

are. Since, as was seen above, correct speculation quickens the movement toward equilibrium, and erroneous speculation tends to correct itself, the activity of these speculators tends to hasten the arrival of an equilibrium position.

The direct users of a good must *also anticipate their desires for a good* when they purchase it. At the time of purchase, their actual use of a good will be at some date in the future, even if in the very near future. The position of the good on their value scales is an estimate of its expected future value in these periods, discounted by time preferences. It is very possible for the buyer to make an erroneous forecast of the value of the good to him in the future, and the more durable the good, the greater the likelihood of error. Thus, it is more likely that the buyer of a house will be in error in forecasting his own future valuation than the buyer of strawberries. Hence, entrepreneurship is also a feature of the buyer's activity—even in direct use. However, in the case of specialized producers, entrepreneurship takes the form of estimating *other people's* future wants, and this is obviously a far more difficult and challenging task than forecasting one's *own* valuations.

Human action occurs in stages, and at each stage an actor must make the best possible use of his resources in the light of expected future developments. The past is forever bygone. The role of errors in different stages of human action may be considered in the comparatively simple case of the man who buys a good for direct use. Say that his estimate of his future uses is such that he purchases a good—e.g., 10 quarts of milk—in exchange for 100 barrels of fish, which also happens to be his maximum buying price for 10 quarts of milk. Suppose that after the purchase is completed he finds, for some reason, that his valuations have changed and that the milk is now far lower on his value scale. He is now confronted with the question of the best use to make of the 10 quarts of milk. The fact that he has made an error in using his resources of 100 barrels of fish does not remove the problem of making the best use of the 10 quarts of milk. If the price is still 100 barrels of fish, his best

course at present would be to resell the milk and reobtain the 100 barrels of fish. If the price is now above 100, he has made a speculative gain, and he can resell the milk for more fish. And if the price of milk has fallen, but the fish is still higher on his value scale than the 10 quarts of milk, it would maximize his psychic revenue to sell the milk for less than 100 barrels of fish.

It is important to recognize that it is absurd to criticize such an action by saying that he suffered a clear loss of X barrels of fish from the two exchanges. To be sure, if he had correctly forecast later developments, the man would not have made the original exchange. His *original* exchange can therefore be termed erroneous in retrospect. But once the first exchange has been made, he must make the best possible present and future use of the milk, regardless of past errors, and therefore his second exchange was his best possible choice under the circumstances.

If, on the other hand, the price of milk has fallen below his new minimum buying price, then his best alternative is to use the milk in its most valuable direct use.

Similarly, a producer might decide to produce a certain amount of stock, and, after the stock has been made, the state of the market turns out to be such as to make him regret his decision. However, he must do the best he can with the stock, once it has been produced, and obtain the maximum psychic revenue from it. In other words, if we consider his action from the beginning—when he *invested* his resources in production—his act in retrospect was a psychic loss because it did not yield the best available alternative from these resources. But once the stock is produced, *this* is his available resource, and its sale at the best possible price now nets him a psychic gain.

At this point, we may summarize the expected (psychic) revenue and the expected (psychic) cost, factors that enter into the decision of buyers and sellers in any direct exchange of two goods.

<i>Buyer Revenue</i>	<i>Seller Revenue</i>
<p>Either</p> <ul style="list-style-type: none"> *A. Direct use of purchase-good <p>or B. Anticipated later sale at higher price (whichever is the greater on his value scale)</p>	<p>Either</p> <ul style="list-style-type: none"> *A. Direct use of sale-good <p>or B. Anticipated later purchase at lower price (whichever is the greater on his value scale)</p>
<i>Buyer Cost</i>	<i>Seller Cost</i>
<p>Either</p> <ul style="list-style-type: none"> A. Direct use of sale-good <p>or B. Anticipated later purchase at lower price</p> <p>or *C. Exchange for a third good (whichever is the greatest on his value scale)</p>	<p>Either</p> <ul style="list-style-type: none"> A. Direct use of purchase-good <p>or *B. Exchange for a third good</p> <p>or C. Later sale at a higher price (whichever is the greatest on his value scale)</p>

If we eliminate the temporary speculative element, we are left with factors: revenue *A*, cost *A*, cost *C* for buyers; and revenue *A*, cost *A*, cost *B* for sellers. Similarly, if we consider the sellers as the specialized original producers—and this will be more true the greater the proportion of the rate of production to accumulated stock—cost *A* drops out for the sellers. If we also remember that, since the exchange involves two goods, the set of buyers for one good is the set of sellers for the other good, cost *A* is eliminated as a factor for buyers as well. Only the factors asterisked above ultimately remain. The revenue for both the buyers and the sellers is the expected direct use of the goods acquired; the costs are the exchange for a third good that is forgone because of this exchange.

The revenue and costs that are involved in making *the original decision regarding the production of stock* are, as we have indicated, of a different order, and these will be explored in subsequent chapters.

11. Types of Exchangeable Goods

For the sake of clarity, the examples of exchangeable goods in this chapter have mainly been taken from tangible *commodities*, such as horses, fish, eggs, etc. Such commodities are not the only type of goods subject to exchange, however. *A* may exchange his *personal services* for the commodity of *B*. Thus, for example, *A* may give his labor services to farmer *B* in exchange for farm produce. Furthermore, *A* may give personal services that function directly as *consumers' goods* in exchange for another good. An individual may thus exchange his medical advice or his musical performance for food or clothing. These services are as legitimately consumers' goods as those goods that are embodied in tangible, physical commodities. Similarly, individual labor services are as much producers' goods as are tangible capital goods. As a matter of fact, tangible goods are valued not so much for their physical content as for their *services* to the user, whether he is a consumer or a producer. The actor values the bread for its services in providing nourishment, the house for its services in providing shelter, the machine for its service in producing a lower-order good. In the last analysis, tangible commodities are also valued for their services, and are thus on the same plane as intangible personal "services."

Economics, therefore, is *not* a science that deals particularly with "material goods" or "material welfare." It deals in general with the action of men to satisfy their desires, and, specifically, with the process of exchange of goods as a means for each individual to "produce" satisfactions for his desires. These goods may be tangible commodities or they may be intangible personal services. The principles of supply and demand, of price determination, are exactly the same for any good, whether it is in one category or the other. The foregoing analysis is applicable to all goods.

Thus, the following types of possible exchanges have been covered by our analysis:

- (a) A commodity for a commodity; such as horses for fish.
- (b) A commodity for a personal service; such as medical advice for butter, or farm labor for food.
- (c) A personal service for a personal service; such as mutual log-rolling by two settlers, or medical advice for gardening labor, or teaching for a musical performance.³²

In cases where there are several competing homogeneous units, supply and demand schedules can be added; in cases where one or both parties are isolated or are the only ones exchanging, the zone of price determination will be established as indicated above. Thus, if one arithmetic teacher is bargaining with one violinist for an exchange of services, their respective utility rankings will set the zone of price determination. If several arithmetic teachers and several violinists who provide homogeneous services form a market for their two goods, the market price will be formed with the addition and intersection of supply and demand schedules. If the services of the different individuals are not considered as of equal quality by the demanders, they will be evaluated separately, and each service will be priced separately.³³ The supply curve will then be a supply of units of a commodity possessed by only *one* individual. This individual supply curve is, of course, sloped upward in a rightward direction. Where only one individual is the supplier of a good on the market, his supply curve is identical with the market supply curve.

One evident reason for the confusion of exchange with a mere trade of material objects is the fact that much intangible property *cannot*, by its very nature, be exchanged. A violinist may *own* his musicianly ability and exchange units of it, in the form of

³²On the importance of services, see Arthur Latham Perry, *Political Economy* (21st ed.; New York: Charles Scribner's Sons, 1892), pp. 124-39.

³³This is not to deny, of course, that the existence of *several* violinists of different quality will affect the consumer's evaluations of each one.

service, for the services of a physician. But other personal attributes, which cannot be exchanged, may be desired as goods. Thus, Brown might have a desired end: to gain the genuine approval of Smith. This is a particular consumers' good which he cannot purchase with any other good, for what he wants is the genuine approval rather than a show of approval that might be purchased. In this case, the consumers' good is a property of Smith's that cannot be exchanged; it might be acquired in some way, but not by exchange. In relation to exchange, this intangible good is an *inalienable* property of Smith's, i.e., it cannot be given up. Another example is that a man cannot permanently transfer his will, even though he may transfer much of his services and his property. As mentioned above, a man may not agree to permanent bondage by contracting to work for another man for the rest of his life. He might change his mind at a later date, and then he cannot, in a free market, be compelled to continue working thereafter. Because a man's self-ownership over his will is inalienable, he cannot, on the unhampered market, be compelled to continue an arrangement whereby he submits his will to the orders of another, even though he might have agreed to this arrangement previously.^{34,35} On the other hand, when property that *can* be alienated is transferred, it, of course, becomes the

³⁴If he has taken the property of another by means of such an agreement, he will, on the free market, have to return the property. Thus, if A has agreed to work for life for B in exchange for 10,000 grams of gold, he will have to return the proportionate amount of property if he terminates the arrangement and ceases the work.

³⁵In other words, he cannot make enforceable contracts binding his future personal actions. (On contract enforcement in an unhampered market, see section 13 below. This applies also to *marriage contracts*. Since human self-ownership cannot be alienated, a man or a woman, on a free market, could not be compelled to continue in marriage if he or she no longer desired to do so. This is regardless of any previous agreement. Thus, a marriage contract, like an individual labor contract, is, on an unhampered market, terminable at the will of *either one* of the parties.

property—under the sole and exclusive jurisdiction—of the person who has received it in exchange, and no later regret by the original owner can establish any claim to the property.

Thus, exchange may occur with alienable goods; they may be consumers' goods, of varying degrees of durability; or they may be producers' goods. They may be tangible commodities or intangible personal services. There are other types of exchangeable items, which are based on these alienable goods. For example, suppose that Jones deposits a good—say 1,000 bushels of wheat—in a warehouse for safekeeping. He retains ownership of the good, but transfers its physical possession to the warehouse owner, Green, for safekeeping. Green gives Jones a *warehouse receipt* for the wheat, certifying that the wheat is there for safekeeping and giving the owner of the receipt a *claim* to receive the wheat whenever he presents the receipt to the warehouse. In exchange for this service as a guardian of the wheat, Jones pays him a certain agreed amount of some other good, say emeralds. Thus, the claim originates from an exchange of a commodity for a service—emeralds for storage—and the price of this exchange is determined according to the principles of the foregoing analysis. Now, however, the warehouse receipt has come into existence as a claim to the wheat. On an unhampered market, the claim would be regarded as absolutely secure and certain to be honored, and therefore Jones would be able to exchange the claim as a *substitute* for actual physical exchange of the wheat. He might find another party, Robinson, who wishes to purchase the wheat in exchange for horses. They agree on a price, and then Robinson accepts the *claim* on the warehouse as a perfectly good substitute for actual transfer of the wheat. He knows that when he wants to use the wheat, he will be able to *redeem* the claim at the warehouse; the claim therefore functions here as a *goods-substitute*. In this case, the claim is to a *present good*, since the good can be redeemed at any time that the owner desires.

Here, the nature and function of the claim is simple. The claim is a secure evidence of ownership of the good. Even simpler

is a case where ownership of property, say a farm, is transferred from A to B by transferring written *title*, or evidence of ownership, which may be considered a claim. The situation becomes more complicated, however, when ownership is divided into pieces, and these pieces are transferred from person to person. Thus, suppose that Harrison is the owner of an iron mine. He decides to divide up the ownership, and sell the various divided pieces, or *shares*, of the good to other individuals. Assume that he creates 100 tickets, with the total constituting the full ownership of the mine, and then sells all but 10 tickets to numerous other individuals. The owner of two shares then becomes a $\frac{2}{100}$ owner of the mine. Since there is very little practical scope for such activity in a regime of *direct exchange*, analysis of this situation will be reserved for later chapters. It is clear, however, that the $\frac{2}{100}$ owner is entitled to his proportionate share of direction and control of, and revenue from, the jointly owned property. In other words, the *share* is evidence of part-ownership, or a claim to part-ownership, of a good. This property right in a proportionate share of the use of a good can also be sold or bought in exchange.

A third type of claim arises from a *credit exchange* (or *credit transaction*). Up to this point we have been discussing exchanges of one *present good* for another—i.e., the good can be used *at present*—or at any desired time—by each receiver in the exchange. In a credit transaction, a present good is exchanged for a *future good*, or rather, a *claim on a future good*. Suppose, for example, that Jackson desires to acquire 100 pounds of cotton at once. He makes the following exchange with Peters: Peters to give Jackson 100 pounds of cotton now (a present good); and, in return, Jackson gives Peters a *claim* on 110 pounds of cotton one year from now. This is a claim on a future good—110 pounds of cotton one year from now. The price of the present good in terms of the future good is 1.1 pounds of future cotton (one year from now) per pound of present cotton. Prices in such exchanges are determined by value scales and the meeting of supply and demand schedules, just as in the case of exchanges of

present goods. Further analysis of the pricing of credit transactions must be left for later chapters; here it may be pointed out that, as explained in the previous chapter, every man will evaluate a homogeneous good more highly the earlier in time is his prospect of attaining it. A present good (a good consisting of units capable of rendering equivalent satisfaction) will always be valued more highly than the same good in the future, in accordance with the individual's rate of time preference. It is evident that the various rates of time preference—ultimately determined by relative positions on individual value scales—will act to set the price of credit exchanges. Moreover, the receiver of the present good—*the debtor*—will always have to repay a *greater amount* of the good in the future to the *creditor*—the man who receives the claim, since the same number of units is worth more as a present good than as a future good. The creditor is rendering the debtor the service of using a good in the *present*, while the debtor pays for this service by repaying a greater amount of the good in the future.

