

- February - 7 February ► [Reading: Chapters I and II, pp. 29-49](#)



CHAPTER I The Function of Money

1 The General Economic Conditions for the Use of Money

Where the free exchange of goods and services is **unknown**, money is not wanted. In a state of society in which the division of labor was a purely domestic matter and production and consumption were consummated **within the single household** it would be just as useless as it would be for an isolated man. But even in an economic order based on division of labor, **money would still be unnecessary if the means of production were socialized**, the control of production and the distribution of the finished product were in the hands of a central body, and individuals were not allowed to exchange the consumption goods allotted to them for the consumption goods allotted to others.

The phenomenon of money **presupposes an economic order** in which production is based on division of labor and in which private property consists not only in goods of the first order (consumption goods), but also in goods of higher orders (production goods). In such a society, there is no systematic centralized control of production, for this is inconceivable without centralized disposal over the means of production. Production is **"anarchistic."** What is to be produced, and how it is to be produced, is decided in the first place by the owners of the means of production, who produce, however, not only for their own needs, but also for the needs of others, and in their valuations take into account, not only the use-value that they themselves attach to their products, but also the use-value that these possess in the estimation of the other members of the community. The balancing of production and consumption takes place in the market, where the different producers meet to exchange goods and services by bargaining together. **The function of money is to facilitate the business of the market by acting as a common medium of exchange.**

2 The Origin of Money

Indirect exchange is distinguished from direct exchange according as a medium is involved or not.

Suppose that A and B exchange with each other a number of units of the commodities m and n . A acquires the commodity n because of the **use-value** that it has for him. He intends to consume it. The same is true of B, who acquires the commodity m for his immediate use. This is a case of direct exchange.

If there are more than two individuals and more than two kinds of commodity in the market, **indirect exchange** also is possible. A may then acquire a commodity p , not because he desires to consume it, but in order to exchange it for a second commodity q which he does desire to consume. Let us suppose that A brings to the market two units of the commodity m , B two units of the commodity n , and C two units of the commodity o , and that A wishes to acquire one unit of each of the commodities n and o , B one unit of each of the commodities o and m , and C one unit of each of the commodities m and n . Even in this case a direct exchange is possible if the subjective valuations of the three commodities permit the exchange of each unit of m , n , and o for a unit of one of the others. But if this or a similar hypothesis does not hold good, and in by far the greater number of all exchange transactions it does not hold good, then indirect exchange becomes necessary, and the demand for goods for immediate wants is supplemented by a demand for goods to be exchanged for others. [1]

Let us take, for example, the simple case in which the commodity p is desired only by the holders of the commodity q , while the commodity q is not desired by the holders of the commodity p but by those, say, of a third commodity r , which in its turn is desired only by the possessors of p . No direct exchange between these persons can possibly take place. If exchanges occur at all, they must be indirect; as, for instance, if the possessors of the commodity p exchange it for the commodity q and then exchange this for the commodity r which is the one they desire for their own consumption. The case is not essentially different when supply and demand do not coincide quantitatively; for example, when one **indivisible** good has to be exchanged for various goods in the possession of several persons.

Indirect exchange becomes more necessary as division of labor increases and wants become more refined. In the present stage of economic development, the occasions when direct exchange is both possible and actually effected have already become very exceptional. Nevertheless, even nowadays, they sometimes arise. Take, for instance, the payment of wages in kind, which is a case of direct exchange so long on the one hand as the employer uses the labor for the immediate satisfaction of his own needs and does not have to procure through exchange the goods in which the wages are paid, and so long on the other hand as the employee consumes the goods he receives and does not sell them. Such payment of wages in kind is still widely prevalent in agriculture, although even in this sphere its importance is being continually diminished by the extension of capitalistic methods of management and the development of division of labor. [2]

Thus along with the demand in a market for goods for direct consumption **there is a demand for goods that the purchaser does not wish to consume but to dispose of by further exchange.** It is clear that not all goods are subject to this sort of demand. An individual obviously has no motive for an indirect exchange if he does not expect that it will bring him nearer to his ultimate objective, the acquisition of goods for his own use. The mere fact that there would be no

exchanging unless it was indirect could not induce individuals to engage in indirect exchange if they secured no immediate personal advantage from it. Direct exchange being impossible, and indirect exchange being purposeless from the individual point of view, no exchange would take place at all. Individuals have recourse to indirect exchange only when they profit by it; that is, only when the goods they acquire are more marketable than those which they surrender.

Now all goods are not equally marketable. While there is only a limited and occasional demand for certain goods, that for others is more general and constant. Consequently, those who bring goods of the first kind to market in order to exchange them for goods that they need themselves have as a rule a smaller prospect of success than those who offer goods of the second kind. If, however, they exchange their relatively unmarketable goods for such as are more marketable, they will get a step nearer to their goal and may hope to reach it more surely and economically than if they had restricted themselves to direct exchange.

It was in this way that those **goods that were originally the most marketable** became **common media of exchange**; that is, goods into which all sellers of other goods first converted their wares and which it paid every would-be buyer of any other commodity to acquire first. And as soon as those commodities that were relatively most marketable had become common media of exchange, there was an increase in the difference between their marketability and that of all other commodities, and this in its turn further strengthened and broadened their position as media of exchange. [3]

Thus the requirements of the market have gradually led to the selection of certain commodities as common media of exchange. The group of commodities from which these were drawn was originally large, and differed from country to country; but it has more and more contracted. Whenever a direct exchange seemed out of the question, each of the parties to a transaction would naturally endeavor to exchange his superfluous commodities, not merely for more marketable commodities in general, but for the *most* marketable commodities; and among these again he would naturally prefer whichever particular commodity was the most marketable of all. The greater the marketability of the goods first acquired in indirect exchange, the greater would be the prospect of being able to reach the ultimate objective without further maneuvering. Thus there would be an inevitable tendency for the less marketable of the series of goods used as media of exchange to be one by one rejected until at last only a single commodity remained, which was universally employed as a medium of exchange; in a word, money.

This stage of development in the use of media of exchange, the exclusive employment of a single economic good, is not yet completely attained. In quite early times, sooner in some places than in others, the extension of indirect exchange led to the employment of the two precious metals gold and silver as common media of exchange. But then there was a long interruption in the steady contraction of the group of goods employed for that purpose. For hundreds, even thousands, of years the choice of mankind has wavered undecided between gold and silver. The chief cause of this remarkable phenomenon is to be found in the natural qualities of the two metals. Being physically and chemically very similar, they are almost equally serviceable for the satisfaction of human wants. For the manufacture of ornaments and jewelry of all kinds the one has proved as good as the other. (It is only in recent times that technological discoveries have been made which have considerably extended the range of uses of the precious metals and may have differentiated their utility more sharply.) In isolated communities, the employment of one or the other metal as sole common medium of exchange has occasionally been achieved, but this short-lived unity has always been lost again as soon as the isolation of the community has succumbed to participation in international trade.

Economic history is the story of the gradual extension of the economic community beyond its original limits of the single household to embrace the nation and then the world. But every increase in its size has led to a fresh duality of the medium of exchange whenever the two amalgamating communities have not had the same sort of money. It would not be possible for the final verdict to be pronounced until all the chief parts of the inhabited earth formed a single commercial area, for not until then would it be impossible for other nations with different monetary systems to join in and modify the international organization.

