity is used only for exchange. For these purposes, it is from then on shipped back and forth throughout the world market. Therefore, there is no really important capital-good location for money separate from a consumers'-good location. Whereas all other goods are first produced and then moved to the place where they are used and consumed, money is used interchangeably throughout the entire market area, moving back and forth. Therefore, the tendency toward geographical uniformity in the purchasing power of money holds true for the physical commodity gold or silver, and there is no need for that commodity to be treated as a different good in one place or another.

The purchasing power of money will therefore be identical over the entire area. Should the PPM be lower in New York than in Detroit, the supply of money for the exchange of goods will diminish in New York and increase in Detroit. Prices of goods being higher in New York than in Detroit, people will spend less in New York and more in Detroit than heretofore, this shift being reflected in the movement of money. This action will tend to raise the purchasing power of money in New York and lower it in Detroit, until its purchasing power in the two places is equal. The purchasing power of money will, in this way, tend to remain equal in all places where the money is used, whether or not national boundaries happen to intervene.

Some people contend that, on the contrary, there *do* exist permanent differences in the purchasing power of money from place to place. For example, they point to the fact that prices for food in restaurants are higher in New York City than in Peoria. For most people, however, New York has certain definite advantages over Peoria. It has a vastly wider range of goods and services available to the consumer, including theaters, concerts, colleges, high-quality jewelry and clothing, and stockbrokerage houses. There is a great difference between the commodity "restaurant service in New York" and the commodity "restaurant service in Peoria." The former allows the purchaser to

remain in New York and to enjoy its various advantages. Thus, the two are distinct goods, and the fact that the price of restaurant service is greater in New York signifies that the preponderance of individuals on the market value the former more highly and consider it a commodity of higher quality.[40]

Costs of transport, however, do introduce a qualification into this analysis. Suppose that the PPM in Detroit is slightly higher than in Rochester. We would expect gold to flow from Rochester to Detroit, spending relatively more on goods in the latter place, until the PPM's are equalized. If, however, the PPM in Detroit is higher by an amount smaller than the transport cost of shipping the gold from Rochester, then relative PPM's have a leeway to differ within the zone of shipping costs of gold. It would then be too expensive to ship gold to Detroit to take advantage of the higher PPM. The interspatial PPM's may vary in either direction within this cost-of-transport margin.[41]

Many critics allege that the PPM cannot be *uniform* throughout the world because some goods are not transferable from one locale to another. Times Square or Niagara Falls, for example, cannot be transferred from one region to another; they are specific to their locale. Therefore, it is alleged, the equalization process can take place only for those goods which "enter into interregional trade"; it does not apply to the general PPM.

Plausible as it seems, this objection is completely fallacious. In the first place, disparate goods like Times Square and other main streets are *different goods*, so that there is no reason to expect them to have the same price. Secondly, so long as *one* commodity can be traded, the PPM can be equalized. The *composition* of the PPM may well be changed, but this does not refute

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[40]For an appreciation of Mises' achievement in clarifying this problem, *see* Wu, *An Outline of International Price Theories*, pp. 127, 232–34.

[41]As we shall see below, however, interlocal *clearing* can greatly narrow these limits.

the fact of equalization. The process of equalization can be deduced from the fact of human action, even though, as we shall see, the PPM cannot be *measured*, since its composition does not remain the same.

Finally, since any good *can* be traded, what is there to prevent, for example, Oshkosh capital from buying a building on Times Square? The Oshkosh capitalists need not literally transport a good back to Oshkosh in order to buy it and make money from their investment. Every good, then, "enters into interregional trade"; no distinction between "domestic" and "interregional" (or "international") goods can be made.

Thus, suppose the PPM is higher in Oshkosh than in New York. New Yorkers tend to buy more in Oshkosh, and Oshkoshians will buy less in New York. This does not only mean that New York will buy more Oshkosh wheat, or that Oshkosh will buy less New York clothing. It also means that New Yorkers will invest in real estate or theaters in Oshkosh, while Oshkoshians will sell some of their New York holdings.

B. Clearing in Interlocal Exchange

Clearing is particularly appropriate for interlocal transactions, since costs of transporting money from one locale to another are likely to be heavy. Bills of exchange on each town (i.e., I.O.U.'s owed by each town) can be reciprocally canceled. Suppose that there are two traders, A and B, in Detroit, and two in Rochester, C and D. A sells C a refrigerator for 200 gold grams, and D sells B a TV set for 200 grams. The two debts can be cleared, and no money need be shipped from one place to the other. On the other hand, D's sale of a TV set may total 120 grams. Suppose for a moment that these are the only traders in the two communities. Then 80 grams will have to be shipped from Rochester to Detroit. In the latter case, the citizens of Detroit have, on net balance, decided to *add* to their cash holdings, while the Rochesterites have decided to diminish their cash holdings.

Economists have often described interlocal trade in terms of "gold export points" and "gold import points." The use of such expressions assumes, however, that even though two localities both use gold money, it makes sense to talk of an "exchange rate" of the money of one locality for that of another. This exchange rate is set between the margins fixed by the cost of transporting money—the "gold import" and "gold export" points. This does *not* hold true on the free market, however. On such a market, all coins and bullion are expressed in terms of weight of gold, and it makes no sense whatever to speak of an "exchange rate" of the money of one place for the same money in another. How can there be an "exchange rate" of an ounce of gold for an ounce of gold? There will be no legal tender or other laws to separate the value of the coins of one area from those of another. Therefore, there may be slight variations in the PPM in each locale, within the limits of the cost of transporting gold, but there could never be deviations from par in interlocal "exchange rates." For there are no exchange rates on the free market, except for two or more coexisting money commodities.

10. Balances of Payments

In chapter 3 above, we engaged in an extensive analysis of the individual's balance of payments. We saw there that an individual's *income* can be called his exports, and the physical sources of his income his *goods exported*; while his expenditures can be termed his *imports*, and the goods purchased his *goods imported*.[42] We also saw that it is nonsensical to call a man's balance of trade "favorable" if he chooses to use some of his income to add to his cash balance, or "unfavorable" if he decides to draw down his cash balance, so that expenditures are greater than income. *Every* action and exchange is favorable from the

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[42]To say that "exports pay for imports" is simply to say that income pays for expenditures.

point of view of the person performing the action or exchange; otherwise he would not have engaged in it. A further conclusion is that there is no need for anyone to worry about anyone else's balance of trade.

A person's income and expenditure constitute his "balance of trade," while his credit transactions, added to this balance, comprise his "balance of payment." Credit transactions may complicate the balance, but they do not alter its essentials. When a creditor makes a loan, he adds to his "money paid" column to the extent of the loan—for purchase of a promise to pay in the future. He has purchased the debtor's promise to pay in exchange for transferring part of his present cash balance to the debtor. The debtor adds to his "money receipts" column—from the sale of a promise to pay in the future. These promises to pay may fall due at any future date decided upon by the creditor and the debtor; generally they range from a day to many years. On that date the debtor repays the loan and transfers part of his cash balance to the creditor. This will appear in the debtor's "money paid" column—for repayment of debt—and in the creditor's "money received" column—from repayment of debt. Interest payments made by the debtor to the creditor will be similarly reflected in the respective balances of payments.

More nonsense has been written about balances of payments than about virtually any other aspect of economics. This has been caused by the failure of economists to ground and build their analysis on *individual* balances of payments. Instead they have employed such cloudy, holistic concepts as the "national" balance of payment without basing them on individual actions and balances.

Balances of payments may be consolidated for many individuals, and any number of groupings may be made. In these cases, the balances of payments *only record the monetary transactions between individuals of the group and other individuals, but fail to record the exchanges of individuals within the group.*

For example, suppose that we take the consolidated balance of payments for the Antlers Lodge of Jonesville for a certain period of time. There are three lodge members A, B, and C. Suppose their individual balances of payments are as indicated in Table 16.

In the consolidated balance sheet of the Antlers Lodge, the money payments between the members must of necessity cancel out. Thus,

CONSOLIDATED BALANCE OF PAYMENTS, ANTLERS LODGE

Money income from "outsiders" (exports) . . . . 75 oz. Reduction of cash balance for transfer to "outsiders" . . 3 oz. 　　　　　　　　　78 oz.	Money expenditure on goods to "outsiders" (imports) . . . . 78 oz.

The consolidated balance tells less about the activities of the members of the group than do the individual balances, since the exchanges *within* the group are not revealed. This discrepancy grows as the number of people grouped in the consolidated balance increases. The consolidated balance of the citizens of a large nation such as the United States conveys less information about their economic activities than is revealed by the consolidated balance of the citizens of Cuba. Finally, if we lump together all the citizens of the world engaged in exchange, their consolidated balance of payments is precisely zero. All the exchanges are internal within the group, and the consolidated balance conveys no information whatever about them. Taken together, the people of the world have zero income from "outside" and zero expenditures on "outside goods."[43]

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[43]For an excellent and original analysis of balances of payments along these lines, *see* Mises, *Human Action*, pp. 447–49.

TABLE 16

	A	B	C	CONSOLIDATED
Money income from other lodge members	5 oz.	2 oz.	3 oz.	10 oz.
Money income from "outsiders".	20 oz.	25 oz.	30 oz.	75 oz.
Total Money Income	25 oz.	27 oz.	33 oz.	85 oz.
Money expenditures on goods of other lodge members	2 oz.	8 oz.	0 oz.	10 oz.
Money expenditures on goods of "outsiders" . . .	22 oz.	23 oz.	33 oz.	78 oz.
Total Money Expenditures	24 oz.	31 oz.	33 oz.	88 oz.
Changes in Cash Balance	+1 oz.	– 4 oz.	0 oz.	– 3 oz.

Fallacies in thinking about foreign trade will disappear if we understand that balances of payment are merely built upon consolidated *individual* transactions and that national balances are merely an arbitrary stopping point between individual balances on the one hand and the simple zeros of a world balance of payments on the other. There is, for example, the perennial worry that a balance of trade will be permanently "unfavorable" so that gold will drain out of the region in question until none is left. Drains of gold, however, are not mysterious acts of God. They are *willed* by people, who, on net balance, wish for one reason or another to reduce their cash balances of gold. The state of the balance is simply the visible manifestation of a voluntary reduction in the cash balance in a certain region or among a certain group.

Worries about *national* balances of payment are the fallacious residue of the accident that statistics of exchange are far more

available across national boundaries than elsewhere. It should be clear that the principles applying to the balance of payment of the United States are the same for one region of the country, for one state, for one city, for one block, one house, or one person. Obviously no person or group can suffer because of an "unfavorable" balance; he or the group can suffer only because of a low level of income or assets. Seemingly plausible cries that money "be kept in" the United States, that Americans not be flooded with the "products of cheap foreign labor," etc., take on a new perspective when we apply it, say, to a family of three Jones brothers. Imagine each brother exhorting the others to "buy Jones," to "keep the money circulating *within* the Jones family," to abstain from buying products made by others who earn less than the Jones family! Yet the principle of the argument is precisely the same in both cases.

Another popular argument is that a debtor group or nation cannot possibly repay its debt because its "balance of trade is in fundamental disequilibrium, being inherently unfavorable." This is taken seriously in international affairs; yet how would we regard the individual debtor who used this excuse for defaulting on his loan? The creditor would be justified in bluntly telling the debtor that all he is saying is that he would much rather spend his money income and assets on enjoyable goods and services than on repayment of his debt. Except for the usual holistic analysis, we would see that the same holds true for an international debt.

11. *Monetary Attributes of Goods*

A. Quasi Money

We saw in chapter 3 how one or more very easily marketable commodities were chosen by the market as media of exchange, thereby greatly increasing their marketability and becoming more and more generally used until they could be called money. We have implicitly assumed that there are one or two media that are fully marketable—always salable—and

other commodities that are simply sold for money. We have omitted mention of the *degrees* of marketability of these goods. Some goods are more readily marketable than others. And some are so easily marketable that they rise practically to the status of *quasi moneys.*

Quasi moneys do not form part of the nation's money supply. The conclusive test is that they are not used to settle debts, nor are they claims to such means of payment at par. However, they are held as assets by individuals and are considered so readily marketable that an extra demand arises for them on the market. Their existence lowers the demand for money, since holders can economize on money by keeping them as assets. The price of these goods is higher than otherwise because of their quasi-monetary status.

In Oriental countries jewels have traditionally been held as quasi moneys. In advanced countries quasi moneys are usually short-term debts or securities that have a broad market and are readily salable at the highest price the market will yield. Quasi moneys include high-grade debentures, some stocks, and some wholesale commodities. Debentures used as quasi moneys have a higher price than otherwise and therefore a *lower interest yield than will accrue on other investments.*[44]

B. BILLS OF EXCHANGE

In previous sections we saw that bills of exchange are not money-substitutes, but *credit* instruments. Money-substitutes are claims to *present* money, equivalent to warehouse receipts. But some critics maintain that in Europe at the turn of the nineteenth century bills *did* circulate as money-substitutes. They circulated as final payment in advance of their due dates, their face value discounted for the period of time left for maturity. Yet these were not money-substitutes. The holder of a bill was a creditor. Each of the acceptors of the bill had to endorse its payment, and the

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[44]Cf. Mises, *Human Action*, pp. 459–61.

credit standing of each endorser had to be examined to judge the soundness of the bill. In short, as Mises has stated:

> The endorsement of the bill is in fact not a final payment; it liberates the debtor to a limited degree only. If the bill is not paid then his liability is revived in a greater degree than before.[45]

Hence, the bills could not be classed as money-substitutes.

12. Exchange Rates of Coexisting Moneys

Up to this point we have analyzed the market in terms of a single money and its purchasing power. This analysis is valid for each and every type of medium of exchange existing on the market. But if there is *more* than one medium coexisting on the market, what determines the exchange ratios between the various media? Although on an unhampered market there is a gradual tendency for one single money to be established, this tendency works very slowly. If two or more commodities offer good facilities and are both especially marketable, they may coexist as moneys. Each will be used by people as media of exchange.

For centuries, gold and silver were two commodities that coexisted as moneys. Both had similar advantages in scarcity, desirability for nonmonetary purposes, portability, durability, etc. Gold, however, being relatively far more valuable per unit of weight, was found to be more useful for larger transactions, and silver better for smaller transactions.

It is impossible to predict whether the market would have continued indefinitely to use gold and silver or whether one would have gradually ousted the other as a general medium of exchange. For, in the late nineteenth century, most Western countries conducted a *coup d'etat* against silver, to establish a monometallic standard by coercion.[46] Gold and silver could and

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[45]Mises, *Theory of Money and Credit*, pp. 285–86.

[46]For recent evidence that this action in the United States was a deliberate "crime against silver," and not sheer accident, *see* Paul M.

did coexist side by side in the same countries or throughout the world market, or one could function as money in one country, and one in another. Our analysis of the exchange rate is the same in both cases.