At the date when the claim finally falls due, the creditor redeems the claim and acquires the good itself, thus ending the existence of the claim. In the meanwhile, however, the claim is in existence, and it can be bought and sold in exchange for other goods. Thus, Peters, the creditor, might decide to sell the claim—or promissory note—to Williams in exchange for a wagon. The price of this exchange will again be determined by supply and demand schedules. Demand for the note will be based on its security as a claim to the cotton. Thus, Williams' demand for the note (or Peters' demand to hold) in terms of wagons will be based on (*a*) the direct utility and exchange-value of the wagon, and (*b*) the marginal utility of the added units of cotton, *discounted* by him on two possible grounds: (1) the length of time the claim has left until the date of "maturity," and (2) the estimate of the security of the note. Thus, the less time there remains to elapse for a claim to any given good, the higher will it tend to be valued in the market. Also, if the eventual payment is considered less than absolutely secure, because of possible

failure to redeem, the claim will be valued less highly in accordance with people's estimates of the likelihood of its failure. After a note has been transferred, it becomes the property of the new owner, who becomes the creditor and will be entitled to redeem the claim when due.

When a claim is thus transferred in exchange for some other good (or *claim*), this in itself is *not* a credit transaction. A credit exchange sets up an *unfinished payment* on the part of the debtor; in this case, Peters pays Williams the claim in return for the other good, and the transaction is finished. Jackson, on the other hand, remains the debtor as a result of the original transaction, which remains unfinished until he makes his agreed-upon payment to the creditor on the date of maturity.³⁶

The several types of claims, therefore, are: on present goods, by such means as warehouse receipts or shares of joint ownership in a good; and on future goods, arising from credit transactions. These are evidences of ownership, or, as in the latter case, objects that *will become* evidence of ownership at a later date.

Thus, in addition to the three types of exchanges mentioned above, there are three other types whose terms and principles are included in the preceding analysis of this chapter:

- (d) A commodity for a claim; examples of this are: (1) the deposit of a commodity for a warehouse receipt—the claim to a present good; (2) a credit transaction, with a commodity exchanged for a claim to a future commodity; (3) the purchase of shares of stock in a commodity by exchanging another type of commodity for them; (4) the purchase of promissory notes on a debtor by exchanging

³⁶In a credit transaction, it is not necessary for the present and the future goods exchanged to be the same commodity. Thus, a man can sell wheat now in exchange for a certain amount of corn at a future date. The example in the text, however, highlights the importance of time preference and is also more likely to occur in practice.

a commodity. All four of these cases have been described above.

- (e) A claim for a service; an example is personal service being exchanged for a promissory note or warehouse receipt or stock.
- (f) A claim for a claim; examples would be: exchange of a promissory note for another one; of stock shares for a note; of one type of stock share for another; of a warehouse receipt for any of the other types of claims.

With all goods analyzable into categories of tangible commodities, services, or claims to goods (goods-substitutes), all six possible types of exchanges are covered by the utility and supply-demand analysis of this chapter. In each case, different concrete considerations enter into the formation of the value scales—such as time preference in the case of credit exchanges; and this permits more to be said about the various specific types of exchanges. The level of analysis presented in this chapter, however, encompasses all possible exchanges of goods. In later chapters, when *indirect exchange* has been introduced, the present analysis will apply also, but further analysis will be made of production and exchange problems involved in credit exchanges (time preference); in exchanges for capital goods and consumer goods; and in exchanges for labor services (wages).

12. Property: The Appropriation of Raw Land

As we have stated above, the origin of all property is ultimately traceable to the appropriation of an unused nature-given factor by a man and his “mixing” his labor with this natural factor to produce a capital good or a consumers’ good. For when we trace back through gifts and through exchanges, we must reach a man and an unowned natural resource. In a free society, any piece of nature that has never been used is *unowned* and is subject to a man’s ownership through his first use or mixing of his labor with this resource.

How will an individual's title to the nature-given factor be determined? If Columbus lands on a new continent, is it legitimate for him to proclaim all the new continent his own, or even that sector "as far as his eye can see"? Clearly, this would not be the case in the free society that we are postulating. Columbus or Crusoe would have to *use* the land, to "cultivate" it in some way, before he could be asserted to own it. This "cultivation" does not have to involve tilling the soil, although that is one possible form of cultivation. If the natural resource is land, he may clear it for a house or a pasture, or care for some plots of timber, etc. If there is more land than can be used by a limited labor supply, then the unused land must simply remain unowned until a first user arrives on the scene. Any attempt to claim a new resource that someone does not use would have to be considered invasive of the property right of whoever the first user will turn out to be.

There is no requirement, however, that land *continue* to be used in order for it to continue to be a man's property. Suppose that Jones uses some new land, then finds it is unprofitable, and lets it fall into disuse. Or suppose that he clears new land and therefore obtains title to it, but then finds that it is no longer useful in production and allows it to remain idle. In a free society, would he lose title? No, for once his labor is mixed with the natural resource, it remains his owned land. His labor has been irretrievably mixed with the land, and the land is therefore his or his assigns' in perpetuity. We shall see in later chapters that the question whether or not labor has been mixed with land is irrelevant to its market price or capital value; in catallactics, the past is of no interest. In establishing the ownership of property, however, the question is important, for once the mixture takes place, the man and his heirs have appropriated the nature-given factor, and for anyone else to seize it would be an invasive act.

As Wolowski and Levasseur state:

Nature has been appropriated by him (man) for his use; she has become his *own*; she is his *property*. This property is legitimate; it constitutes a right as sacred for man as is the free exercise of his faculties. It is his

because it has come entirely from himself, and is in no way anything but an emanation from his being. Before him, there was scarcely anything but matter; since him, and by him, there is interchangeable wealth. The producer has left a fragment of his own person in the thing which has thus become valuable, and may hence be regarded as a prolongation of the faculties of man acting upon external nature. As a free being he belongs to himself; now, the cause, that is to say, the productive force, is himself; the effect, that is to say, the wealth produced, is still himself. Who shall dare contest his title of ownership so clearly marked by the seal of his personality?³⁷

Some critics, especially the Henry Georgists, assert that, while a man or his assigns may be entitled to the produce of his own labor or anything exchanged for it, he is not entitled to an original, nature-given factor, a "gift of nature." For one man to appropriate this gift is alleged to be an invasion of a common heritage that all men deserve to use equally. This is a self-contradictory position, however. A man cannot produce anything without the co-operation of original nature-given factors, if only as standing room. In order to produce and possess any capital good or consumers' good, therefore, he must appropriate and use an original nature-given factor. He cannot form products purely out of his labor alone; he *must* mix his labor with original nature-given factors. Therefore, if property in land or other nature-given factors is to be denied man, he cannot obtain property in the fruits of his labor.

Furthermore, in the question of land, it is difficult to see what better title there is than the first bringing of this land from a simple unvaluable thing into the sphere of production. For that is what the first user does. He takes a factor that was

³⁷Léon Wolowski and Émile Levasseur, "Property," *Lalor's Cyclopedia of Political Science, etc.* (Chicago: M.B. Cary & Co., 1884), III, 392.

previously unowned and unused, and therefore worthless to anyone, and converts it into a tool for production of capital and consumers' goods. While such questions as communism of property will be discussed in later parts of this book, it is difficult indeed to see why the mere fact of being born should automatically confer upon one some aliquot part of the world's land. For the first user has mixed his labor with the land, while neither the newborn child nor his ancestors have done anything with the land at all.

The problem will be clearer if we consider the case of *animals*. Animals are "economic land," because they are equivalent to physical land in being original, nature-given factors of production. Yet will anyone deny title to a cow to the man that finds and domesticates her, putting her to use? For this is precisely what occurs in the case of land. Previously valueless "wild" land, like wild animals, is taken and transformed by a man into goods useful for man. The "mixing" of labor gives equivalent title in one case as in the other.

We must remember, also, what "production" entails. When man "produces," he does not create matter. He uses given materials and transforms and rearranges them into goods that he desires. In short, he moves matter further toward consumption. His finding of land or animals and putting them to use is also such a transformation.

Even if the value accruing to a piece of land at present is substantial, therefore, it is only "economic land" because of the innumerable past efforts of men at work on the land. When we are considering legitimacy of title, the fact that land always embodies past labor becomes extremely important.³⁸

³⁸See the vivid discussion by Edmond About, *Handbook of Social Economy* (London: Strahan & Co., 1872), pp. 19–30. Even urban sites embody much past labor. Cf. Herbert B. Dorau and Albert G. Hinman, *Urban Land Economics* (New York: Macmillan & Co., 1928), pp. 205–13.

If animals are also "land" in the sense of given original nature factors, so are water and air. We have seen that "air" is inappropriable, a condition of human welfare rather than a scarce good that can be owned. However, this is true only of air for breathing under usual conditions. For example, if some people want their air to be changed, or "conditioned," then they will have to pay for this service, and the "conditioned air" becomes a scarce good that is owned by its producers.

Furthermore, if we understand by "air" the medium for the transmission of such things as radio waves and television images, there is only a limited quantity of wave lengths available for radio and for television purposes. This scarce factor is appropriable and ownable by man. In a free society, ownership of these channels would accrue to individuals just like that of land or animals: the first users obtain the property. The first user, Jones, of the wave length of 1,000 kilocycles, would be the absolute owner of this length for his wave area, and it will be his right to continue using it, to abandon it, to sell it, etc. Anyone else who set up a transmitter on the owner's wave length would be as guilty of invasion of another's property right as a trespasser on someone else's land or a thief of someone else's livestock.^{39,40}

The same is true of *water*. Water, at least in rivers and oceans, has been considered by most people as also inappropriable and unownable, although it is conceded to be ownable in the cases of (small) lakes and wells. Now it is true that the high seas, in relation to shipping lanes, are probably inappropriable, because of

³⁹If a channel has to be a certain number of wave lengths in width in order to permit clear transmission, then the property would accrue to the first user, in terms of such width.

⁴⁰Professor Coase has demonstrated that Federal ownership of air-waves was arrogated, in the 1920's, not so much to alleviate a preceding "chaos," as to forestall this very acquisition of private property rights in air waves, which the courts were in the process of establishing according to common law principles. Ronald H. Coase, "The Federal Communications Commission," *Journal of Law and Economics*, October, 1959, pp. 5, 30-32.

their abundance in relation to shipping routes.⁴¹ This is *not* true, however, of *fishing* rights in oceans. Fish are definitely not available in unlimited quantities relatively to human wants. Therefore, they are appropriable—their stock and source just as the captured fish themselves. Indeed, nations are always quarreling about “fishing rights.” In a free society, fishing rights to the appropriate areas of oceans would be owned by the first users of those areas and then usable or salable to other individuals. Ownership of areas of water that contain fish is directly analogous to private ownership of areas of land or forests that contain animals to be hunted. Some people raise the difficulty that water flows and has no fixed position, as land does. This is a completely invalid objection, however. Land “moves” too, as when soil is uprooted in dust storms. Most important, water can definitely be marked off in terms of latitudes and longitudes. These boundaries, then, would circumscribe the area owned by individuals, in the full knowledge that fish and water can move from one person’s property to another. The value of the property would be gauged according to this knowledge.⁴²

Another argument is that appropriation of ownership by a first user would result in an uneconomic allocation of the

⁴¹It is rapidly becoming evident that air lanes for planes *are* becoming scarce and, in a free society, would be owned by first users—thus obviating a great many plane crashes.

⁴²Flowing water should be owned in proportion to its rate of use by the first user—i.e., by the “appropriation” rather than the “riparian” method of ownership. However, the appropriator would then have absolute control over his property, might transfer his share, etc., something which cannot be done in those areas, e.g., states in the West, where an approach to appropriation ownership now predominates. See Murray N. Rothbard, “Concerning Water,” *The Freeman*, March, 1956, pp. 61–64. Also see the excellent article by Professor Jerome W. Milliman, “Water Law and Private Decision-Making: A Critique,” *The Journal of Law and Economics*, October, 1959, pp. 41–63; Milliman, “Commonality, the Price System, and Use of Water Supplies,” *Southern Economic Journal*, April, 1956, pp. 426–37.

nature-given factors. Thus, suppose that one man can fence, cultivate, or otherwise use, only five acres of a certain land, while the most economic allocation would be units of 15 acres. However, the rule of *first ownership by the first user*, followed in a free society, would not mean that ownership must end with this allocation. On the contrary. In this case, either the owners would pool their assets in one corporate form, or the most efficient individual owners would buy out the others, and the final size of each unit of land in production would be 15 acres.

It must be added that the theory of land ownership in a free society set forth here, i.e., first ownership by the first user, has nothing in common with another superficially similar theory of land ownership—advanced by J.K. Ingalls and his disciples in the late nineteenth century. Ingalls advocated *continuing ownership* only for actual occupiers and personal users of the land. This is in contrast to *original ownership* by the first user.

The Ingalls system would, in the first place, bring about a highly uneconomic allocation of land factors. Land sites where small “homestead” holdings are uneconomic would be forced into use in spite of this, and land would be prevented from entering other lines of use greatly demanded by consumers. Some land would be artificially and coercively withdrawn from use, since land that could not be used by owners *in person* would have to lie idle. Furthermore, this theory is self-contradictory, since it would not really permit ownership at all. One of the prime conditions of ownership is the right to buy, sell, and dispose of property as the owner or owners see fit. Since small holders would not have the right to sell to nonoccupying large holders, the small holders would not really be owners of the land at all. The result is that on the ownership question, the Ingalls thesis reverts, in the final analysis, to the Georgist view that Society (in the alleged person of the State) should own the land.⁴³

⁴³On Ingalls and his doctrines, see James J. Martin, *Men Against the State* (DeKalb, Ill.: Adrian Allen Associates, 1953), pp. 142–52, 220 ff.,

13. Enforcement Against Invasion of Property

This work is largely the analysis of a market society unhampered by the use of violence or theft against any man's person or property. The question of the *means* by which this condition is best established is not at present under consideration. For the present purpose, it makes no difference whether this condition is established by every man's deciding to *refrain from invasive action* against others or whether some agency is established to enforce the abandonment of such action by every individual. (*Invasive action* may be defined as any action—violence, theft, or fraud—taking away another's personal freedom or property without his consent.) Whether the enforcement is undertaken by each person or by some sort of agency, we assume here that such a condition—the existence of an unhampered market—is maintained in some way.