Of course, if two or more economic goods had exactly the same marketability, so that none of them was superior to the others as a medium of exchange, this would limit the development toward a unified monetary system. We shall not attempt to decide whether this assumption holds good of the two precious metals gold and silver. The question, about which a bitter controversy has raged for decades, has no very important bearings upon the theory of the nature of money. For it is quite certain that even if a motive had not been provided by the unequal marketability of the goods used as media of exchange, unification would still have seemed a desirable aim for monetary policy. The simultaneous use of several kinds of money involves so many disadvantages and so complicates the technique of exchange that the endeavor to unify the monetary system would certainly have been made in any case.

The theory of money must take into consideration all that is implied in the functioning of several kinds of money side by side. Only where its conclusions are unlikely to be affected one way or the other, may it proceed from the assumption that a single good is employed as common medium of exchange. Elsewhere, it must take account of the simultaneous use of several media of exchange. To neglect this would be to shirk one of its most difficult tasks.

3 The "Secondary" Functions of Money

The simple statement, that money is a commodity whose economic function is to facilitate the interchange of goods and services, does not satisfy those writers who are interested rather in the accumulation of material than in the increase of knowledge. Many investigators imagine that insufficient attention is devoted to the remarkable part played by money in economic life if it is merely credited with the function of being a medium of exchange; they do not think that due regard has been paid to the significance of money until they have enumerated half a dozen further "functions"—as if, in an economic order founded on the exchange of goods, there could be a more important function than that of the common medium of exchange.

After Menger's review of the question, further discussion of the connection between the secondary functions of money and its basic function should be unnecessary. [4] Nevertheless, certain tendencies in recent literature on money make it appear advisable to examine briefly these *secondary* functions—some of them are coordinated with the basic function by many writers—and to show once more that all of them can be deduced from the function of money as a common medium of exchange.

This applies in the first place to the function fulfilled by money *in facilitating credit transactions*. It is simplest to regard this as part of its function as medium of exchange. Credit transactions are in fact nothing but the exchange of present goods against future goods. Frequent reference is made in English and American writings to a function of money as a standard of deferred payments. [5] But the original purpose of this expression was not to contrast a particular function of money with its ordinary economic function, but merely to simplify discussions about the influence of changes in the value of money upon the real amount of money debts. It serves

this purpose admirably. But it should be pointed out that its use has led many writers to deal with the problems connected with the general economic consequences of changes in the value of money merely from the point of view of modifications in existing debt relations and to overlook their significance in all other connections.

The functions of money as a *transmitter of value through time and space* may also be directly traced back to its function as medium of exchange. Menger has pointed out that the special suitability of **goods for hoarding**, and their consequent widespread employment for this purpose, has been one of the most important causes of their increased marketability and therefore of their qualification as media of exchange. [6] As soon as the practice of employing a certain economic good as a medium of exchange becomes general, people begin to store up this good in preference to others. **In fact, hoarding as a form of investment plays no great part in our present stage of economic development, its place having been taken by the purchase of interest-bearing property.** [7] On the other hand, money still functions today as a means for transporting value through space. [8] This function again is nothing but a matter of facilitating the exchange of goods. The European farmer who emigrates to America and wishes to exchange his property in Europe for a property in America, sells the former, goes to America with the money (or a bill payable in money), and there purchases his new homestead. Here we have an absolute textbook example of an exchange facilitated by money.

Particular attention has been devoted, especially in recent times, to the function of money as a *general medium of payment*. Indirect exchange divides a single transaction into two separate parts which are connected merely by the ultimate intention of the exchangers to acquire consumption goods. Sale and purchase thus apparently become independent of each other. Furthermore, if the two parties to a sale-and-purchase transaction perform their respective parts of the bargain at different times, that of the seller preceding that of the buyer (purchase on credit), then the settlement of the bargain, or the fulfillment of the seller's part of it (which need not be the same thing), has no obvious connection with the fulfillment of the buyer's part. The same is true of all other credit transactions, especially of the most important sort of credit transaction—lending. The apparent lack of a connection between the two parts of the single transaction has been taken as a reason for regarding them as independent proceedings, for speaking of the payment as an independent legal act, and consequently for attributing to money the function of being a common medium of *payment*. This is obviously incorrect. "If the function of money as an object which facilitates dealings in commodities and capital is kept in mind, a function that includes the payment of money prices and repayment of loans...there remains neither necessity nor justification for further discussion of a special employment, or even function of money, as a medium of payment." [9]

The root of this error (as of many other errors in economics) must be sought in the uncritical acceptance of juristical conceptions and habits of thought. From the point of view of the law, outstanding debt is a subject which can and must be considered in isolation and entirely (or at least to some extent) without reference to the origin of the obligation to pay. Of course, in law as well as in economics, money is only the common medium of exchange. But the principal, although not exclusive, motive of the law for concerning itself with money is the problem of payment. When it seeks to answer the question, **What is money?** it is in order to determine how monetary liabilities can be discharged. **For the jurist, money is a medium of payment.** The economist, to whom the problem of money presents a different aspect, may not adopt this point of view if he does not wish at the very outset to prejudice his prospects of contributing to the advancement of economic theory.

[1] See Wicksell, *Über Wert, Kapital und Rente* (Jena, 1893; London, 1933), pp. 50 f.

[2] The conclusion that indirect exchange is necessary in the majority of cases is extremely obvious. As we should expect, it is among the earliest discoveries of economics. We find it clearly expressed in the famous fragment of the Pandects of Paulus: "Quia non semper nec facile concurrebat, ut, cum tu haberas, quod ego desiderarem, invicem haberem, quod tu accipere velles" (Paulus, lib. 33 ad edictum 1.1 pr. D. de contr. empt. 18, 1).

Schumpeter is surely mistaken in thinking that the necessity for money can be proved solely from the assumption of indirect exchange (see his *Wesen und Hauptinhalt der theoretischen Nationalökonomie* [Leipzig, 1908], pp. 273 ff.). On this point, cf. Weiss, *Die moderne Tendenz in der Lehre vom Geldwert, Zeitschrift für Volkswirtschaft, Sozialpolitik und Verwaltung*, vol. 19, pp. 518 ff.

[3] See Menger, *Untersuchungen über die Methode der Sozialwissenschaften und der politischen Ökonomie insbesondere* (Leipzig, 1883), pp. 172 ff.; *Grundsätze der Volkswirtschaftslehre*, 2d ed. (Vienna, 1923), pp. 247 ff.

[4] See Menger, *Grundsätze*, pp. 278 ff.

[5] See Nicholson, *A Treatise on Money and Essays on Present Monetary Problems* (Edinburgh, 1888), pp. 22 ff.; Laughlin, *The Principles of Money* (London, 1903), pp. 22 f.

[6] Cf. Menger, *Grundsätze*, pp. 284 ff.

[7] That is, apart from the exceptional propensity to hoard gold, silver, and foreign bills, **encouraged by inflation** and the laws enacted to further it.

[8] Knies in particular (*Geld und Kredit*, 2d ed. [Berlin, 1885], vol. 1, pp. 233 ff.) has laid stress upon the function of money as interlocal transmitter of value.

[9] Cf. Menger, *Grundsätze*, pp. 282 f.

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Study Guide:

Money is necessary in a society based on **private property** and the **division of labor**. The function of money is to facilitate these trades: Money is a commonly used medium of exchange.