What determines the exchange rate between two (or more) moneys? Two different kinds of money will exchange in a ratio corresponding *to the ratio of the purchasing power of each in terms of all the other economic goods*. Thus, suppose that there are two coexisting moneys, gold and silver, and the purchasing power of gold is double that of silver, i.e., that the money price of every commodity is double in terms of silver what it is in terms of gold. One ounce of gold exchanges for 50 pounds of butter, and one ounce of silver exchanges for 25 pounds of butter. One ounce of gold will then tend to exchange for two ounces of silver; the exchange ratio of gold and silver will tend to be 1:2. If the rate at any time deviates from 1:2, market forces will tend to re-establish the parity between the purchasing powers and the exchange rate between them. This equilibrium exchange rate between two moneys is termed the *purchasing power parity*.

Thus, suppose that the exchange rate between gold and silver is 1:3, three ounces of silver exchanging for one ounce of gold. At the same time, the purchasing power of an ounce of gold is *twice* that of silver. It will now pay people to sell commodities for gold, exchange the gold for silver, and then exchange the silver back into commodities, thereby making a clear arbitrage gain. For example, people will sell 50 pounds of butter for one ounce of gold, exchange the gold for three ounces of silver, and then exchange the silver for 75 pounds of butter, gaining 25 pounds of butter. Similar gains from this arbitrage action will take place for all other commodities.

O'Leary, "The Scene of the Crime of 1873 Revisited," *Journal of Political Economy*, August, 1960, pp. 388–92. One argument in favor of such action holds that the government thereby simplified accounts in the economy. However, the market could easily have done so itself by keeping all accounts in gold.

Arbitrage will restore the exchange rate between silver and gold to its purchasing power parity. The fact that holders of gold increase their demand for silver in order to profit by the arbitrage action will make silver more expensive in terms of gold and, conversely, gold cheaper in terms of silver. The exchange rate is driven in the direction of 1:2. Furthermore, holders of commodities are increasingly demanding gold to take advantage of the arbitrage, and this raises the purchasing power of gold. In addition, holders of silver are buying more commodities to make the arbitrage profit, and this action lowers the purchasing power of silver. Hence the ratio of the purchasing powers moves from 1:2 in the direction of 1:3. The process stops when the exchange rate is again at purchasing power parity, when arbitrage gains cease. Arbitrage gains tend to eliminate themselves and to bring about equilibrium.

It should be noted that, in the long run, the movement in the purchasing powers will probably not be important in the equilibrating process. With the arbitrage gains over, demands will probably revert back to what they were formerly, and the original ratio of purchasing powers will be restored. In the above case, the equilibrium rate will likely remain at 1:2.

Thus, the exchange rate between any two moneys will tend to be at the purchasing power parity. Any deviation from the parity will tend to eliminate itself and re-establish the parity rate. This holds true for any moneys, including those used mainly in different geographical areas. Whether the exchanges of moneys occur between citizens of the same or different geographical areas makes no economic difference, except for the costs of transport. Of course, if the two moneys are used in two completely isolated geographical areas with no exchanges between the inhabitants, then there is no exchange rate between them. Whenever exchanges *do* take place, however, the rate of exchange will always tend to be set at the purchasing power parity.

It is impossible for economics to state whether, if the money market had remained free, gold and silver would have continued

to circulate side by side as moneys. There has been in monetary history a curious reluctance to allow moneys to circulate at freely fluctuating exchange ratios. Whether one of the moneys or both would be used as units of account would be up to the market to decide at its convenience.[47]

13. The Fallacy of the Equation of Exchange

The basis on which we have been explaining the purchasing power of money and the changes in and consequences of monetary phenomena has been an analysis of individual action. The behavior of aggregates, such as the aggregate demand for money and aggregate supply, has been constructed out of their individual components. In this way, monetary theory has been integrated into general economics. Monetary theory in American economics, however (apart from the Keynesian system, which we discuss elsewhere), has been presented in entirely different terms—in the quasi-mathematical, holistic equation of exchange, derived especially from Irving Fisher. The prevalence of this fallacious approach makes a detailed critique worthwhile.

The classic exposition of the equation of exchange was in Irving Fisher's *Purchasing Power of Money*.[48] Fisher describes the

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[47]*See* Mises, *Theory of Money and Credit*, pp. 179 ff., and Jevons, *Money and the Mechanism of Exchange*, pp. 88–96. For advocacy of such parallel standards, *see* Isaiah W. Sylvester, *Bullion Certificates as Currency* (New York, 1882); and William Brough, *Open Mints and Free Banking* (New York: G.P. Putnam's Sons, 1894). Sylvester, who also advocated 100-percent specie-reserve currency, was an official of the United States Assay Office.

For historical accounts of the successful working of parallel standards, *see* Luigi Einaudi, "The Theory of Imaginary Money from Charlemagne to the French Revolution" in F.C. Lane and J.C. Riemersma, eds., *Enterprise and Secular Change* (Homewood, Ill.: Richard D. Irwin, 1953), pp. 229–61; Robert Sabatino Lopez, "Back to Gold, 1252," *Economic History Review*, April, 1956, p. 224; and Arthur N. Young, "Saudi Arabian Currency and Finance," *The Middle East Journal*, Summer, 1953, pp. 361–80.

[48]Fisher, *Purchasing Power of Money*, especially pp. 13 ff.

chief purpose of his work as that of investigating "the causes
determining the purchasing power of money." Money is a gen-
erally acceptable medium of exchange, and purchasing power is
rightly defined as the "quantities of other goods which a given
quantity of goods will buy."[49] He explains that the lower the
prices of goods, the larger will be the quantities that can be
bought by a given amount of money, and therefore the greater
the purchasing power of money. *Vice versa* if the prices of goods
rise. This is correct; but then comes this flagrant *non sequitur:*
"In short, the purchasing power of money is the reciprocal of
the level of prices; so that the study of the purchasing power of
money is identical with the study of price levels."[50] From then
on, Fisher proceeds to investigate the causes of the "price level";
thus, by a simple "in short," Fisher has leaped from the real
world of an array of individual prices for an innumerable list of
concrete goods into the misleading fiction of a "price level,"
without discussing the grave difficulties which any such concept
must face. The fallacy of the "price level" concept will be
treated further below.

The "price level" is allegedly determined by three aggrega-
tive factors: the quantity of money in circulation, its "velocity of
circulation"—the average number of times during a period that
a unit of money is exchanged for goods—and the total volume
of goods bought for money. These are related by the famous
equation of exchange: $MV = PT$. This equation of exchange is
built up by Fisher in the following way: First, consider an indi-
vidual exchange transaction—Smith buys 10 pounds of sugar
for 7 cents a pound.[51] An exchange has been made, Smith giv-
ing up 70 cents to Jones, and Jones transferring 10 pounds of

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[49]*Ibid.*, p. 13.

[50]*Ibid.*, p. 14.

[51]We are using "dollars" and "cents" here instead of weights of gold
for the sake of simplicity and because Fisher himself uses these expres-
sions.

sugar to Smith. From this fact Fisher somehow deduces that "10 pounds of sugar have been regarded as *equal* to 70 cents, and this fact may be expressed thus: 70 cents = 10 pounds multiplied by 7 cents a pound."[52] This off-hand assumption of equality is not self-evident, as Fisher apparently assumes, but a tangle of fallacy and irrelevance. *Who* has "regarded" the 10 pounds of sugar as equal to the 70 cents? Certainly not Smith, the buyer of the sugar. He bought the sugar precisely because he considered the two quantities as *unequal* in value; to him the value of the sugar was greater than the value of the 70 cents, and that is why he made the exchange. On the other hand, Jones, the seller of the sugar, made the exchange precisely because the values of the two goods were *unequal in the opposite direction*, i.e., he valued the 70 cents more than he did the sugar. There is thus never any equality of values on the part of the two participants. The assumption that an exchange presumes some sort of equality has been a delusion of economic theory since Aristotle, and it is surprising that Fisher, an exponent of the subjective theory of value in many respects, fell into the ancient trap. There is certainly no equality of values between two goods exchanged or, as in this case, between the money and the good. Is there an equality in anything else, and can Fisher's doctrine be salvaged by finding such an equality? Obviously not; there is no equality in weight, length, or any other magnitude. But to Fisher, the equation represents an equality in value between the "money side" and the "goods side"; thus, Fisher states:

> [T]he total money paid is equal in value to the total value of the goods bought. The equation thus has a money side and a goods side. The money side is the total money paid. . . . The goods side is made up of the products of quantities of goods exchanged multiplied by respective prices.[53]

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[52]Fisher, *Purchasing Power of Money*, p. 16.
[53]*Ibid.*, p. 17.

We have seen, however, that even for the individual exchange, and setting aside the holistic problem of "total exchanges," there is no such "equality" that tells us anything about the facts of economic life. There is no "value-of-money side" equaling a "value-of-goods side." The equal sign is illegitimate in Fisher's equation.

How, then, account for the general acceptance of the equal sign and the equation? The answer is that, mathematically, the equation is of course an obvious truism: 70 cents = 10 pounds of sugar x 7 cents per pound of sugar. In other words, 70 cents = 70 cents. But this truism conveys no knowledge of economic fact whatsoever.[54] Indeed, it is possible to discover an endless number of such equations, on which esoteric articles and books could be published. Thus:

$$70 \text{ cents} = 100 \text{ grains of sand} \ \ \text{x} \ \ \frac{\text{number of students in a class}}{100 \text{ grains of sand}}$$

$$\text{+} \ \ 70 \text{ cents} \ \ \text{–} \ \ \text{number of students in a class.}$$

Then, we could say that the "causal factors" determining the quantity of money are: the number of grains of sand, the number of students in the class, and the quantity of money. What we have in Fisher's equation, in short, is *two* money sides, each identical with the other. In fact, it is an *identity* and not an equation. To say that such an equation is not very enlightening is self-evident. All that this equation tells us about economic life is that the *total money received in a transaction is equal to the total money given up in a transaction*—surely an uninteresting truism.

Let us reconsider the elements of the equation on the basis of the determinants of price, since that is our center of interest.

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[54]Greidanus justly calls this sort of equation "in all its absurdity the prototype of the equations set up by the equivalubrists," in the modern mode of the "economics of the bookkeeper, not of the economist." Greidanus, *Value of Money*, p. 196.

Fisher's equation of exchange for an individual transaction can be rearranged as follows:

$$\frac{7 \text{ cents}}{1 \text{ pound of sugar}} = \frac{70 \text{ cents}}{10 \text{ pounds of sugar}}$$

Fisher considers that this equation yields the significant information that the price is *determined* by the total money spent divided by the total supply of goods sold. Actually, of course, the equation, as an equation, tells us nothing about the determinants of price; thus, we could set up an equally truistic equation:

$$\frac{7 \text{ cents}}{1 \text{ pound of sugar}} = \frac{70 \text{ cents}}{100 \text{ bushels of wheat}} \times \frac{100 \text{ bushels of wheat}}{10 \text{ pounds of sugar}}$$

This equation is just as mathematically true as the other, and, on Fisher's own mathematical grounds, we could argue cogently that Fisher has "left the important wheat price out of the equation." We could easily add innumerable equations with an infinite number of complex factors that "determine" price.

The *only* knowledge we can have of the determinants of price is the knowledge deduced logically from the axioms of praxeology. Mathematics can at best only translate our previous knowledge into relatively *un*intelligible form; or, usually, it will mislead the reader, as in the present case. The price in the sugar transaction may be made to equal any number of truistic equations; but it is determined by the supply and demand of the participants, and these in turn are governed by the utility of the two goods on the value scales of the participants in exchange. *This* is the fruitful approach in economic theory, not the sterile mathematical one. If we consider the equation of exchange as revealing the determinants of price, we find that Fisher must be implying that the determinants are the "70 cents" and the "10 pounds of sugar." But it should be clear that *things* cannot determine prices. *Things*, whether pieces of money or pieces of sugar or pieces of anything else, can never act; they cannot set

prices or supply and demand schedules. All this can be done only by *human action*: only individual actors can decide whether or not to buy; only their value scales determine prices. It is this profound mistake that lies at the root of the fallacies of the Fisher equation of exchange: human action is abstracted out of the picture, and *things* are assumed to be in control of economic life. Thus, either the equation of exchange is a trivial truism—in which case, it is no better than a million other such truistic equations, and has no place in science, which rests on simplicity and economy of methods—or else it is supposed to convey some important truths about economics and the determination of prices. In that case, it makes the profound error of substituting for correct logical analysis of causes based on human action, misleading assumptions based on action by things. At best, the Fisher equation is superfluous and trivial; at worst, it is wrong and misleading, although Fisher himself believed that it conveyed important causal truths.

Thus, Fisher's equation of exchange is pernicious even for the individual transaction. How much more so when he extends it to the "economy as a whole"! For Fisher, this too was a simple step. "The equation of exchange is simply the sum of the equations involved in all individual exchanges"[55] as in a period of time. Let us now, for the sake of argument, assume that there is nothing wrong with Fisher's individual equations and consider his "summing up" to arrive at the total equation for the economy as a whole. Let us also abstract from the statistical difficulties involved in discovering the magnitudes for any given historical situation. Let us look at several individual transactions of the sort that Fisher tries to build into a total equation of exchange:

> A exchanges 70 cents for 10 pounds of sugar
> B exchanges 10 dollars for 1 hat
> C exchanges 60 cents for 1 pound of butter
> D exchanges 500 dollars for 1 television set.

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[55]Fisher, *Purchasing Power of Money*, p. 16.

What is the "equation of exchange" for this community of four? Obviously there is no problem in summing up the total amount of money spent: $511.30. But what about the other side of the equation? Of course, if we wish to be meaninglessly truistic, we could simply write $511.30 on the other side of the equation, without any laborious building up at all. But if we merely do this, there is no point to the whole procedure. Furthermore, as Fisher wants to get at the determination of prices, or "the price level," he cannot rest content at this trivial stage. Yet he continues on the truistic level:

$$\$511.30 = \frac{7 \text{ cents}}{1 \text{ pound of sugar}} \times 10 \text{ pounds of sugar}$$

$$+ \frac{10 \text{ dollars}}{1 \text{ hat}} \times 1 \text{ hat} + \frac{60 \text{ cents}}{1 \text{ pound of butter}}$$

$$\times 1 \text{ pound of butter} + \frac{500 \text{ dollars}}{1 \text{ TV set}} \times 1 \text{ TV set}$$

This is what Fisher does, and this is still the same trivial truism that "total money spent equals total money spent." This triviality is not redeemed by referring to $p \times Q$, $p' \times Q'$, etc., with each p referring to a price and each Q referring to the quantity of a good, so that: E = Total money spent = $pQ + p'Q' + p''Q'' + \ldots$ etc. Writing the equation in this symbolic form does not add to its significance or usefulness.

Fisher, attempting to find the causes of the price level, has to proceed further. We have already seen that even for the individual transaction, the equation $p = (E/Q)$ (price equals total money spent divided by the quantity of goods sold) is only a trivial truism and is erroneous when one tries to use it to analyze the *determinants* of price. (This is the equation for the price of sugar in Fisherine symbolic form.) How much worse is Fisher's attempt to arrive at such an equation for the whole community and to use this to discover the *determinants* of a mythical "price level"! For simplicity's sake, let us take only the two transactions of A and B, for the sugar and the hat. Total money spent, *E*,

clearly equals $10.70, which, of course, equals total money re-
ceived, $pQ + p'Q'$. But Fisher is looking for an equation to explain
the price level; therefore he brings in the concept of an "average
price level," P, and a total quantity of goods sold, T, such that E
is supposed to equal PT. But the transition from the trivial tru-
ism $E = pQ + p'Q' \ldots$ to the equation $E = PT$ cannot be made as
blithely as Fisher believes. Indeed, if we are interested in the
explanation of economic life, it cannot be made at all.