One of the problems in maintaining the conditions of a free market is the role of the enforcing agency—whether individual or organizational—in exchange contracts. What type of contracts are to be enforced to maintain the conditions of an unhampered market? We have already seen that contracts assigning away the will of an individual cannot be enforced in such a market, because the will of each person is by its nature inalienable. On the other hand, if the individual made such a contract and received another's property in exchange, he must forfeit part or all of the property when he decides to terminate the agreement. We shall see that fraud may be considered as theft, because one individual receives the other's property but does not fulfill his part of the exchange bargain, thereby taking

246 ff. Also cf. Benjamin R. Tucker, *Instead of a Book* (2nd ed.; New York: B.R. Tucker, 1897), pp. 299–357, for the views of Ingalls' most able disciple. Despite the underlying similarity and their many economic errors, the Ingalls-Tucker group launched some interesting and effective critiques of the Georgist position. These take on value in the light of the excessive kindness often accorded to Georgist doctrines by economists.

the other's property without his consent. This case provides the clue to the role of contract and its enforcement in the free society. Contract must be considered as an agreed-upon exchange between two persons of two goods, present or future. Persons would be free to make any and all property contracts that they wished; and, for a free society to exist, all contracts, where the good is naturally alienable, must be enforced. Failure to fulfill contracts must be considered as theft of the other's property. Thus, when a debtor purchases a good in exchange for a promise of future payment, the good cannot be considered his property until the agreed contract has been fulfilled and payment made. Until then, it remains the creditor's property, and non-payment would be equivalent to theft of the creditor's property.

An important consideration here is that contract *not* be enforced because a promise has been made that is not kept. It is not the business of the enforcing agency or agencies in the free market to enforce promises merely because they are promises; its business is to enforce against theft of property, and contracts are enforced because of the implicit theft involved.

Evidence of a *promise to pay property* is an enforceable claim, because the possessor of this claim is, in effect, the owner of the property involved, and failure to redeem the claim is equivalent to theft of the property. On the other hand, take the case of a promise to contribute personal services without an advance exchange of property. Thus, suppose that a movie actor agrees to act in three pictures for a certain studio for a year. Before receiving any goods in exchange (salary), he breaks the contract and decides not to perform the work. Since his personal will is inalienable, he cannot, on the free market, be forced to perform the work there. Further, since he has received none of the movie company property in exchange, he has committed no theft, and thus the contract cannot be enforced on the free market. Any suit for "damages" could not be entertained on an unhampered market. The fact that the movie company may have made considerable plans and investments on the expectation that the actor would keep the agreement may be unfortunate for the

company, but it could not expect the actor to pay for its lack of foresight and poor entrepreneurship. It pays the penalty for placing too much confidence in the man. The movie actor has not received and kept any of the company's property and therefore cannot be held accountable in the form of payment of goods as "damages."⁴⁴ Any such enforced payment would be an invasion of his property rights on the free market rather than an attack upon invasion. It may be considered more moral to keep promises than to break them, but the condition of a free market is that each individual's rights of person and property be maintained, and not that some *further* standard of morals be coercively imposed on all. Any coercive enforcement of such a moral code, going beyond the abolition of invasive acts, would in itself constitute an invasion of individual rights of person and property and be an interference in the free market.⁴⁵

⁴⁴This is true *even* if the actor had previously agreed in a contract that he would pay damages. For this is still merely a promise; he has not implicitly seized someone else's property. The object of an enforcing agency in a free society is not to uphold promise-keeping by force, but to redress any invasions of person and property.

⁴⁵Sir Frederick Pollock thus describes original English contract law:

Money debts, it is true, were recoverable from an early time. But this was not because the debtor had promised to repay the loan; it was because the money was deemed still to belong to the creditor, as if the identical coins were merely in the debtor's custody. The creditor sued to recover money . . . in exactly the same form which he would have used to demand possession of land . . . and down to Blackstone's time the creditor was said to have a property in the debt—property which the debtor had granted him. Giving credit, in this way of thinking, is not reliance on the right to call thereafter for an act . . . to be performed by the debtor, but merely suspension of the immediate right to possess one's own particular money, as the owner of a house lot suspends his right to occupy it. . . . The foundation of the plaintiff's right was not bargain or promise, but the unjust detention by the defendant of

It certainly would be consonant with the free market, however, for the movie company to ask the actor to pay a certain sum in consideration of his breaking the contract, and, if he refuses, to refuse to hire him again, and to notify other prospective contracting parties (such as movie companies) of the person's action. It seems likely that his prospect of making exchanges in the future will suffer because of his action. Thus, the "blacklist" is permissible on the free market. Another legitimate action on the free market is the *boycott*, by which A urges B not to make an exchange with C, for whatever reason. Since A's and B's actions are purely voluntary and noninvasive, there is no reason for a boycott not to be permitted on the unhampered market. On the contrary, any coercive action against a boycott is an invasion against the rights of free persons.

If default on contracted debts is to be considered as equivalent to theft, then on the unhampered market its treatment by the enforcing agency will be similar to that of theft. It is clear—for example, in the case of burglary—that the recovery of the stolen property to its owner would be the fundamental consideration for the enforcing agency. Punishment of the wrongdoer would be a consideration subsidiary to the former. Thus, suppose A has stolen 100 ounces of gold from B. By the time A has been apprehended by the enforcing agency, he has dissipated the 100 ounces and has no assets by which the 100 ounces can be obtained. The main goal of the enforcement agency should be to force A to return the 100 ounces. Thus, instead of simply idle imprisonment, the agency could force the thief to labor and to attach his earnings to make up the amount of the theft, plus a compensation for the delay in time. Whether this forced labor is done in or out of prison is immaterial here. The main point is that the invader of another's rights on the free market gives

the plaintiff's money or goods. (Sir Frederick Pollock, "Contract," *Encyclopedia Britannica* [14th ed.; London, 1929], VI, 339–40)

up his rights to the same extent. The first consideration in the punishment of the aggressor against property in the free market is the forced return of the equivalent property.⁴⁶ On the other hand, suppose that B voluntarily decides to forgive A and grant the latter a gift of the property; he refuses to “press charges” against the thief. In that case, the enforcement agency would take no action against the robber, since he is now in the position of the receiver of a gift of property.

This analysis provides the clue to the treatment of defaulting debtors on the free market. If a creditor decides to forget about the debt and not press charges, he in effect grants a gift of his property to the debtor, and there is no further room for enforcement of contract. What if the creditor insists on keeping his property? It is clear that if the debtor can pay the required amount but refuses to do so, he is guilty of pure fraud, and the enforcing agency would treat his act as such. Its prime move would be to make sure that the debtor’s assets are transferred to their rightful owner, the creditor. But suppose that the debtor has not got the property and would be willing to pay if he had it? Does this entitle him to special privilege or coerced elimination of the debt, as in the case of bankruptcy laws? Clearly not. The prime consideration in the treatment of the debtor would be his continuing and primary responsibility to redeem the property of the creditor. The only way by which this treatment could be eliminated would be for the debtor and the creditor to agree, as part of the original contract, that if the debtor makes certain investments and fails to have the property at the date due, the

⁴⁶Wordsworth Donisthorpe, *Law in A Free State* (London: Macmillan & Co., 1895), p. 135:

In Rome one could recover stolen goods, or damages for their loss, by what we should call a civil process, without in the least affecting the relation between the thief and the public by reason of the theft. Restitution first and punishment afterwards was the rule.

creditor will forgive the debt; in short, he grants the debtor the rights of a partial co-owner of the property.

There could be no room, in a free society such as we have outlined, for “negotiable instruments.” Where the government designates a good as “negotiable,” if A steals it from B and then sells it to C without the latter’s knowledge of the theft, B cannot take the good back from C. Despite the fact that A was a thief and had no proper title to the good, C is decreed to be the legitimate owner, and B has no way of regaining his property. The law of negotiability is evidently a clear infringement of property right. Where property rights are fully defended, theft cannot be compounded in this manner. The buyer would have to purchase at his own risk and make sure that the good is not stolen; if he nonetheless does buy stolen goods, he must try to obtain restitution from the thief, and not at the expense of the rightful owner.

What of a cartel agreement? Would that be enforceable in a free society? If there has been no exchange of property, and A, B, C . . . firms agree among themselves to set quotas on their production of a good, this agreement would surely not be illegal, but neither would it be enforceable. It could be only a simple promise and not an enforceable case of implicit theft.⁴⁷

One difficulty often raised against a free society of individual property rights is that it ignores the problem of “external diseconomies” or “external costs.” But cases of “external diseconomy” all turn out to be instances of failure of *government*—the enforcing agency—adequately to enforce individual property rights. The “blame,” therefore, rests not on the institution of private property, but on the failure of the government to

⁴⁷This reason for the unenforceability of a cartel agreement in a free society has no relation to any common-law hostility to agreements allegedly “in restraint of trade.” However, it is very similar to the English common-law doctrine finally worked out in the *Mogul Steamship Case* (1892). See William L. Letwin, “The English Common Law Concerning Monopolies,” *University of Chicago Law Review*, Spring, 1954, pp. 382 ff.

enforce this property right against various subtle forms of invasion—the failure, e.g., to maintain a free society.

One instance of this failure is the case of smoke, as well as air pollution generally. In so far as the outpouring of smoke by factories pollutes the air and damages the persons and property of others, it is an invasive act. It is equivalent to an act of vandalism and in a truly free society would have been punished after court action brought by the victims. Air pollution, then, is not an example of a defect in a system of absolute property rights, but of failure on the part of the government to preserve property rights. Note that the remedy, in a free society, is not the creation of an administrative State bureau to prescribe regulations for smoke control. The remedy is *judicial* action to punish and proscribe pollution damage to the person and property of others.⁴⁸

In a free society, as we have stated, every man is a self-owner. No man is allowed to own the body or mind of another, that being the essence of slavery. This condition completely overthrows the basis for a law of defamation, i.e., libel (written defamation) or slander (oral defamation). For the basis of outlawing defamation is that every man has a “property in his own reputation” and that therefore any malicious or untruthful attack on him or his character (or even more, a truthful attack!) injures his reputation and therefore should be punished. However, a man has no such objective property as “reputation.” His reputation is simply what others think of him, i.e., it is purely a function of the *subjective* thoughts of others. But a man cannot own the minds or thoughts of others. Therefore, I cannot

⁴⁸*Noise* is also an invasive act against another, a transmission of sound waves assaulting the eardrums of others. On “external diseconomies,” the only good discussion by an economist is the excellent one in Mises, *Human Action*, pp. 650–53. For an appreciation of the distinction between judicial and administrative action in a free society, as well as a fine grasp of property rights and governmental enforcement, see the classic discussion of adulteration in Donisthorpe, *Law in A Free State*, pp. 132–58.

invade a man's property right by criticizing him publicly. Further, since I do not own others' minds, either, I cannot force anyone else to think less of the man because of my criticism.⁴⁹

The foregoing observations should firmly remind us that what the enforcing agency combats in a free society is invasion of the *physical* person and property, *not* injury to the *values* of property. For physical property is what the person owns; he does not have any ownership in monetary values, which are a function of what *others* will pay for his property. Thus, someone's vandalism against, or robbery of, a factory is an invasion of physical property and is outlawed. On the other hand, someone's shift from the purchase of this factory's product to the purchase of a competing factory's product may lower the monetary value of the former's property, but this is certainly not a punishable act. It is precisely the condition of a free society that a property owner have no unearned *claim* on the property of anyone else; therefore, he has no vested right in the value of his property, only in its physical existence. As for the value, this must take its chance on the free market. This is the answer, for example, to those who believe that "undesirable" businesses or people must be legally prevented from moving into a certain neighborhood because this may or will "lower the existing property value."

One method of acquiring property that we have not discussed yet is *fraud*. Fraud involves cases where one party to an agreed-upon exchange deliberately refuses to fulfill his part of the contract. He thus acquires the property of the other person, but he sacrifices either none of the agreed-upon goods or less than he had agreed. We have seen that a debtor's deliberate failure to pay his creditor is equivalent to an outright theft of the creditor's property.

⁴⁹Similarly, *blackmail* would not be illegal in the free society. For blackmail is the receipt of money in exchange for the service of not publicizing certain information about the other person. No violence or threat of violence to person or property is involved.

Another example of fraudulent action is the following exchange: Smith agrees to give up 15 ounces of gold to Jones in exchange for a package of certain specified chinaware. When he receives the package, after having given up the gold, Smith finds that he has received an empty crate instead of the goods that the two had agreed to exchange. Jones has falsely represented the goods that he would exchange, and here again this is equivalent to outright theft of Smith's property. Since the exchange has been made falsely, the actual form of which might not have been contracted had the other party not been deceived, this is not an example of voluntary exchange, but of one-sided theft. We therefore exclude both explicit violence and the implicit violence of fraud from our definition of the market—the pattern of voluntary interpersonal exchanges. At this point we are dealing only with an analysis of the market unhampered by fraud or violence.

We have not here been discussing what type of enforcing agency will be set up or the means it will use, but what type of actions the agency will combat and what type will be permissible. In a free market, all invasive acts by one person against another's property, either against his person or his material goods, will be combatted by the enforcing agency or agencies. We are assuming here that there are no invasive acts in the society, either because no individuals commit them or because they are successfully combatted and prevented by some sort of enforcing agency. The problem then becomes one of defining invasive, as distinguished from noninvasive, acts, and this is what has been done here in various typical examples. Each man would be entitled to ownership over his own person and over any property that he has acquired by production, by appropriation of unowned factors, by receiving gifts, or by voluntary exchange. Never has the basis of the free, noninvasive, or "voluntaryist" society been described more clearly in a brief space than by the British political philosopher Auberon Herbert:

- (1) The great natural fact of each person being born in possession of a separate mind and separate body

implies the ownership of such mind and body by each person, and rights of direction over such mind and body; it will be found on examination that no other deduction is reasonable.

(2) Such self-ownership implies the restraint of violent or fraudulent aggressions made upon it.

(3) Individuals, therefore, have the right to protect themselves by force against such aggressions made forcibly or fraudulently, and they may delegate such acts of self-defense to a special body called a government . . .