In a **direct exchange**, people accept goods in trade that they intend to personally use, whether for consumption or production. There is no medium of exchange involved in the transaction.

In an **indirect exchange**, at least one person in the transaction accepts a good that he intends to trade away in the future for something else. The item that is accepted in the first trade is a medium of exchange.

Even before the use of money, traders would have quickly discovered the benefits of indirect exchanges, and the use of media of exchange to facilitate them. Some goods would have had a far broader market than others. A trader who came to market with an unmarketable good would place himself in a more advantageous bargaining position if he engaged in an indirect exchange, by trading his good for something that was more marketable.

Because every trader would act in this fashion, those goods that were initially more marketable, would see their marketability enhanced even further. Over time, a community would gravitate to one or a few commodities that would be acceptable to everyone in trade. This is how money emerged from an initial state of barter. Historically the market has often chosen gold and silver as money.

Although other writers outline other “functions” of money—such as a standard of deferred payments or a store of value—these all flow from its definition: money is a commonly accepted medium of exchange.

1. The General Economic Conditions for the Use of Money

A person living by himself on a tropical island would not need **money**. Several people living in the same household would not need money either, so long as they produced everything they needed within the household. Even an entire community—consisting of thousands or millions of households, each of which specialized in producing different goods and services—could get by without the use of money, assuming there were a central group or person who acted as a “planner” and told everyone what to make, and decided which portion of the total output each person would get to consume.

However, in a society based on the **division of labor**, and where private individuals own both consumption goods (TVs, radios, Big Macs) and producer goods (tractors, factories, copper mines), money is essential. In such a society, there is no one person or group who decides how scarce resources will be deployed. Each individual must make his or her own plans, which usually require exchanging property for other people’s property. The function of money is to **facilitate these trades**: Money is a commonly used **medium of exchange**.

2. The Origin of Money

In a **direct exchange**, people accept goods in trade that they intend to personally use, whether for consumption or production. For example, suppose Alan has a muffin but he is really hungry for fish. Bill, on the other hand, has a net (which can be used to catch fish) that he doesn’t really want, but he thinks Alan’s muffin looks delicious. If Alan trades his muffin for Bill’s net, this is a direct exchange. There is no medium of exchange involved in the transaction.

In an **indirect exchange**, at least one person in the transaction accepts a good that he *doesn’t* intend to consume or use himself in production. Rather, the person accepts a good because he plans on trading it away again in the future. For example, suppose there is a woman who has knitted a quilt, and she wants to exchange it for a certain parakeet. Unfortunately, the man who owns the parakeet doesn’t want a quilt, but is instead interested in obtaining a new radio. The

owner of the radio, however, hates birds, but is very cold at night. The woman with the quilt, unfortunately, is very hard of hearing and has no use for a radio.

In this scenario, no direct exchange is possible. However, the woman could trade away her quilt for the radio—even though she personally has no use for it—and then trade the radio in turn for the parakeet. These two successive trades would make all three people happier. In this example, the radio would be a medium of exchange.

Logically, there must have been a time when people had goods and traded with each other, but before money had arisen. **Even before the use of money, traders would have quickly discovered the benefits of indirect exchanges—and the use of media** of exchange to facilitate them.

Some goods (eggs, milk, leather) would have had a far broader market than others (telescopes, philosophy books, machinery). A trader who came to market with an unmarketable good such as a telescope probably wouldn't be able to quickly find someone who

(a) had the items that the first trader hoped to acquire and

(b) wanted a telescope.

In this case, the trader could **improve his bargaining position** by trading away his telescope for something more marketable, such as eggs, even if the trader had no desire to eat the eggs. Because every trader would act in this fashion, those goods that were initially more marketable, would see their marketability enhanced even further: They would be demanded not only by people intending to use them directly, but also by people intending to use them as media of exchange. In any particular indirect exchange, a trader would naturally prefer to sell his own wares in exchange for the most marketable medium of exchange, because this would place him in the most advantageous position as he continued looking for the goods he ultimately desired. Over time, a community would gravitate to one or a few commodities that would be acceptable to everyone in trade. A commonly accepted medium of exchange *is* money.

Historically, gold and silver have been the two commodities most frequently employed as money. They have very similar properties and are both excellent media of exchange.

3. The “Secondary” Functions of Money

Money is, by definition, a common medium of exchange, which therefore serves to facilitate the exchange of goods and services. In a market economy, this is a crucial “function” and we see money’s importance by focusing on it. Although other writers outline other “functions” of money—such as a standard of deferred payments, or a facilitator of credit transactions, or a store of value through time—these all flow from its use as a common medium of exchange.

Mises references Carl Menger, whose 1871 *Grundsätze* (translated as *Principles of Economics*) is the **founding work** of what is called “Austrian” economics. Among his other contributions, Menger is credited in the annals of the history of economic thought with giving the first satisfactory explanation of the origin of money. Rather than assuming that money must have been created by an edict issued by a powerful king or wise tribal leader, **Menger showed that step-by-step evolution from an initial state of barter to a monetary economy, where each person only seeks to improve his own position at each step in the process.**

• Even in modern textbooks, writers will list several “functions” of money. This can be confusing, because it makes it hard to pin down exactly what money *is* and why it so important. Menger’s approach—followed by Mises—is refreshingly clear: **Money is defined as a commonly accepted medium of exchange, and this characteristic enables all of the other “functions” attributed to it.**

Direct exchange: An exchange in which both parties intend to directly use the received good, either in consumption or production.

Indirect exchange: An exchange in which **at least one party intends to hold the received good, in order to trade it away** in the future for something else.

Division of labor: The situation in which people **specialize** in particular occupations, producing far more than they personally can consume, and trade away their surplus to receive some of the surplus created by others.

Medium of exchange: A good that is accepted in exchange, with the intention of trading it away to acquire something else in the future.

Money: A medium of exchange that is generally accepted in the community. Money typically stands on one side of virtually every exchange.

QUESTIONS

Would a society based on total central planning in both production and consumption need money? Why or why not? (p. 29)

No. Because no need for exchange. The phenomenon of money presupposes an economic order in which production is based on division of labor and in which private property consists not only in goods of the first order, but also in goods of higher orders (production goods).

1. Why doesn’t a direct exchange involve the use of a medium of exchange? (p. 30). *Because a direct exchange requires only two goods that are exchanged.*

2. Can you think of reasons that traders eventually gravitated toward gold and silver as money, as opposed to other items such as cattle or aluminum? *These goods are durable, portable and divisible.*

3. Did media of exchange exist *before* the existence of money? (pp. 30 –32)

Along with the demand in a market for goods for direct consumption there is a demand for goods that the purchaser does not wish to consume but to dispose of by further exchange. Individuals have recourse to indirect exchange only when they profit by it; that is, only when the goods they acquire are more marketable than those which they surrender. The requirements of the market have gradually led to the selection of certain commodities as common medial of exchange.

4. For the various secondary functions of money listed by Mises, explain how each is related to money’s role as a commonly accepted medium of exchange. (pp. 34 –36)

Credit transactions are the exchange of present goods against future goods. The functions of money as a transmitter of value through time and space may also be traced back to its function as medium of exchange.

As a medium of payment.