For example, for the two transactions (or for the four), *what
is T?* How can 10 pounds of sugar be added to one hat or to one
pound of butter, to arrive at T? Obviously, no such addition can
be performed, and therefore Fisher's holistic T, the total physi-
cal quantity of all goods exchanged, is a meaningless concept
and cannot be used in scientific analysis. If T is a meaningless
concept, then P must be also, since the two presumably vary
inversely if E remains constant. And what, indeed, of P? Here,
we have a whole array of prices, 7 cents a pound, $10 a hat, etc.
What is the price *level*? Clearly, there is no price level here;
there are only individual prices of specific goods. But here,
error is likely to persist. Cannot prices in some way be "aver-
aged" to give us a working definition of a price level? This is
Fisher's solution. Prices of the various goods are in some way
averaged to arrive at P, then $P = (E/T)$, and all that remains is the
difficult "statistical" task of arriving at T. However, the concept of
an average for prices is a common fallacy. It is easy to demon-
strate that *prices can never be averaged* for different commodities;
we shall use a simple average for our example, but the same con-
clusion applies to any sort of "weighted average" such as is rec-
ommended by Fisher or by anyone else.

What is an average? Reflection will show that for several
things to be averaged together, they must first be totaled. In
order to be thus added together, the things must have some *unit
in common*, and it must be this unit that is added. Only homoge-
neous units can be added together. Thus, if one object is 10 yards
long, a second is 15 yards long, and a third 20 yards long, we may
obtain an average length by adding together the number of yards

and dividing by three, yielding an average length of 15 yards. Now, money prices are in terms of ratios of units: cents per pound of sugar, cents per hat, cents per pound of butter, etc. Suppose we take the first two prices:

$$\frac{7 \text{ cents}}{1 \text{ pound sugar}} \quad \text{and} \quad \frac{1,000 \text{ cents}}{1 \text{ hat}}$$

Can these two prices be averaged in any way? Can we add 1,000 and 7 together, get 1,007 cents, and divide by something to get a price level? Obviously not. Simple algebra demonstrates that the only way to add the ratios in terms of cents (certainly there is no other common unit available) is as follows:

$$\frac{(7 \text{ hats and } 1,000 \text{ pounds of sugar}) \text{ cents}}{(\text{hats}) (\text{pounds of sugar})}$$

Obviously, neither the numerator nor the denominator makes sense; the units are incommensurable.

Fisher's more complicated concept of a weighted average, with the prices weighted by the quantities of each good sold, solves the problem of units in the numerator but *not* in the denominator:

$$P = \frac{pQ + p'Q' + p''Q''}{Q + Q' + Q''}$$

The pQ's are all money, but the Q's are still different units. Thus, any concept of average price level involves adding or multiplying quantities of completely different units of goods, such as butter, hats, sugar, etc., and is therefore meaningless and illegitimate. Even pounds of sugar and pounds of butter cannot be added together, because they are two different goods and their valuation is completely different. And if one is tempted to use poundage as the common unit of quantity, what is the pound weight of a concert or a medical or legal service?[56]

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[56]For a brilliant critique of the disturbing effects of averaging even when a commensurable unit *does* exist, *see* Louis M. Spadaro, "Averages

It is evident that *PT*, in the total equation of exchange, is a completely fallacious concept. While the equation $E = pQ$ for an individual transaction is at least a trivial truism, although not very enlightening, the equation $E = PT$ for the whole society is a *false* one. Neither *P* nor *T* can be defined meaningfully, and this would be necessary for this equation to have any validity. We are left only with $E = pQ + p'Q'$, etc., which gives us only the useless truism, $E = E$.[57]

Since the *P* concept is completely fallacious, it is obvious that Fisher's use of the equation to reveal the determinants of prices is also fallacious. He states that if *E* doubles, and *T* remains the same, *P*—the price level—must double. On the holistic level, this is not even a truism; it is false, because neither *P* nor *T* can be meaningfully defined. All we can say is that when *E* doubles, *E* doubles. For the individual transaction, the equation is at least meaningful; if a man now spends $1.40 on 10 pounds of sugar, it is obvious that the price has doubled from 7 cents to 14 cents a pound. Still, this is only a mathematical truism, telling us nothing of the real causal forces at work. But Fisher never attempted to use this individual equation to explain the determinants of individual prices; he recognized that the logical analysis of supply and demand is far superior here. He used only the *holistic* equation, which he felt explained the determinants of the price level and was uniquely adapted to such an explanation. Yet the holistic equation is false, and the price level remains pure myth, an indefinable concept.

Let us consider the other side of the equation, $E = MV$, the average quantity of money in circulation in the period, multiplied

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and Aggregates in Economics" in *On Freedom and Free Enterprise*, pp. 140–60.

[57]*See* Clark Warburton, "Elementary Algebra and the Equation of Exchange," *American Economic Review*, June, 1953, pp. 358–61. *Also see* Mises, *Human Action*, p. 396; B.M. Anderson, Jr., *The Value of Money* (New York: Macmillan & Co., 1926), pp. 154–64; and Greidanus, *Value of Money*, pp. 59–62.

by the average velocity of circulation. V is an absurd concept. Even Fisher, in the case of the other magnitudes, recognized the necessity of building up the total from individual exchanges. He was not successful in building up T out of the individual Q's, P out of the individual p's, etc., but at least he *attempted* to do so. But in the case of V, *what is the velocity of an individual transaction?* Velocity is not an independently defined variable. Fisher, in fact, can derive V only as being equal in every instance and every period to E/M. If I spend in a certain hour $10 for a hat, and I had an average cash balance (or M) for that hour of $200, then, by definition, my V equals $1/20$. I had an average quantity of money in my cash balance of $200, each dollar turned over on the average of $1/20$ of a time, and consequently I spent $10 in this period. But it is absurd to dignify any quantity with a place in an equation *unless it can be defined independently of the other terms in the equation*. Fisher compounds the absurdity by setting up M and V as independent determinants of E, which permits him to go to his desired conclusion that if M doubles, and V and T remain constant, P—the price level—will also double. But since V is defined as equal to E/M, what we actually have is: $M \times (E/M) = PT$ or simply, $E = PT$, our original equation. Thus, Fisher's attempt to arrive at a quantity equation with the price level approximately proportionate to the quantity of money is proved vain by yet another route.

A group of Cambridge economists—Pigou, Robertson, etc.—has attempted to rehabilitate the Fisher equation by eliminating V and substituting the idea that the total supply of money equals the total demand for money. However, their equation is not a particular advance, since they keep the fallacious holistic concepts of P and T, and their k is merely the reciprocal of V, and suffers from the latter's deficiencies.

In fact, since V is not an independently defined variable, M must be eliminated from the equation as well as V, and the Fisherine (and the Cambridge) equation cannot be used to demonstrate the "quantity theory of money." And since M and V

must disappear, there are an infinite number of other "equations of exchange" that we could, with equal invalidity, uphold as "determinants of the price level." Thus, the aggregate stock of sugar in the economy may be termed S, and the ratio of E to the total stock of sugar may be called "average sugar turnover," or U. This new "equation of exchange" would be: $SU = PT$, and the stock of sugar would suddenly become a major determinant of the price level. Or we could substitute A = number of salesmen in the country, and X = total expenditures per salesman, or "salesmen turnover," to arrive at a new set of "determinants" in a new equation. And so on.

This example should reveal the fallacy of equations in economic theory. The Fisherine equation has been popular for many years because it has been thought to convey useful economic knowledge. It *appears* to be demonstrating the plausible (on *other* grounds) quantity theory of money. Actually, it has only been misleading.

There are other valid criticisms that could be made of Fisher: his use of index numbers, which even at best could only measure a change in a variable, but never define its actual position; his use of an index of T defined in terms of P and of P defined in terms of T; his denial that money is a commodity; the use of mathematical equations in a field where there can be no constants and therefore no quantitative predictions. In particular, even if the equation of exchange were valid in all other respects, it could at best only describe statically the conditions of an average period. It could never describe the path from one static condition to another. Even Fisher admitted this by conceding that a change in M would always affect V, so that the influence of M on P could not be isolated. He contended that after this "transition" period, V would revert to a constant and the effect on P would be proportional. Yet there is no reasoning to support this assertion. At any rate, enough has been shown to warrant expunging the equation of exchange from the economic literature.

14. The Fallacy of Measuring and Stabilizing the PPM

A. MEASUREMENT

In olden times, before the development of economic science, people naively assumed that the value of money remained always unchanged. "Value" was assumed to be an objective quantity inhering in things and their relations, and money was the measure, the fixed yardstick, of the values of goods and their changes. The value of the monetary unit, its purchasing power with respect to other goods, was assumed to be fixed.[58] The analogy of a fixed standard of measurement, which had become familiar to the natural sciences (weight, length, etc.), was unthinkingly applied to human action.

Economists then discovered and made clear that money does not remain stable in value, that the PPM does not remain fixed. The PPM can and does vary, in response to changes in the supply of or the demand for money. These, in turn, can be resolved into the stock of goods and the total demand for money. Individual money prices, as we have seen in section 8 above, are determined by the stock of and demand for money as well as by the stock of and demand for each good. It is clear, then, that the money relation and the demand for and the stock of each individual good are intertwined in each particular price transaction. Thus, when Smith decides whether or not to purchase a hat for two gold ounces, he weighs the utility of the hat against the utility of the two ounces. Entering into every price, then, is the stock of the good, the stock of money, and the demand for money and the good (both ultimately based on individuals' utilities). The money relation is *contained in* particular price demands and supplies and cannot, in practice, be separated from them. If, then, there is a change in the supply of or demand for money, the change will *not* be neutral, but will affect different specific demands for goods and different prices

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[58]Conventional accounting practice is based on a fixed value of the monetary unit.

in varying proportions. There is no way of separately measuring changes in the PPM and changes in the specific prices of goods.

The fact that the use of money as a medium of exchange enables us to calculate relative exchange ratios between the different goods exchanged against money has misled some economists into believing that separate measurement of changes in the PPM is possible. Thus, we could say that one hat is "worth," or can exchange for, 100 pounds of sugar, or that one TV set can exchange for 50 hats. It is a temptation, then, to forget that these exchange ratios are purely hypothetical and can be realized in practice only through monetary exchanges, and to consider them as constituting some barter-world of their own. In this mythical world, the exchange ratios between the various goods are somehow determined separately from the monetary transactions, and it then becomes more plausible to say that some sort of method can be found of isolating the value of money from these relative values and establishing the former as a constant yardstick. Actually, this barter-world is a pure figment; these relative ratios are only historical expressions of past transactions that can be effected only by and with money.

Let us now assume that the following is the array of prices in the PPM on day one:

10 cents per pound of sugar
10 dollars per hat
500 dollars per TV set
5 dollars per hour legal service of Mr. Jones, lawyer.

Now suppose the following array of prices of the same goods on day two:

15 cents per pound of sugar
20 dollars per hat
300 dollars per TV set
8 dollars per hour of Mr. Jones' legal service.

Now what can economics say has happened to the PPM over these two periods? All that we can legitimately say is that now one dollar can buy $1/20$ of a hat instead of $1/10$ of a hat, $1/300$ of a TV set instead of $1/500$ of a set, etc. Thus, we can describe (if we know the figures) what happened to each individual price in the market array. But how much of the price rise of the hat was due to a rise in the demand for hats and how much to a fall in the demand for money? There is no way of answering such a question. *We do not even know for certain whether the PPM has risen or declined.* All we do know is that the purchasing power of money has fallen in terms of sugar, hats, and legal services, and risen in terms of TV sets. Even if all the prices in the array had risen we would not know by *how much* the PPM had fallen, and we would not know how much of the change was due to an increase in the demand for money and how much to changes in stocks. If the supply of money changed during this interval, we would not know how much of the change was due to the increased supply and how much to the other determinants.

Changes are taking place all the time in each of these determinants. In the real world of human action, there is no one determinant that can be used as a fixed benchmark; the whole situation is changing in response to changes in stocks of resources and products and to the changes in the valuations of all the individuals on the market. In fact, one lesson above all should be kept in mind when considering the claims of the various groups of mathematical economists: *in human action there are no quantitative constants.*[59] As a necessary corollary, all praxeological-economic laws are qualitative, not quantitative.

The *index-number* method of measuring changes in the PPM attempts to conjure up some sort of totality of goods

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[59]Professor Mises has pointed out that the assertion of the mathematical economists that their task is made difficult by the existence of "many variables" in human action grossly understates the problem; for the point is that *all* the determinants are variables and that in contrast to the natural sciences *there are no constants.*

whose exchange ratios remain constant among themselves, so that a kind of general averaging will enable a separate measurement of changes in the PPM itself. We have seen, however, that such separation or measurement is impossible.

The only attempt to use index numbers that has any plausibility is the construction of fixed-quantity weights for a base period. Each price is weighted by the quantity of the good sold in the base period, these weighted quantities representing a typical "market basket" proportion of goods bought in that period. The difficulties in such a market-basket concept are insuperable, however. Aside from the considerations mentioned above, there is in the first place *no average buyer or housewife.* There are only individual buyers, and each buyer has bought a different proportion and type of goods. If one person purchases a TV set, and another goes to the movies, each activity is the result of differing value scales, and each has different effects on the various commodities. There is no "average person" who goes partly to the movies and buys part of a TV set. There is therefore no "average housewife" buying some given proportion of a totality of goods. Goods are not bought in their totality against money, but only by individuals in individual transactions, and therefore there can be no scientific method of combining them.

Secondly, even if there were meaning to the market-basket concept, the utilities of the goods in the basket, as well as the basket proportions themselves, are always changing, and this completely eliminates any possibility of a meaningful constant with which to measure price changes. The nonexistent typical housewife would have to have constant valuations as well, an impossibility in the real world of change.

All sorts of index numbers have been spawned in a vain attempt to surmount these difficulties: quantity weights have been chosen that vary for each year covered; arithmetical, geometrical, and harmonic averages have been taken at variable and fixed weights; "ideal" formulas have been explored—all with no realization of the futility of these endeavors. No such index

number, no attempt to separate and measure prices and quantities, can be valid.[60]

B. Stabilization

The knowledge that the purchasing power of money could vary led some economists to try to improve on the free market by creating, in some way, a monetary unit which would remain stable and constant in its purchasing power. All these stabilization plans, of course, involve in one way or another an attack on the gold or other commodity standard, since the value of gold fluctuates as a result of the continual changes in the supply of and the demand for gold. The stabilizers want the government to keep an arbitrary index of prices constant by pumping money into the economy when the index falls and taking money out when it rises. The outstanding proponent of "stable money," Irving Fisher, revealed the reason for his urge toward stabilization in the following autobiographical passage: "I became increasingly aware of the imperative need of a stable yardstick of value. I had come into economics from mathematical physics, in which fixed units of measure contribute the essential starting point."[61] Apparently, Fisher did not realize that there could be fundamental differences in the nature of the sciences of physics and of purposeful human action.