Condensed into a few words, our Voluntaryist formula would run: "The sovereignty of the individual must remain intact, except where the individual coerced has aggressed upon the sovereignty of another unaggressive individual."

Elaborating on the first point, Herbert continued:

If there is one thing on which we can safely build, it is the great natural fact that each human being forms with his or her body and mind a separate entity—from which we must conclude that the entities belong to themselves and not to each other. As I have said, no other deduction is possible. If the entities do not belong to themselves, then we are reduced to the most absurd conclusion. A or B cannot own himself; but he can own, or part own, C or D.⁵⁰

⁵⁰Auberon Herbert, in A. Herbert and J.H. Levy, *Taxation and Anarchism* (London: The Personal Rights Assn., 1912), pp. 24, 36–39; and Herbert, "A Cabinet Minister's Vade Mecum" in Michael Goodwin, ed., *Nineteenth-Century Opinion* (London: Penguin Books, 1951), pp. 206–07.

THE PATTERN OF INDIRECT EXCHANGE

1. The Limitations of Direct Exchange

WE HAVE SEEN IN THE PREVIOUS chapter how exchange benefits each participant and how the division of labor on a market increases productivity. The only exchange so far discussed, however, has been *direct exchange*, or *barter*—the exchange of one useful good for another, each for purposes of direct use by the party to the exchange. Although a treatment of direct exchange is important for economic analysis, the scope for direct exchange in society is extremely limited. In a very primitive society, for example, Crusoe could employ Jackson to labor on his farm in exchange for a part of the farm produce. There could, however, be no advanced system of production in a direct-exchange society and no accumulation of capital in higher stages of production—indeed no production at all beyond the most primitive level. Thus, suppose that A is a house-builder; he builds a house on contract and employs masons, carpenters, etc. In a regime of direct exchange, how would it be possible to pay these men? He could not give pieces of the house to each of the laborers. He would have to try to sell the house for precisely that combination of useful goods that each of the laborers and each of the sellers of raw material would accept. It is obvious that production could not be carried on and that the difficulties would be insuperable.

This problem of the lack of “coincidence of wants” holds even for the simple, direct exchange of consumers’ goods, in addition to the insoluble problem of production. Thus, suppose that A, with a supply of eggs for sale, wants a pair of shoes in exchange. B has shoes but does not want eggs; there is no way for the two to get together. For anyone to sell the simplest commodity, he must find not only one who wants to purchase it, but one who has a commodity for sale that he wants to acquire. The market for anyone’s commodities is therefore extremely limited, the extent of the market for any product is very small, and the scope for division of labor is negligible. Furthermore, someone with a less divisible commodity, such as a plow, is in worse straits. Suppose that D, with a plow, would like to exchange it for eggs, butter, shoes, and various other commodities. Obviously, he cannot divide his plow into several pieces and then exchange the various pieces for eggs, butter, etc. The value of each piece to the others would be practically nil. Under a system of direct exchange, a plow would have almost no *marketability* in exchange, and few if any would be produced.

In addition to all these difficulties, which render a regime of direct exchange practically impossible, such a society could not solve the various problems of estimation, which (as was seen in chapter 1) even Crusoe had to face.¹ Since there would be no common denominator of units, there could be no way of estimating which line of production various factors should enter. Is it better to produce automobiles or tractors or houses or steel? Is it more productive to employ fewer men and more land on a certain product or less land and more men? Is the capital structure being maintained or consumed? None of these questions could be answered, since, in the stages beyond immediate consumption, there would be no way of comparing the usefulness or the productivity of the different factors or products.

The conclusion is evident that no sort of civilized society can be built on the basis of direct exchange and that direct exchange,

¹See, for example, chapter 1 above, pp. 57–58.

as well as Crusoe-like isolation, could yield only an economy of the most primitive type.²

2. *The Emergence of Indirect Exchange*

The tremendous difficulties of direct exchange can be overcome only by *indirect exchange*, where an individual buys a commodity in exchange, not as a consumers' good for the direct satisfaction of his wants or for the production of a consumers' good, but simply *to exchange again* for another commodity that he does desire for consumption or for production. Offhand, this might seem a clumsy and roundabout operation. Actually, it is indispensable for any economy above the barely primitive level.

Let us return, for example, to the case of A, with a supply of eggs, who wants a pair of shoes in exchange. B, the shoemaker, has shoes for sale but does not desire any more eggs than he has in stock. A cannot acquire shoes by means of direct exchange. If A wants to purchase a pair of shoes, he must find out what commodity B does want in exchange, and procure it. If A finds that B wants to acquire butter, A may exchange his eggs for the butter of C and *then* exchange this butter for B's shoes. In this case, butter has been used as a *medium* of indirect exchange. The butter was worth more to A than the eggs (say the exchange was 10 dozen eggs for 10 pounds of butter, then for one pair of shoes), *not* because he wanted to consume the butter or to use the butter to produce some other good in a later stage of production, but because the butter greatly facilitated his obtaining the shoes in exchange. Thus, for A, the butter was more *marketable* than his eggs and was worth purchasing *because* of its superior marketability. The pattern of the exchange is shown in Figure 30.

Or consider the enormous benefit that D, the owner of a plow, acquires by using a medium of exchange. D, who would like to

²For a vivid and accurate contrast between man's condition in a market society and that in a primitive society, see About, *Handbook of Social Economy*, pp. 5-17.

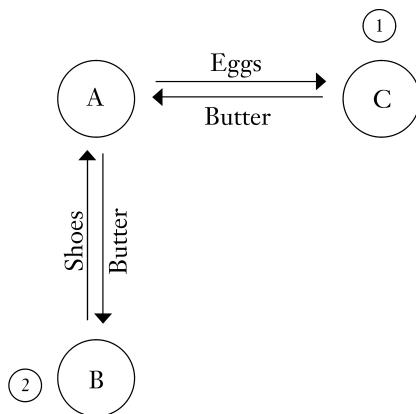


FIGURE 30. PATTERN OF INDIRECT EXCHANGE

acquire many commodities but finds that his plow has a very limited marketability, can sell it in exchange for quantities of a more marketable commodity, e.g., butter. Butter, for one thing, is more marketable because, unlike the plow, its nature is such that it does not lose its complete value when divided into smaller pieces. D now uses the butter as a medium of indirect exchange to obtain the various commodities that he desires to consume.

Just as it is fundamental to human experience that there is great variety in resources, goods desired, and human skills, so is there great variety in the marketability of various commodities. Tending to increase the marketability of a commodity are its demand for use by more people, its divisibility into small units without loss of value, its durability, and its transportability over large distances. It is evident that people can vastly increase the extent of the market for their own products and goods by exchanging them for more marketable commodities and using the latter as media to exchange for goods that they desire. Thus, the pattern of D's, the plow-producer's, exchanges will be as shown in Figure 31.

D first exchanges his plow for X_1 's butter, and then uses the butter to exchange for the various goods that he desires to use, with X_2 for eggs, X_3 for shoes, X_4 for horses, etc.

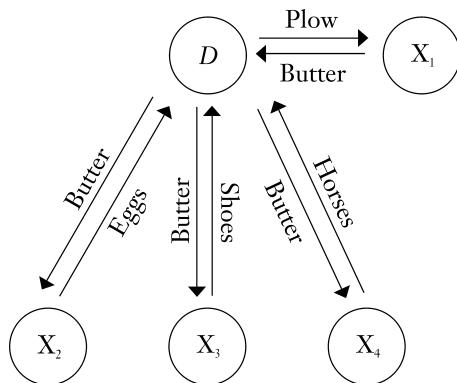


FIGURE 31. EFFECT OF EXCHANGING A LESS MARKETABLE FOR A MORE MARKETABLE COMMODITY

As the more marketable commodities in any society begin to be picked by individuals as media of exchange, their choices will quickly focus on the few *most marketable* commodities available. If D saw, for example, that eggs were a more marketable commodity than butter, he would exchange his plow for eggs instead and use them as his medium in other exchanges. It is evident that, as the individuals center on a few selected commodities as the media of exchange, the demand for these commodities on the market greatly increases. For commodities, in so far as they are used as media, have an additional component in the demand for them—not only the demand for their direct use, but also a demand for their use as a medium of indirect exchange. This demand for their use as a medium is superimposed on the demand for their direct use, and this increase in the composite demand for the selected media *greatly increases their marketability*. Thus, if butter begins as one of the most marketable commodities and is therefore more and more chosen as a medium, this increase in the market demand for butter greatly increases the very marketability that makes it useful as a medium in the first place. The process is cumulative, with the most marketable commodities becoming enormously more marketable and with this increase spurring their use as media of exchange. The

process continues, with an ever-widening gap between the marketability of the medium and the other commodities, until finally one or two commodities are far more marketable than any others and are in general use as media of exchange.³

Economic analysis is not concerned about *which* commodities are chosen as media of exchange. That is subject matter for *economic history*. The economic analysis of indirect exchange holds true regardless of the type of commodity used as a medium in any particular community. Historically, many different commodities have been in common use as media. The people in each community tended to choose the most marketable commodity available: tobacco in colonial Virginia, sugar in the West Indies, salt in Abyssinia, cattle in ancient Greece, nails in Scotland, copper in ancient Egypt, and many others, including beads, tea, cowrie shells, and fishhooks.⁴ Through the centuries, gold and silver (specie) have gradually evolved as the commodities most widely used as media of exchange. Among the factors in their high marketability have been their great demand as ornaments, their scarcity in relation to other commodities, their ready divisibility, and their great durability. In the last few hundred years their marketable qualities have led to their general adoption as media throughout the world.

A commodity that comes into *general use* as a medium of exchange is defined as being a *money*. It is evident that, whereas the concept of a “medium of exchange” is a precise one, and indirect exchange can be distinctly separated from direct exchange, the concept of “money” is a less precise one. The point

³For further analysis of this process of the emergence of common media, see Mises, *Theory of Money and Credit*, pp. 30–33, and *Human Action*, pp. 402–04. Also see Menger, *Principles of Economics*, pp. 257–63. For an historical description, see J. Laurence Laughlin, *A New Exposition of Money, Credit, and Prices* (Chicago: University of Chicago Press, 1931), I, 3–15, 28–31.

⁴Cf. Adam Smith, *The Wealth of Nations* (New York: Modern Library, 1937), pp. 22–24; Menger, *Principles of Economics*, pp. 263–71; and Laughlin, *A New Exposition of Money, Credit, and Prices*, pp. 15–23, 38–43.

at which a medium of exchange comes into "common" or "general" use is not strictly definable, and whether or not a medium is a money can be decided only by historical inquiry and the judgment of the historian. However, for purposes of simplification, and since we have seen that there is a great impetus on the market for a medium of exchange to become money, we shall henceforth refer to all media of exchange as *moneys*.

3. Some Implications of the Emergence of Money

The establishment of a money on the market enormously increases the scope for specialization and division of labor, immensely widens the market for every product, and makes possible a society on a civilized productive level. Not only are the problems of coincidence of wants and indivisibility of goods eliminated, but individuals can now construct an ever-expanding edifice of remote stages of production to arrive at desired goods. Intricate and remote stages of production are now possible, and specialization can extend to every part of a production process as well as to the type of good produced. Thus, an automobile producer can sell an automobile in exchange for the money, e.g., butter or gold, and then exchange the gold partly for labor, partly for steel, partly for chrome, partly for rubber tires, etc. The steel producers can exchange the gold partly for labor, partly for iron, partly for machines, etc. Then the various laborers, landowners, etc., who receive the gold in the production process can use it as a medium to purchase eggs, automobiles, or clothing, as they desire.

The whole pattern of a modern society is thus built on the use of money, and the enormous importance of the use of money will become clearer as the analysis continues.⁵ It is evident that it is a mistake on the part of many writers who wish to set forth the doctrines of modern economics to analyze direct exchange

⁵On the significance of money for civilized society, cf. Wicksteed, *Common Sense of Political Economy*, I, 140ff.

only and then to insert money somewhere at the end of the analysis, considering the task finished. On the contrary, the analysis of direct exchange is useful only as an introductory aid to the analysis of a society of indirect exchange; direct exchange would leave very little scope for the market or for production.

With the great variety in human skills and natural resources resulting in enormous advantages from the division of labor, the existence of money permits the splitting of production into minute branches, each man selling his product for money and using money to buy the products that he desires. In the field of consumers' goods, a doctor can sell his services, or a teacher his, for money, and then use the money to purchase goods that he demands. In production, a man can produce a capital good, sell it for money, and use the gold received to purchase the labor, land, and capital goods of a higher order needed for its production. He may use the surplus of money income over money outlay on factors to purchase consumers' goods for his own needs. Thus, at any stage in the production of any product, a man employs land and labor factors, exchanging money for their services as well as for the needed capital goods, and then sells the product for money to help in the next lower stage of production. This process continues until the final consumers' goods are sold to consumers. These consumers, on the other hand, obtain their money by *purchasing* it through the sale of their own goods—either durable consumers' goods or services in production. The latter may include the sale of labor services, the sale of services of their land, the sale of their capital goods, or inheritance from those who had previously contributed such services.⁶

⁶Later sections will deal further with the receipt of money income in the production process. Here it must be noted that since the owner and seller of capital goods must pay for the land, labor, and capital goods in *their* production, in the last analysis the owner of capital receives income only as a holder of goods over a period of *time*.