END

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CHAPTER 2 On the Measurement of Value

1 The Immeasurability of Subjective Use-Values

Although it is usual to speak of **money as a measure of value and prices, the notion is entirely fallacious**. So long as the **subjective theory of value** is accepted, this question of measurement cannot arise. In the older political economy, the search for a principle governing the measurement of value was to a certain extent justifiable. If, in accordance with an objective theory of value, the possibility of an objective concept of commodity values is accepted, and exchange is regarded as the reciprocal surrender of equivalent goods, then the conclusion necessarily follows that exchange transactions must be preceded by measurement of the quantity of value contained in each of the objects that are to be exchanged. And it is then an obvious step to regard money as the measure of value.

But modern value theory has a different starting point. It conceives of value as the significance attributed to individual commodity units by a human being who wishes to consume or otherwise dispose of various commodities to the best advantage. Every economic transaction presupposes a comparison of values. But the necessity for such a comparison, as well as the possibility of it, is due only to the circumstance that the person concerned has to choose between several commodities. **It is quite irrelevant whether this choice is between a commodity in his own possession and one in somebody else's possession for which he might exchange it,** or between the different uses to which he himself might put a given quantity of productive resources. In an isolated household, in which (as on Robinson Crusoe's desert island) there is neither buying nor selling, changes in the stocks of goods of higher and lower orders do nevertheless occur whenever anything is produced or consumed; and these changes must be based upon valuations if their returns are to exceed the outlay they involve. **The process of valuation** remains fundamentally the same whether the question is one of transforming labor and flour into bread in the domestic bake house, or of obtaining bread in exchange for clothes in the market. **From the point of view of the person making the valuation, the calculation whether a certain act of production would justify a certain outlay of goods and labor is exactly the same as the comparison between the values of the commodities to be surrendered and the values of the commodities to be acquired that must precede an exchange transaction. For this reason it has been said that every economic act may be regarded as a kind of exchange. [1]**

Acts of valuation are not susceptible of any kind of measurement. It is true that everybody is able to say whether a certain piece of bread seems more valuable to him than a certain piece of iron or less valuable than a certain piece of meat. And it is therefore true that everybody is in a position to draw up an immense list of comparative values; a list which will hold good only for a

given point of time, since it must assume a given combination of wants and commodities. **If the individual's circumstances change, then his scale of values changes also.**

But subjective valuation, which is the pivot of all economic activity, only arranges commodities in order of their significance; it does not measure this significance. And economic activity has no other basis than the value scales thus constructed by individuals. An exchange will take place when two commodity units are placed in a different order on the value scales of two different persons. In a market, exchanges will continue until it is no longer possible for reciprocal surrender of commodities by any two individuals to result in their each acquiring commodities that stand higher on their value scales than those surrendered. If an individual wishes to make an exchange on an economic basis, he has merely to consider the comparative significance in his own judgment of the quantities of commodities in question. Such an estimate of relative values in no way involves the idea of measurement. An estimate is a direct psychological judgment that is not dependent on any kind of intermediate or auxiliary process.

(Such considerations also provide the answer to a series of objections to the subjective theory of value. It would be rash to conclude, because psychology has not succeeded and is not likely to succeed in measuring desires, that it is therefore impossible ultimately to attribute the quantitatively exact exchange ratios of the market to subjective factors. The exchange ratios of commodities are based upon the value scales of the individuals dealing in the market. Suppose that A possesses three pears and B two apples; and that A values the possession of two apples more than that of three pears, while B values the possession of three pears more than that of two apples. On the basis of these estimations an exchange may take place in which three pears are given for two apples. Yet it is clear that the determination of the numerically precise exchange ratio 2: 3, taking a single fruit as a unit, in no way presupposes that A and B know exactly *by how much* the satisfaction promised by possession of the quantities to be acquired by exchange exceeds the satisfaction promised by possession of the quantities to be given up.)

General recognition of this fact, for which we are indebted to the authors of modern value theory, was hindered for a long time by a peculiar sort of obstacle. It is not altogether a rare thing that those very pioneers who have not hesitated to clear new paths for themselves and their followers by boldly rejecting outworn traditions and ways of thinking should yet shrink sometimes from all that is involved in the rigid application of their own principles. When this is so, it remains for those who come after to endeavor to put the matter right. The present is a case in point. **On the subject of the measurement of value**, as on a series of further subjects that are very closely bound up with it, the founders of the subjective theory of value refrained from the consistent development of their own doctrines. This is especially true of Böhm-Bawerk. At least it is especially striking in him; for the arguments of his which we are about to consider are embodied in a system that would have provided an alternative and, in the present writer's opinion, a better, solution of the problem, if their author had only drawn the decisive conclusion from them.

Böhm-Bawerk points out that when we have to choose in actual life between several satisfactions which cannot be had simultaneously because our means are limited, the situation is often such that the **alternatives** are on the one hand one big satisfaction and on the other hand a large number of homogeneous smaller satisfactions. Nobody will deny that it lies in our power to come to a rational decision in such cases. But it is equally clear that a judgment merely to the effect that a satisfaction of the one sort is greater than a satisfaction of the other sort is inadequate for such a decision; as would even be a judgment that a satisfaction of the first sort

is *considerably* greater than one of the other sort. Böhm-Bawerk therefore concludes that the judgment must definitely affirm how many of the smaller satisfactions outweigh one of the first sort, or in other words how many times the one satisfaction exceeds one of the others in magnitude. [2]

The credit of having exposed the error contained in the identification of these two last propositions belongs to Cuhel. The judgment that so many small satisfactions are outweighed by a satisfaction of another kind is in fact *not* identical with the judgment that the one satisfaction is so many times greater than one of the others. The two would be identical only if the satisfaction afforded by a number of commodity units taken together were equal to the satisfaction afforded by a single unit on its own multiplied by the number of units. That this assumption cannot hold good follows from Gossen's law of the satisfaction of wants. The two judgments, "I would rather have eight plums than one apple" and "I would rather have one apple than seven plums," do not in the least justify the conclusion that Böhm-Bawerk draws from them when he states that therefore the satisfaction afforded by the consumption of an apple is more than seven times but less than eight times as great as the satisfaction afforded by the consumption of a plum. The only legitimate conclusion is that the satisfaction from one apple is greater than the total satisfaction from seven plums but less than the total satisfaction from eight plums. [3]

This is the only interpretation that can be harmonized with the fundamental conception expounded by the marginal-utility theorists, and especially by Böhm-Bawerk himself, that the utility (and consequently the subjective use-value also) of units of a commodity decreases as the supply of them increases. But to accept this is to reject the whole idea of measuring the subjective use-value of commodities. Subjective use-value is not susceptible of any kind of measurement.

The American economist Irving Fisher has attempted to approach the problem of value measurement by way of mathematics. [4] His success with this method has been no greater than that of his predecessors with other methods. Like them, he has not been able to surmount the difficulties arising from the fact that marginal utility diminishes as supply increases, and the only use of the mathematics in which he clothes his arguments, and which is widely regarded as a particularly becoming dress for investigations in economics, is to conceal a little the defects of their clever but artificial construction.