It is difficult, indeed, to understand what the advantages of a stable value of money are supposed to be. One of the most frequently cited advantages, for example, is that debtors will no longer be harmed by unforeseen rises in the value of money, while creditors will no longer be harmed by unforeseen declines in its value. Yet if creditors and debtors want such a hedge

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[60]See the brilliant critique of index numbers by Mises, *Theory of Money and Credit*, pp. 187–94. *Also see* R.S. Padan, "Review of C.M. Walsh's *Measurement of General Exchange Value*," *Journal of Political Economy*, September, 1901, p. 609.

[61]Irving Fisher, *Stabilised Money* (London: George Allen & Unwin, 1935), p. 375.

against future changes, they have an easy way out on the free market. When they make their contracts, they can agree that repayment be made in a sum of money corrected by some agreed-upon index number of changes in the value of money. Such a voluntary *tabular standard* for business contracts has long been advocated by stabilizationists, who have been rather puzzled to find that a course which appears to them so beneficial is almost never adopted in business practice. Despite the multitude of index numbers and other schemes that have been proposed to businessmen by these economists, creditors and debtors have somehow failed to take advantage of them. Yet, while stabilization plans have made no headway among the groups that they would supposedly benefit the most, the stabilizationists have remained undaunted in their zeal to force their plans on the whole society by means of State coercion.

There seem to be two basic reasons for this failure of business to adopt a tabular standard: (*a*) As we have seen, there is no scientific, objective means of measuring changes in the value of money. Scientifically, one index number is just as arbitrary and bad as any other. Individual creditors and debtors have not been able to agree on any one index number, therefore, that they can abide by as a measure of change in purchasing power. Each, according to his own interests, would insist on including different commodities at different weights in his index number. Thus, a debtor who is a wheat farmer would want to weigh the price of wheat heavily in his index of the purchasing power of money; a creditor who goes often to nightclubs would want to hedge against the price of night-club entertainment, etc. (*b*) A second reason is that businessmen apparently prefer to take their chances in a speculative world rather than agree on some sort of arbitrary hedging device. Stock exchange speculators and commodity speculators are continually attempting to forecast future prices, and, indeed, all entrepreneurs are engaged in anticipating the uncertain conditions of the market. Apparently, businessmen are willing to be entrepreneurs in anticipating future changes in purchasing power as well as any other changes.

The failure of business to adopt voluntarily any sort of tabular standard seems to demonstrate the complete lack of merit in compulsory stabilization schemes. Setting this argument aside, however, let us examine the contention of the stabilizers that somehow they can create certainty in the purchasing power of money, while at the same time leaving freedom and uncertainty in the prices of *particular goods*. This is sometimes expressed in the statement: "Individual prices should be left free to change; the price level should be fixed and constant." This contention rests on the myth that some sort of general purchasing power of money or some sort of price level exists on a plane apart from specific prices in specific transactions. As we have seen, this is purely fallacious. There is no "price level," and there is no way that the exchange-value of money is manifested except in specific purchases of goods, i.e., specific prices. There is no way of separating the two concepts; any array of prices establishes at one and the same time an exchange relation or objective exchange-value between one good and another and between money and a good, and there is no way of separating these elements quantitatively.

It is thus clear that the exchange-value of money cannot be quantitatively separated from the exchange-value of goods. Since the general exchange-value, or PPM, of money cannot be quantitatively defined and isolated in any historical situation, and its changes cannot be defined or measured, it is obvious that it cannot be kept stable. If we do not know what something is, we cannot very well act to keep it constant.[62]

We have seen that the ideal of a stabilized value of money is impossible to attain or even define. Even if it were attainable,

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[62]The fact that the purchasing power of the monetary unit is not quantitatively definable does not negate the fact of its *existence*, which is established by prior praxeological knowledge. It thereby differs, for example, from the "competitive price–monopoly price" dichotomy, which cannot be independently established by praxeological deduction for free-market conditions.

however, what would be the result? Suppose, for example, that the purchasing power of money rises and that we disregard the problem of measuring the rise. Why, if this is the result of action on an unhampered market, should we consider it a *bad* result? If the total supply of money in the community has remained constant, falling prices will be caused by a general increase in the demand for money or by an increase in the supply of goods as a result of increased productivity. An increased demand for money stems from the free choice of individuals, say, in the expectation of a more troubled future or of future price declines. Stabilization would deprive people of the chance to increase their *real* cash holdings and the real value of the dollar by free, mutually agreed-upon actions. As in any other aspect of the free market, those entrepreneurs who successfully anticipate the increased demand will benefit, and those who err will lose in their speculations. But even the losses of the latter are purely the consequence of their own voluntarily assumed risks. Furthermore, falling prices resulting from increased productivity are beneficial to all and are precisely the means by which the fruits of industrial progress spread on the free market. Any interference with falling prices blocks the spread of the fruits of an advancing economy; and then real wages could increase only in particular industries, and not, as on the free market, over the economy as a whole.

Similarly, stabilization would deprive people of the chance to *decrease* their real cash holdings and the real value of the dollar, should their demand for money fall. People would be prevented from acting on their expectations of future price increases. Furthermore, if the supply of goods should decline, a stabilization policy would prevent the price rises necessary to clear the various markets.

The intertwining of general purchasing power and specific prices raises another consideration. For money could not be pumped into the system to combat a supposed increase in the value of money without distorting the previous exchange-values between the various goods. We have seen that money cannot be

neutral with respect to goods and that, therefore, the whole price structure will change with any change in the supply of money. Hence, the stabilizationist program of fixing the value of money or price level without distorting relative prices is necessarily doomed to failure. It is an impossible program.

Thus, even were it possible to define and measure changes in the purchasing power of money, stabilization of this value would have effects that many advocates consider undesirable. But the magnitudes cannot even be defined, and stabilization would depend on some sort of arbitrary index number. Whichever commodities and weights are included in the index, pricing and production will be distorted.

At the heart of the stabilizationist ideal is a misunderstanding of the nature of money. Money is considered either a mere *numeraire* or a grandiose measure of values. Forgotten is the truth that money is desired and demanded as a useful commodity, even when this use is only as a medium of exchange. When a man holds money in his cash balance, he is deriving utility from it. Those who neglect this fact scoff at the gold standard as a primitive anachronism and fail to realize that "hoarding" performs a useful social function.

15. Business Fluctuations

In the real world, there will be continual changes in the pattern of economic activity, changes resulting from shifts in the tastes and demands of consumers, in resources available, technological knowledge, etc. That prices and outputs fluctuate, therefore, is to be expected, and absence of fluctuation would be unusual. *Particular* prices and outputs will change under the impact of shifts in demand and production conditions; the general level of production will change according to individual time preferences. Prices will all tend to move in the same direction, instead of shifting in different directions for different goods, whenever there is a change in the *money relation*. Only a change in the supply of or demand for money will transmit its

impulses throughout the entire monetary economy and impel prices in a similar direction, albeit at varying rates of speed. General price fluctuations can be understood only by analyzing the money relation.

Yet simple fluctuations and changes do not suffice to explain that terrible phenomenon so marked in the last century and a half—the "business cycle." The business cycle has had certain definite features which reveal themselves time and again. First, there is a boom period, when prices and productive activity expand. There is a greater boom in the heavy capital-goods and higher-order industries—such as industrial raw materials, machine goods, and construction, and in the markets for titles to these goods, such as the stock market and real estate. Then, suddenly, without warning, there is a "crash." A financial panic with runs on banks ensues, prices fall very sharply, and there is a sudden piling up of unsold inventory, and particularly a revelation of great excess capacity in the higher-order capital-goods industries. A painful period of liquidation and bankruptcy follows, accompanied by heavy unemployment, until recovery to normal conditions gradually takes place.

This is the empirical pattern of the modern business cycle. Historical events can be explained by laws of praxeology, which isolate causal connections. Some of these events can be explained by laws that we have learned: a general price rise could result from an increase in the supply of money or from a fall in demand, unemployment from insistence on maintaining wage rates that have suddenly increased in real value, a reduction in unemployment from a fall in real wage rates, etc. But one thing cannot be explained by any economics of the free market. And this is the crucial phenomenon of the crisis: *Why is there a sudden revelation of business error?* Suddenly, all or nearly all businessmen find that their investments and estimates have been in error, that they cannot sell their products for the prices which they had anticipated. This is the central problem of the business cycle, and this is the problem which any adequate theory of the cycle must explain.

No businessman in the real world is equipped with perfect foresight; all make errors. But the free-market process precisely rewards those businessmen who are equipped to make a minimum number of errors. Why should there suddenly be a cluster of errors? Furthermore, why should these errors particularly pervade the capital-goods industries?

Sometimes sharp changes, such as a sudden burst of hoarding or a sudden raising of time preferences and hence a decrease in saving, may arrive unanticipated, with a resulting crisis of error. But since the eighteenth century there has been an almost regular pattern of consistent clusters of error which always follow a boom and expansion of money and prices. In the Middle Ages and down to the seventeenth and eighteenth centuries, business crises rarely followed upon booms in this manner. They took place suddenly, in the midst of normal activity, and as the result of some obvious and identifiable external event. Thus, Scott lists crises in sixteenth- and early seventeenth-century England as irregular and caused by some obvious event: famine, plague, seizures of goods in war, bad harvest, crises in the cloth trade as a result of royal manipulations, seizure of bullion by the King, etc.[63] But in the late seventeenth, eighteenth and nineteenth centuries, there developed the aforementioned pattern of the business cycle, and it became obvious that the crisis and ensuing depression could no longer be attributed to some single external event or single act of government.

Since no one event could account for the crisis and depression, observers began to theorize that there must be some deep-seated defect *within* the free-market economy that causes these crises and cycles. The blame must rest with the "capitalist system" itself. Many ingenious theories have been put forward to explain the business cycle as an outgrowth of the free-market economy, but none of them has been able to explain the crucial

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[63]Cited in Wesley C. Mitchell, *Business Cycles, the Problem and Its Setting* (New York: National Bureau of Economic Research, 1927), pp. 76–77.

point: the cluster of errors after a boom. In fact, such an explanation can never be found, since no such cluster could appear on the free market.

The nearest attempt at an explanation stressed general swings of "overoptimism" and "overpessimism" in the business community. But put in such fashion, the theory looks very much like a *deus ex machina*. Why should hardheaded businessmen, schooled in trying to maximize their profits, suddenly fall victim to such psychological swings? In fact, the crisis brings bankruptcies regardless of the emotional state of particular entrepreneurs. We shall see in chapter 12 that feelings of optimism *do* play a role, but they are *induced* by certain objective economic conditions. We must search for the objective reasons that cause businessmen to become "overoptimistic." And they cannot be found on the free market.[64] The positive explanation of the business cycle, therefore, will have to be postponed to the next chapter.

16. Schumpeter's Theory of Business Cycles

Joseph Schumpeter's business cycle theory is one of the very few that attempts to integrate an explanation of the business cycle with an analysis of the entire economic system. The theory was presented in essence in his *Theory of Economic Development*,

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[64]*See* V. Lewis Bassie:

> The whole psychological theory of the business cycle appears to be hardly more than an inversion of the real causal sequence. Expectations more nearly derive from objective conditions than produce them. . . . It is not the wave of optimism that makes times good. Good times are almost bound to bring a wave of optimism with them. On the other hand, when the decline comes, it comes not because anyone loses confidence, but because the basic economic forces are changing. (V. Lewis Bassie, "Recent Development in Short-Term Forecasting," *Studies in Income and Wealth*, XVII [Princeton, N.J.: National Bureau of Economic Research, 1955], 10–12)

published in 1912. This analysis formed the basis for the "first approximation" of his more elaborate doctrine, presented in the two-volume *Business Cycles*, published in 1939.[65] The latter volume, however, was a distinct retrogression from the former, for it attempted to explain the business cycle by postulating three superimposed cycles (each of which was explainable according to his "first approximation"). Each of these cycles is supposed to be roughly periodic in length. They are alleged by Schumpeter to be the three-year "Kitchin" cycle; the nine-year "Juglar"; and the very long (50-year) "Kondratieff." These cycles are conceived as independent entities, combining in various ways to yield the aggregate cyclical pattern.[66] Any such "multicyclic" approach must be set down as a mystical adoption of the fallacy of conceptual realism. There is no reality or meaning to the allegedly independent sets of "cycles." The market is one interdependent unit, and the more developed it is, the greater the interrelations among market elements. It is therefore impossible for several or numerous independent cycles to coexist as self-contained units. It is precisely the characteristic of a business cycle that it permeates *all* market activities.

Many theorists have assumed the existence of *periodic* cycles, where the length of each successive cycle is uniform, even down to the precise number of months. The quest for periodicity is a chimerical hankering after the laws of physics; in human action there are no quantitative constants. Praxeological laws can be only qualitative in nature. Therefore, there will be no periodicity in the length of business cycles.

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[65]Joseph A. Schumpeter, *The Theory of Economic Development* (Cambridge: Harvard University Press, 1936), and *idem*, *Business Cycles* (New York: McGraw-Hill, 1939).

[66]Warren and Pearson, as well as Dewey and Dakin, conceive of the business cycle as made up of superimposed, independent, periodic cycles from *each field* of production activity. *See* George F. Warren and Frank A. Pearson, *Prices* (New York: John Wiley and Sons, 1933); E.R. Dewey and E.F. Dakin, *Cycles: The Science of Prediction* (New York: Holt, 1949).

It is best, then, to discard Schumpeter's multicyclical schema entirely and to consider his more interesting one-cycle "approximation" (as presented in his earlier book), which he attempts to derive from his general economic analysis. Schumpeter begins his study with the economy in a state of "circular flow" equilibrium, i.e., what amounts to a picture of an evenly rotating economy. This is proper, since it is only by hypothetically investigating the disturbances of an imaginary state of equilibrium that we can mentally isolate the causal factors of the business cycle. First, Schumpeter describes the ERE, where all anticipations are fulfilled, every individual and economic element is in equilibrium, profits and losses are zero—all based on given values and resources. Then, asks Schumpeter, what can impel changes in this setup? First, there are possible changes in consumer tastes and demands. This is cavalierly dismissed by Schumpeter as unimportant.[67] There are possible changes in population and therefore in the labor supply; but these are gradual, and entrepreneurs can readily adapt to them. Third, there can be new saving and investment. Wisely, Schumpeter sees that changes in saving-investment rates imply no business cycle; new saving will cause continuous growth. Sudden changes in the rate of saving, when *unanticipated* by the market, can cause dislocations, of course, as may *any* sudden, unanticipated change. But there is nothing *cyclic* or mysterious about these effects. Instead of concluding from this survey, as he should have done, that there *can be no business cycle* on the free market, Schumpeter turned to a fourth element, which for him was the generator of all growth as well as of business cycles—*innovation* in productive techniques.

We have seen above that innovations cannot be considered the prime mover of the economy, since innovations can work their effects only *through* saving and investment and since there

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[67]On the tendency to neglect the consumer's role in innovation, cf. Ernst W. Swanson, "The Economic Stagnation Thesis, Once More," *The Southern Economic Journal*, January, 1956, pp. 287–304.

are always a great many investments that could improve techniques *within* the corpus of existing knowledge, but which are not made for lack of adequate savings. This consideration alone is enough to invalidate Schumpeter's business-cycle theory.

A further consideration is that Schumpeter's own theory relies specifically for the financing of innovations on newly expanded bank credit, on new money issued by the banks. Without delving into Schumpeter's theory of bank credit and its consequences, it is clear that Schumpeter assumes a hampered market, for we have seen that there could not be any monetary credit expansion on a free market. Schumpeter therefore cannot establish a business-cycle theory for a purely unhampered market.

Finally, Schumpeter's explanation of innovations as the trigger for the business cycle necessarily assumes that there is a recurrent *cluster* of innovations that takes place in each boom period. Why should there be such a cluster of innovations? Why are innovations not more or less continuous, as we would expect? Schumpeter cannot answer this question satisfactorily. The fact that a bold few begin innovating and that they are followed by imitators does not yield a cluster, for this process could be continuous, with new innovators arriving on the scene. Schumpeter offers two explanations for the slackening of innovatory activity toward the end of the boom (a slackening essential to his theory). On the one hand, the release of new products yielded by the new investments creates difficulties for old producers and leads to a period of uncertainty and need for "rest." In contrast, in equilibrium periods, the risk of failure and uncertainty is less than in other periods. But here Schumpeter mistakes the auxiliary construction of the ERE for the real world. There is *never* in existence any actual period of certainty; *all periods are uncertain*, and there is no reason why increased production should cause more uncertainty to develop or any vague needs for rest. Entrepreneurs are always seeking profit-making opportunities, and there is no reason for any periods of "waiting" or of "gathering the harvest" to develop suddenly in the economic system.

Schumpeter's second explanation is that innovations cluster in only one or a few industries and that these innovation opportunities are therefore limited. After a while they become exhausted, and the cluster of innovations ceases. This is obviously related to the Hansen stagnation thesis, in the sense that there are alleged to be a certain limited number of "investment opportunities"—here innovation opportunities—at any time, and that once these are exhausted there is temporarily no further room for investments or innovations. The whole concept of "opportunity" in this connection, however, is meaningless. There is no limit on "opportunity" as long as wants remain unfulfilled. The only other limit on investment or innovation is saved capital available to embark on the projects. But this has nothing to do with vaguely available opportunities which become "exhausted"; the existence of saved capital is a continuing factor. As for innovations, there is no reason why innovations cannot be continuous or take place in many industries, or why the innovatory pace has to slacken.

As Kuznets has shown, a cluster of innovation must assume a cluster of entrepreneurial ability as well, and this is clearly unwarranted. Clemence and Doody, Schumpeterian disciples, countered that entrepreneurial ability *is* exhausted in the act of founding a new firm.[68] But to view entrepreneurship as simply the founding of new firms is completely invalid. Entrepreneurship is not just the founding of new firms, it is not merely innovation; it is *adjustment*: adjustment to the uncertain, changing conditions of the future.[69] This adjustment takes

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[68]S.S. Kuznets, "Schumpeter's *Business Cycles*," *American Economic Review*, June, 1940, pp. 262–63; and Richard V. Clemence and Francis S. Doody, *The Schumpeterian System* (Cambridge: Addison-Wesley Press, 1950), pp. 52 ff.

[69]In so far as innovation is a regularized business procedure of research and development, rents from innovations will accrue to the research and development workers in firms, rather than to entrepreneurial profits. Cf. Carolyn Shaw Solo, "Innovation in the Capitalist Process:

place, perforce, all the time and is not exhausted in any single act of investment.

We must conclude that Schumpeter's praiseworthy attempt to derive a business cycle theory from general economic analysis is a failure. Schumpeter almost hit on the right explanation when he stated that the only other explanation that could be found for the business cycle would be a cluster of *errors* by entrepreneurs, and he saw no reason, no objective cause, why there should be such a cluster of errors. That is perfectly true— for the free, unhampered market!

17. *Further Fallacies of the Keynesian System*

In the text above, we saw that even if the Keynesian functions were correct and social expenditures fell below income above a certain point and *vice versa*, this would have no unfortunate consequences for the economy. The level of national money income, and consequently of hoarding, is an imaginary bogey. In this section, we shall pursue our analysis of the Keynesian system and demonstrate further grave fallacies within the system itself. In other words, we shall see that the consumption function and investment are not ultimate determinants of social income (whereas above we demonstrated that it makes no particular difference if they are or not).

A. INTEREST AND INVESTMENT

Investment, though the dynamic and volatile factor in the Keynesian system, is also the Keynesian stepchild. Keynesians have differed on the causal determinants of investment. Originally, Keynes determined it by the interest rate as compared with the marginal efficiency of capital, or prospect for net return. The interest rate is supposed to be determined by the money relation; we have seen that this idea is fallacious. Actually, the equilibrium

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A Critique of the Schumpeterian Theory," *Quarterly Journal of Economics*, August, 1951, pp. 417–28.

net rate of return *is* the interest rate, the natural rate to which the bond rate conforms. Rather than changes in the interest rate *causing* changes in investment, as we have seen before, changes in time preference are reflected in changes in consumption-investment decisions. Changes in the interest rate and in investment are two sides of a coin, both determined by individual valuations and time preferences.

The error of calling the interest rate the cause of investment changes, and itself determined by the money relation, is also adopted by such "critics" of the Keynesian system as Pigou, who asserts that falling prices will release enough cash to lower the interest rate, stimulate investment, and thus finally restore full employment.

Modern Keynesians have tended to abandon the intricacies of the relation between interest and investment and simply declare themselves agnostic on the factors determining investment. They rest their case on an alleged determination of consumption.[70]

B. The "Consumption Function"

If Keynesians are unsure about investment, they have, until very recently, been very emphatic about consumption. Investment is a volatile, uncertain expenditure. Aggregate consumption, on the other hand, is a passive, stable "function" of immediately previous social income. Total net expenditures determining and equaling total net income in a period (gross expenditures *between* stages of production are unfortunately removed from discussion) consist of investment and consumption. Furthermore, consumption always behaves so that below a certain income level consumption will be higher than income, and above that level consumption will be lower. Figure 82 depicts

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[70]Some Keynesians account for investment by the "acceleration principle" (see below). The Hansen "stagnation" thesis—that investment is determined by population growth, the rate of technological improvement, etc.—seems happily to be a thing of the past.
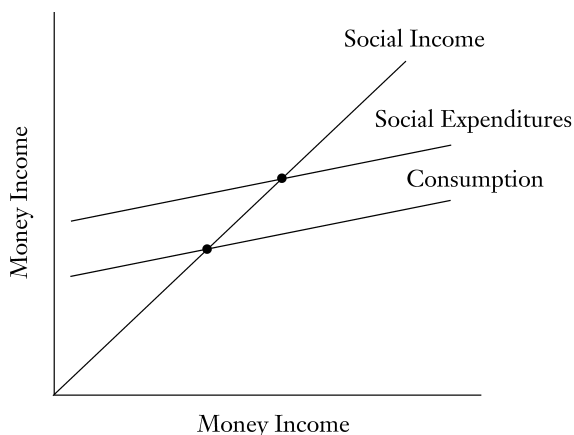
FIGURE 82. RELATIONS AMONG CONSUMPTION,
INVESTMENT, SOCIAL EXPENDITURES, AND SOCIAL
INCOME, ACCORDING TO THE KEYNESIAN SYSTEM

the relations among consumption, investment, expenditure, and social income.

The relation between income and expenditure is the same as shown in Figure 78. Now we see why the Keynesians assume the expenditure curve to have a smaller slope than income. *Consumption* is supposed to have the identical slope as expenditures; for investment is unrelated to income, as the determinants are unknown. Hence, investment is depicted as having no functional relation to income and is represented as a constant gap between the expenditure and consumption lines.

The stability of the passive consumption function, as contrasted with the volatility of active investment, is a keystone of the Keynesian system. This assumption is replete with so many grave errors that it is necessary to take them up one at a time.

(*a*) How do the Keynesians justify the assumption of a stable consumption function with the shape as shown above? One route was through "budget studies"—cross-sectional studies of the relation between family income and expenditure by income

groups in a given year. Budget studies such as that of the National Resources Committee in the mid-1930's yielded similar "consumption functions" with dishoardings increasing below a certain point, and hoardings above it (i.e., income below expenditures below a certain point, and expenditures below income above it).

This is supposed to intimate that those doing the "dissaving," i.e., the dishoarding, are poor people below the subsistence level who incur deficits by borrowing. But how long is this supposed to go on? How can there be a continuous deficit? Who would continue to lend these people the money? It is more reasonable to suppose that the dishoarders are *decumulating* their previously accumulated capital, i.e., that they are wealthy people whose businesses suffered losses during that year.

(*b*) Aside from the fact that budget studies are misinterpreted, there are graver fallacies involved. For the curve given by the budget study has no relation whatever to the Keynesian consumption function! The former, at best, gives a cross section of the relation between *classes* of family expenditure and income for one year; the Keynesian consumption function attempts to establish a relation between *total* social income and total social consumption for *any* given year, holding true over a hypothetical range of social incomes. At best, one entire budget curve can be summed up to yield only *one point* on the Keynesian consumption function. Budget studies, therefore, can in no way confirm the Keynesian assumptions.

(*c*) Another very popular device to confirm the consumption function reached the peak of its popularity during World War II. This was historical-statistical correlation of national income and consumption for a definite period of time, usually the 1930's. This correlation equation was then assumed to be the "stable" consumption function. Errors in this procedure were numerous. In the first place, even assuming such a stable relation, it would only be an *historical* conclusion, *not a theoretical law*. In physics, an experimentally determined law may be assumed to be constant for other identical situations; in human action, historical

situations are never the same, and therefore there are no quantitative constants! Conditions and valuations could change at any time, and the "stable" relationship altered. There is here no proof of a stable consumption function. The dismal record of forecasts (such as those of postwar unemployment) made on this assumption should not have been surprising.

Moreover, a stable relation was not even established. Income was correlated with consumption and with investment. Since consumption is a much larger magnitude than (net) investment, no wonder that its *percentage* deviations around the regression equation were smaller! Furthermore, income is here being correlated with 80–90 percent *of itself*; naturally, the "stability" is tremendous. If income were correlated with *saving*, of similar magnitude as investment, there would be no greater stability in the income-saving function than in the "income-investment function."

Thirdly, the consumption function is necessarily an *ex ante* relation; it is supposed to tell how much consumers *will* decide to spend given a certain total income. Historical statistics, on the other hand, record only *ex post* data, which give a completely different story. For any *given period of time*, for example, hoarding and dishoarding cannot be recorded *ex post*. In fact, *ex post*, on double-entry accounting records, total social income is always equal to total social expenditures. Yet, in the dynamic, *ex ante*, sense, it is precisely the *divergence* between total social income and total social expenditures (hoarding or dishoarding) that plays the crucial role in the Keynesian theory. But these divergences can never be revealed, as Keynesians believe, by study of *ex post* data. *Ex post*, in fact, saving always equals investment, and social expenditure always equals social income, so that the *ex post* expenditure line coincides with the income line.[71]

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[71]*See* Lindahl, "On Keynes' Economic System—Part I," p. 169 n. Lindahl shows the difficulties of mixing an *ex post* income line with *ex ante* consumption and spending, as the Keynesians do. Lindahl also shows

(*d*) Actually, the whole idea of stable consumption functions has now been discredited, although many Keynesians do not fully realize this fact.[72] In fact, Keynesians themselves have admitted that, *in the long run*, the consumption function is not stable, since total consumption rises as income rises; and that *in the short run* it is not stable, since it is affected by all sorts of changing factors. But if it is not stable in the short run and not stable in the long run, what kind of stability does it have? Of what use is it? We have seen that the only really important runs are the immediate and the long-run, which shows the direction in which the immediate is tending. There is no use for some sort of separate "intermediate" situation.

(*e*) it is instructive to turn now to the reasons that Keynes himself, in contrast to his followers, gave for assuming his stable consumption function. It is a confused exposition indeed.[73] The "propensity to consume" out of given income, according to Keynes, is determined by two sets of factors, "objective" and "subjective." It seems clear, however, that these are purely *subjective* decisions, so that there can be no separate objective *determinants*. In classifying subjective factors, Keynes makes the mistake of subsuming hoarding and investing motivations

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that the expenditure and income lines coincide if the divergence between expected and realized income affects income and not stocks. Yet it cannot affect stocks, for, contrary to Keynesian assertion, there is no such thing as hoarding or any other unexpected event leading to "unintended increase in inventories." An increase in inventories is never unintended, since the seller has the alternative of selling the good at the market price. The fact that his inventory increases means that he has voluntarily *invested* in larger inventory, hoping for a future price rise.

[72]Summing up disillusionment with the consumption function are two significant articles: Murray E. Polakoff, "Some Critical Observations on the Major Keynesian Building Blocks," *Southern Economic Journal*, October, 1954, pp. 141–51; and Leo Fishman, "Consumer Expectations and the Consumption Function," *ibid.*, January, 1954, pp. 243–51.

[73]Keynes, *General Theory*, pp. 89–112.

under categories of separate "causes": precaution, foresight, improvement, etc. Actually, as we have seen, the demand for money is ultimately determined by each individual for all sorts of reasons, but all tied up with uncertainty; motives for investment are to maintain and increase future standards of living. By a sleight of hand completely unsupported by facts or argument Keynes simply assumes all these subjective factors to be given in the short run, although he admits that they will change in the long run. (If they change in the long run, how can his system yield an equilibrium position?) He simply reduces the subjective motives to current economic organization, customs, standards of living, etc., and assumes them to be given.[74] The "objective factors" (which in reality are subjective, such as time-preference changes, expectations, etc.) can admittedly cause short-run changes in the consumption function (such as windfall changes in capital values). Expectations of future changes in income can affect an individual's consumption, but Keynes simply asserts without discussion that this factor "is likely to average out for the community as a whole." Time preferences are discussed in a very confused way, with interest rate and time preference assumed to be apart from and influencing the propensity to consume. Here again, short-run fluctuations are assumed to have little effect, and Keynes simply leaps to the conclusion that the propensity to consume is, in the short run, a "fairly" stable function.[75]

(*f*) The failure of the consumption-function theory is not only the failure of a specific theory. It is a profound epistemological failure as well. For the concept of a consumption function has no place in economics at all. Economics is *praxeological*,

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[74]*Ibid.*, pp. 109–10.

[75]What is "fairly" supposed to mean? How can a theoretical law be based on "fair" stability? More stable than other functions? What are the grounds for this assumption, particularly as a law of human action? *Ibid.*, pp. 89–96.

i.e., its propositions are absolutely true given the existence of the axioms—the basic axiom being the existence of human action itself. Economics, therefore, is not and cannot be "empirical" in the positivist sense, i.e., it cannot establish some sort of empirical hypothesis which could or could not be true, and at best is only true approximately. Quantitative, empirico-historical "laws" are worthless in economics, since they may only be coincidences of complex facts, and not isolable, repeatable laws which will hold true in the future. The idea of the consumption function is not only wrong on many counts; it is irrelevant to economics.

Furthermore, the very term "function" is inappropriate in a study of human action. Function implies a quantitative, determined relationship, whereas no such quantitative determinism exists. People act and can change their actions at any time; no causal, constant, external determinants of action can exist. The term "function" is appropriate only to the unmotivated, repeatable motion of inorganic matter.

In conclusion, there is no reason whatever to assume that at some point, expenditures will be below income, while at lower points it will be above income. Economics does not and *cannot* know what *ex ante* expenditure will ever be in relation to income; at any point, it could be equal, or there could be net hoarding or dishoarding. The ultimate decisions are made by the individuals and are not determinable by science. There is, therefore, no stable expenditure function whatever.

C. The Multiplier

The once highly esteemed "multiplier" has now happily faded in popularity, as economists have begun to realize that it is simply the obverse of the stable consumption function. However, the complete absurdity of the multiplier has not yet been fully appreciated. The theory of the "investment multiplier" runs somewhat as follows:

$$\text{Social Income} = \text{Consumption} + \text{Investment}$$

Consumption is a stable function of income, as revealed by statistical correlation, etc. Let us say, for the sake of simplicity, that Consumption will always be .80 (Income).[76] In that case,

> Income = .80 (Income) + Investment.
> .20 (Income) = Investment; or
> Income = 5 (Investment).

The "5" is the "investment multiplier." It is then obvious that all we need to increase social money income by a desired amount is to increase investment by $1/5$ of that amount; and the multiplier magic will do the rest. The early "pump primers" believed in approaching this goal through stimulating private investment; later Keynesians realized that if investment is an "active" volatile factor, government spending is no less active and more certain, so that government spending must be relied upon to provide the needed multiplier effect. Creating new money would be most effective, since the government would then be sure not to reduce private funds. Hence the basis for calling all government spending "investment": it is "investment" because it is not tied passively to income.

The following is offered as a far more potent "multiplier," on Keynesian grounds even more potent and effective than the investment multiplier, and *on Keynesian grounds there can be no objection to it*. It is a *reductio ad absurdum*, but it is not simply a parody, for it is in keeping with the Keynesian method.

Social Income = Income of (insert name of any person, say the reader) + Income of everyone else.

Let us use symbols:

> Social income = Y
> Income of the Reader = R
> Income of everyone else = V

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[76]Actually, the form of the Keynesian function is generally "linear," e.g., Consumption = .80 (Income) + 20. The form given in the text simplifies the exposition without, however, changing its essence.

We find that V is a completely stable function of Y. Plot the two on coordinates, and we find historical one-to-one correspondence between them. It is a tremendously stable function, far more stable than the "consumption function." On the other hand, plot R against Y. Here we find, instead of perfect correlation, only the remotest of connections between the fluctuating income of the reader of these lines and the social income. Therefore, this reader's income is the active, volatile, uncertain element in the social income, while everyone else's income is passive, stable, determined by the social income.

Let us say the equation arrived at is:

$$V = .99999\ Y$$

Then, $Y = .99999\ Y + R$

$$.00001\ Y = R$$
$$Y = 100,000\ R$$

This is the reader's own personal multiplier, a far more powerful one than the investment multiplier. To increase social income and thereby cure depression and unemployment, it is only necessary for the government to print a certain number of dollars and give them to the reader of these lines. The reader's spending will prime the pump of a 100,000-fold increase in the national income.[77]

18. The Fallacy of the Acceleration Principle

The "acceleration principle" has been adopted by some Keynesians as their explanation of investment, then to be combined with the "multiplier" to yield various mathematical "models" of the business cycle. The acceleration principle antedates Keynesianism, however, and may be considered on its own merits. It is almost always used to explain the behavior of investment in the business cycle.

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[77]*Also see* Hazlitt, *Failure of the "New Economics,"* pp. 135–55.

The essence of the acceleration principle may be summed up in the following illustration:

Let us take a certain firm or industry, preferably a first-rank producer of consumers' goods. Assume that the firm is producing an output of 100 units of a good during a certain period of time and that 10 machines of a certain type are needed in this production. If the period is a year, consumers demand and purchase 100 units of output per year. The firm has a stock of 10 machines. Suppose that the average life of a machine is 10 years. In equilibrium, the firm buys one machine as replacement every year (assuming it had bought a new machine every year to build up to 10).[78] Now suppose that there is a 20-percent increase in the consumer demand for the firm's output. Consumers now wish to purchase 120 units of output. Assuming a fixed ratio of capital investment to output, it is now necessary for the firm to have 12 machines (maintaining the ratio of one machine: 10 units of annual output). In order to have the 12 machines, it must buy two additional machines this year. Add this demand to its usual demand of one machine, and we see that there has been a 200-percent increase in demand for the machine. A 20-percent increase in demand for the product has caused a 200-percent increase in demand for the capital good. *Hence*, say the proponents of the acceleration principle, an increase in consumption demand *in general* causes an enormously magnified increase in demand for capital goods. Or rather, it causes a magnified increase in demand for "fixed" capital goods, of high *durability*. Obviously, capital goods lasting only one year would receive no magnification effect. The essence of the acceleration principle is the relationship between the increased demand and the low level of replacement demand for a durable good. The more durable the good, the greater the magnification and the greater, therefore, the acceleration effect.

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[78]It is usually overlooked that this replacement pattern, necessary to the acceleration principle, could apply only to those firms or industries that had been growing in size rapidly and continuously.

Now suppose that, in the next year, consumer demand for output remains at 120 units. There has been no change in consumer demand from the second year (when it changed from 100 to 120) to the third year. And yet, the accelerationists point out, dire things are happening in the demand for fixed capital. For now there is no longer any need for firms to purchase any new machines beyond what is necessary for replacement. Needed for replacement is still only one machine per year. As a result, while there is zero change in demand for consumers' goods, there is a 200-percent *decline* in demand for fixed capital. And the former is the cause of the latter. In the long run, of course, the situation stabilizes into an equilibrium with 120 units of output and one unit of replacement. But in the short run there has been consequent upon a simple increase of 20 percent in consumer demand, first a 200-percent increase in the demand for fixed capital, and next a 200-percent decrease.

To the upholders of the acceleration principle, this illustration provides the key to some of the main features of the business cycle: the greater fluctuations of fixed capital-goods industries as compared with consumers' goods, and the mass of errors revealed by the crisis in the investment goods industries. The acceleration principle leaps boldly from the example of a single firm to a discussion of aggregate consumption and aggregate investment. Everyone knows, the advocates say, that consumption increases in a boom. This increase in consumption accelerates and magnifies increases in investment. Then, the rate of increase of consumption slows down, and a decline is brought about in investment in fixed capital. Furthermore, if consumption demand declines, then there is "excess capacity" in fixed capital—another feature of the depression.

The acceleration principle is rife with error. An important fallacy at the heart of the principle has been uncovered by Professor Hutt.[79] We have seen that consumer demand

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[79]See his brilliant critique of the acceleration principle in W.H. Hutt, *Co-ordination and the Price System* (unpublished, but available from

increases by 20 percent; but why must two extra machines be purchased *in a year*? What does the *year* have to do with it? If we analyze the matter closely, we find that the year is a purely arbitrary and irrelevant unit even within the terms of the example itself. We might just as readily take a *week* as the period of time. Then we would have to say that consumer demand (which, after all, goes on continuously) increases 20 percent over the first week, thereby necessitating a 200-percent increase in demand for machines in the first *week* (or even an *infinite* increase if the replacement does not precisely occur in the first week), followed by a 200-percent (or infinite) decline in the next week, and stability thereafter. A week is never used by the accelerationists because the example would then be glaringly inapplicable to real life, which does not see such enormous fluctuations in the course of a couple of weeks. *But a week is no more arbitrary than a year*. In fact, the only *non*arbitrary period to choose would be the life of the machine (e.g., 10 years). Over a *ten*-year period, demand for machines had previously been ten (in the previous decade), and in the current and succeeding decades it will be 10 plus the extra two, i.e., 12. In short, over the 10-year period the demand for machines will increase *precisely in the same proportion* as the demand for consumers' goods—and there is no magnification effect whatever.

Since businesses buy and produce over planned periods covering the life of their equipment, there is no reason to assume that the market will not plan production suitably and smoothly, without the erratic fluctuations manufactured by the model of the acceleration principle. There is, in fact, no validity in saying that increased consumption *requires* increased production of machines immediately; on the contrary, it is only increased saving and investment in machines, at points of time chosen by entrepreneurs strictly on the basis of expected profit,

the Foundation for Economic Education, Irvington-on-Hudson, N.Y., 1955), pp. 73–117.

that *permits* increased production of consumers' goods in the future.

Secondly, the acceleration principle makes a completely unjustified leap from the single firm or industry to the whole economy. A 20-percent increase in consumption demand at one point must signify a 20-percent drop in consumption somewhere else. For how can consumption demand in general increase? Consumption demand in general can increase only through a shift from saving. But if saving decreases, then there are less funds available for investment. If there are less *funds* available for investment, how can investment increase even *more* than consumption? In fact, there are *less* funds available for investment when consumption increases. Consumption and investment compete for the use of funds.

Another important consideration is that the proof of the acceleration principle is couched in *physical* rather than *monetary* terms. Actually, consumption demand, particularly *aggregate* consumption demand, as well as demand for capital goods, cannot be expressed in physical terms; it must be expressed in monetary terms, since the demand for goods is the reverse of the *supply* of money on the market for exchange. If consumer demand increases either for one good or for all, it increases in monetary terms, thereby raising prices of consumers' goods. Yet we notice that there has been no discussion whatever of prices or price relationships in the acceleration principle. This neglect of price relationships is sufficient by itself to invalidate the entire principle.[80] The acceleration principle simply glides from a demonstration in *physical* terms to a conclusion in *monetary* terms.

Furthermore, the acceleration principle assumes a constant relationship between "fixed" capital and output, ignoring substitutability, the possibility of a range of output, the more or

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[80]Neglect of prices and price relations is at the core of a great many economic fallacies.

less intensive working of factors. It also assumes that the new machines are produced practically instantaneously, thus ignoring the requisite period of production.

In fact, the entire acceleration principle is a fallaciously mechanistic one, assuming automatic reactions by entrepreneurs to *present* data, thereby ignoring the most important fact about entrepreneurship: that it is *speculative*, that its essence is estimating the data of the uncertain future. It therefore involves judgment of future conditions by businessmen, and not simply blind reactions to past data. Successful entrepreneurs are those who best forecast the future. Why can't the entrepreneurs foresee the supposed slackening of demand and arrange their investments accordingly? In fact, that is what they will do. If the economist, armed with knowledge of the acceleration principle, thinks that he will be able to operate more profitably than the generally successful entrepreneur, why does he not become an entrepreneur and reap the rewards of success himself? All theories of the business cycle attempting to demonstrate general entrepreneurial error on the free market founder on this problem. They do not answer the crucial question: Why does a whole set of men most able in judging the future suddenly lapse into forecasting error?

A clue to the correct business cycle theory is contained in the fact that buried somewhere in a footnote or minor clause of all business cycle theories is the assumption that the money supply expands during the boom, in particular through credit expansion by the banks. The fact that this is a necessary condition in all the theories should lead us to explore this factor further: perhaps it is a sufficient condition as well. But, as we have seen above, there can be no bank credit expansion on the free market, since this is equivalent to the issue of fraudulent warehouse receipts. The positive discussion of business cycle theory will have to be postponed to the next chapter, since there can be no business cycle in the purely free market.

Business-cycle theorists have always claimed to be more "realistic" than general economic theorists. With the exceptions of

Mises and Hayek (correctly) and Schumpeter (fallaciously), none has tried to deduce his business cycle theory from general economic analysis.[81] It should be clear that this is required for a satisfactory explanation of the business cycle. Some, in fact, have explicitly discarded economic analysis altogether in their study of business cycles, while most writers use aggregative "models" with no relation to a general economic analysis of individual action. All of these commit the fallacy of "conceptual realism"—i.e., of using aggregative concepts and shuffling them at will, without relating them to actual individual action, while believing that something is being said about the real world. The business-cycle theorist pores over sine curves, mathematical models, and curves of all types; he shuffles equations and interactions and thinks that he is saying something about the economic system or about human action. In fact, he is not. The overwhelming bulk of current business cycle theory is not economics at all, but meaningless manipulation of mathematical equations and geometric diagrams.[82]

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[81]*See* Mises, *Human Action*, pp. 581 f.; S.S. Kuznets, "Relations between Capital Goods and Finished Products in the Business Cycle" in *Economic Essays in Honor of Wesley Clair Mitchell* (New York: Columbia University Press, 1935), p. 228; and Hahn, *Commonsense Economics*, pp. 139–43.

[82]See the excellent critique by Leland B. Yeager of the neostagnationist Keynesian versions of "growth economics" of Harrod and Domar, which make use of the acceleration principle. Yeager, "Some Questions on Growth Economics," pp. 53–63.

THE ECONOMICS OF VIOLENT INTERVENTION IN THE MARKET

1. Introduction

UP TO THIS POINT WE HAVE been assuming that no violent invasion of person or property occurs in society; we have been tracing the economic analysis of the free society, the free market, where individuals deal with one another only peacefully and never with violence. This is the construct, or "model," of the purely free market. And this model, imperfectly considered perhaps, has been the main object of study of economic analysis throughout the history of the discipline.

In order to complete the economic picture of our world, however, economic analysis must be extended to the nature and consequences of violent actions and interrelations in society, including intervention in the market and violent abolition of the market ("socialism"). Economic analysis of intervention and socialism has developed much more recently than analysis of the free market.[1] In this book, space limitations prevent us from delving into the economics of intervention to the same extent as we have treated the economics of the free market. But our

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[1]Some economists, notably Edwin Cannan, have denied that economic analysis could be applied to acts of violent intervention. But, on the contrary, economics is the praxeological analysis of human actions, and violent interrelations are forms of action which can be analyzed.

researches into the former field are summarized more briefly in this final chapter.

One reason why economics has tended to concentrate on the free market is that here is presented the problem of order arising out of a seemingly "anarchic" and "planless" set of actions. We have seen that instead of the "anarchy of production" that a person untrained in economics might see in the free market, there emerges an orderly pattern, structured to meet the desires of all individuals, and yet eminently suited to adapt to changing conditions. In this way we have seen how the free, voluntary actions of individuals combine in an orderly determination of such seemingly mysterious processes as the formation of prices, income, money, economic calculation, profits and losses, and production.

The fact that each man, in pursuing his own self-interest, furthers the interest of everyone else, is a *conclusion* of economic analysis, not an *assumption* on which the analysis is grounded. Many critics have accused economists of being "biased" in favor of the free-market economy. But this or any other conclusion of economics is not a bias or prejudice, but a *post-judice* (to use a happy term of Professor E. Merrill Root's)—a judgment made *after* inquiry, and not beforehand.[2] Personal preferences, moreover, are completely separate from the validity of analytic procedures. The personal preferences of the analyst are of no interest for economic science; what is relevant is the validity of the method itself.

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[2]Is it, then, surprising that the early economists, all religious men, marveled at their epochal discovery of the harmony pervading the free market and tended to ascribe this beneficence to a "hidden hand" or divine harmony? It is easier for us to scoff at their enthusiasm than to realize that it does not detract from the validity of their analysis.

Conventional writers charge, for example, that the French "optimistic" school of the nineteenth century were engaging in a naïve *Harmonielehre*—a mystical idea of a divinely ordained harmony. But this charge ignores the fact that the French optimists were building on the very sound "welfare-economic" insight that voluntary exchanges on the free market conduce harmoniously to the benefit of all. For example, *see* About, *Handbook of Social Economy*, pp. 104–12.

2. A Typology of Intervention

Intervention is the intrusion of aggressive physical force into society; it means the substitution of coercion for voluntary actions. It must be remembered that, *praxeologically*, it makes no difference what individual or group wields this force; the economic nature and consequences of the action remain the same.

Empirically, the vast bulk of interventions are performed by States, since the State is the only organization in society legally equipped to use violence and since it is the only agency that legally derives its revenue from a compulsory levy. It will therefore be convenient to confine our treatment to *government* intervention—bearing in mind, however, that private individuals may illegally use force, or that government may, openly or covertly, permit favored private groups to employ violence against the persons or property of others.

What types of intervention can an individual or group commit? Little or nothing has so far been done to construct a systematic typology of intervention, and economists have simply discussed such seemingly disparate actions as price control, licensing, inflation, etc. We can, however, classify interventions into three broad categories. In the first place, the *intervener*, or "invader," or "aggressor"—the individual or group that initiates violent intervention—may command an individual subject to do or not do certain things, when these actions directly involve the individual's person or property *alone*. In short, the intervener may restrict the subject's use of his property, where exchange with someone else is not involved. This may be called an *autistic intervention*, where the specific order or command involves only the subject himself. Secondly, the intervener may compel an *exchange* between the individual subject and himself or coerce a "gift" from the subject. We may call this a *binary intervention*, since a hegemonic relation is here established between two people: the intervener and the subject. Thirdly, the invader may either compel or prohibit an exchange between a *pair* of subjects (exchanges always take place between *two* people). In

this case, we have a *triangular intervention*, where a hegemonic relation is created between the invader and a *pair* of actual or potential exchangers. All these interventions are examples of the *hegemonic* relation (see chapter 2 above)—the relation of command and obedience—in contrast to the contractual, free-market relation of voluntary mutual benefit.

Autistic intervention occurs, therefore, when the intervener coerces a subject without receiving any good or service in return. Simple homicide is an example; another would be the compulsory enforcement or prohibition of a salute, speech, or religious observance. Even if the intervener is the State, issuing an edict to all members of society, the edict in itself is still *autistic*, since the lines of force radiate, so to speak, from the State to each individual alone. Binary intervention, where the intervener forces the subject to make an exchange or gift to the former, is exemplified in taxation, conscription, and compulsory jury service. Slavery is another example of binary, coerced exchange between master and slave.

Examples of triangular intervention, where the intervener compels or prohibits exchanges between sets of two *other* individuals, are price control and licensing. Under price control, the State prohibits any pair of individuals from making an exchange below or above a certain fixed rate; licensing prohibits certain people from making specified exchanges with others. Curiously enough, writers on political economy have recognized only cases in the third category as being "intervention." It is understandable that economists have overlooked autistic intervention, for, in truth, economics can say little about events that lie outside the monetary exchange nexus. There is far less excuse for the neglect of binary intervention.

3. *Direct Effects of Intervention on Utility*

In tracing the effects of intervention, we must explore both the direct and the indirect consequences. In the first place, intervention will have direct, immediate consequences on the

utilities of those participating. On the one hand, when the society is free and there is no intervention, everyone will always act in the way that he believes will maximize his utility, i.e., will raise him to the highest possible position on his value scale. In short, everyone's utility *ex ante* will be "maximized" (provided we take care not to interpret "utility" in a cardinal manner). Any exchange on the free market, indeed any action in the free society, occurs because it is expected to benefit each party concerned. If we may use the term "society" to depict the pattern, the array, of all individual exchanges, then we may say that the free market maximizes social utility, since everyone gains in utility from his free actions.[3]

Coercive intervention, on the other hand, signifies *per se* that the individual or individuals coerced *would not have voluntarily done what they are now being forced to do by the intervener.* The person who is coerced into saying or not saying something or into making or not making an exchange with the intervener or with a third party is having his actions changed by a threat of violence. The man being coerced, therefore, *always loses in utility as a result of the intervention,* for his action has been forcibly changed by its impact. In autistic and binary interventions, the individual subjects each lose in utility; in triangular interventions, at least one, and sometimes both, of the pair of would-be exchangers lose in utility.

Who *gains* in utility *ex ante*? Clearly, the intervener; otherwise, he would not have made the intervention. In the case of binary intervention, he himself gains directly in exchangeable goods or services at the expense of his subject.[4] In the case of

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[3]The study of the direct consequences for utility of intervention or nonintervention is peculiarly the realm of "welfare economics." For a critique and outline of a reconstruction of welfare economics, *see* Rothbard, "Toward a Reconstruction of Utility and Welfare Economics."

[4]Perhaps we may note here the German sociologist Franz Oppenheimer's distinction between the free market and binary intervention as

autistic and triangular interventions, he gains in a sense of psychic well-being from enforcing regulations upon others (or, perhaps, in providing a seeming justification for other, binary interventions).

In contrast to the free market, therefore, all cases of intervention supply one set of men with gains *at the expense* of another set. In binary interventions, the direct gains and losses are "tangible" in the form of exchangeable goods or services; in other cases, the direct gains are nonexchangeable satisfactions to the interveners, and the direct loss is being coerced into less satisfying, if not positively painful, forms of activity.

Before the development of economic science, people tended to think of exchange and the market as always benefiting one party at the expense of the other. This was the root of the mercantilist view of the market, of what Ludwig von Mises calls the "Montaigne fallacy." Economics has shown this to be a fallacy, for on the market *both* parties to an exchange will benefit.[5]

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the "economic" as against the "political" means to the satisfaction of one's wants:

> There are two fundamentally opposed means whereby man, requiring sustenance, is impelled to obtain the necessary means for satisfying his desires. These are work and robbery, one's own labor and the forcible appropriation of the labor of others. . . . I propose . . . to call one's own labor and the equivalent exchange of one's own labor for the labor of others, the "economic means" for the satisfaction of needs, while the unrequited appropriation of the labor of others will be called the "political means." . . . The state is an organization of the political means. (Oppenheimer, *The State*, pp. 24–27)

[5]One of the roots of this fallacy is the idea that in an exchange the two things exchanged are or should be "equal" in value and that "inequality" of value demonstrates "exploitation." We have seen, on the contrary, that any exchange involves inequality of the values of each commodity between buyer and seller, and that it is this very double inequality of values that brings about the exchange. An example of stress on this fallacy is

On the market, therefore, *there can be no such thing as exploitation*. But the thesis of an inherent conflict of interest *is* true whenever the State or anyone else wielding force intervenes on the market. For then the intervener gains at the expense of the subjects who lose in utility. On the market all is harmony. But as soon as intervention appears on the scene, conflict is created, for each person or group may participate in a scramble to be a net gainer rather than a net loser—to be part of the intervening team, as it were, rather than one of the victims. And the very institution of taxation ensures that some will be in the net gaining, and others in the net losing, class.[6] Since all State actions rest on

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the well-known work by Yves Simon, *Philosophy of Democratic Government* (Chicago: University of Chicago Press, 1951), chap. IV.

[6]It has become fashionable to assert that John C. Calhoun anticipated the Marxian doctrine of class exploitation, but actually, Calhoun's "classes" were *castes*: creatures of State intervention itself. In particular, Calhoun saw that the binary intervention of taxation must always be spent so that some people in the community become net payers of tax funds, and the others net recipients. Calhoun defined the latter as the "ruling class" and the former as the "ruled." Thus:

> Few, comparatively, as they are, the agents and employees of the government constitute that portion of the community who are the exclusive recipients of the proceeds of the taxes. . . . But as the recipients constitute only a portion of the community, it follows . . . that the action [of the fiscal process] must be unequal between the payers of the taxes and the recipients of their proceeds. Nor can it be otherwise; unless what is collected from each individual in the shape of taxes shall be returned to him in that of disbursements, which would make the process nugatory and absurd. . . . It must necessarily follow that some one portion of the community must pay in taxes more than it receives in disbursements, while another receives in disbursements more than it pays in taxes. It is, then, manifest . . . that taxes must be, in effect, bounties to that portion of the community which receives more in disbursements than it pays in taxes, while to the other which pays in taxes

the fundamental binary intervention of taxation, it follows that no State action can increase social utility, i.e., can increase the utility of all affected individuals.[7]

A common objection to the conclusion that the free market, in unique contrast to intervention, increases the utility of every individual in society, points to the fate of the entrepreneur whose product suddenly becomes obsolete. Take, for example, the buggy manufacturer who faces a shift in public demand from buggies to automobiles. Does *he* not lose utility from the operation of the free market? We must realize, however, that we are concerned only with the utilities that are *demonstrated* by the manufacturer's action.[8] In both period one, when consumers

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more than it receives in disbursements they are taxes in reality—burdens instead of bounties. This consequence is unavoidable. It results from the nature of the process, be the taxes ever so equally laid. . . .

The necessary result, then, of the unequal fiscal action of the government is to divide the community into two great classes: one consisting of those who, in reality, pay the taxes and, of course, bear exclusively the burden of supporting the government; and the other, of those who are the recipients of their proceeds through disbursements, and who are, in fact, supported by the government; or, the effect of this is to place them in antagonistic relations in reference to the fiscal action of the government. . . . For the greater the taxes and disbursements, the greater the gain of the one and the loss of the other, and vice versa. . . . (John C. Calhoun, *A Disquisition on Government* [New York: Liberal Arts Press, 1953], pp. 16–18)

[7]*See* Rothbard, "Toward a Reconstruction of Utility and Welfare Economics." For an analysis of State action, *see* Gustave de Molinari, *The Society of Tomorrow* (New York: G.P. Putnam's Sons, 1904), pp. 19 ff., 65–96.

[8]We have seen above that praxeology may deal with utilities only as deduced from the concrete actions of human beings. Elsewhere we have named this concept "demonstrated preference," have traced its history, and criticized competing concepts. Rothbard, "Toward a Reconstruction of Utility and Welfare Economics," pp. 224 ff.

demanded buggies, and in period two, when they shifted to autos, he acts so as to maximize his utility on the free market. The fact that, in retrospect, he prefers the results of period one may be interesting data for the historian, but is irrelevant for the economic theorist. For the manufacturer is *not* living in period one any more. He lives always under *present* conditions and in relation to the present value scales of his fellow men. Voluntary exchanges, in any given period, will increase the utility of everyone and will therefore maximize social utility. The buggy manufacturer could not restore the conditions or results of period one unless he used force against others to coerce their exchanges, but, in that case, social utility could no longer be maximized, because of his invasive act.

Just as some writers have tried to deny the voluntary nature and the mutual benefits of free exchange, so others have tried to attribute a voluntary quality to actions of the State. Generally, this attempt has been based either on the view that there exists an entity "society," which cheerfully endorses and supports the actions of the State, or that the majority endorses these acts and that this somehow *means* universal support, or finally, that somehow, down deep, even the opposing minority endorses the acts of the State. From these fallacious assumptions, they conclude that the State can increase social utility at least as well as the market can.[9,10]

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[9]For a critique of the first assumption, *see* Murray N. Rothbard, "The Mantle of Science" in Helmut Schoeck and James W. Wiggins, eds., *Scientism and Values* (Princeton, N.J.: D. Van Nostrand, 1960); on the latter arguments, *see* Rothbard, "Toward a Reconstruction of Utility and Welfare Economics," pp. 256 ff.

[10]Schumpeter's insights on the fallacy of attributing a voluntary nature to the State deserve to be heeded:

> . . . ever since the princes' feudal incomes ceased to be of major importance, the State has been living on a revenue which was being produced in the private sphere for private purposes and had to be deflected from these purposes

Having described the unanimity and harmony of the free market, as well as the conflict and losses of utility generated by intervention, let us ask what happens if government is used to check interventions in the market by private criminals—i.e., private imposers of coerced exchanges. It has been asked: Is not this "police" function an act of intervention, and does not the free market itself then necessarily rest on a "framework" of such intervention? And does not the existence of the free market therefore require a loss of utility on the part of the criminals who are being punished by the government?[11] In the first place, we must remember that the purely free market is an array of voluntary exchanges between sets of two persons. If there are no threats of criminal intervention in that market—say because everyone feels duty-bound to respect the private property of others—no "framework" of counterintervention will be needed. The "police" function is therefore solely a secondary derivative problem, not a precondition, of the free market.

Secondly, if governments—or private agencies, for that matter—are employed to check and combat intervention in society by criminals, it is certainly obvious that this combat imposes losses of utility upon the criminals. But these acts of defense are hardly "intervention" in our sense of the term. For the losses of utility are being imposed only upon people who, in turn, have been trying to impose losses of utility on peaceful citizens. In

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by political force. The theory which construes taxes on the analogy of club dues or of the purchase of the services of, say, a doctor only proves how far removed this part of the social sciences is from scientific habits of mind. (Schumpeter, *Capitalism, Socialism and Democracy*, p. 198 and 198 n.)

[11]I am deeply indebted to Professor Ludwig M. Lachmann, Mr. L.D. Goldblatt, and other members of Professor Lachmann's Honours Seminar in Economics at the University of Witwatersrand, South Africa, for raising these questions in their discussion of my "Reconstruction" paper cited above.

short, the force used by police agencies in defending individual freedom—i.e., in defending the persons and property of the citizens—is purely an *inhibitory* force; it is *counter*intervention against true, initiatory intervention. While such counter action cannot maximize "social utility"—the utility of *everyone* in society involved in interpersonal actions—it *does* maximize the utility of *noncriminals*, i.e., those who have been peacefully maximizing their own utility without inflicting losses upon others. Should these defense agencies do their job perfectly and eliminate all interventions, then their existence will be perfectly compatible with the maximization of social utility.

4. Utility Ex Post: *Free Market and Government*

We have thus seen that individuals maximize their utility *ex ante* on the free market, and that they cannot do so when there is intervention, for then the intervener gains in utility only at the expense of a demonstrated loss in utility by his subject. But what of utilities *ex post*? People may *expect* to benefit when they make decisions, but do they *actually* benefit from their results? How do the free market and intervention compare in traveling that vital path from *ante* to *post*?

For the free market, the answer is that the market is constructed so as to reduce error to a minimum. There is, in the first place, a fast-working, highly accurate, easily understandable test that tells the entrepreneur, and also the income-receiver, whether they are succeeding or failing at the task of satisfying the desires of the consumer. For the entrepreneur, who carries the main burden of adjustment to uncertain, fluctuating consumer desires, the test is particularly swift and sure— profits or losses. Large profits are a signal that he has been on the right track, losses that he has been on a wrong one. Profits and losses spur rapid adjustments to consumer demands; at the same time, they perform the function of getting money out of the hands of the inefficient entrepreneurs and into the hands of the good ones. The fact that good entrepreneurs prosper and

add to their capital, and poor ones are driven out, insures an ever smoother market adjustment to changes in conditions. Similarly, to a lesser extent, land and labor factors move in accordance with the desire of their owners for higher incomes, and highly value-productive factors are rewarded accordingly.

Consumers also take entrepreneurial risks on the market. Many critics of the market, while willing to concede the *expertise* of the capitalist-entrepreneurs, bewail the prevailing ignorance of consumers, which prevents them from gaining the utility *ex post* that they had expected *ex ante*. Typically, Wesley C. Mitchell entitled one of his famous essays: "The Backward Art of Spending Money." Professor Mises has keenly pointed out the paradox of interventionists who insist that consumers are too ignorant or incompetent to buy products intelligently, while at the same time proclaiming the virtues of democracy, where the same people vote for or against politicians whom they do not know and on policies which they scarcely understand. To put it another way, the partisans of intervention assume that individuals are not competent to run their own affairs or to hire experts to advise them, but also assume that these same individuals *are* competent to vote for these experts at the ballot box. They are further assuming that the mass of supposedly incompetent consumers *are* competent to choose not only those who will rule over themselves, but also over the *competent* individuals in society. Yet such absurd and contradictory assumptions lie at the root of every program for "democratic" intervention in the affairs of the people.[12]

In fact, the truth is precisely the reverse of this popular ideology. Consumers are surely not omniscient, but they have direct tests by which to acquire and check their knowledge. They buy

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[12]Neither are these contradictions removed by abandoning democracy in favor of dictatorship. For even if the mass of the public do not vote under a dictatorship, they must still consent to the rule of the dictator and his chosen experts, and therefore their unique competence in the *political* field as against other spheres of their daily life must still be assumed.

a certain brand of breakfast food and they do not like it; and so they do not buy it again. They buy a certain type of automobile and like its performance; they buy another one. And in both cases, they tell their friends of this newly won knowledge. Other consumers patronize consumers' research organizations, which can warn or advise them in advance. But, in all cases, the consumers have the direct test of results to guide them. And the firm which satisfied the consumers expands and prospers and thus gains "good will," while the firm failing to satisfy them goes out of business.[13]

On the other hand, voting for politicians and public policies is a completely different matter. Here there are no direct tests of success or failure whatever, neither profits and losses nor enjoyable or unsatisfying consumption. In order to grasp consequences, especially the indirect catallactic consequences of governmental decisions, it is necessary to comprehend complex chains of praxeological reasoning. Very few voters have the ability or the interest to follow such reasoning, particularly, as Schumpeter points out, in political situations. For the minute influence that any one person has on the results, as well as the seeming remoteness of the actions, keeps people from gaining interest in political problems or arguments.[14] Lacking the direct test of success or failure, the voter tends to turn, not to those politicians whose policies have the best chance of success, but to those who can best "sell" their propaganda ability. Without grasping logical chains of deduction, the average voter will never be able to discover the errors that his ruler makes. To borrow an example from a later section of this chapter, suppose that the government inflates the money supply, thereby causing an

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[13]*See* Rothbard, "Mises' *Human Action*: Comment," pp. 383–84. Also cf. George H. Hildebrand, "Consumer Sovereignty in Modern Times," *American Economic Review, Papers and Proceedings*, May, 1951, p. 26.

[14]Cf. the excellent discussion of the contrast between daily life and politics in Schumpeter, *Capitalism, Socialism and Democracy*, pp. 258–60.

inevitable rise in prices. The government can blame the price rise on wicked speculators or alien black marketeers, and unless the public knows economics, it will not be able to see the fallacies in the rulers' arguments.

It is curious, once more, that the very writers who complain most of the wiles and lures of advertising never apply their critique to the one area where it is truly correct: the advertising of politicians. As Schumpeter states:

> The picture of the prettiest girl that ever lived will in the long run prove powerless to maintain the sales of a bad cigarette. There is no equally effective safeguard in the case of political decisions. Many decisions of fateful importance are of a nature that makes it impossible for the public to experiment with them at its leisure and at moderate cost. Even if that is possible, judgment is as a rule not so easy to arrive at as in the case of the cigarette, because effects are less easy to interpret.[15]

George J. Schuller, in attempting to refute this argument, protested that: "complex chains of reasoning are required for consumers to select intelligently an automobile or television set."[16] But such knowledge is *not* necessary; for the whole point is that the consumers have always at hand a simple and pragmatic test of success: does the product work and work well? In public economic affairs, there is no such test, for no one can know whether a particular policy has "worked" or not without knowing the *a priori* reasoning of economics.

It may be objected that, while the average voter may not be competent to decide on *issues* that require chains of praxeological reasoning, he *is* competent to pick the *experts*—the politicians—who will decide on the issues, just as the individual may select his own private expert adviser in any one of numerous

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[15]*Ibid.*, p. 263.

[16]Schuller, "Rejoinder," p. 189.

fields. But the critical problem is precisely that in government the individual has no direct, personal test of success or failure of his hired expert such as he has in the market. On the market, individuals tend to patronize those experts whose advice is most successful. Good doctors or lawyers reap rewards on the free market, while poor ones fail; the privately hired expert flourishes in proportion to his ability. In government, on the other hand, there is no market test of the expert's success. Since there is no direct test in government, and, indeed, little or no personal contact or relationship between politician or expert and voter, there is no way by which the voter can gauge the true *expertise* of the man he is voting for. As a matter of fact, the voter is in even greater difficulties in the modern type of issueless election between candidates who agree on all fundamental questions than he is in voting on issues. For issues, after all, *are* susceptible to reasoning; the voter *can*, if he wants to and has the ability, learn about and decide on the issues. But what can any voter, even the most intelligent, know about the true *expertise* or competence of individual candidates, especially when elections are shorn of all important issues? The only thing that the voter can fall back on for a decision are the purely external, advertised "personalities" of the candidates, their glamorous smiles, etc. The result is that voting purely on candidates is bound to be even less rational than voting on the issues themselves.

Not only does government lack a successful test for picking the proper experts, not only is the voter necessarily more ignorant than the consumer, but government itself has other inherent mechanisms which lead to poorer choices of experts and officials. For one thing, the politician and the government expert receive their revenues, not from service voluntarily purchased on the market, but from a compulsory levy on the inhabitants. These officials, then, wholly lack the direct pecuniary incentive to *care* about servicing the public properly and competently. Furthermore, the relative rise of the "fittest" applies in government as in the market, but the criterion of "fitness" is here very different. In the market, the fittest are those most able

to serve the consumers. In government, the fittest are either (1) those most able at wielding coercion or (2) if bureaucratic officials, those best fitted to curry favor with the leading politicians or (3) if politicians, those most adroit at appeals to the voting public.[17]

Another critical divergence between market action and democratic voting is this: the voter has, for example, only a $1/100$ billionth power to choose among his potential rulers, who in turn will make decisions affecting him, unchecked until the next election. The individual acting on the market, on the other hand, has absolute sovereign power to make decisions over his property, not just a removed, $1/100$ billionth power. Furthermore, the individual is continually demonstrating his choices of whether to buy or not to buy, to sell or not to sell, by making absolute decisions in regard to his property. The voter, by voting for some particular candidate, demonstrates only a relative preference for him over one or two other potential rulers—and he must do this, let us not forget, within the framework of the coercive rule that, whether he votes or not, *one* of these men will rule over him for the next few years. (We should also not forget that, with a secret ballot, the voter does not even demonstrate this much of a constrained and limited preference.)

It may be objected that the shareholder voting in a corporation is in similar straits. But he is not. Aside from the critical point that the corporation does not acquire *its* funds by compulsory levy, the shareholder still has absolute power over his own property by being able to sell his shares on the free market, something that the democratic voter clearly cannot do. Moreover, the shareholder has voting power in the corporation

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[17]We might say that this insight underlies F.A. Hayek's famous chapter, "Why the Worst Get on Top" in *The Road to Serfdom* (Chicago: University of Chicago Press, 1944), chap. x. Also see the recent brief discussion by Jack Hirshleifer, "Capitalist Ethics—Tough or Soft?" *Journal of Law and Economics*, October, 1959, p. 118.

proportionate to his degree of property ownership of the common assets.[18]

Thus, we see that the free market has a smooth, efficient mechanism to bring anticipated, *ex ante* utility into the realization and fruition of *ex post*. The free market always maximizes *ex ante* social utility; it always tends to maximize *ex post* social utility as well. The field of political action, on the other hand, i.e., the field where most intervention takes place, has no such mechanism; indeed, the political process inherently tends to delay and thwart the realization of expected gains. So that the divergence in *ex post* results between free market and intervention is even greater than in *ex ante*, anticipated utility. In fact, the divergence is still greater than we have shown. For, as we analyze the *indirect* consequences of intervention in the remainder of this chapter, we shall find that, in every instance, the consequences of intervention will make the intervention look worse in the eyes of many of its original supporters. Thus, we shall find that the indirect consequence of a price control is to cause unexpected shortages of the product. *Ex post*, many of the interveners themselves will feel that they have lost rather than gained in utility.

In sum, the free market always benefits every participant, and it maximizes social utility *ex ante*; it also tends to do so *ex post*, for it contains an efficient mechanism for speedily converting anticipations into realizations. With intervention, one group gains directly at the expense of another, and therefore social utility is not maximized or even increased; there is no mechanism for speedy translation of anticipation into fruition, but indeed the opposite; and finally, as we shall see, the indirect consequences of intervention will cause many interveners themselves to *lose* utility *ex post*. The remainder of this chapter traces the nature and *indirect* consequences of various forms of intervention.

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[18]Cf. the interesting definition of "democracy" in Heath, *Citadel, Market, and Altar*, p. 234.

5. Triangular Intervention: Price Control

A triangular intervention occurs when an intervener either compels a pair of people to make an exchange or prohibits them from making an exchange. The coercion may be imposed on the *terms* of the exchange or on the nature of one or both of the products being exchanged or on the people doing the exchanging. The former type of triangular intervention is called a *price control*, because it deals specifically with the terms, i.e., the price, at which the exchange is made; the latter may be called *product control*, as dealing specifically with the nature of the product or of the producer. An example of price control is a decree by the government that no one may buy or sell a certain product at more (or, alternatively, less) than X gold ounces per pound; an example of product control is the prohibition of the sale of this product or prohibition of the sale by any but certain persons selected by the government. Clearly both forms of control have various repercussions on both the price and the nature of the product.

A price control may be effective or ineffective. It will be ineffective if the regulation has no influence on the market price. Thus, if automobiles are selling at 100 gold ounces on the market, and the government decrees that no autos be sold for more than 300 ounces, on pain of punishment inflicted on violators, the decree is at present completely academic and ineffective.[19] However, should a customer wish to order an unusual custom-built automobile for which the seller would charge over 300 ounces, then the regulation *now* becomes effective and changes transactions from what they would have been on the free market.

There are two types of effective price control: a *maximum* price control that prohibits all exchanges of a good above a certain price, with the controlled price being *below* the market equilibrium price; and a *minimum* price control prohibiting

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[19]Of course, even a completely ineffective triangular control is likely to increase the government bureaucracy dealing with the matter and therefore increase the total amount of *binary* intervention over the taxpayer. But more on this below.
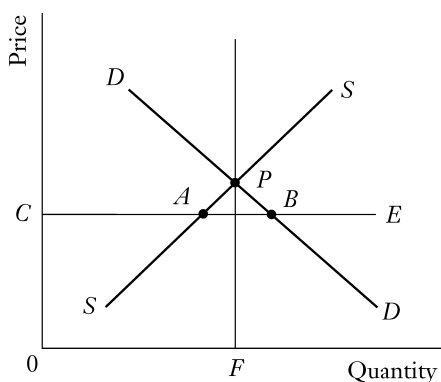
FIGURE 83. EFFECT OF A MAXIMUM PRICE CONTROL

exchanges below a certain price, this fixed price being *above* market equilibrium. Let Figure 83 depict the supply and demand curves for a good subjected to maximum price control: *DD* and *SS* are the demand and supply curves for the good. *FP* is the equilibrium price set by the market. The government, let us assume, imposes a maximum control price *0C*, above which any sale is illegal. At the control price, the market is no longer cleared, and the quantity demanded exceeds the quantity supplied by amount *AB*. In this way, an artificially created shortage of the good has been created. In any shortage, consumers rush to buy goods which are not available at the price. Some must do without, others must patronize the market, revived as illegal or "black," paying a premium for the risk of punishment that sellers now undergo. The chief characteristic of a price maximum is the queue, the endless "lining up" for goods that are not sufficient to supply the people at the rear of the line. All sorts of subterfuges are invented by people desperately seeking to arrive at the clearance of supply and demand once provided by the market. "Under-the-table" deals, bribes, favoritism for older customers, etc., are inevitable features of a market shackled by the price maximum.[20]

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[20]A "bribe" is only payment of the market price by a buyer.

It must be noted that, even if the stock of a good is frozen for the foreseeable future and the supply line is vertical, this artificial shortage will still develop and all these consequences ensue. The more "elastic" the supply, i.e., the more resources shift out of production, the more aggravated, *ceteris paribus*, the shortage will be. The firms that leave production are the ones nearest the margin. If the price control is "selective," i.e., is imposed on one or a few products, the economy will not be as universally dislocated as under general maxima, but the artificial shortage created in the particular line will be even more pronounced, since entrepreneurs and factors can shift to the production and sale of other products (preferably substitutes). The prices of the substitutes will go up as the "excess" demand is channeled off in their direction. In the light of this fact, the typical governmental reason for selective price control—"We must impose controls on this necessary product so long as it continues in short supply"—is revealed to be an almost ludicrous error. For the truth is the reverse: price control creates an artificial shortage of the product, which continues *as long as* the control is in existence—in fact, becomes ever worse as resources have time to shift to other products. If the government were really worried about the short supply of certain products, it would go out of its way *not* to impose maximum price controls upon them.

Before investigating further the effects of general price maxima, let us analyze the consequences of a *minimum* price control, i.e., the imposition of a price *above* the free-market price. This may be depicted in Figure 84. *DD* and *SS* are the demand and supply curves respectively. *0C* is the control price and *FP* the market equilibrium price. At *0C*, the quantity demanded is less than the quantity supplied, by the amount *AB*. Thus, while the effect of a maximum price is to create an artificial shortage, a minimum price creates an artificial unsold surplus, *AB*. The unsold surplus exists even if the *SS* line is vertical, but a more elastic supply will, *ceteris paribus*, aggravate the surplus. Once again, the market is not cleared. The artificially high price at first attracts resources into the field, while, at the