Thus, nearly all exchanges are made against money, and money impresses its stamp upon the entire economic system. Producers of consumers' goods as well as owners of durable consumers' goods, owners of capital goods, and sellers of labor services, all sell their goods against money and purchase with money the factors that they need. They use their net money income to purchase consumers' goods produced by others in the society. Thus, all individuals, in their capacity as producers and owners, supply goods (commodities and services) and demand money in exchange. And, in their capacity as producers purchasing factors, as well as in their capacity as consumers, they supply money and demand an almost infinite variety of goods in exchange. The economy is therefore a "money economy," and almost all goods are compared with and exchanged against the money commodity. This fact is of crucial importance to the analysis of any society beyond the most primitive level. We may sum up the complex pattern of exchanges in a money economy in the following way:

Men in their capacity as:

Producers

<i>Sell:</i>	<i>Buy:</i>
<i>Consumers' Goods,</i>	<i>Producers' Goods</i>
<i>Producers' Goods</i>	Labor
Labor	Land
Land	Capital Goods
Capital Goods	
<i>For Money</i>	<i>With Money</i>

Consumers

<i>Buy:</i>
<i>Consumers' Goods</i>
<i>With Money</i>

4. The Monetary Unit

We have seen that every good is “in supply” if it can be divided into units, each of which is homogeneous with every other. Goods can be bought and sold only in terms of such units, and those goods which are indivisible and unique may be described as being in a supply of one unit only. Tangible commodities are generally traded in terms of *units of weight*, such as tons, pounds, ounces, grains, grams, etc. The money commodity is no exception to this rule. The most universally traded commodity in the community, it is bought and sold always in terms of units of its weight. It is characteristic of units of weight, as of other metrical scales, that each unit is convertible into every other. Thus, one pound equals 16 ounces; and one ounce equals 437.5 grains, or 28.35 grams. Therefore, if Jones sells his tractor for 15 pounds of gold, he may also be described as having sold the tractor for 240 ounces of gold, or for 6,804 grams of gold, etc.

It is clear that the size of the unit of the money commodity chosen for any transaction is irrelevant for economic analysis and is purely a matter of convenience for the various parties. All the units will be units of weight, and they will be convertible into pounds, ounces, etc., by multiplying or dividing by some constant number, and therefore all will be convertible into one another in the same manner. Thus, one pound of gold will equal 16 ounces and will, of course, exchange for 16 ounces, should such an exchange be desired on the market. The economic irrelevance of the names or sizes of the units may be seen from the following example. Suppose that the residents of Texas use, in their exchanges, a unit known as the Houston, equalling 20 grains of gold, while the residents of Massachusetts use the Adams, equalling 10 grains. The citizens of the respective areas may make their exchanges and calculations in these terms, e.g., Jones sells his car for “2,000 Houstons of gold,” or, more simply, “2,000 Houstons,” or Jones might consider the money price of eggs as being “ $\frac{1}{2}$ Houston per dozen.” On the other hand,

Smith might buy a house for “10,000 Adamses.” It is obvious that the use of the different names will complicate matters, but it is economically *insignificant*. The “Houston” is still a unit of weight of gold, and is a shorthand name for “20 grains of gold.” It is clear that, on the market, one Houston will exchange for two Adamses.⁷

To avoid unnecessary complications and to clarify the analysis, therefore, the names of the monetary units in this work will be in terms of universally acceptable units of weight (such as ounces, grams, etc.) rather than in terms of accidental names of only local significance (such as dollars or francs).

Obviously, the more valuable the units of a commodity are, the smaller the size of the units used in daily transactions; thus, platinum will be traded in terms of ounces, while iron is traded in terms of tons. Relatively valuable money commodities like gold and silver will tend to be traded in terms of smaller units of weight. Here again, this fact has no particular economic significance.

The *form* in which a unit weight of any commodity is traded depends on its usefulness for any specific, desired purpose. Thus, iron may be sold in the form of bars or chunks, cheese in rectangular or triangular shape, etc. Whereas other commodities will be traded in those forms suitable for production or consumption, money will be traded in forms suitable for exchange or storing until an exchange is made. Historically, the shapes of

⁷The names of the units can be, and have been, anything conceivable, depending on custom, language, etc. Such names as dollars, francs, marks, shekels, are examples. The “dollar” originated as the generally applied name of ounce weights of silver coined by the Count of Schlick in Bohemia. The Count, who lived in Joachim’s Valley (or *Joachimsthal*) began coining ounces of silver in 1518, and their uniformity and fineness earned a reputation throughout Europe. They became known as Joachimthalers, finally abbreviated to *thalers*. The name “dollar” is derived from “thaler.” Cf. Charles A. Conant, *The Principles of Money and Banking* (New York: Harper & Bros., 1905), I, 135–40; Menger, *Principles of Economics*, p. 283.

money have been innumerable.⁸ In recent centuries large bars of gold or silver have been used for storage or for exchange in larger transactions, while smaller, circular pieces, known as *coins*, are used for smaller transactions.

5. Money Income and Money Expenditures

In a money economy, each individual sells goods and services that he owns for money and uses the money to buy desired goods. Each person may make a record of such monetary exchanges for any period of time. Such a record may be called his *balance of payments* for that period.

One record may be the transactions of goods sold for money in a certain period to other individuals. Suppose, for example, that Mr. Brown draws up the record of goods sold for money for the month of September, 1961. Suppose that he has sold his services as a carpenter to a Mr. Jones in building the latter's house and has sold his services as a handyman to Messrs. Jones and Smith during the same period. Also, he has disposed of an old radio to Mr. Johnson. His account of money received, i.e., money *purchased* for goods and services *sold*, is as follows:

September, 1961—James Brown

<i>Money Purchased</i>	<i>For Goods and Services Sold</i>
20 ounces of gold	Labor as carpenter to Jones
5 ounces of gold	Labor as handyman to Jones & Smith
1 ounce of gold	Old radio to Johnson
<hr/> 26 ounces of gold	

⁸Gold, for example, has been traded as money in the raw form of nuggets, as gold dust in sacks, or as jewelry and other ornaments. One interesting example of a money shape was the iron money of central Africa. Iron was a valuable commodity, in use as hoes. The money form was made to be divisible into two parts, easily shaped into hoes. See Laughlin, *A New Exposition of Money, Credit, and Prices*, p. 40.

From the account, we know that by his sales of goods and services during this period, Brown has purchased 26 ounces of gold. This total of money purchased is his total of *money income* for that period.

It is clear that the more money income a man receives during any period, the more money he will be able to spend on desired goods. *Other things being equal* (an important qualification that will be examined in later sections), *he will strive to earn as much money income in any prospective period as he can.*

Mr. Brown acquired his income by selling his labor services and a durable consumers' good. There are other ways of acquiring money income on an unhampered market. The owner of land may sell it for agricultural, locational, industrial, as well as other, purposes. The owner of capital goods may sell them to those interested in using them as factors of production. Tangible land and capital goods may be sold for money outright, or the owner may retain ownership of the good while selling ownership of its *services* over a certain period of time. Since any good is bought only for the services that it can bestow, there is no reason why a certain period of service of a good may not be purchased. This can be done, of course, only where it is technically possible. Thus, the owner of a plot of land or a sewing machine or a house may "rent it out" for a certain period of time in exchange for money. While such *hire* may leave legal ownership of the good in the hands of the "landlord," the actual owner of the good's service *for that period* is the renter, or "tenant." At the end of the hire period, the good is returned to the original owner, who may use or sell the remainder of the services.

In addition to the sale of goods and services, a man may receive money as a gift. He does not *purchase* the money he receives in gifts. His money income for any period equals his money purchased, plus the money he receives in gifts. (One common form of receipt of a gift is an inheritance, the result of a bequest at death.)

Thus, Mr. Green's account of money income for June to December, 1961, may be as follows:

<i>Money Income</i>	<i>From Sale of Goods and Services</i>
<i>PURCHASED</i>	
28 ounces of gold	Rent of land to Mr. Jones
300 ounces of gold	Sale of (other) land to Mr. Forrest
15 ounces of gold	Sale of threshing machine to Mr. Woods
<i>GIVEN</i>	<i>From Gifts</i>
400 ounces of gold	Inheritance from uncle
743 ounces of gold	

As was seen in the previous chapter, in order first to acquire the good or service that a man can sell for money, he must first either produce it himself or buy it from someone who has produced it (or who, in turn, has bought it from the original producer). If he has been given money, the original owner must have acquired it through producing a good, etc. Thus, in the last analysis, the first seller of a capital good or a durable consumers' good is the original producer, and later purchasers must have produced some service of their own in order to obtain the money to acquire it. The seller of labor service, of course, produces the service directly at the time. The seller of pure land must originally have appropriated unused land which he had found and transformed. On the unhampered market of a money economy, producers of commodities and services sell their goods for the money commodity, then use the money acquired to buy other desired goods.

Money is acquired in this way by all except the producers of the original gold on the market—those who mined and marketed it. However, the production of the money commodity, as with all other valuable commodities, itself requires the use of land, labor, and capital goods, and these must be paid for by the use of money. The gold miner, then, receives no money by gift, but must actively find and produce gold to acquire his money.

With the use of money acquired in these various ways, individuals purchase desired goods. They do so in two capacities: as consumers and as producers. As consumers, they purchase consumers' goods that they desire; in the case of durable goods, they may purchase the entire good, or they may hire the services of goods for some specified period of time. As producers, they use money to purchase the services of factors of production needed to produce consumers' goods or lower-order capital goods. Some factors they may purchase outright, to use *all* their anticipated future services; some they may hire for their services for a specified period of time. Thus, they may purchase capital goods that function as "raw material"; they may purchase some capital goods called "machines" and hire others; or they may hire or purchase the land that they need to work on. In general, just as consumers cannot very well hire short-lived, nondurable goods, so producers cannot very well hire capital goods, dubbed "raw material" or "inventory," that are used up quickly in the process of production. On a free market, they cannot purchase labor services outright, as was explained in the preceding chapter. Since man's personal will is inalienable, he cannot, in a voluntary society, be compelled to work for another against his present will, and therefore no contracts can be made for purchase of his future will. Labor services, therefore, can only be bought for "hire," on a "pay-as-you-go" basis.

Any individual may draw up an account of his purchases of other goods with money for any period of time. The total amount of money given up in such exchanges is his *money expenditures* or *money outlays* for that period. Here it must be noted that his expenditure account, as well as his income account, can be itemized for each transaction or may be grouped into various classes. Thus, in Brown's account above, he might have tabulated his income as 25 ounces from labor in general, and one ounce from his radio. How broad or narrow the classes are depends purely on the convenience of the person drawing up

the account. The total, of course, is always unaffected by the type of classification chosen.

Just as money income equaled *money purchased* for goods and services sold *plus* money received as gifts, so money expenditure equals *money sold* for goods and services bought *plus* money given away as gifts. Thus, Mr. Brown's money expenditure account for September, 1961, might be the following:

September, 1961—James Brown

Money Expended

<i>Money Sold</i>	<i>For Goods and Services Bought</i>
12 ounces of gold	Food
6 ounces of gold	Clothing
3 ounces of gold	Rent of House
2 ounces of gold	Entertainment
<i>Money Given</i>	
1 ounce of gold	Charity
24 ounces of gold	

In this account, Brown is spending money purely as a *consumer*, and his total money expenditures for the period are 24 ounces. If he had desired it, he could have subdivided the account further into such items as apples, $\frac{1}{5}$ ounce; hat, one ounce; etc.

Here it may be noted that an individual's total money income for any period may be termed his *exports*, and the goods sold may be termed the "goods exported"; on the other hand, his total money expenditure may be termed his *imports*, and the goods and services bought are the "goods imported." These terms apply to goods purchased by producers or consumers.

Now, let us observe and compare Mr. Brown's income and expenditure accounts for September, 1961. Brown's total money income was 26 ounces of gold, his money expenditures 24 ounces. This must mean that two ounces of the 26 earned in this

period *remained unspent*. These two ounces remain in the possession of Mr. Brown, and are therefore added to whatever previous stock of gold Brown might have possessed. If Brown's stock of money on September 1, 1961, was six ounces of gold, his stock of money on October 1, 1961, is eight ounces of gold. The stock of money owned by any person at any point in time is called his *cash holding* or *cash balance* at that time. The two ounces of income remaining unspent on goods and services constituted a *net addition* to Brown's cash balance over the month of September. For any period, therefore, a person's money income is equal to his money outlay plus his addition to cash balance.

If we subdivide this income-expenditure account into smaller periods of time, the picture of what is happening to the cash balance within the larger period is likely to be far different from a simple addition of two ounces. Thus, suppose that all of Brown's money income came in two chunks on the first and fifteenth of September, while his expenditures occurred every day in varying amounts. As a result, his cash balance rose drastically on September 1, say to six plus 13 or a total of 19 ounces. Then, the cash balance was gradually drawn down each day until it equaled six again on the 15th; then it rose sharply again to 19, finally being reduced to eight at the month's end.

The pattern of Brown's supplies and demands on the market is clear. Brown *supplied* various goods and services on the market and *demanded* money in exchange. With this money income, he *demanded* various goods and services on the market and supplied money in exchange. The money *must go into the cash balance* before it can be spent on goods and services.⁹

Suppose, on the other hand, that Brown's expenditures for September had been 29 ounces instead of 24 ounces. This was accomplished by drawing down Brown's previous cash balance by three ounces and leaving him with three ounces in his cash

⁹This is also true if the income is gradual and the expenditure is in discrete sums, or for any other pattern of money income and expenditures.

holding. In this case, his money expenditures for the period equaled his money income *plus* the decrease in his cash balance. In sum, the following formula always holds true for any individual over any period of time:

$$\text{Money Income} = \text{Money Expenditures} + \text{Net Additions to Cash Balance} - \text{Net Subtractions from Cash Balance}$$

Alternatively, the term Exports can be substituted for Income, and Imports for Expenditures, in the above equation.

Let us assume for purposes of simplification that the total stock of the money commodity in the community has remained unchanged over the period. (This is not an unrealistic assumption, since newly mined gold is small compared to the existing stock.) Now it is obvious that, like all valuable property, all money must, at any point in time, be owned by *someone*. At any point in time, the sum of the cash holdings of all individuals is equal to the total *stock* of money in the community. Thus, if we consider Brown among a *group* of five persons living in a village, and their respective cash balances on September 1 were: 6, 8, 3, 12, and 5 ounces, then the total stock of money held in the village on that date was 34 ounces. If the data were available, the same sort of summation could be performed for the world as a whole, and the total stock of money discovered. *Now it is obvious that Brown's addition of two ounces to his cash balance for September must have been counterbalanced by a subtraction of two ounces from the cash balances of one or more other individuals.* Since the stock of money has not changed, Brown's addition to his cash balance must have been acquired by drawing down the cash balances of other individuals. Similarly, if Brown had drawn down his cash balance by three ounces, this must have been counterbalanced by the addition of three ounces to the cash balance of one or more individuals.