Fisher begins by assuming that the utility of a particular good or service, though dependent on the supply of that good or service, is **independent** of the supply of all others. He realizes that it will not be possible to achieve his aim of discovering a unit for the measurement of utility unless he can first show how to determine the proportion between two given marginal utilities. If, for example, an individual has a hundred loaves of bread at his disposal during one year, the marginal utility of a loaf to him will be greater than if he had one hundred and fifty loaves. **The problem is, to determine the arithmetical proportion between the two marginal utilities.** Fisher attempts to do this by comparing them with a third utility. He therefore supposes the individual to have B gallons of oil annually as well, and calls β that increment of B whose utility is equal to that of the 100th loaf of bread. In the second case, when not a hundred but a hundred and fifty loaves are available, it is assumed that the supply of B remains unchanged. Then the utility of the 150th loaf may be equal, say, to the utility of $\beta/2$. Up to this point it is unnecessary to quarrel with Fisher's argument; but now follows a jump that neatly avoids all the difficulties of the problem. That is to say, Fisher simply continues, as if he were stating something quite self-evident: "Then the utility of the 150th loaf is said to be half the utility of the 100th." Without any

further explanation he then calmly proceeds with his problem, the solution of which (if the above proposition is accepted as correct) involves no further difficulties, and so succeeds eventually in deducing a unit which he calls a "util." It does not seem to have occurred to him that in the particular sentence just quoted he has argued in defiance of the whole of marginal-utility theory and set himself in opposition to all the fundamental doctrines of modern economics. For obviously this conclusion of his is legitimate only if the utility of β is equal to twice the utility of $\beta/2$. But if this were really so, the problem of determining the proportion between two marginal utilities could have been solved in a quicker way, and his long process of deduction would not have been necessary. Just as justifiably as he assumes that the utility of β is equal to twice the utility of $\beta/2$, he might have assumed straightaway that the utility of the 150th loaf is two-thirds of that of the 100th.

Fisher imagines a supply of B gallons that is divisible into n small quantities β , or $2n$ small quantities $\beta/2$. He assumes that an individual who has this supply B at his disposal regards the value of commodity unit x as equal to that of β and the value of commodity unit y as equal to that of $\beta/2$. And he makes the further assumption that in both valuations, that is, both in equating the value of x with that of β and in equating the value of y with that of $\beta/2$, the individual has the same supply of B gallons at his disposal.

He evidently thinks it possible to conclude from this that the utility of β is twice as great as that of $\beta/2$. The error here is obvious. The individual is in the one case faced with the choice between x (the value of the 100th loaf) and $\beta = 2\beta/2$. He finds it impossible to decide between the two, i.e., he values both equally. In the second case he has to choose between y (the value of the 150th loaf) and $\beta/2$. Here again he finds that both alternatives are of equal value. Now the question arises, what is the proportion between the marginal utility of β and that of $\beta/2$? We can determine this only by asking ourselves what the proportion is between the marginal utility of the n th part of a given supply and that of the $2n$ th part of the same supply, between that of β/n and that of $\beta/2n$. For this purpose let us imagine the supply B split up into $2n$ portions of $\beta/2n$. Then the marginal utility of the $(2n-1)$ th portion is greater than that of the $2n$ th portion. If we now imagine the same supply B divided into n portions, then it clearly follows that the marginal utility of the n th portion is equal to that of the $(2n-1)$ th portion plus that of the $2n$ th portion in the previous case. It is not twice as great as that of the $2n$ th portion, but more than twice as great. In fact, even with an unchanged supply, the marginal utility of several units taken together is not equal to the marginal utility of one unit multiplied by the number of units, but necessarily greater than this product. The value of two units is greater than, but not twice as great as, the value of one unit. [5]

Perhaps Fisher thinks that this consideration may be disposed of by supposing β and $\beta/2$ to be such small quantities that their utility may be reckoned infinitesimal. If this is really his opinion, then it must first of all be objected that the peculiarly mathematical conception of infinitesimal quantities is inapplicable to economic problems. The utility afforded by a given amount of commodities, is either great enough for valuation, or so small that it remains imperceptible to the valuer and cannot therefore affect his judgment. But even if the applicability of the conception of infinitesimal quantities were granted, the argument would still be invalid, for it is obviously impossible to find the proportion between two finite marginal utilities by equating them with two infinitesimal marginal utilities.

Finally, a few words must be devoted to Schumpeter's attempt to set up as a unit the satisfaction resulting from the consumption of a given quantity of commodities and to express other satisfactions as multiples of this unit. Value judgments on this principle would have to be

expressed as follows: "The satisfaction that I could get from the consumption of a certain quantity of commodities is a thousand times as great as that which I get from the consumption of an apple a day," or "For this quantity of goods I would give at the most *a thousand times this apple*." [6] Is there really anybody on earth who is capable of adumbrating such mental images or pronouncing such judgments? Is there any sort of economic activity that is actually dependent on the making of such decisions? Obviously not. [7] Schumpeter makes the same mistake of starting with the assumption that we need a measure of value in order to be able to compare one "quantity of value" with another. But valuation in no way consists in a comparison of two "quantities of value." It consists solely in a comparison of the importance of different wants. The judgment "Commodity *a* is worth more to me than commodity *b*" no more presupposes a measure of economic value than the judgment "A is dearer to me—more highly esteemed—than B" presupposes a measure of friendship.

2 Total Value

If it is impossible to measure subjective use-value, it follows directly that it is impracticable to ascribe "quantity" to it. We may say, the value of this commodity is greater than the value of that; but it is not permissible for us to assert, this commodity is worth *so much*. Such a way of speaking necessarily implies a definite unit. It really amounts to stating how many times a given unit is contained in the quantity to be defined. But this kind of calculation is quite inapplicable to processes of valuation.

The consistent application of these principles implies a criticism also of Schumpeter's views on the total value of a stock of goods. According to Wieser, the total value of a stock of goods is given by multiplying the number of items or portions constituting the stock by their marginal utility at any given moment. The untenability of this argument is shown by the fact that it would prove that the **total stock of a free good must always be worth nothing**. Schumpeter therefore suggests a different formula in which each portion is multiplied by an index corresponding to its position on the value scale (which, by the way, is quite arbitrary) and these products are then added together or integrated. This attempt at a solution, like the preceding, has the defect of assuming that it is possible to measure marginal utility and "intensity" of value. The fact that such measurement is impossible renders both suggestions equally useless. Mastery of the problem must be sought in some other way.

Value is always the result of a process of valuation. The process of valuation compares the significance of two complexes of commodities from the point of view of the individual making the valuation. The individual making the valuation and the complexes of goods valued, that is, the subject and the objects of the valuation, must enter as indivisible elements into any given process of valuation. This does not mean that they are necessarily indivisible in other respects as well, whether physically or economically. The subject of an act of valuation may quite well be a group of persons, a state or society or family, so long as it acts in this particular case as a unit, through a representative. And the objects thus valued may be collections of distinct units of commodities so long as they have to be dealt with in this particular case as a whole. There is nothing to prevent either subject or object from being a single unit for the purposes of one valuation even though in another their component parts may be entirely independent of each other. The same people who, acting together through a representative as a single agent, such as a state, make a judgment as to the relative values of a battleship and a hospital, are the independent subjects of valuations of other commodities, such as cigars and newspapers. It is just the same with commodities. Modern value theory is based on the fact that it is not the abstract importance of different kinds of need that determines the scales of values, but the

intensity of specific desires. Starting from this, the law of marginal utility was developed in a form that referred primarily to the usual sort of case in which the collections of commodities are divisible. But there are also cases in which the total supply must be valued as it stands.