It is important to recognize that the additions to, or subtractions from, a cash balance are all voluntary acts on the part of the individuals concerned. In each period, some individuals

decide to add to their cash balances, and others decide to reduce them, and each makes that decision which he believes will benefit him most.¹⁰ For centuries, however, fallacious popular usage has asserted that one whose income is greater than expenditures (exports greater than imports) has a "favorable balance of trade," while one whose expenditures have been greater than income for a period (imports greater than exports) has suffered an "unfavorable balance of trade." Such a view implies that the active, important part of the balance of payments is the "trade" part, the exports and imports, and that the changes in the individual's cash balance are simply passive "balancing factors," serving to keep the total payments always in balance. In other words, it assumes that the individual spends as much as he wants to on goods and services and that the addition or subtraction from his cash balance appears as an afterthought. On the contrary, changes in cash balance are actively decided upon by each individual in the course of his market actions. Thus, Brown decided to increase his cash balance by two ounces and sold his labor services to obtain the money, forgoing purchases of consumers' goods to the extent of two ounces. Conversely, in the later example, when he spent three ounces more than he earned in the month, he decided that his cash balance had been excessive and that he would rather spend some of it on consumers' goods and services. *There is therefore never a need for anyone to worry about anyone else's balance of payments.* A person's "unfavorable" balance of trade will continue so long as the individual wishes to reduce his cash balance (and others are willing to purchase his money for goods). His maximum limit is, of course, the point when his cash balance is reduced to zero. Most likely,

¹⁰This section is limited to a discussion of expenditures on consumers' goods. A later section will discuss producers' expenditures on producers' goods. It will be seen, however, that even unwelcome losses from cash balances suffered by producers are purely the result of voluntary action that, in a later period, proved erroneous.

however, he will stop reducing his cash balance long before this point.¹¹

6. Producers' Expenditures

The previous section concentrated on the case of Mr. Brown, whose entire money expenditures were on *consumers'* goods. His money income, aside from the sale of old, previously produced goods, came from the sale of current productive labor services. His expenditures were purely on consumption; his income was derived almost solely from his production of labor services. Every man must be a consumer, and therefore this analysis of consumer spending applies to all persons. Most people earn their income from the sale of their labor services. However, if we except previously produced goods, because someone must have originally produced them, all other money incomes must derive from new production of capital goods or consumers' goods. (This is apart from the sellers of land or its services, whose ownership must have originally derived from the finding and reshaping of unappropriated land.)

Producers of capital goods and consumers' goods are in a different position from sellers of labor service only. Mr. Brown, for example, a seller solely of labor service, need not spend any money on purchasing capital goods. Purely from his expenditure on desired consumers' goods, he derives the energy to be able to produce and sell labor services on the market. But the producers of capital goods and consumers' goods—the nub of any civilized society, since labor services alone could produce very little—are not and cannot be in such a fortunate position.

¹¹The assertion has also been made that a person who spends most or all of his income on food and clothing *must* also have an “unfavorable balance of trade,” since his money expenditures *must* be at a certain minimum amount. However, if the man has spent all his cash balance, he can no longer continue to have an “unfavorable balance,” regardless of what goods he buys or what his standard of living is.

For a man to produce a consumers' good, he must obtain labor services and the services of land and capital goods, in order to use the technological "know-how" available in the production of the good. Pushing the problem back, we find that, in order to produce a capital good, the would-be producer must obtain the necessary land, labor, and capital goods. Each such individual producer (or group of individuals in partnership) obtains the required factors and then directs the combination of factors into producing a capital good. This process is repeated among numerous individuals, until the lowest stage of production is reached and a consumers' good is produced. The producer of the capital good must obtain the needed factors (land, labor, and capital) by purchasing them for money, and, when the (lower-order) capital good is completed, he sells it for money. This capital good is, in turn, used for the production of a still lower-order capital good, and the latter is sold for money. This process continues until the final producer of the consumers' good sells it for money to the ultimate consumer.

A simplified schematic representation of this process is shown in Figure 32.

The solid arrows depict the movement of *goods* in exchange, as factors are bought by the producers at each stage, worked into a lower-order capital good, and then sold to lower-order producers. The broken arrows in the reverse direction depict the movement of *money* in the same exchanges. The producer of a capital good employed money that he owned to purchase factors of production. He then used these owned factors, along with hired labor services, to produce a lower-order capital good that he owned until he could sell it for money to another producer. The producer of a consumers' good went through the same process, except that his final sale for money was to the ultimate consumer.

Now let us call those producers who use their money to *invest* in the purchase of factors (either outright or for hire) *capitalists*. The capitalists then produce and own the various stages of capital goods, exchanging them for money until their products reach the consumers. Those who participate in the

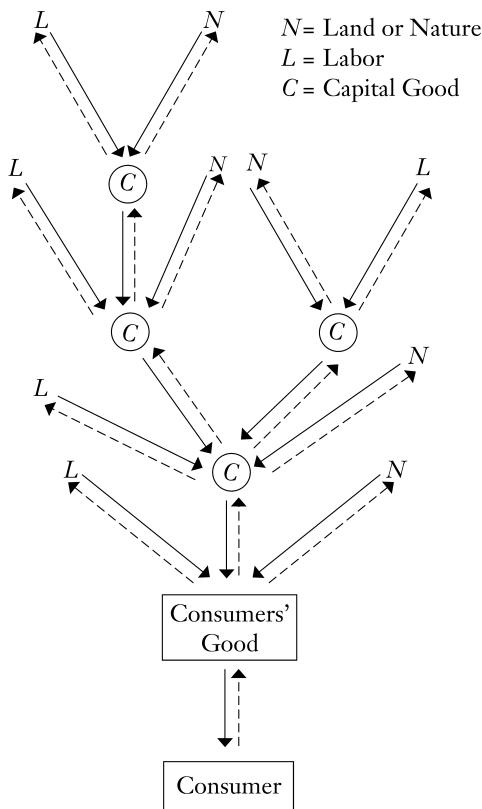


FIGURE 32. STAGES IN THE PROCESS OF PRODUCTION FOR THE ULTIMATE CONSUMER

productive process are therefore the capitalists and the sellers of land and labor services. The capitalists are the only ones who *spend money on producers' goods*, and they, therefore, may here be termed "the producers."

It is evident that a dominant characteristic of the production process is that each individual must produce *in anticipation* of the sale of his product. Any investment in production is made in anticipation of later sale to lower-order producers and, finally, to consumers.

Clearly, the consumer must have money in his cash balance in order to spend it on consumers' goods, and, likewise, the

producer must have the original money to invest in factors. Where does the consumer get the money? As has been shown above, he may obtain it from gifts or from the sale of previously produced goods, but in the last analysis he must have obtained it from the sale of some productive service. The reader can inspect the final destinations of the broken arrows; these are the sellers of labor services and of the services of land. These laborers and landowners use the money thus obtained to buy the final products of the production system. The capitalist-producers also receive income at each stage of the production process. Evidently, the principles regulating these incomes require careful investigation, which will be undertaken below. Here it might be noted that the net incomes accruing to the owners of capital goods are not simply the result of the contribution to production by the capital goods, since these capital goods are in turn the products of other factors.

Where, then, do the *producers* acquire their money for investment? Clearly, from the same sources only. From the income acquired in production, individuals can, in addition to buying consumers' goods, purchase factors of production and engage in the productive process as producers of a good that is not simply their own labor service. In order to obtain the money for investment, then, an individual must *save money* by restricting his possible consumption expenditures. This saved money first goes into his cash balance and then is *invested* in the purchase of factors in the anticipation of a later sale of the produced good. It is obvious that investment can come only from funds that are saved by individuals from their possible consumption spending. The producers restrict their consumption expenditures, save their money, and "go into business" by investing their funds in factors that will yield them products in the future.¹²

¹²Producers could also borrow the saved funds of others, but the whole process of lending and borrowing is omitted in this section in order to clarify the analysis. Loans will be analyzed in a later chapter.

Thus, while every man must spend part of his money income in consumption, some decide to become producers of capital or consumers' goods and to save money to invest in the required factors. Every person's income may be spent on consumption, on investment in the production of goods, or on an addition to his cash balance. For any period, an individual's *Money Income = his Consumption Expenditures + Investment Expenditures + Additions to Cash Balance – Subtractions from Cash Balance.* (Investment expenditures may be defined as the sum of the money expenditures made in investment in factors of production.)

Let us take the hypothetical case of Mr. Fred Jones and his "balance of payments" for November, 1961. Suppose his income from various sources during this month is 50 ounces. He decides to spend, during the month, 18 ounces on consumers' goods; to add two ounces to his cash balance; and to invest the other 30 ounces in a "business" for the production of some good. It must be emphasized that this business can involve the production of any good at all; it could be a steel factory, a farm, or a retail shoe store. It could be for the purchase of wheat in one season of the year in anticipation of sale in another season. All of this is productive enterprise, since, in each instance, a good is produced, i.e., goods are moved a step forward in their progress to the ultimate consumer. Since the investment is always in anticipation of later sale, the investors are also engaged in *entrepreneurship*, in enterprise.

Let us assume that Jones expends the saved funds on investment in a paper factory. His income-expenditure account for November may appear as follows in the diagram below. Of course, these figures are purely illustrative of a possible situation; there are innumerable other illustrations; e.g., there could have been a subtraction from cash balance to enable greater investment.

Investment expenditures are always made in anticipation of future sale. Factors are purchased, and transformed into the product, and the product is then sold by the enterpriser for

November, 1961—*Fred Jones*

<i>Income</i>	<i>Expenditures</i>
From sale of land 20 oz.	Food 7 oz.
From sale of a building . 30 oz.	Clothing 4 oz.
50 oz.	Shelter 4 oz.
	Entertainment 3 oz.
	 Consumption
	Expenditures 18 oz.
	 On Paper Machinery . . 12 oz.
	On Wood Pulp 10 oz.
	On Labor Services 8 oz.
	 Investment
	Expenditures 30 oz.
	 Addition to
	Cash Balance 2 oz.
	 Total 50 oz.

money. The “businessman” makes his outlays with the expectation of being able to sell the product at a certain price on a certain future date. Suppose that Jones makes the investment of 30 ounces with the expectation of being able to transform his factors into the product (in this case, paper) and sell the product for 40 ounces at some date in November, 1962. If his expectation proves correct, he will succeed in selling the paper for 40 ounces at that date, and his income account, for any period that includes that date in November, 1962, will include “40 ounces from sale of paper.”

It is obvious that, other things being equal, an investor will attempt to acquire the greatest possible net income from his investment, just as, with the same qualification, everyone attempts to acquire the greatest income from other types of sales.

If Jones is confronted with investment opportunities for his 30 ounces in different possible lines or processes of production, and he expects one will net him 40 ounces in a year, another 37 ounces, another 34, etc., Jones will choose that investment promising the greatest return. A crucial difference, then, between man as an entrepreneur and man as a consumer is that in the latter case there is no drive to have exports greater than imports. A man's imports are his purchase of consumers' goods and are therefore the ends of his activity. The goods he imports are a source of satisfaction to him. On the other hand, the businessman is "importing" only producers' goods, which by definition are useless to him directly. He can gain from them only by selling them or their product, and therefore his imports are merely the necessary means to his later "exports." Therefore, he tries to attain the greatest net income, or, in other words, to attain the largest surplus of exports over imports. The larger his business income, the more the owner of the business will be able to spend (i.e., to import) on consumers' goods that he desires.

It is clear, however, that the man, *considered as a whole*, has no particular desire to export more than he imports or to have a "favorable balance of trade." He tries to export more than he imports of *producers' goods* in his business; then he uses this surplus to spend on *imports of consumers' goods* for his personal wants. On total balance, he may, like Mr. Brown above, choose to add to his cash balance or subtract from his cash balance, as he sees fit and considers most desirable.¹³ Let us take as an example Mr. Jones, after he has been established in his business. Over a certain period, he may decide to subtract five ounces from his cash balance. Even though he tries his best to achieve the largest net income from business and thus add to his cash balance as much as possible from *this source*, in total he may well decide to reduce his cash balance. Thus:

¹³It was partly confusion between the *total* action of the individual and his action as a businessman that led writers to extrapolate from the behavior of the businessman and conclude that "nations" are "better off" if "they" export more than "they" import.

Fred Jones

<i>Income</i>	<i>Expenditures</i>
From business 150 oz.	In business, on factors of production (producers' goods) 100 oz.
	For consumers' goods . . . 55 oz.
	155 oz.
	Subtraction from cash balance 5 oz.

7. Maximizing Income and Allocating Resources

We have seen that, in the money economy, *other things being equal*, men will attempt to attain the highest possible money income: if they are investors, they will try to obtain the largest net return; if they sell their labor service, they will sell it for the largest return. The higher their money income, the more money they will have available for expenditure on consumers' goods. Before we proceed to a deeper analysis of the money economy, it is important to examine the "other things being equal," or the *ceteris paribus*, qualification.

In chapter 1, we examined the truth that in every action, men try to obtain the greatest advantage, i.e., to attain the end located on the highest possible point on their value scale. This was also called attempting to "maximize psychic revenue" or "psychic income." This is a praxeological truth, a general law holding for all human action, with no qualification whatsoever. Now the establishment of indirect exchange, or a money economy, enables every person to obtain a vast number of consumers' goods that he could not obtain, or could barely obtain, in isolation or by way of barter. As we have demonstrated in this chapter, these consumers' goods are acquired by producing and selling a good for the money commodity and then using money to purchase them. Despite this development, however,

by no means can all goods be bought and sold on the market. Some goods are attainable in this way; some cannot be. As was explained in chapter 2, some goods cannot be alienated from a person and therefore cannot be exchanged. They cannot come within the money nexus; they cannot be bought or sold for money. This fact does not mean that individuals disparage or revere them on that account. To some people, many of the unexchangeable consumers' goods are very precious and hold a high place on their value scale. To others, these goods mean little, as compared to those consumers' goods that can be bought in exchange. The ranking on his value scale depends entirely on the voluntary choice of each individual. It is nonsense to place the blame on "money" for the tendencies of some people to value exchangeable goods highly as compared to some nonexchangeable goods. There is no force in the existence of the money economy that compels men to make such choices; money simply enables men to expand enormously their acquisition of exchangeable goods. But the existence of the market leaves it to each individual to decide how he will value money and the goods that money will buy, as against other goods that are unexchangeable.

As a matter of fact, the existence of the money economy has the reverse effect. Since, as we know from the law of utility, the marginal utility of a unit of any good diminishes as its supply increases, and the establishment of money leads to an enormous increase in the supply of exchangeable goods, it is evident that this great supply enables men to enjoy unexchangeable goods to a far greater extent than would otherwise be the case. *The very fact that exchangeable consumers' goods are more abundant enables each individual to enjoy more of the nonexchangeable ones.*

There are many possible examples of grading exchangeable and nonexchangeable goods on one's value scale. Suppose that a man owns a piece of land containing an historic monument, which he prizes on aesthetic grounds. Suppose also that he has an offer for sale of the property for a certain sum of money, knowing that the purchaser intends to destroy the monument

and use it for other purposes. To decide whether or not to sell the property, he must weigh the value to him of keeping the monument intact as against the value to him of the consumers' goods that he could eventually buy with the money. Which will take precedence depends on the constitution of the individual's value scale at that particular time. But it is evident that a greater abundance of consumers' goods already at his disposal will tend to raise the value of the (unexchangeable) aesthetic good to him as compared with the given sum of money. Contrary, therefore, to the common accusation that the establishment of a money economy tends to lead men to slight the importance of nonexchangeable goods, the effect is precisely the reverse. A destitute person is far less likely to prefer the nonexchangeable to the exchangeable than one whose "standard of living" in terms of the latter is high.¹⁴

Examples such as these are of great importance for human action, but of little importance for the rest of this volume, which is mainly concerned with analysis of the market under a system of indirect exchange. In this study of money exchanges—the subdivision of praxeology known as *catalectics*—there is not much more that could be said about this problem. Other examples of such choices, however, are more important for catalectics. Consider the case of a man who has three offers for the purchase of his labor services, one of a money income of 30 ounces per month, another of 24 ounces, and a third of 21 ounces. Now—and here we return to the original problem of this section—the man will clearly choose to accept the offer of

¹⁴The terms "nonexchangeable" (or "unexchangeable") and "exchangeable" goods are far superior to the terms "ideal" and "material." The latter classification errs on two counts, aside from failing to convey the essential difference between the two types of goods. In the first place, as has been stated above, many exchangeable goods are intangible services rather than tangible, "material" things. Secondly, many of the nonexchangeable goods valued by some persons would hardly be considered "ideal" by others, so that a less colored term is necessary.

30 ounces, *provided* that the psychic, or more precisely, the nonexchangeable, factors are “equal” between the various alternatives. If the man is indifferent to any variations in conditions of work among the three offers, then no factors enter into his choice except money income and leisure, and, if he works at all, he will choose the income of 30 ounces. On the other hand, he may well have great differences in taste for the work itself and the varying conditions; thus, the job earning 30 ounces may be for a firm, or in a type of labor, that he dislikes. Or the job offering 24 ounces may have positive qualities that the man likes a great deal. We have seen in chapter 1 that labor is evaluated on the basis, not only of the monetary return, but also in terms of the individual’s liking for or dislike of the work itself. The valuations that a man attaches to the work itself are nonexchangeable positive or negative goods, because they are, for the actor, inseparable attachments to the work itself. They may be weighed against monetary considerations, but they cannot be exchanged away or ignored. Thus, in the above case, along with the prospective money income, the man must weigh the nonexchangeable “consumers’ goods” attached to the different jobs in his value scale. What he is weighing, in essence, is two “bundles” of utility: (a) the utility of 30 ounces per month plus work in what he considers an immoral trade or in unpleasant surroundings, vs. (b) the utility of 24 ounces per month plus work in a job that he likes. The choice will be made in accordance with the value scale of each individual; one man may choose the 30-ounce job, and another may choose the 24-ounce job. The important fact for catallactics is that a man always chooses a bundle of *money income plus other psychic factors* and that he will maximize his money income only if psychic factors are neutral with respect to his choices. If they are not, then these factors must always be kept in view by the economist.

Another similar example is the case of a prospective investor. Suppose an investor faces the choice of investing his saved money in various alternative production projects. He can, say, invest 100 ounces, with the prospect of earning a net return of

10 percent in a year, in one project; 8 percent in a second; and 6 percent in a third. Other nonexchangeable psychic factors being equal, he will tend to invest in that line where he expects the greatest net money return—in this case, the 10 percent line. Suppose, however, that he has a great dislike for the product that would offer a 10 percent return, while he has a great fondness for the process and the product promising the 8 percent return. Here again, each prospect of investment carries with it a nondetachable positive or negative psychic factor. The pleasure in producing one product as against the distaste for producing another are *nonexchangeable consumers' goods*, positive and negative, which the actor has to weigh in deciding where to make his investment. He will weigh not simply 10 percent vs. 8 percent, but "10 percent plus a disliked production process and product" vs. "8 percent plus a delightful production process." Which alternative he chooses depends on his individual value scale. Thus, in the case of enterprise as well as in the case of labor, we must say that the entrepreneur will tend to choose the course that maximizes his prospective money income, *provided* that other nonexchangeable factors are neutral with respect to the various alternatives. In all cases whatsoever, of course, each man will move to maximize the *psychic* income on his value scale, on which scale all exchangeable and unexchangeable goods are entered.¹⁵

In deciding on the course that will maximize his psychic income, man therefore considers all the relevant factors, exchangeable and nonexchangeable. In considering whether to work and at what job, he must also consider the almost universally desired consumers' good, leisure. Suppose that, on the basis of the money return and the nonexchangeable values attached, the laborer in the example given above chooses to work at the 24-ounce job. As he continues to work at the job, the marginal

¹⁵The belief of the classical economists, notably John Stuart Mill, as well as their critics, that economics must postulate a mythical "economic man," who is interested only in acquiring money income, is thus a completely erroneous one.

utility of the money wage per unit of time that he earns (whether it be 24 ounces per month or $\frac{1}{4}$ ounce per hour, etc.), will decline. The marginal utility of money income will tend to decline as more money is acquired, since money is a good. In so far as money is desired for a nonmonetary use (such as ornaments) or for use as an addition to one's cash balance (see below for a discussion of the components in the demand for money), addition to its stock will lead to a decline in its marginal utility, just as in the case of any other good. In so far as money is desired for the purchase of consumers' goods, an "ounce-worth" of consumers' goods will also decline in utility as new ounces are acquired. The first ounce of money spent on consumers' goods will fulfill the highest-ranking wants on the person's value scale, the next ounce spent the wants ranking second highest, etc. (Of course, this will not be true for a good costing more than one ounce, but this difficulty can be met by increasing the size of the monetary units so that each is homogeneous in what it can buy.) Consequently, the marginal utility of money income tends to decline as the income is increased.

On the other hand, as the input of labor increases, the stock of possible units of leisure declines, and the marginal utility of leisure forgone increases. As was seen in chapter 1, labor will tend to be supplied until the point at which the marginal utility reaped from labor no longer outweighs the marginal utility of leisure on the individual's value scale. In the money economy, labor will cease when the marginal utility of the additional money income per unit of time no longer exceeds the marginal utility of the leisure forgone by working for the additional time.¹⁶

¹⁶Of course, the concrete result differs with the individual and with the *unit of time* selected for consideration. In terms of income per hour, the point at which labor stops may come fairly quickly; in terms of income per year, it may never come. Regardless of his money income per hour, in other words, he is likely to stop work after a certain number of hours worked, whereas he is likely to take a year off from work only if his annual income is substantial.

Thus, man allocates his time between leisure and productive labor, between labor for money and labor on unexchangeable items, etc., in accordance with the principle of maximizing his psychic income. In deciding between labor and leisure, he weighs the marginal advantages of work with the marginal advantages of leisure.

Similarly, man as a prospective investor must weigh, not only the advantages and disadvantages, monetary and otherwise, from each prospective investment, but also whether or not to invest at all. *Every man must allocate his money resources in three and only three ways: in consumption spending, in investment expenditure, and in addition to his cash balance.* Assume that to the investor cited above, the 10 percent project is highest in utility in his value scale, all factors considered. But then he must decide: Shall he invest at all, or shall he buy consumers' goods now, or add to his cash balance? The marginal advantage of making the investment will be the prospective money return, weighted by the nonexchangeable utilities or disutilities involved. The advantage of a money return will be that he will have more money, in the future, that he could spend on consumers' goods. If he has 100 ounces of money now and invests it, in a year he might have 110 ounces which he could spend on consumers' goods. On the other hand, what chiefly militates against investment, as was explained in chapter 1, is the fact of time preference, the fact that he is giving up possible consumption *in the present*. If we assume that an ounce of money will buy the same quantity of goods as an ounce a year from now (an assumption that will be removed in later chapters), then one ounce of money now will always be worth *more* than one ounce a year from now, simply because enjoyment of *a given good* is always preferred as early as possible. Therefore, in deciding whether or not to invest, he must balance the *additional* return against his desire to consume in the present rather than the future. He must decide: if I value 100 ounces now more than 100 ounces a year from now, do I value 100 ounces now more or less than 110 ounces a year from now? He will decide in accordance with his value scale. Similarly, he must

weigh each against the marginal utility of adding to his cash balance (in what this consists will be examined below).

Thus, every unit of the money commodity in a man's stock (his money resources owned) is always being allocated to the three categories of use in accordance with his value scale. The more money that he allocates to consumption, the lower will be the marginal utility of the goods consumed. Each further unit spent will be devoted to less urgently desired goods. And each further unit so spent will decrease his available stock of investment goods and his available cash balance, and therefore will, in accordance with the law of utility, raise the marginal utility forgone in each of these uses. The same will be true for each of the other uses; the more money he spends on each use, the less will be the marginal utility from that use, and the higher will be the marginal utility of other uses forgone. Every man will allocate his money resources on the same principles that the hypothetical actor allocated his stock of horses in chapter 1 above; each unit will be used for the most useful end not yet achieved. It is in accordance with these principles—the maximizing of his psychic income—that each man will allocate his money stock. In accordance with his value scale, each man will judge the respective marginal utilities to be obtained by each monetary unit in each use, and his allocation of money expenditures as revealed in his balance of payments will be determined by such judgments.

Just as, within the general category of investment expenditure, there are different projects with different expected returns, so there are an innumerable variety of consumers' goods within the general category of consumption. On what principles does a man allocate his expenditures among the numerous types of consumers' goods available? On precisely corresponding principles. His first unit of money spent on consumers' goods will be spent on that good satisfying the most highly valued end, the next unit on the next most highly valued end, etc. Each parcel of a consumers' good bought decreases the marginal utility of

this good to the man and increases the marginal utility of all other goods forgone. Again, a man will allocate his money resources within the consumption category by apportioning each unit of money to that good with the highest marginal utility on his value scale. A judgment of relative marginal utilities determines the allocation of his money expenditures. It is evident that we may eliminate the words "within the consumption category" in the sentence before the preceding, to arrive at the rule which governs all a man's money allocation within and between categories.

Our analysis may now be generalized still further. Each man, at every point in time, has in his ownership a certain stock of useful goods, a certain stock of *resources*, or *assets*. These resources may include not only *money*, but also *consumers' goods*, *nonpersonal producers' goods* (land and capital goods), *personal energy*, and *time*. He will allocate *each one* of these resources according to the same principles by which he has allocated money—so that each unit goes into the use with the highest prospective marginal utility on his value scale.

Here we must note that the sale of personal labor service is not always made to an investing "employer" who purchases the labor service for money and then tries to sell the resulting product. In many cases, the man who invests also works directly in the production of the product. In some cases, the investor spends saved funds on factors of production and hires the labor of someone to direct the actual production operation. In other cases, the investor also spends his labor-time in the details of the production process. It is clear that this is just as much "labor" as the labor of an employee who does not own and sell the product.

What principles will decide whether a prospective investor uses his labor in his own investment in production (i.e., will be "self-employed") or will invest only his money and sell his labor elsewhere as an employee? Clearly, the principle again will be the best psychic advantage from the action. Thus, suppose that

Jones finds what he considers to be the best and most remunerative investment project, which he estimates will yield him a net money income of 150 ounces for the forthcoming year, provided that he does not labor on the project itself, but hires others for its direction and management. He also estimates that, if he were to perform the direction himself instead of hiring a manager to do it, he would be able to net a further income from the project of 50 ounces a year. With his own labor involved, then, the net income from the project would be 200 ounces for the year. This figure will be the higher, the more skilled his direction would be than the man he replaces, and the lower, the less comparatively skilled he is. In this case, the 200-ounce net income would include a 150-ounce investment income and 50 ounces for the labor income of direction. Whether or not he takes this course depends (setting leisure aside) on whether he can sell his labor service for a greater income elsewhere. This "greater income" will, of course, be in terms of psychic income, but, if nonexchangeable factors are assumed in this case to be neutral, then the "greater income" will be the greater money income. If, *ceteris paribus*, Jones can earn 60 ounces as an employee for some other investing producer, then he will take this job and hire someone else to use labor on his investment. His total money income will then be: 150 ounces from the project plus 60 ounces from the sale of his labor services to a producer, totaling 210 ounces. Of course, if nonexchangeable psychic factors countervail, such as a great preference for being self-employed in the use of his labor, then he may accept the 200-ounce income.

It is clear from this discussion that the common concept of the productive laborer, limited to the man who works in the fields or on an assembly line, is completely fallacious. Laborers are all those who expend their labor in the productive process. This labor is expended for a money income (which may be weighted by other psychic factors). If the labor service is sold to an investing employer who owns the final good produced by the co-operating factors, it might be rendered in any required task

from that of a ditchdigger to that of a company president. On the other hand, labor income may be the result of the "self-employment" of the investing enterpriser. This type of laborer is also the owner of the final product, and his net monetary return from the sale of the product will include his labor income as well as his return from the money invested. The larger and more complex the enterprise and the production process, the greater will tend to be the development of specialized skill in management, and therefore the less will be the tendency for self-employment by the enterpriser. The smaller the enterprise, and the more direct the production methods, the more likely is self-employment to be the rule.