Suppose that an economically isolated individual possesses two cows and three horses and that the relevant part of his scale of values (that item valued highest being placed first) is as follows: 1, a cow; 2, a horse; 3, a horse; 4, a horse; 5, a cow. If this individual has to choose between one cow and one horse he will rather be inclined to sacrifice the cow than the horse. If wild animals attack one of his cows and one of his horses, and it is impossible for him to save both, then he will try to save the horse. But if the whole of his stock of either animal is in danger, his decision will be different. Supposing that his stable and cowshed catch fire and that he can only rescue the occupants of one and must leave the others to their fate, then if he values three horses less than two cows he will attempt to save not the three horses but the two cows. The result of that process of valuation which involves a choice between one cow and one horse is a higher estimation of the horse. The result of the process of valuation which involves a choice between the whole available stock of cows and the whole available stock of horses is a higher estimation of the stock of cows.

Value can rightly be spoken of only with regard to specific acts of appraisal. It exists in such connections only; there is no value outside the process of valuation. There is no such thing as abstract value. Total value can be spoken of only with reference to a particular instance of an individual or other valuing "subject" having to choose between the total available quantities of certain economic goods. Like every other act of valuation, this is complete in itself. The person making the choice does not have to make use of notions about the value of units of the commodity. His process of valuation, like every other, is an immediate inference from considerations of the utilities at stake. When a stock is valued as a whole, its marginal utility, that is to say, the utility of the last available unit of it, coincides with its total utility, since the total supply is one indivisible quantity. This is also true of the total value of free goods, whose separate units are always valueless, that is, are always relegated to a sort of limbo at the very end of the value scale, promiscuously intermingled with the units of all the other free goods. [8]

3 Money as a Price Index

What has been said should have made sufficiently plain the unscientific nature of the practice of attributing to money the function of acting as a measure of price or even of value. **Subjective value is not measured, but graded.** The problem of the measurement of objective use-value is not an economic problem at all. (It may incidentally be remarked that a measurement of efficiency is not possible for every species of commodity and is at the best only available within separate species, while every possibility, not only of measurement, but even of mere scaled comparison, vanishes as soon as we seek to establish a relation between two or more kinds of efficiency. It may be possible to measure and compare the calorific value of coal and of wood, but it is in no way possible to reduce to a common objective denominator the objective efficiency of a table and that of a book.)

Neither is objective exchange value measurable, for it too is the result of the comparisons derived from the valuations of individuals. The objective exchange value of a given commodity unit may be expressed in units of every other kind of commodity. Nowadays exchange is usually carried on by means of money, and since every commodity has therefore a price expressible in money, the exchange value of every commodity can be expressed in terms of money. This possibility enabled money to become a medium for expressing values when the growing

elaboration of the scale of values which resulted from the development of exchange necessitated a revision of the technique of valuation.

That is to say, opportunities for exchanging induce the individual to rearrange his scales of values. A person in whose scale of values the commodity "a cask of wine" comes after the commodity "a sack of oats" will reverse their order if he can exchange a cask of wine in the market for a commodity that he values more highly than a sack of oats. The position of commodities in the value scales of individuals is no longer determined solely by their own subjective use-value, but also by the subjective use-value of the commodities that can be obtained in exchange for them, whenever the latter stand higher than the former in the estimation of the individual. Therefore, if he is to obtain the maximum utility from his resources, the individual must familiarize himself with all the prices in the market.

For this, however, he needs some help in finding his way among the confusing multiplicity of the exchange ratios. Money, the common medium of exchange, which can be exchanged for every commodity and with which every commodity can be procured, is preeminently suitable for this. It would be absolutely impossible for the individual, even if he were a complete expert in commercial matters, to follow every change of market conditions and make the corresponding alterations in his scale of use-values and exchange values, unless he chose some common denominator to which he could reduce each exchange ratio. Because the market enables any commodity to be turned into money and money into any commodity, objective exchange value is expressed in terms of money. Thus money becomes a price index, in Menger's phrase. The whole structure of the calculations of the entrepreneur and the consumer rests on the process of valuing commodities in money. Money has thus become an aid that the human mind is no longer able to dispense with in making economic calculations. [9] **If in this sense we wish to attribute to money the function of being a measure of prices, there is no reason why we should not do so. Nevertheless, it is better to avoid the use of a term which might so easily be misunderstood as this.** In any case the usage certainly cannot be called correct—we do not usually describe the determination of latitude and longitude as a "function" of the stars. [10]

[1] See Simmel, *Philosophie des Geldes*, 2d ed. (Leipzig, 1907), p. 35; Schumpeter, *Wesen und Hauptinhalt der theoretischen Nationalökonomie* (Leipzig, 1908), p. 50.

[2] Cf. Böhm-Bawerk, "Grundzüge der Theorie des wirtschaftlichen Güterwertes," *Jahrbücher für Nationalökonomie und Statistik* (1886), New Series, vol. 13, p. 48.

[3] See Cuhel, *Zur Lehre von den Bedürfnissen* (Innsbruck, 1906), pp. 186 ff.; Weiss, *Die moderne Tendenz in der Lehre vom Geldwert*, *Zeitschrift für Volkswirtschaft, Sozialpolitik und Verwaltung*, vol. 19, pp. 532 ff. In the last edition of his masterpiece *Capital and Interest*, revised by himself, Böhm-Bawerk endeavored to refute Cuhel's criticism, but did not succeed in putting forward any new considerations that could help toward a solution of the problem (see *Kapital und Kapitalzins*, 3d ed. [Innsbruck, 1909-12], pp. 331 ff. Exkurse, pp. 280 ff.).

[4] See Fisher, *Mathematical Investigations in the Theory of Value and Prices*, Transactions of the Connecticut Academy (New Haven, 1892), vol. 9, pp. 14 ff.

[5] See also Weiss, *op. cit.*, p. 538.

[6] Cf. Schumpeter, *op. cit.*, p. 290.

[7] Cf. further Weiss, *op. cit.*, pp. 534 ff.

[8] See also Clark, *Essentials of Economic Theory* (New York, 1907), p. 41. In the first German edition of the present work, the above argument contained two further sentences that summarized in an inadequate fashion the results of investigation into the problem of total value. In deference to certain criticisms of C. A. Verrijn Stuart (*Die Grundlagen der Volkswirtschaft* [Jena, 1923], p. 115), they were omitted from the second edition.

[9] On the indispensability of money for economic calculation, see my book *Die Gemeinwirtschaft: Untersuchungen über den Sozialismus* (Jena, 1922), pp. 100 ff.

[10] [This chapter deals with technical matters which may present difficulty to readers unacquainted with general economic theory. It may be omitted on a first reading, but it is essential to complete understanding of certain issues, such as the index-number problem, which are dealt with later.—Editor.]

Study Guide Chapter 2: **ON THE MEASUREMENT OF VALUE**

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The classical economists relied on an **objective theory of value**, and naturally thought that money was a measuring rod of this objective value. Modern economics is based on a **subjective theory of value**, which traces the source of value to the mind of the individual actor. **Value** is the significance given to a particular good by a person. Subjective value is bound up with the idea of exchange. Each party to a voluntary trade gives up an item that is lower on his value ranking (or **scale of values**), in exchange for an item that is higher on his ranking. Exchanges will occur until there are no more mutually beneficial trades. Individuals' subjective valuations give rise to *objective* exchange ratios or **prices**.

The **law of diminishing marginal utility** states that the value of the last unit of a commodity decreases as the person acquires a greater quantity of the commodity. The various schemes to define an objective measurement of satisfaction—a “util”—cannot get around the fact that value scales involve a ranking (1st, 2nd, 3rd, etc.) and not a measurement of the intensity of value. It is impossible to perform arithmetical operations on the marginal utilities of various units in order to compute the “total utility” or total value of the entire stock of the good. If someone says, “Diamonds are more valuable than water,” what he means is that if forced to give up *one* diamond or *one* gallon of water, he would choose to give up the latter.

Knowledge of objective money prices causes people to revise their subjective value scales. Objective money prices provide a “**common denominator**” for the market exchange values of all the various goods and services available.

However, money prices themselves are constantly changing. That is why Mises and Menger prefer to say that **money is an index (not a measurement) of prices**, since it is less liable to confusion.

1. The Immeasurability of Subjective Use-Values The classical economists (such as Adam Smith) relied on an **objective theory of value**, which held that the value of a commodity was based on an objective criterion (such as the amount of labor required for its production). In this mindset, it was natural to view money as a measuring rod of this objective value. Just as a thermometer shows a higher reading on a hot day than on a cold day—reflecting the objectively warmer temperature—so too did the classical economists think that a higher price tag indicated that a more expensive good had a higher objective value than a cheaper good.

However, modern economics is based on a **subjective theory of value**, which traces the source of value to the mind of the individual actor. **In modern economics, value doesn't reside in physical things per se, but instead is an attribute ascribed to physical things by subjective preferences.** **Value** is the significance given to a particular good by a person, who can imagine ways to use the good to become more satisfied.

Subjective value is bound up with the idea of exchange. If a man values a piece of iron more than a piece of bread, it means that he would choose the former if faced with a choice between the two. Even Robinson Crusoe, alone on his desert island, reveals his valuations by his “exchanges” with nature. For example, he may value satisfying his hunger more than he values satisfying his desire to lounge on the beach, and that is why he “exchanges” his leisure time for coconuts (by climbing trees).

With more than one person, valuation guides exchanges made in the marketplace. Each party to a voluntary trade gives up an item that is lower on his value ranking (or **scale of values**), in exchange for an item that is higher on his ranking. This apparent contradiction—where each person gives up something “less valuable” in exchange for something “more valuable”—is perfectly sensible because value is in the eye of the beholder, i.e., value is subjective. In the market, exchanges will occur until there are no more mutually beneficial trades. The underlying subjective valuations *driving* acts of exchange do not involve a “measurement” of value. (For an analogy, someone can rank his friends in order of importance, without implying that there is an objective unit of friendship that the person measures in each person before constructing the ranking. Someone can report, “Jim is my best friend and Sally is my second-best friend” without being able to say, “Jim is a 24 percent better friend than Sally.”) All that is necessary is that a person be able to look at any two possibilities, and decide which he prefers.

Even though market exchanges are driven by subjective valuations that are themselves nonquantifiable, nonetheless these exchanges in turn give rise to *objective* exchange ratios or **prices**. For example, suppose Alice has three pears while Bob has two apples, and that on her value scale Alice ranks “two apples” more highly than “three pears,” whereas Bob has the opposite ranking. These subjective valuations—which do not involve any measurement of the amount of value or utility residing in each combination of fruit—mean that the two people can gain from trading the three pears for the two apples. This mutually beneficial trade then establishes that the objective price of an apple is 1.5 pears, and that the price of a pear is two-thirds of an apple. Thus Alice and Bob's subjective rankings of apples and pears, allowed for the formation of an objective market price reflected in their exchange. But it would be nonsensical to describe this scenario as one in which “an apple gives 50 percent more value to people than a pear.”

The **law of diminishing marginal utility** states that the value of the last unit of a commodity (in someone's possession) decreases as the person acquires a greater quantity of the commodity. This follows from the observation that a person will necessarily assign subsequent units of a commodity to those purposes that he deems less and less significant. For example, if a person has only one gallon of water, he will attach a great significance to it, because it is necessary to stave off thirst.

As a person's access to water becomes greater, however, the last (or marginal) gallon of water becomes less significant. The 25th gallon, perhaps, will be devoted to cooking, and is not nearly as important as the 1st through 24th gallons, which were devoted to drinking. And the 1,000th gallon might be used to wash the car, a relatively unimportant goal. The various schemes to define an objective measurement of satisfaction—a "util"—cannot get around the fact that value scales involve a ranking (1st, 2nd, 3rd, etc.) and not a measurement of the intensity of value. The renowned Chicago School economist Irving Fisher, for example, devised a clever argument by which he equated the utility of the 100th loaf of bread with the utility derived from the last and second-last units of fuel oil. At the same time, the utility of the 150th loaf of bread was equal to the utility of only the last unit of fuel oil. Fisher concludes that the 150th loaf of bread must have only one-half the utility of the 100th loaf. But this assumes away diminishing marginal utility in the fuel oil.

2. Total Value

If it is impossible to measure the value in a single unit of a good, it is obviously impossible to perform arithmetical operations on the marginal utilities of various units in order to compute the "total utility" or total value of the entire stock of the good. One problem with this approach is that a **free good** (such as air) would end up with a total value of zero, since the marginal utility of one cubic meter of air is zero in most circumstances.

It must be repeated that utility or value is a concept related to the acts of choice that a particular individual contemplates. If someone says, "Diamonds are more valuable than water," what he means is that if forced to give up *one* diamond or *one* gallon of water, he would choose to give up the latter. But if an individual had to choose between all the water in the world, or all the diamonds, then he would choose to retain the water (at least if he wanted to live longer than a few days). Only in this contrived case can we meaningfully speak of the "total value" of the entire stock of water, because in this situation the "total value" and the "marginal value" are the same; the unit under consideration is all the water in the world.

3. Money as a Price Index

At this point, it should be clear that money cannot serve as a measuring rod of subjective value. There is a sense in which money is a measure of objective market exchange value, however. For example, if a car trades for \$20,000 while a motorcycle trades for \$10,000, then the car has twice as much exchange value. Someone bringing a car to market can obtain "twice as many goods and services" for it, where the amount is measured in money prices. Knowledge of objective money prices causes people to revise their subjective value scales. Someone who despises smoking and loves vegetables may nonetheless place a higher value on an unopened carton of cigarettes than on a tomato, because she can sell the carton for money, and then use the money to buy a tomato as well as many other items. In this way, objective money prices provide a "common denominator" for the market exchange values of all the various goods and services available. However, because money prices themselves are

determined by the underlying subjective valuations of the traders, they are constantly changing. The various combinations of goods that one motorcycle can “buy” today, may be different tomorrow, not only because the price (quoted in money) of the motorcycle can change, but also because the prices (quoted in money) of all other goods can change. That is why Mises and Menger prefer to say that **money is an index (not a measurement) of prices, since it is less liable to confusion.**

- **The replacement of the classical economists’ labor (or cost) theory of value, with subjective value theory, was a true revolution in economic theory.** The classical theory explained the price of a good by the amount of labor or (more generally) the cost of producing the good. Although such an approach explained the fact that prices and production costs tended to be similar, there were many problems. For example, it was clear that the *actual* day-to-day prices of goods were not determined by production costs, so at best the cost theory explained long-run tendencies, not the determinants of actual market prices. Worse still, “costs” are themselves prices, and so to explain the price of a good by the costs of producing it, only pushes the problem back one step. By explaining the prices of consumer goods through the interaction of subjective valuations in the market—and then using these consumer prices to explain the prices of the producer goods needed to make them—the **subjective value theorists resolved these problems.** Although other economists participated in the **Subjectivist /Marginal Revolution**, it was the Austrian economists who worked out the logical foundations of the new approach, as Mises’s frequent references to Menger, Böhm-Bawerk, and Wieser testify.

- Irving Fisher was an incredibly influential economist from the Chicago School, and arguably one of the founders of modern, mainstream economics. Although economists paid lip service to the subjectivist revolution in value theory, nonetheless they often fell back into the old habit of viewing utility as a cardinal, measurable substance. Mises’s critique of Fisher is a good illustration of this tendency. Modern Austrian economists also chide their mainstream peers for relying on mathematical models of “utility functions” that can easily lead the economist into forgetting that modern price theory only assumes that individuals can *rank* various combinations of goods from best to worst. There is no need to assume that a consumer has an intensity of preference for various goods that could be measured by units of utility.

Free good: A good that has a price of zero, because it is not scarce. There is enough of the good to satisfy all human wants that it can technically fulfill.

Law of diminishing marginal utility: The rule, deducible from the nature of economizing action, that each additional unit of a good or service will have a lower value, because a person will allocate successive units to satisfying ends that are less and less important.

Objective theory of value: An explanation of value that relies on the objective properties of a good, such as its cost of production or the amount of labor that went into its construction. (The classical economists, such as Adam Smith and David Ricardo, held an objective theory of value.)

Prices: The market exchange ratios between various goods and services. In a monetary economy, prices are typically quoted in terms of the money good.

Scale of values: An analytical tool by which the economist interprets the actions of an individual, who subjectively ranks particular units of goods and services in order from most to least important.

Subjective theory of value: An explanation of value that relies on individuals' subjective rankings of particular units of goods and services. (The so-called Marginal Revolution of the early 1870s—spearheaded by Carl Menger, William Stanley Jevons, and Léon Walras—overturned the objective theory of value and ushered in the subjective theory.)

Value: The importance that an individual places on a particular unit of a good or service.

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Explain: "In the older political economy, the search for a principle governing the measurement of value was to a certain extent justifiable." (p. 38)

Exchange transactions must be preceded by measurement of the quantity of value contained in each of the objects that are to be exchanged. And it is then an obvious step to regard money as the measure of value.

1. Why would an isolated individual still need to engage in a "comparison of values" before taking action with respect to scarce goods? (p. 38)

Every economic transaction presupposed a comparison of values. Changes in the stocks of goods of higher and lower orders do nevertheless occur whenever anything is produced or consumed; and these changes must be based upon valuations if their returns are to exceed the outlay they involve.

2. Why does an exchange of two items require that the people making the exchange place the items in reverse order on their value scales? (p. 39)

Subjective valuation only arranges commodities in order of their significance; it does not measure this significance. An exchange takes place when two commodity units are placed in a different order on the value scales of two different persons. In a market, exchanges will continue until it is no longer possible for reciprocal surrender of commodities by any two individuals to result in their each acquiring commodities that stand higher on their value scales than those surrendered.

3. Explain: "The untenability of [Wieser's] argument is shown by the fact that it would prove that the total stock of a free good must always be worth nothing." (p. 45)

We may say the value of this commodity is greater than the value of that; but it is not permissible for us to assert, this commodity is worth so much. According to Wieser, the total value of a stock of goods is given by multiplying the number of items or portions constituting the stock by their marginal utility at any given moment. It is not possible to measure marginal utility and "intensity" of value.

4. How does money aid the entrepreneur? (pp. 48–49)

Money helps the entrepreneur find his or her way among the confusing multiplicity of the exchange ratios. Money, the common medium of exchange, which can be exchanged for every commodity and with which every commodity can be procured, is preeminently suitable for this. Objective exchange value is expressed in terms of money.

END

QUIZ

Question 1

What is a problem with the State theory of the origin of money?
Choose one answer.

<input type="radio"/>	a. Different rulers claim to have invented money.	
<input type="radio"/>	b. The idea of money would be crazy for people who hadn't grown up with it.	
<input checked="" type="radio"/>	c. Before money existed, the State would have no means of influencing people.	

Question 2

Marks: 1.00

Which Austrian economist is credited with explaining the origin of money?
Choose one answer.

<input type="radio"/>	a. Eugen von Bohm-Bawerk	
<input type="radio"/>	b. Friedrich von Wieser	
<input checked="" type="radio"/>	c. Carl Menger	

Question 3

Marks: 1.00

What would be very unlikely in the absence of money?
Choose one answer.

<input type="radio"/>	a. Exchange	
<input type="radio"/>	b. Production	
<input checked="" type="radio"/>	c. Specialization	

Question 4

Marks: 1.00

Which of the following goods (probably) has the highest market value?

Choose one answer.

<input checked="" type="radio"/>	a. House in a suburb.	
<input type="radio"/>	b. Minivan with 5,000 miles on it.	
<input type="radio"/>	c. \$100 U.S. government savings bond.	

Question 5

Marks: 1.00

Which of the following goods (probably) has the highest liquidity?
Choose one answer.

<input type="radio"/>	a. Minivan with 5,000 miles on it.	
<input type="radio"/>	b. \$100 U.S. government savings bond.	
<input type="radio"/>	c. House in a suburb.	

Question 6

Marks: 1.00

What is a medium of exchange?
Choose one answer.

<input checked="" type="radio"/>	a. An item that a person doesn't intend to personally consume.	
<input type="radio"/>	b. An item accepted in trade that the person intends to trade away in the future.	
<input type="radio"/>	c. An object of exchange that is neither too big nor too small.	

Question 7

Marks: 1.00

By what criterion is gold a better money than emeralds?
Choose one answer.

<input type="radio"/>	a. Easy to transport.	
<input type="radio"/>	b. Durable.	

<input checked="" type="radio"/>	c. Easily divisible.	
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Question 8

Marks: 1.00

By what criterion is gold a better money than diamonds?
Choose one answer.

<input checked="" type="radio"/>	a. Homogeneous units.	
<input type="radio"/>	b. Easy to transport.	
<input type="radio"/>	c. Convenient market value by weight.	

Question 9

Marks: 1.00

If Jim trades 10 gold coins for Mary's horse, what can we say about subjective value?
Choose one answer.

<input checked="" type="radio"/>	a. Jim values the horse more than the 10 coins, while Mary values the 10 coins more than the horse.	
<input type="radio"/>	b. The subjective value of 1 gold coin is equal to the subjective value of one-tenth of a horse.	
<input type="radio"/>	c. The subjective value of 10 gold coins equals that of one horse.	

Question 10

Marks: 1.00

If Jim trades 10 gold coins for Mary's horse, what can we say about market value?
Choose one answer.

<input type="radio"/>	a. We need more information.	
<input type="radio"/>	b. The market value of the 10 coins is less than the market value of the horse.	
<input checked="" type="radio"/>	c. The market value of 10 coins is equal to the market value of 1 horse.	