We have so far specifically treated the principles of allocating labor and money. The other exchangeable resources that a man may possess (and it is the *exchangeable* resources that catallactics is interested in) are consumers' goods and nonpersonal producers' goods (land and capital goods).

The consumers' goods in a man's stock are the *durable* ones. The nondurable goods and services will have disappeared in the process of consuming them. Now, as we have seen in chapter 2, any good may have either *direct use-value* to its owner or *exchange-value* or a mixture of both. At any time, each owner of a consumers' good must judge on his value scale whether its exchange-value or its highest direct use-value is the greater. In the money economy, the problem of exchange-value is simplified, since it will be exchange for *money* that will be especially important. The utility on his value scale of the highest direct use-value will be compared to the utility of the sum of money the good could procure in exchange. Suppose, for example, that Mr. Williams owns a house; he determines that he could sell the house for 200 ounces of gold. Now he judges the ranking of the direct use as against the exchange-value on his value scale. Thus, he might have three alternative direct uses for the house (*a*) living in it; (*b*) living in it part of the time and letting his brother live in it part of the time; (*c*) living in it part of the time, with no

participation by his brother, and he may weigh each of these against the exchange-value as follows:

Williams' Value Scale

Ranking

1. Direct Use (a).
2. Exchanging good for 200 ounces of money.
3. Direct Use (b).
4. Direct Use (c).

In this case, Williams will decide to live in the house and not sell it. His decision will be determined solely by his value scale; someone else might rank the exchange above the direct use and therefore sell the house for money.

It is obvious that it is true, without qualification, that for any *given good*, the seller will try to obtain as high a money price for it as possible. The proof of this is analogous to the demonstration given in chapter 2 that the seller of a given good always tries to obtain the highest price, except that here the markets are simplified by being exchanges solely for *money*, and therefore it is the *money price* that is important. *The money income that a man will get from the sale of a good will always equal the money price of the sale times the quantity of units of the good.* Thus, if he sells one house at a money price of 200 ounces per house, his total money income from the good will be 200 ounces. His desire to sell at the highest price does not, of course, mean that he will *always* sell at that price. The highest money price for a good may still be lower than the psychic value of direct use to him, as was the case with Williams. It is possible, however, that if the money price for selling the house rose to 250 ounces, the exchange-value of the house would have ranked higher than Direct Use (a), and he would have sold the house.

It is clear that, if the owner of the consumers' good is also the original producer, the direct use-value to him will be almost nil. The specialized producer who produces and owns houses or

television sets or washing machines finds that the direct use-value to him of this stock is practically nonexistent. For him, the exchange-value is the only important factor, and his interest lies *solely* in maximizing his money income from the stock and therefore in attaining the highest money prices in the sale of each good. The nonexchangeable factors that might loom large to the prospective investor or laborer in a certain line of production will be negligible to the producer who already has a stock of goods, since he had already taken the nonexchangeable factors into account when he made his original investment or his original choice of occupation. Thus, to the producer of a consumers' good, the way to maximize his psychic income from this revenue is to obtain the highest possible money price from its sale.

When will an owner sell the good, and when will he rent out its services? Clearly, he will take the course that he believes will yield him the highest money income, or, more precisely, the highest present value of money income.

What of the owner of a stock of *nonpersonal producers' goods*? How will he allocate these goods to attain the highest psychic income? In the first place, it is clear that, by definition, producers' goods can have no direct use-value to him as consumers' goods. But they may well have direct use-value *as producers' goods*, i.e., as factors of production in the making of a product further along in the process of being transformed into consumers' goods. For any given stock of a producers' good, or for any unit of that stock, there might be an exchange-value, a value in use for transformation into another product that would then have exchange-value, or both. It is also true for the owner of producers' goods that nonexchangeable factors will generally play a negligible role. The fact that he has already invested and perhaps worked in producing or purchasing these goods signifies that he has already accounted for the possible positive or negative psychic values in the work itself. Furthermore, in the economy of indirect exchange, it is only exchange of goods produced for money that is important, as there will be very little

scope for barter. The owner of producers' goods is therefore interested in judging whether the goods will yield a higher money income from exchanging them directly for money or from transforming them via production into a product of "lower-order," and then selling the product for money.

As an example of the choices facing the owner of producers' goods, let us take Robertson. Robertson has invested in, and therefore owns, the following factors:

- 10 units of Producers' Good X
- 5 units of Producers' Good Y
- 6 units of Producers' Good Z

He knows, because of his technological knowledge, that he can transform these units of co-operating factors *X*, *Y*, and *Z*, into 10 units of a final product *P*. (The various "units," of course, are purely physical units of the various goods and are therefore completely incommensurable with one another.) He estimates that he will be able to sell these units of *P* for 15 ounces each, a total money income of *150 ounces*.

On the other hand, he sees that he could sell (or resell) the factors directly for money, without himself transforming them into *P*, as follows:

- 10 units of *X* @ 6 oz. of gold per unit (the money price of *X*) a money income from stock of *X* of. *60 ounces*
- 5 units of *Y* @ 9 oz. per unit, a money income of. *45 ounces*
- 6 units of *Z* @ 4 oz. per unit, a money income of. *24 ounces*

His total money income from the sale of the stock of each producers' good separately and directly is *129 ounces*. However, Robertson must also consider the money expenditures that he would have to make in buying labor services to help in this transformation. In a free economy, he cannot own a stock of laborers. If his expenditure on labor service is less than *21 ounces*, then it will pay him to transform the factors and sell the

product P for 150 ounces; if the required expenditures on labor-service are more than 21 ounces, then it will pay him to sell the producers' goods directly for money.

In each one of these prospective sales, of course, it is to the owner's interest to be able to sell at the highest possible price, thus yielding the highest money income from each good.

Suppose, now, that Robertson had decided to go ahead with the production and that he now has in his stock 10 units of P . There is no prospect of his immediately going into the business that would make use of P as a factor in making another product. Therefore, there is only one alternative left to this owner—to sell the product for money, for the highest price that he can acquire. However, in those cases where P is durable, he still has the option of holding off the sale if he believes that its money price in the future will be higher, and provided that the higher price will cover the disadvantage to him of waiting (his time preference) and the expenses of storing P until the sale is made.

The owner of a producers' good, whether a product to him or a factor, may rent it out if he does not sell the entire good. In order for this to be feasible, of course, the good would have to be relatively durable. Here again, as in the case of a consumers' good, the owner will decide on outright sale of the good or hiring out of its services over a period of time in accordance with his judgment of which alternative will yield him the highest money income (precisely, the highest present value).

We have thus analyzed the actions of an owner of a stock of consumers' goods or of producers' goods in attempting to attain his most highly valued ends, i.e., to maximize his psychic income. Nonexchangeable factors for him will generally be negligible in importance, since they had already been discounted when the investment in them was made. If we set aside the value of the durable consumers' good in direct use for some owners, the aim of the owners will be to maximize their money income from the stock of the good. Since money income from sale of a good is the money price of the good multiplied by the quantity

sold, this means that the sellers will try to attain the highest money price for their stock.

At this point we may, at least briefly, begin to answer the question we did not have the information to answer in chapter 2: Granted the behavior of the owner of a given stock, what determines the *size* of that stock of goods? Now obviously, except in the case of personal energy, these goods must have been *previously produced by someone* (or previously found and transformed in the case of pure nature-given factors). This previous production was undertaken either by the present owner or by someone in the past, from whom he had acquired, by exchange or gift, this stock of goods. The past investment must have been made for the reason that we saw above: the expectation of a future money return from the investment, compensating for the sacrifice of waiting to consume in the future instead of the present. This previous investor expected that he would be able to sell the good for a money income greater than the money expenditures that he had to make on the factors of its production. As an example, let us take Robertson with a stock of 10 units of *P*. How did he acquire this stock? By investing money in buying factors of its production, and then producing it, in the hope of making a certain net money income, i.e., in the expectation that the money income from the sale of *P* would be greater by a certain amount than the money expenditures invested in the various factors. Now how did the previously produced stock of the factors *X*, *Y*, and *Z* come into existence? By the same process. Various investors engaged in the production of these factors in the expectation of a net money income from the investment (total money income from the investment greater than total money expenditures). This investment decision accounts for the existence of all the stock of all producers' goods and durable consumers' goods for any community at any given point in time. In addition, the stock of pure nature-given factors was acquired through the owner's or some previous person's finding and using previously unused factors in a production process. The stock of the money commodity was, like that of the consumers'

and producers' goods, the result of an investment decision by an investing producer, who expected his money income to be higher than his money expenditure. On the other hand, the stock of *personal energy* owned by any person is inherent in his nature as a human being.

We have thus analyzed each type of exchangeable resource that a person may have, what governs his use of them in order to maximize his psychic income, and to what extent such maximization involves attempted maximization of money income from the resource. In analyzing the determinants of the money income from any sale, we have seen that they are the quantity and the money price, and we have just seen how the quantities involved in the "given stock" of any good can be accounted for. What yet remains unaccounted for is the money prices. All we know about them so far is that the *seller* of any good—consumers' or producers' good or labor service—wishes to sell it for as *high a money price as possible*. Nonexchangeable goods on the owner's value scale may modify this rule, but generally these modifications will be important only for sellers of labor services.

We have so far been considering man as the allocator, or seller, of a given good. What of man as a *buyer* of a good? (And here we recall the discussion in the early parts of this chapter.) As a buyer, he uses money for investment expenditures and for consumption expenditures. In our discussion of an individual's consumption expenditures, we saw that he decided on them upon considering a "unit's worth" of goods. But what determines what his unit's worth shall be? What is an ounce of money's worth of eggs, or hats, or butter, etc.? This can be determined only by the *money price* that the buyer would have to pay for the good. If a man can buy eggs at $\frac{1}{10}$ of an ounce per dozen, then one ounce's worth of eggs is 10 dozen. Now it is obvious that man, in his capacity as a buyer of consumers' goods with money, will seek to buy each particular good at the *lowest money price possible*. For a man who owns money and seeks to buy consumers' goods, it is clear that the lower the money prices of the goods he seeks to buy, the *greater is his psychic income*; for the

more goods he can buy, the more uses he can make with the same amount of his money. The buyer will therefore seek the lowest money prices for the goods he buys.

Thus, *ceteris paribus*, the psychic income of man as a seller for money is maximized by selling the good at the highest money price obtainable; the psychic income of man as a buyer with money is maximized by buying the good for the lowest money price obtainable.

Let us now sum up the results of the analysis of this chapter. We have seen how the common medium of exchange emerges in the market out of direct exchange; we have noted the pattern of exchanges with and for money in an economy of indirect exchange; we have described how each individual has a pattern of money income and money expenditures. Then, we investigated what is involved in the maximization of psychic income in a money economy, how this principle governs the actions of people in their various functions—as owners of different types of resources and as laborers or investors. We have seen to what extent such pursuit after the most highly valued ends involves the maximization of money income in the various cases, and to what extent it does not. We have just concluded that such maximization of psychic income always leads the seller of a good to seek the highest money price for it, and the buyer of a good to seek the lowest money price, with such exceptions as the laborer who spurns a higher money price for his labor because of the nonexchangeable conditions attached to the work, or the investor who spurns a greater prospective income for a line of production that he prefers for its own sake. These exceptions aside, pursuit of the rule: “Buy on the cheapest market and sell on the dearest” leads to satisfaction of the most highly valued ends for each individual, both as a consumer and as a producer.

Although we know that man tries to maximize his psychic income, and therefore his money income, *ceteris paribus*, we still do not know on what basis the money income that he does acquire is determined. We know that the nonexchangeable

values are simply determined by the value scales of each individual. But though we know that, *ceteris paribus*, a man will sell a service or a good for a greater rather than a lesser money price and income, we do not yet know what makes the money prices what they are. What determines the money prices of consumers' goods, of labor services, of capital goods, of nature-given factors? What determines the money price of the entire durable good and the money price of the "hired-out" services? And, with the enormous importance of investment as the determinant of the given stock of every good, what determines the spread between gross money income from goods and the money expenditures on the factors needed to produce them? It is only the anticipation of this spread between money income from the sale of the product, and money expenditure on factors, that brings about investment and production. And what, if any, are the relations that tend to be established among the various prices?

To put it differently, all human action uses scarce resources to attempt to arrive at the most highly valued of not-yet-attained ends, i.e., to maximize psychic income. We have seen how this is done by individuals in isolation and by individuals in direct exchange—although these can exist only to a drastically limited extent. We have seen how it is done, on an immensely greater scale, in the money economy; and we have seen that the specific components of psychic maximization in the money economy are, ultimately, nonexchangeable values, quantities of goods in stock, and the money prices that these goods can exchange for on the market. We have explained the operations of the nonexchangeable values, and we have very briefly indicated how the quantity of the given stock of each good is determined. We have now to investigate the classic problem in the analysis of indirect exchange: *the determination of money prices*. The analysis of money prices, moreover, will enable investigation into the reasons for, and the determinants of, the "spread" between expected gross money income from sales and the expenditure on factors, which induces people to invest in the production of stock.

PRICES AND CONSUMPTION

1. Money Prices

WE HAVE SEEN THE ENORMOUS importance of the money prices of goods in an economy of indirect exchange. The money income of the producer or laborer and the psychic income of the consumer depend on the configuration of these prices. How are they determined? In this investigation, we may draw extensively from almost all of the discussion in chapter 2. There we saw how the prices of one good in terms of others are determined under conditions of direct exchange. The reason for devoting so much consideration to a state of affairs that can have only a very limited existence was that a similar analysis can be applied to conditions of indirect exchange.

In a society of barter, the *markets* that established prices (assuming that the system could operate) were innumerable markets of one good for every other good. With the establishment of a money economy, the *number* of markets needed is immeasurably reduced. A large variety of goods exchange against the money commodity, and the money commodity exchanges for a large variety of goods. Every single market, then (with the exception of isolated instances of barter) includes the money commodity as one of the two elements.

Aside from loans and claims (which will be considered below), the following types of exchange are made against money: