

# USEFUL ECONOMICS

By  
E. C. Harwood



*ECONOMIC EDUCATION BULLETIN*

Published by  
AMERICAN INSTITUTE *for* ECONOMIC RESEARCH  
Great Barrington, Massachusetts

## About A.I.E.R.

**A** MERICAN Institute for Economic Research, founded in 1933, is an independent scientific and educational organization. The Institute's research is planned to help individuals protect their personal interests and those of the Nation. The industrious and thrifty, those who pay most of the Nation's taxes, must be the principal guardians of American civilization. By publishing the results of scientific inquiry, carried on with diligence, independence, and integrity, American Institute for Economic Research hopes to help those citizens preserve the best of the Nation's heritage and choose wisely the policies that will determine the Nation's future.

The Institute represents no fund, concentration of wealth, or other special interests. Advertising is not accepted in its publications. Financial support for the Institute is provided primarily by the small annual fees from several thousand sustaining members, by receipts from sales of its publications, by tax-deductible contributions, and by the earnings of its wholly owned investment advisory organization, American Investment Services, Inc. Experience suggests that information and advice on economic subjects are most useful when they come from a source that is independent of special interests, either commercial or political.

The provisions of the charter and bylaws ensure that neither the Institute itself nor members of its staff may derive profit from organizations or businesses that happen to benefit from the results of Institute research. Institute financial accounts are available for public inspection during normal working hours of the Institute.

---

### ECONOMIC EDUCATION BULLETIN

Vol. X No. 5 June 1970

*Economic Education Bulletin* (ISSN 0424-2769) (USPS 167-360) is published once a month at Great Barrington, Massachusetts, by American Institute for Economic Research, a scientific and educational organization with no stockholders, chartered under Chapter 180 of the General Laws of Massachusetts. Periodical postage paid at Great Barrington, Massachusetts. Printed in the United States of America. Subscription: \$25 per year. POSTMASTER: Send address changes to *Economic Education Bulletin*, American Institute for Economic Research, Great Barrington, Massachusetts 01230.

# **USEFUL ECONOMICS**

# **USEFUL ECONOMICS**

**By**

**E. C. Harwood**

**AMERICAN INSTITUTE FOR ECONOMIC RESEARCH  
Great Barrington, Massachusetts**

© 1970 American Institute for Economic Research

Printed in the United States of America

## Contents

<b>Foreword</b> .....	1
<b>I. INITIAL SELECTION OF TERMS</b> .....	5
Man and His Environment.....	6
Terra Firma Essential .....	8
Human Processing Effort.....	9
Summary .....	10
<b>II. THE EXISTING CONFUSED TERMINOLOGY</b> .....	13
<b>III. PROCESSING AT RETAIL</b> .....	25
How Do the Customers Get Their Purchasing Media? .....	30
<b>IV. PROCESSING AT THE WHOLESALE     AND MANUFACTURING LEVELS</b> .....	33
Manufacturers .....	34
<b>V. PROCESSING IN AGRICULTURE, MINING     FISHING AND HUNTING</b> .....	39
Agriculture.....	40
Mining .....	42
Fishing and Hunting .....	44
<b>VI. OTHER CUSTOMERS OF THE RETAIL MARKETS</b> ...	47
<b>VII. ORIGINATING, CIRCULATING,     AND CANCELING PURCHASING MEDIA</b> .....	53
Processing and Exchanging .....	54
A Satisfactory Purchasing Medium .....	59
The Evolution of Commercial Banking .....	64
Findings of Facts .....	80
<b>VIII. HOW WHO GETS WHAT</b> .....	89
<b>IX. A BRIEF DIGRESSION</b> .....	101
<b>X. THE SHARES OF TER-HUP     ACCRUING TO PROCESSORS</b> .....	109
<b>XI. THE SHARES ACCRUING TO OWNERS     OF PROCESSING TER-HUP</b> .....	113
Two Kinks of Processing Ter-Hup .....	115
How Are Relative Shares Determined? .....	117
<b>XII. THE SHARES OF TER-HUP     ACCRUING TO PROVIDERS OF SERVICES</b> .....	119
<b>XIII. PRACTICAL APPLICATIONS</b> .....	121

**Appendix A:**

**FREE COMPETITION IS VOLUNTARY COOPERATION .. 125**  
Competition vs. War ..... 125  
Voluntary vs. Involuntary Cooperation ..... 126  
What Is Free Competition? ..... 127

**Appendix B:**

**THE SIGNIFICANCE OF FREEDOM ..... 130**  
Incomplete Freedom ..... 131  
Processing Ter-Hup, Earned or Inherited ..... 132  
Monopoly Privileges ..... 135

## Foreword

**A**S of 1970 economics still is in the transition stage to the status of a modern science from an aggregation of secular cults based on the methods of inquiry that characterized medieval scholasticism and earlier even less reliable procedures. The application of modern scientific method, as exemplified in various other fields since the Galilean revolution 3 centuries ago, is steadily making progress on economic problems, but the work remaining to be done is so extensive that only a beginning has been made. An organized and comprehensive body of scientifically grounded warranted assertions or “knowledge” simply does not exist as yet in the field of man’s economic behavior.

Economics textbooks in great variety are available. Perhaps the most widely used at the moment are those emphasizing the secular revelations of the Keynesian school, but others presenting modern versions of the Marshallian marginal analyses and still others based on the seemingly intuitive introspections of a “reasoning mind” likewise are used.

Any student who takes the classical demand and supply curves to the mathematics department of his college will learn that the point where the theoretical supply and demand curves cross is without significance because three rather than two variables necessarily are involved. Time, the sometimes unmentioned third variable, cannot be disposed of in practice; and two equations involving three variables are still insoluble. Nevertheless, probably thousands of undergraduates are being required to learn what, to mathematicians, obviously is nonsense.

The existing situation probably is no worse than that in chemistry during the transition from the days of the alchemists or that in medicine when barbers were in the process of being disqualified as surgeons. The vested interests of senior personnel in academic departments, including both their “capital fund” of acquired “knowledge” and their interests in continuing the use of current textbooks must tend to delay progressive change. One simply cannot expect any human being to believe that his accumulated learning of a lifetime as embalmed in his textbook is largely a collection of outmoded notions headed for the scrap pile.

Of course, many senior economists have avoided the slavish adherence to outmoded notions that characterizes some of their less fortunate associates. Those alert to the change under way presumably will welcome the new results of further scientific inquires even at the cost of sacrificing old and familiar notions.

But the regrettable fact is that those able to prepare a new economics

textbook, or at least aware of the need for one, have not yet produced a book that seems to meet the need. That modern textbooks will appear in due course seems inevitable; in the meantime, something is needed both for the student beginner and for the general reader who wishes to gain at least an elementary understanding of man's economic behavior.

This book is an attempt to meet an obvious need. Both student beginners and general readers, it seems to me, preferably should start such an inquiry in an area of the field where they at least have some familiarity with the principal matters discussed. Therefore, after preliminary development of certain technical terms, this report focuses attention on economic behavior in a typical supermarket and proceeds from that beginning. Few Americans are unfamiliar with that field of economic behavior.

Except for the point of beginning and subsequent course of inquiry here reported on, no claims to originality are made. However, it is believed that the procedure followed facilitates learning about man's economic behavior as a "live" subject. At the ends of several chapters suggestions have been made regarding the use of supplementary material. Students might well analyze the current annual reports of various types of corporations engaged in the retailing, wholesaling, manufacturing, and other economic activities described. Thus the actual flows of purchasing media and of processed materials may be more readily related to the discussion in the text.

The publication, *Business Conditions Digest*, published by the U.S. Department of Commerce, the *Federal Reserve Charts*, published monthly by the Board of Governors of the Federal Reserve System, and *Economic Indicators* published by the Congressional Joint Committee on the Economic Report all can be used to advantage as is suggested. Of course, the use of material brought up to date periodically during an academic year places an added burden on the teacher. Instead of presenting a petrified subject, comfortably ossified in a textbook that may change only on rare occasions, the teacher will find that he must keep himself well informed from week to week and month to month. But surely students of economics have a right to learn what is going on in the world as well as what has happened in the past. Many teachers already are using the aids suggested in order to heighten interest in what for many has been a dull subject.

Having suggested that certain vested interests may be among the factors responsible for "cultural lags" in the teaching of economics, I perhaps should emphasize that the Institute does not pay royalties to the authors of its publications. Therefore, in offering this publication for use in the schools as well as by interested general readers, I am not inhibited by any reluctance to urge a course of action because it would line my pockets. My

sole interest in the matter is to encourage students to get something more from their required courses in economics than a passing grade. Few college graduates whom I have questioned have felt that they obtained anything of lasting value or use to them, other than a marked distaste for economics as they learned about it. Surely, it must be possible to do far more effective teaching of those who never take other than elementary courses. Perhaps this small volume will stimulate other writers more competent to do more effectively the job that should be done.

E. C. Harwood

## I.

### INITIAL SELECTION OF TERMS

**R**ATHER than begin by discussing the vital importance of accurate specification (*i.e.*, careful naming or precise use of words), we proceed immediately to select certain terms or names that perhaps can be used for this report. In the next chapter the need for such accurate naming will be demonstrated by citing examples of the confusion resulting from the use of more familiar terms or names that long usage has made less precise, even when restricted to the special field of economics.

As a preliminary preparation for the task ahead I ask readers to imagine that they, with the writer, are members of a team of scientists who have landed on the Earth from the space ship that brought them from Saturn. From now on, when I use “we” or “us” I shall refer to the group of anthropologist-economists that includes the writer and readers who are participating in developing this report.

As prospective visitors to the Earth from Saturn, we prepared for the expedition by learning English grammar and the ordinary English of literate peoples using that language. We did not attempt to gain familiarity with the specialized technical usage of words in economics textbooks and other writings of the experts in the field.

Our reason for not attempting to learn the technical terms of the Earth’s economists, as a first step in our preparation, was that we had learned of the confusion widely prevalent in the field. Suspecting that any attempt to resolve the semantic confusion before visiting the Earth and examining the facts for ourselves might only complicate our problem, we chose to develop our own technical terms, at least for the elementary portion of the task.

As observers from Saturn, we have an advantage over the Earthbound inhabitants. It happens that the evolution of inquiry occurred much earlier on Saturn, and the stage comparable to the Galilean revolution on the Earth occurred several thousand years ago instead of only 3 centuries ago. Consequently, we on Saturn have long been thoroughly familiar with the principles of inquiry that people on the Earth call “modern” scientific method.

All but the least educated on Saturn are well aware of the necessity for accurate specification (or precise naming). Moreover, the directive function of hypotheses is well understood: *i.e.*, that notions about things, such as the connections among events, are used to guide research, to indicate where experiential or experimental aspects of inquiry should proceed. This is the way that hypotheses have been used on the Earth likewise in the sciences that have progressed more rapidly since Galileo’s day. So

long ago that the details are lost in the haze of history, the Saturnians abandoned the search for immutable, eternal, and forever unchanging "Being" or "Reality" and turned their attention to measuring changes and analyzing the connections among changes.

Now, our task, the readers' and mine, is to function as a Saturnian group of anthropologist-economists in studying and reporting on some aspects of human behavior. Saturnian science has long been organized in three principal sectors, the physical, the physiological, and the behavioral subsiences. We are specialists in the last named but fortunately have an adequate grounding in the physical and physiological subsiences as well.

The aspects of human behavior on which we originally were to report included the activities of the organism labeled "man" in obtaining food, clothing, and shelter. The first thought of those who assigned the task to us was that our inquiry and report would deal only with man's behavior in obtaining the necessities of his existence. Subsequent preliminary investigation suggested the advisability of enlarging the scope of our inquiry because of the difficulty of differentiating necessities from near necessities.

As of this writing, then, our project comprises a report on the behavior of man in obtaining physical things modified by him for his use as food, clothing, shelter, and for other purposes. In view of the fact that our report will deal with elementary aspects of the developing science of economics, we should not, of course, assume that the scope of our studies can be finally delimited at this stage. Possibly a wider or a narrower range of man's behavior ultimately will be included in the scope of the science.

The space ship on which we traveled with other Saturnians who were to study and report on various aspects of Earth and its inhabitants landed in the outskirts of Chicago 12 months ago. Our party has spent a full year within a few hundred miles of the landing point and has inquired into the behaviors of man as found in farming, mining, fishing, manufacturing, transporting, wholesaling, retailing, and servicing. Our report on the scientific inquiry we have conducted follows.

### *Man and His Environment*

We begin with a brief description of man and the conditions of his habitat, Earth.

Man as an object in the cosmos is easily differentiated from his environment. Being an organism, man lives, grows, and dies; consequently, there is no danger of confusing individual specimens of man with inorganic things.

Among the organisms, man is found to have distinctive characteristics.

Like all other living things, he has the capacity to convert various forms of energy to his own uses through processes of absorption and digestion. Like some other living things, man has the capacity to move about in space, thus, in a manner of speaking, converting space to his own uses. In this latter respect man differs from most plant life and is similar to the various forms of animal life. However, man is differentiated from the latter not only in that he is a two-legged organism with two hands and without wings, but also in that he uses words, symbols, and tools. In short, man has a developing culture in the sense of accumulating records of language (designating or naming) behavior and accumulations of artifacts or tools. In these latter respects, at least, man differs from all other forms of life.

At this point, three important preliminary findings should be stressed. In the first place, men nowhere have been found living separately from the land as differentiated from the air and the sea or lakes. We have found a few men in the air at times, but they were supported by machines obviously made of things found on land. The relatively few men we have found on the water likewise have been in or on objects made from things on land. Moreover, the men we found in the air or on the water were only temporarily thus situated while moving from one place on land to another. In short, man has no capacity to exist in the air completely independently of the land or things derived therefrom, as some microscopic organisms seem to. Man also has no capacity to exist in or on the water independently of the land or things derived therefrom, as the fish seem to and even some mammals such as whales appear to.

The second important finding to be stressed here is that man has not been found existing independently of a culture. The culture that we found in North America in the general vicinity of Chicago included language, numerous institutional (in the sense of legally or otherwise established) arrangements, accumulated written records in the form of books, etc., habitual modes of procedures, formal and informal rules of conduct, accumulated things possessed by men, etc.

And the third important finding is that man, of all organisms on Earth, is distinguished as a learner. Infant man is not only ill-equipped for survival (as likewise are many forms of life at birth, although others are not), but also man apparently cannot survive except through learning. Even the most primitive specimens of man that we found were prodigies of learning in contrast with other forms of life; and even the best equipped specimens of man that we found seemed incapable of survival without learning. This capacity for learning apparently gives man the capacity for infinite expansion of the variety of wants. When bees have functioned by filling their hives with honey as bees have done since time immemorial, they appar-

ently want no more; when the cow has eaten her fill she only chews her cud and looks for now new worlds to conquer; but man, unlike all other forms of life, seems forever unsatisfied. If there is any limit to what man will try to acquire, to find out, to do, to seek, we have been unable to find it.

Although man as we have found him cannot exist independently of the land in either the air or the water, both air and water seem to be essential to man, the former for breathing, the latter for drinking. Equally essential to man is space on the land and access to various things found there. The space is required not only as "standing room" but also as some minimum of living and working room. Things found on or in the land likewise are essential to man because nearly all of his food, clothing, and shelter is derived from that source.

### *Terra Firma Essential*

In view of the peculiar importance of land to that portion of man's behavior we are to study, we need a technical term, a word or a phrase, that will specify accurately what we talk about. Various words or phrases commonly used might serve, such, for example, as earth, terra firma, ground, land space and content, earth surface and things on or in it exclusive of man, natural resources, etc. One word would be more convenient to use than a phrase, but each of the words in common use seems inadequate, either because it already is used too broadly or too narrowly or because the customary usage is vague rather than precise.

As a tentative name we have selected the phrase, "terra firma essential." For convenience in use we have shortened it to "ter-fir-ess" by combining the first three letters of each word in the phrase, "terra firma essential." We do not suggest that either the phrase or the abbreviation we have chosen has any special virtue. We may well discover that some other name can be used more advantageously as our report progresses, and we may find that the aggregate of things to which we shall apply the name "ter-fir-ess" (terra firma essential) should preferably be increased or decreased in order to include some or exclude other types of things. If the developing science of economics progresses as have the more advanced sciences, we can expect our specification (technical naming) to improve as we progress.

The behavior of man in which we are especially interested includes the processing of things obtained from *ter-fir-ess* (terra firma essential) beginning with the things as found in a natural state by man and continuing through to the stage of consumption. In common language, this processing includes farming, fishing, mining, manufacturing, transporting, wholesaling, and retailing. Whether or not more accurate specification of the different kinds of processing will prove to be advisable remains to be seen.

At this stage of the report, we are not prepared to name scientifically the stage of consumption or use and thus more accurately specify what aspects of man's behavior these common words refer to. However, we can advantageously designate the things processed by man. As the components of these things are found in a natural state prior to the application of human effort to them they are portions of *ter-fir-ess* (terra firma essential).

### *Human Processing Effort*

Once the application of human effort to these things is begun, they are modified in form, composition, place, and time. As thus processed through various stages, the modified things are made suitable, or more suitable, for human consumption or use. Part of the economic behavior of man is human processing effort applied to things found in *ter-fir-ess* (terra firma essential) on space that is an aspect of *ter-fir-ess* with the result that those things are thus modified for human consumption or use. *All* the behavior of man concerned with processing of portions of *ter-fir-ess* in the various ways described will be named "hu-pr-ef," an abbreviation of the phrase, "human processing effort." In order that our naming may be precise (in more technical language, that our specification may be accurate), we must remember that the phrase "human processing effort" and its abbreviation "hu-pr-ef" are the long and short names, respectively, only for that portion of man's economic behavior that is concerned with the processing of *ter-fir-ess*. To other economic behaviors we shall apply other names as may prove to be advisable in the interests of consistent and coherent discussion.

In our technical terminology, then, *hu-pr-ef* (human processing effort) in transactions with *ter-fir-ess* results in food, clothing, shelter, etc. In this connection, it should be emphasized that other aspects of human behavior, no matter how much effort may be involved, are not included in *hu-pr-ef* (human processing effort). *Hu-pr-ef* is the behavioral aspect of transactions that include *ter-fir-ess* aspects and, of course, the modified *ter-fir-ess* that results from the processing.

It will be convenient to have a name that we can apply to the result of the processing just mentioned. For this purpose we may combine the first three letters of "ter-fir-ess" with the first three of "hu-pr-ef" and obtain the name "ter-hup," which will be used, so to speak, as a shorthand abbreviation of the phrase "portions of terra firma essential modified by human processing effort to fit them for human consumption or other use by man." In short, this name "ter-hup" will be applied to all of the things derived from *ter-fir-ess* that have been modified by *hu-pr-ef*. *Ter-hup* thus includes all of the *ter-fir-ess* that has been *hu-pr-effed* and that has not yet been consumed, used up, discarded, or otherwise unfitted for human use.

## Summary

We are inquiring into part of the behavior of man, one of the living organisms we have found on Earth in the general vicinity of Chicago in North America. Our primary interest is that portion of the behavior of this organism connected with the acquisition of food, clothing, shelter, and other physical things consumed or used by man.

Our report thus far has been largely in the form of loose, general description, but we have developed certain technical names for aspects of the transactions observed as the specimens of man studied have functioned in their environment.

<i>Name</i>	<i>Application</i>
Ter-fir-ess (Terra firma essential):	The terrestrial globe on which the organism, man, is found, exclusive of the oceans, lakes, and rivers, and the air, but including <i>all</i> things found in or on the earth in a natural state and likewise including the space aspect of the Earth that constitutes the area of man's activities. (This tentative application is later modified.)
Hu-pr-ef (Human processing effort):	The portion of man's behavior that is involved in processing activities by means of which things found in <i>ter-fir-ess</i> are modified in form, composition, place, or time, in order to adapt them for subsequent use by man.
Ter-hup:	The portions of <i>ter-fir-ess</i> that have been modified by <i>hu-pr-ef</i> .

Certain supplementary comments regarding the things to which the three technical names are applied may be helpful.

1. Obviously, no thing found in its natural state unprocessed by man is included in the things labeled "ter-hup."

2. "Hu-pr-ef" is the term applied to all human effort engaged in processing portions of *ter-fir-ess* in order to adapt them to man's use. *Hu-pr-ef* includes what is commonly called "mental" effort as well as the muscular effort of human beings when thus applied. The name "hu-pr-ef" is applicable even when the processing consists of no more than picking berries, for example, or transporting things, or holding things in storage on a shelf accessible to prospective buyers. Assuming the berries *not* to have been cultivated by man, they are part of *ter-fir-ess* until the processing (picking) begins. Once *hu-pr-ef* is applied, the berries thus processed become part of the things classified as "ter-hup," and they remain in that classification through the stages of packing, transporting, offering for sale, holding in stock until purchased, and in continued storage until eaten by the consumer. Thus *ter-hup* includes the vast stock of things that have

been modified in form, composition, place, or time in order to adapt them for use by man.

Note: At this point, it seems advisable to emphasize that the names selected and their applications are tentative only. Either the names or their applications or both may be changed if such modifications are required in the interests of coherent and consistent discussion.

An important test of the usefulness of scientific terms (or names or labels) is whether or not skilled reporters achieve consistent and coherent use of the terms. If the best scientific reporters available are unable to achieve demonstrable consistency and coherency in using any particular terms, those terms become suspect. One cannot, of course, be sure that the difficulty is in the naming-named aspect of the problem, but one probably will be wise to investigate that possibility carefully by experimenting with other names and applications.

For example, in the course of this report the application of the label "ter-fir-ess" is modified, as the reader will find discussed in detail later. However, the modification results in eliminating an inconsistency rather than adding one or more inconsistencies or incoherencies (the latter situation frequently is encountered in economic writings).

This continued striving for the elimination of inconsistencies and incoherencies attributable to semantic difficulties is a vital aspect of modern scientific method. Only those who persistently and successfully strive to achieve the goals of coherency and consistency can hope to present useful scientific reports.

## II.

### THE EXISTING CONFUSED TERMINOLOGY

**T**HIS portion of our report is intended to explain as briefly as is practicable the necessity for the selection of new technical terms (scientific names) in the preceding chapter and as may be found desirable throughout this report. We begin with a question, why not simply adopt the technical terms already in general use by those organisms under our observation who purport to be specialists in the matters under consideration? In any of several sciences this could be done as a matter of course.

Having learned before our departure from Saturn that various semantic difficulties had been encountered by students of economics on Earth, we had resolved to begin our inquiry into certain aspects of man's economic behavior by first observing that behavior directly. By that means, we hoped to avoid in our report the confusion that apparently resulted in part at least from inaccurate specification.

In the preceding chapter, we have reported on the basic situation and have developed a limited terminology for certain things. As our next step, it seemed advisable to investigate the naming behaviors of those under our observation in order to ascertain whether technical terms in general use by them may be substituted for those already selected.

We have reviewed the literature on the subject, beginning with the writings of Adam Smith, continuing through the subsequent writings by many economists, and ending with a dozen textbooks, most of them published in 1953-54.\* The situation that existed during the first hundred years after Adam Smith published his *Wealth of Nations* in 1776 has been described as follows:†

“Adam Smith, who is regarded as the founder of the modern science of political economy, is not very definite or entirely consistent as to the real nature of the wealth of nations, or wealth in the economic sense. But since his time the confusions of which he shows traces, instead of being cleared up by the writings of those who in our schools and colleges are recognized as political economists, has become progressively so much worse confounded that in the latest and most elaborate of these treatises all attempts to define the term seem to have been abandoned.

---

\* Textbooks published between 1954 and 1969 have not significantly altered the situation regarding the existing confused terminology.

† The quoted extracts are from Chapter I, Book II, of *The Science of Political Economy*, by Henry George, New York, Robert Schalkenbach Foundation, 1946. (This book, first copyright 1897, also is available in a 1932 British edition.)

“... The fact is, that many of the best-known writers on political economy, such, for instance, as Ricardo, Chalmers, Thorold Rogers and Cairnes, make no attempt to give any definition of wealth. The same thing is to be said of the two volumes of Karl Marx entitled *Capital*; and also of the volumes on the same subject by Bohm-Bawerk, which also have been translated into English, and are much quoted by that now dominant school of scholastic political economy known as the ‘Austrian.’ And while many of the writers who make no attempt to define wealth, do have a good deal to say about it, what they say is too diffused and incoherent either to quote or condense....

“To make this exhibition of definitions as fairly representative as possible I have wished to include in it that of Professor Alfred Marshall, Professor of Political Economy in the University of Cambridge, England, whose *Principles of Economics* (of which only the first volume, issued in 1890, and containing some 800 octavo pages, has yet been published) may be considered the latest and largest, and scholastically the most highly endorsed, economic work yet published in English.

“It cannot be said of him, as of many economic writers, that he does not attempt to say what is meant by wealth, for if one turns to the index he is directed to a whole chapter. But neither in this chapter nor elsewhere can I find any paragraph, however long, that may be quoted as defining the meaning he attaches to the term wealth. The only approach to it is this:

“All wealth consists of things that satisfy wants, directly or indirectly. All wealth therefore consists of goods; but not all kinds of goods are reckoned as wealth.’

“But for the distinction between goods reckoned as wealth and goods not reckoned as wealth, which one would think was about to follow, the reader looks in vain. He merely finds that Professor Marshall gives him the choice of classifying goods into external-material-transferable goods, external-material-nontransferable goods, external-personal-transferable goods, external-personal-nontransferable goods, and internal-personal-nontransferable goods; or else into material-external-transferable goods, material-external-nontransferable goods, personal-external-transferable goods, personal-external-nontransferable goods, and personal-internal-nontransferable goods. But as to which of these kinds of goods are reckoned as wealth and which are not, Professor Marshall gives the reader no inkling, unless, indeed, he may be able to find it in Wagner’s *Volkswirtschaftslehre*, to which the reader is referred at the conclusion of the chapter as throwing ‘much light upon the connection between the economic concept of wealth and the juridical concept of rights in private property.’ I can convey the impression produced on my mind by repeated struggles to discover what

the Professor of Political Economy in the great English University of Cambridge holds is to be reckoned as wealth, only by saying that it seems to comprise all things in the heavens above, the earth beneath, and the waters under the earth, that may be useful to or desired by man, individually or collectively, including man himself with all his natural or acquired capabilities, and that all I can absolutely affirm for it as the only thing for which I can find a direct statement, is, that 'we ought for many purposes to reckon the Thames a part of England's wealth.'

"The same utter, though perhaps somewhat less elaborate, incoherency is shown by Professor J. Shield Nicholson, Professor of Political Economy in the great Scottish University of Edinburgh, whose *Principles of Political Economy* appeared in first volume (less than half as big as that of Professor Marshall's) in 1893, and has not yet (1897) been succeeded by another. Looking up the index for the word 'wealth' one finds no less than fifteen references, of which the first is 'popular conception of,' and the second 'economic conception of.' Yet in none of these, nor in the whole volume, though one wade through it all in search, is anything like a definition of wealth to be found, the only thing resembling a direct statement being the incidental remark (page 404) that 'land is in general the most important item in the inventory of national wealth' — a proposition which logically is as untrue as that we ought to reckon the Thames a part of England's wealth.

"Now, wealth is the object-noun, or name given to the subject-matter, of political economy, the science that seeks to discover the laws of the production and distribution of wealth in human society. It is therefore the economic term of first importance. Unless we know what wealth is, how possibly can we hope to discover how it is procured and distributed? Yet after a century of what passes for the cultivation of this science, with professors of political economy in every college, the question, 'What is Wealth?' finds at their hands no certain answer. Even to such questions as, 'Is wealth material or immaterial?' or 'Is it something external to man or does it include man and his attributes?' we get no undisputed reply. There is not even a consensus of opinion. And in the latest and most pretentious scholastic teaching the attempt to obtain any has been virtually, where not definitely, abandoned, and the economic meaning of wealth reduced to that of anything having value to the social unit."

One might think that, by the early years of the present century, the need for accurate specification (precise naming) in any scientific inquiry would have been so well established that the economists would have improved their technical terminology. However, careful scrutiny of books published during the first half of the 20th century reveals no such progress. On the contrary, the *Dictionary of Political Economy*, published in 1926, and the

*Encyclopedia of the Social Sciences*, published in 1930, in attempting to report the current usage of the technical terms of economics as well as the other social sciences, reveal as great if not greater diversity of naming than that described in the paragraphs quoted above.

We continued our inquiry into the technical terminology used by contemporary economists on the earth. For this aspect of our work we selected 12 textbooks published during the period 1948 to 1954, both years inclusive. These textbooks appear to be representative of those most widely used today. Our findings are summarized in the paragraphs that follow.\*

---

\* The 12 books are:

*Exhibit*

- A. George Leland Bach, *Economics, an Introduction to Analysis and Policy*, New York, Prentice-Hall, 1954. (Used at the Carnegie Institute of Technology.)
- B. James Harvey Dodd and C. W. Hasek, *Economics: Principles and Applications*, Cincinnati, South-Western Publishing Company, 1948. (Used at the University of Virginia and at Pennsylvania State College.)
- C. John F. Due, *Intermediate Economic Analysis*, Homewood, Illinois, Richard D. Irwin, Inc., 1953. (Used at the University of Illinois.)
- D. Fred Rogers Fairchild, Norman Sydney Buch, Reuben Emanuel Slesinger, *Principles of Economics*, New York, The MacMillan Company, 1954. (Used at Yale and at the University of Pittsburgh.)
- E. Bruce Winton Knight and Lawrence Gregory Hines, *Economics*, New York, Alfred A. Knopf, 1952. (Used at Dartmouth College.)
- F. Theodore Morgan, *Introduction to Economics*, New York, Prentice-Hall, 1950. (Used at the University of Wisconsin.)
- G. J. A. Nordin and Virgil Salera, *Elementary Economics*, New York, Prentice-Hall, 1950. (Used at Iowa State College.)
- H. Shorey Peterson, *Economics*, New York, Henry Holt and Company, 1949. (Used at the University of Michigan.)
- I. Leland Rex Robinson, John F. Adams and Harry L. Dillin, *Modern Economics*, New York, The Dryden Press, 1952. (Used at New York University, Temple University, and Linfield College.)
- J. Alfred W. Stonier and Douglas C. Hague, *A Textbook of Economic Theory*, New York, Longmans Green, 1953. (Used at University College, London.)
- K. John V. Van Sickle and Benjamin A. Rogge, *Introduction to Economics*, New York, D. Van Nostrand Company, 1954. (Used at Wabash College.)
- L. Myron H. Umbreit, Elgin F. Hunt, and Charles V. Kintner, *Fundamentals of Economics*, New York, McGraw-Hill Book Company, 1948. (Used at Northwestern University.)

*Notes:*

1. Some of these books are used as texts at other colleges and universities also, but the information above is sufficient to indicate that the books are representative of material widely used.

2. Hereafter, these publications will be referred to as Exhibit A, or B, etc.

Perhaps the most striking feature of these textbooks is the apparent lack of concern for accurate specification. Most of the authors seem to be unaware of the need for precise naming in scientific discourse. A few who do reveal some concern for this aspect of their problem nevertheless offer some technical terms that, as used by the authors concerned, are inconsistent with one another as will be pointed out in detail later.\*

As has been noted, the early economists regarded the word "wealth" as one of their basic technical terms. Much effort was devoted to developing firm specific use of this word label in economic discourse. However, that the efforts thus far have been abortive is evidenced in the exhibits now under consideration.

For example, in half of the exhibits (A, C, E, F, G, and K)† we find no attempt to use the word "wealth" precisely as the label for anything. This is an interesting development in a field where the man frequently referred to as the "father" of the subject matter chose for the title of his book, *Wealth of Nations*, and where the field itself has been described as "the science of wealth" or "the science that deals with the production and distribution of wealth" by some of the most noted writers during the past century.

Of the six writers who make no attempt to indicate a precise application for the label "wealth," four (A, C, E, and K) do use the term in an offhand way as though the reader must surely know what the authors intend to specify, and of the other two (F and G) one uses the term once, casually, and the other apparently does not use the word "wealth" at all.

Now there is nothing strange about the removal of particular terms from scientific discourse. Every science in the course of its advance has had occasion to discard labels once considered useful and adopt other technical terms more suitable for scientific discourse. However, it *is* strange

---

\* Even on the Earth, where scientific method has been applied in the modern way for only a little more than 3 centuries and has thus far been strikingly successful primarily in the physical and some of the physiological sciences, most scientists are well aware of the need for accurate specification. This aspect of the problem of inquiry is not definition in the sense of word substitution or most of the other senses in which "definition" is used. In fact, Dewey and Bentley were forced to conclude that the word "definition" itself would be unsuitable for scientific discourse "until a sufficiently large number of experts in the fields of its technical employment can establish and maintain a specific use." (John Dewey and Arthur F. Bentley, *Knowing and the Known*, Boston, Beacon Press, 1949, page 292.)

Scientists generally have found that precise naming is essential. Unless a scientist chooses labels for things carefully and uses them consistently, he cannot control his own discourse to say nothing of adequately communicating his findings to others. Such seems to have been the universal experience of those engaged in scientific inquiry.

† The letters refer to the listing of exhibits in the footnote on page 16.

for technical terms to be discarded from a *science* without general agreement among the experts in that science on the adoption of new labels that either supersede those discarded in their particular uses or, by naming other more relevant things, render use of the older terms no longer necessary. In the field of economics, there is not only no agreement on a new name as the substitute for “wealth” and no agreed upon precise naming of more relevant things, but also there evidently is not even general acceptance of the need for precise naming. The latter fact alone should be sufficient evidence that modern scientific method has not yet been generally applied by the Earth’s economists.

In the other six exhibits, the respective authors make some attempts to use “wealth” as a technical term. The success of the attempts may be judged from the following samples.

The authors of Exhibit I (page 14) assert that “Wealth refers to the stock of economic goods....” They previously (page 12) indicate that economic goods include services, but on page 14 indicate that the phrase “economic goods” in the sentence quoted above about “wealth” includes only “material objects —,” which obviously are *not* services. Subsequently (page 70), they indicate that the things they refer to when using the label “wealth” include land. Thus they have included in one classification under one technical term land or natural resources, processed materials, and some portions of human behavior (unless one gives more weight to the statement on page 14 than to that on page 12, in which event no portions of human economic behavior are included). Such procedure is far from the precise naming required for scientific discourse.

The author of Exhibit H includes among the things to which he applies the label “wealth” all material things that have “utility, scarcity, and transferability” (page 62). That he includes land or natural resources is clearly indicated on page 63. But on the same page he asserts that wealth increases as a result of saving and through appreciation in value. “Appreciation is distinctively the source of expansion in natural wealth.” Now the quantity of processed material things can be increased indefinitely, but the land area in a city block is fixed. An increase in the value of the city block reflects a capitalization of the increase in the actual or potential annual claim on current production accruing to the owner. To add together in one classification both an increased amount of processed materials and the evidence of an increased claim on such materials seems a strange procedure.

The authors of Exhibit B use the term “wealth” to refer to “material economic goods” (page 67). The latter include processed materials of various kinds (page 66.) But on page 68 the authors indicate that land and

presumably all natural resources are included with the class of things labeled "wealth," in spite of the fact that the space aspect of the land in a city block, for example, obviously is not a processed material.

Judging by the dozen recent textbooks that we assume to be representative, the Earth's economists have not succeeded in developing firm and specific use of the term "wealth" or any substitute for it. What is the situation with reference to other things for which we have suggested tentative labels?

In our first chapter we have differentiated the organism, man, within his environment. This would seem to be an essential first step in attempting to inquire into any of the behavior of that organism. Such differentiation does not imply a separation of the organism from its environment. Man outside of the cosmos or separated in any significant way therefrom has not yet been found.

Having thus differentiated man within his environment we next sought to differentiate among the behaviors of man in order to select and appropriately specify those that would constitute part of the subject matter of our inquiry. Tentatively, we selected the human behavior that is concerned with the processing of things found in the environment in order to fit them for use by man. Human effort thus applied we labeled "hu-pr-ef." Have the Earth's economists a technical term that might be used to better advantage?

The word "labor" is the only one that appears to be widely used in this connection. However, it cannot be said that there is general and firm usage of this term.

In three of the exhibits (A, C, and G) the authors use neither "labor" nor any other name to specify the human effort applied in processing things, although there is much discussion of labor problems in the sense of the problems pertaining to large numbers of employees, primarily in industry. And in five others (F, H, I, J, and K), although the word "labor" is casually used, not even an approach to accurate specification is attempted.

In four of the exhibits (B, D, E, and L) the word "labor" is used with and obvious attempt to achieve scientific precision in naming. However, the results are as follows:

In Exhibit B, the authors assert (page 72), "By labor we mean effort directed to the creation of utility. This concept of labor does not require that any distinction be made between physical and mental effort." Previously (page 66), the authors had said that "production is the creation of utility" and that "anyone who changes the form of materials so that they become more useful, or who moves a material thing to a place where it will be needed at the time it will be wanted, or who lends, sells or

otherwise makes the thing available for use ... is engaged in the creation of utility and is therefore a producer” and therefore presumably a laborer. For example, the owner of the land in a city block who “sells or otherwise makes the thing available for use” (possibly by permitting someone to lease it for 99 years) apparently would be included in the class of things the authors of this book label “labor.”

And later in the same book (Exhibit B, page 76) the authors say, “Before production can take place, these factors [natural resources, labor, and capital] must be brought together, organized, and directed to the end of producing certain specific goods.” Of course, this task of organizing, etc., is undertaken by human beings; but, for some reason not disclosed by the authors, the efforts of such human beings appear to be neither the physical nor mental effort that would constitute labor but some other kind of effort that makes them entrepreneurs. Then on page 78 the authors assert “that management is a function of entrepreneurship ... is hardly correct.” Evidently, these authors would not include assembly of men and materials, organizing them, and directing them to the production of specific goods as functions of management. In fact, in the next sentence they say, “Management, however, is a form of labor....” If all this seems somewhat confusing to readers, we can only say that we share their bewilderment.

The authors of Exhibit D assert on page 32 that “Mental effort is as truly labor as physical exertion.” Then on page 36 they say, “Land, labor, and capital cannot work together without organization and control.... *Anyone who performs the function of organization, planning, and risk bearing is an entrepreneur*” [italics in the original]. The authors also specify that an entrepreneur has certain “legal obligations to the landowner and the laborers.” Just how organization and control are accomplished without exerting the physical or mental effort that would qualify the efforts of the organizer and controller as labor is difficult to imagine.

The authors of Exhibit E offer these assertions (pages 19 and 26):

“The agents of production are ... labor, capital (including land) and entrepreneurship.”

“Labor means human effort, physical or mental, skilled or unskilled, that is devoted to production.”

“... no sharp distinctions can be drawn between entrepreneurship on the one hand and labor and capital on the other.”

“The distinctive function of entrepreneurship is risk-bearing.”

And in the example of a corporation offered on page 27, the authors say, “Now the stockholders, as such, are the entrepreneurs.”

Detailed comment, beyond raising the question whether the insurance companies as agencies specializing in risk bearing are the perfect example of entrepreneurship, seems unnecessary.

The authors of Exhibit L assert (page 30), “Labor is human services” that contribute “to the productive process....” “Entrepreneurship is that special type of human service which is concerned with organizing and directing business activities. Entrepreneurship involves not only controlling business but also taking the major risks.” Subsequently, on page 303, the authors make clear that they regard entrepreneurship as one of “the four factors of production.” Again there is no explanation of how the efforts of the entrepreneur fail to fall within the classification, “human services” that contribute “to the productive process....”

In the first chapter we also differentiated within the cosmos the terra firma on the spatial aspect of which human economic behavior is found and which is the source of the things modified by man in order to adapt them for his use. The label we applied was “ter-fir-ess.” Have the Earth’s economists a technical term that might be better for use in this report?

“Land” is the word that seems to be widely used in this connection, albeit not with the uniformity and precision one expects to find in a science. In three of the exhibits (A, G, and I), we found no attempt to develop precise naming in this connection and only casual (and in A not indexed) use of the word “land” or any apparent substitute.

The authors of Exhibit B (pages 71 and 72) use “land” as a label very much (but not precisely) as we have used “ter-fir-ess.” However, on page 76 they raise the question, “Is land capital?” Previously, on page 74, they had asserted “only those tangible, material goods that have been produced by the application of labor to the resources of nature ... are capital.” In answering their own question on page 76, the authors indicate that land may or may not be capital, depending on the usage of that label, but the possibility of serious semantic difficulties arising from either or both uses is not discussed.

The authors of Exhibit E use the label “capital”, for which they also use the phrase “or wealth” in referring to the “stock of all economic goods.” (Page 24) Included in the latter are agricultural and urban land and other natural resources. Nevertheless, they assert (page 25) that “In our actual economy, capital is formed by saving and investing money.” Precisely how land and other natural resources are “formed by saving and investing ...” is not explained. On page 101 the authors tentatively differentiate between land or “natural” capital and “artificial” capital consisting of produced goods. However, they seem unaware of any significant semantic problem and drop the subject after brief comment.

The author of Exhibit H offers the following assertions (page 8): “There is need in economics for a term to cover the whole area of economic things — for a common term to use in speaking of the results of production, of the means of production, of possessions and accumulations. All such things which are to economists what matter is to the physical sciences, are called *economic goods*” [italics in original]. But a few lines above the authors assert, “The flow of economic goods, which is the basis of economic welfare, results from a process called *production*” [italics in the original]. And on page 37 the authors refer to a test being “necessary to distinguish human services which are economic goods from human abilities which are not.” Thus it appears that one label is used for the results of production, the human behavior aspect of production, the natural resources or aspect of production not produced by man, and any other means of production. That such unscientific naming might unnecessarily complicate their communication efforts seems not to have occurred to the authors.

The authors of the remaining exhibits apply the term “land” or “natural resources” more consistently. However, it is plain that firm usage of such terms has not yet been developed among the professional economists as a group.

Considering now the various attempts to achieve precision in naming what we found in the 12 exhibits, only three (C, D, and K) reflect what may be called systematic efforts in this direction. The authors of one summarize their results in a manner that facilitates our further consideration of them. (Exhibit C, page 22.)

“The classification of goods developed in this section is outlined below:

- I. Free goods, such as air
- II. Economic goods
  - A. Consumption goods
    1. Human Services, such as the work of a dentist or barber
    2. Natural resources used directly for consumption purposes, such as the land upon which a home is built
    3. Produced material goods, such as bread, houses, automobiles
  - B. Factors of Production
    1. Natural resources used in production
    2. Labor: all human activity involved in production, including that involved in the rendering of services which are consumption goods (II. A. 1., above)
      - a. Employed labor
      - b. Entrepreneurial labor
    3. Capital goods
      - a. Single-use capital goods, such as fuel, raw materials
      - b. Multiple-use capital goods, such as industrial machinery”

Earlier (page 20), the author of Exhibit C stated that he would apply the label “goods” to “material objects and services which are capable of satisfying human wants.” Then, as is shown in the summary classification above, he divides goods into two major classifications and further subdivides the latter (economic goods) into two principal classifications, which are consumption goods and production goods, respectively.

It will be noted that human services are included in the classification, “consumption goods,” and that the services referred to include those “such as the work of a dentist or barber.” However, the “human activity ... involved in the rendering of services” also is classified under the other principal type of economic goods, that is, as a factor of production called “labor.” The question therefore arises, does not “work of a dentist or barber” and “human activity ... in the rendering of services [of a dentist or barber]” refer to the same thing? Is there anything else to refer to in this connection than the pertinent economic behavior of the barber (or dentist)? Finally, if the “work” of a barber and the “human activity” of a barber “in rendering his services” are two different names for the same human behavior, it would appear that some “labor” (according to the author of Exhibit C) is a “consumption good” and is engaged in producing itself. To many readers this may seem an unnecessarily confusing terminology.

In view of the situation found as reported above, we have concluded that many technical terms used by the Earth’s economists are unsuitable for scientific discourse; at least, they are unsuitable for our use at this stage of the present report. Whether we shall find, as our inquiry develops, that some of those terms are suitable, we leave that to the future to determine and resume our report on the economic behavior of man as we have found it.

### III.

#### PROCESSING AT RETAIL

**H**AVING differentiated the organism, man, from other organisms as well as the rest of the cosmos, we then named things that we shall have occasion to refer to repeatedly. The land that is the source of all materials processed by man and on the spatial aspect of which man lives and works we have labeled "ter-fir-ess"; the human effort applied to the processing of portions of ter-fir-ess we have labeled "hu-pr-ef"; and the results of such processing efforts have been labeled "ter-hup" (pronounced tare-hupe, the hu as in human).

With this as a beginning, we might next consider in chronological order the processing of each type of thing. Were we to make our report in this manner, we should discuss agriculture and mining, then harvesting and refining, then manufacturing, then distribution through wholesale agencies, then retailing, and finally consumption. Such a mode of procedure has often been used by the Earth's economists, but we have decided to follow a somewhat different procedure. Because relatively few persons through their own experience are intimately familiar with farming and mining but practically all are familiar with retail outlets, we have decided to report first on the processing and other economic behavior found at the retail level. Readers lacking personal experience with all the processing stages may find the discussion easier to follow if we thus begin with activities familiar to nearly everyone.

Typical processing behaviors at the retail level are found in the retail-store centers of all cities and in the more modern shopping centers frequently found in areas of suburban population. Stores offering nearly all types of ter-hup range from large department stores down to small shops specializing in only one or a few types of ter-hup. As a starting point, we shall report on the activities found in a typical supermarket, a combined meat, grocery, and fruit store that also offers some additional items such as candies, cigarettes, household supplies, etc.

In a supermarket the hu-pr-ef (human processing effort) includes the receiving of incoming shipments, storing of bulk lots, breaking down of wholesale lots (for example, cases) to individual items, shifting items to display racks, some processing of meats and fruits at the request of individual customers (for example, cutting, sorting, weighing, etc.), pricing all items, checking outgoing items collected by customers, receiving payment and appropriate care of the funds received, in some instances delivery of the items to the customer's car, maintaining cleanliness and orderliness, repair and maintenance of facilities used including the build-

ing, providing for replacement of facilities outmoded or worn out including the building, and planning the ordering, allocations of space, advertising, hiring and firing of employees, etc.

The usual procedure for the customers is to select whatever they wish and simply take it away with them. In exchange for the ter-hup they thus obtain for their own purposes, the customers give what we shall tentatively label "purchasing media." The purchasing media are accepted by the cashiers as representing a complete discharge by the customer of any obligation he may have incurred for the ter-hup he has taken. The customer is then free to regard the ter-hup he has thus collected and paid for as his own to be used solely as he chooses.

Ordinarily, ter-hup that has passed into the hands of consumers never is returned to the market places but is kept, used up, or worn out by the purchaser or those to whom he gives ter-hup. Exceptions to this general rule will be discussed later when we report at greater length on the behaviors of consumers.

Two significant questions no doubt have occurred to readers. The first is, What do the managers of retail stores do with the purchasing media received in exchange for goods? The second is, How do the customers of such a retail store get the purchasing media in the first place?

Before attempting to report the answers to these two questions, it seems best to examine in greater detail the purchasing media used. Precisely what are the various forms of purchasing media?

One of the most common forms is paper currency; and, of the paper currency in use, by far the larger amount consists of Federal Reserve notes. The most prominent printing on the face of these notes is "The United States of America will pay to the bearer on demand \_\_\_\_ dollars", the blank being filled in by such an amount as five, ten, twenty, fifty, one hundred, one thousand, five thousand, or ten thousand. Thus it is apparent that these purchasing media are simple demand notes or promises to pay on demand certain specified items.\*

The items specified invariably are dollars in certain amounts as indicated above; therefore, the next obvious question is, What are dollars? However, before attempting to answer this question we shall describe the other forms of purchasing media found in use and answer the two significant questions previously raised.

---

\* NOTE: In 1968, the United States Treasury began removing these promises from the currency as new Federal Reserve notes were printed to replace worn out currency. This change apparently was related to the monetary disorder that had reached crisis proportions. Whether or not the change will be permanent remains to be seen.

Another form of purchasing media that is a paper currency is labeled "Silver Certificate." The most prominent printing on the face of this certificate reads as follows: "This certifies that there is on deposit in the Treasury of the United States of America one dollar in silver payable to the bearer on demand." Thus it is apparent that this type of currency is in effect an exchangeable warehouse receipt for "silver dollars." (We postpone to a later chapter our report clarifying the difference between the "Dollars" promised by Federal Reserve notes and the "silver dollars" for which silver certificates are, in effect, warehouse receipts.) However, few silver certificates now remain in circulation. They have been replaced by Federal Reserve notes.

Coins also are generally used as purchasing media at the retail level. These consist of coins of denominations of 1, 5, 10, 25, and 50 cents. (Most coins now circulating contain only copper and nickel. Early in 1969 the only coins being minted with some silver content, 50-cent pieces, were being hoarded as rapidly as they were produced. Already, most subsidiary silver coins that had been produced in earlier years and not withdrawn from circulation by the mint were being hoarded.)

Much of the purchasing media used consists of checks drawn on banks. For example, on Saturdays in particular we found that many customers presented such checks to the cashiers of the supermarket.

Careful reading of numerous checks discloses that all appear to be in the form of written instructions to some bank to pay to the order of the payee a specified number of dollars. The words "on demand" are not included in the instructions, but we found that such checks are uniformly payable on demand.

Further research reveals that those who write such checks, including business corporations, have what are called demand deposits or checking accounts with the banking institutions. Such accounts constitute agreements by the banks to pay any checks drawn on demand within the limitations of the account at any time. In short, the checking accounts are records of the banks' promises to pay dollars on demand.

Thus we find that the purchasing media used consist almost entirely either of Government paper currency promises to pay *dollars* on demand, or Government paper currency warehouse receipts certifying that *silver* dollars will be paid to the bearer on demand, or paper instructions to banks that simply transfer from the writer to the payee the right to demand dollars from the bank on demand. The subsidiary coinage is an almost insignificant part of the purchasing media in use and obviously serves only for small change. However, in even dollar amounts and within certain specified limits the coins likewise are exchangeable for dollars on

demand or for the currency described above or for checking-account demand claims on dollars as the holder may desire.

We therefore find that the purchasing media used are transferable demand claims on dollars. As such, the purchasing media are immediately available in their existing forms (from the viewpoint of purchasers), are immediately acceptable (from the viewpoint of sellers), and involve no continuing or future obligation (either buyer to seller or seller to buyer) after a purchase has been made.

For the time being, we postpone consideration of how such purchasing media come into existence and turn to the two questions previously raised. The first was, What do the managers of retail stores do with the purchasing media received in exchange for goods?

We begin with the pertinent behavior of the manager of a retail supermarket. After checking, at the end of the day, the total purchasing media received against the cash register totals, the manager usually takes the purchasing media to the bank. There the total amount is credited to the checking account (demand deposit) of the supermarket. The bank adds the paper currency and coin to vault cash where it is available to pay out on demand. The checks included with the supermarket's deposit are collected; that is, if drawn on the same bank, the amount of the check is deducted from the checking account of the depositor concerned; if drawn on another bank, the check is sent to that institution where the amount is deducted from the account of the depositor concerned and is transferred to the first bank.

The manager of the supermarket then is in a position to use the purchasing media as may be desired for the purpose of the business. The typical ways in which such purchasing media are used are as follows:

1. By far the most of the purchasing media is used to pay for incoming goods or ter-hup. (Whether any particular purchasing media are used to pay a wholesaler for the same items that were exchanged for the purchasing media at retail is of course not material. Most purchasing media bear no means of proving that they are used in particular transactions. For the most part, the purchasing media in use are demand claims on dollars, and one cannot ascertain by examining the purchasing media what purchases have been made with them or what purchases they will be used for in the future.) The usual procedure is for the manager of the supermarket to write checks in appropriate amounts payable to the order of the various wholesalers from whom goods have been purchased.

2. A second use of purchasing media is to pay for new equipment used in the store. For example, the scales on which items are weighed wear out

and must be replaced; busy cash registers will not last forever, new floor covering in time must be laid, etc. When new items such as these are purchased, some of the purchasing media are transferred to the sellers, usually by checks.

3. A third use of purchasing media is to pay for the use of the building. In a typical supermarket operation we found that the building occupied was owned by others who had bargained with the supermarket management and signed a rental contract. The supermarket manager had agreed to pay to the owners of the building an amount that the latter had calculated would reimburse them for the depreciation of the building (buildings also wear out or become obsolete) and provide a return for the use of their property. (Responsibility for repairs, maintenance, and taxes on the building had been assumed by the supermarket under the terms of the contract.)

4. A fourth use of purchasing media is to pay for such repairs and maintenance as are the responsibility of the supermarket. This includes maintenance of vehicles as well as other equipment, painting, and other miscellaneous repairs and maintenance.

5. A fifth use of purchasing media is to pay the employees of the supermarket, including the manager, for their processing activities or hurt. In this instance also, the usual procedure is to pay by checks drawn against the bank account, but some stores may pay employees directly from the purchasing media received instead of depositing that portion of the total.

6. A sixth use of purchasing media is to pay for numerous miscellaneous services. Included among these are the telephone, electricity, professional window cleaning, insurance, and other services.

7. A seventh use of purchasing media is to pay the owner of the site on which the building is located. (At this point mention should be made of the fact that some supermarkets own their buildings or their sites, in some instances both; but the particular supermarket under discussion here leases the site [the space aspect of some ter-fir-ess] and the building from two separate agencies. The owner of the building happens to be a corporation that specializes in constructing, owning, and leasing such facilities; and the owner of the site is an individual.) By contract with the owner, the supermarket manager has agreed to pay all taxes levied on the site plus a fixed minimum amount plus a percentage of gross sales. In return, the site owner has agreed to permit the site to be thus used for a period of 30 years, at the end of which time the supermarket must clear the site or make new arrangements satisfactory to the owner.

8. An eighth use of purchasing media is to pay interest on outstanding

loans and principal on loans that may fall due. For example, the supermarket under consideration usually contracts for canned vegetables and fruits during the summer, receives and stores them during the fall, and gradually sells them at retail during the winter and spring. In order to pay for this seasonal accumulation, the supermarket borrows at the bank. A promissory note or series of such notes is given to the bank in exchange for credits to the checking account of the supermarket. This makes possible payment of the canners' bills without delay. Then, as the accumulated goods are gradually sold, the notes are paid by having the bank deduct the face value from the checking account as each note falls due. In this instance the bank creates the credit to the checking account (the addition to the demand deposit) in the first place; and, when the note falls due, the bank deducts it from the supermarket's checking account balance, thereby canceling out or withdrawing an amount of purchasing media equal to that previously created.

9. A ninth use of purchasing media is to pay dividends to the owners of the supermarket. In most years, a surplus of purchasing media remains after the payments indicated in 1 to 8 above. This surplus of receipts over necessary expenditures is labeled by the accountants as "profit." Part of it usually is distributed to the stockholders.

10. A tenth use of purchasing media is to pay corporate income and other Federal taxes to the Government. Most of these payments are a percentage of the profits mentioned in 9 above.

11. The company operating the supermarket in question is a growing organization. Consequently, the usual disposition of the remaining purchasing media is for enlargement of the business through the acquisition of new stores, new storage warehouses, or other facilities.

The final result of the dispositions of purchasing media mentioned and others of an individual nature too insignificant to justify a detailed report is that the purchasing media received during a year ordinarily are paid out.

### ***How Do the Customers Get Their Purchasing Media?***

The second significant question that we proposed to answer, at least partially, in this chapter was, How do the customers of such a retail store get the purchasing media in the first place? No doubt it will be apparent from the distribution of purchasing media described above how some customers of retail stores have obtained the purchasing media they use.

Included among the customers of retail stores are some individuals who have received part of the receipts of such stores. For example, the clerks, the cashiers, the managers, the repairmen, the window washers, the owner of the site, the owners of the building, and the stockholders who receive

dividends are all consumers. As such they are customers of the retail stores, and much of the purchasing media these individuals receive from the stores comes back to such stores in payment for goods purchased.

Of course, the total of purchasing media received by a retail store exceeds the amount paid to wholesalers for goods. The price of the items at retail is higher than the price of the same item at wholesale or direct from the maker. This difference between gross sales and the total cost to the retail store of the goods sold constitutes a sum that is apportioned among numerous participants as has been indicated. In effect, those individuals thus are given shares of the value added to the goods by retail processing activities. How the respective shares are determined will be the subject of further detailed inquiry. At this point we may simply note that purchasing media representing the total value added at the retail level are distributed among various recipients. If, in the supermarket under consideration, the sales of goods during a given week exceed the cost of those goods by \$12,000, that amount shortly is distributed to those having a legal right to share in it as described above.

If we suppose that gross sales of the supermarket are \$60,000 a week, it will be apparent that the recipients of the \$12,000 will be able to buy about one-fifth of the goods processed through that market. Evidently, the distribution of purchasing media, as has been described, is the means by which those who directly or indirectly participate in the processing of ter-hup at the retail level or who otherwise have some kind of a claim on ter-hup thus processed receive the purchasing media or claim checks that entitle them to demand their respective shares of the market value added to the ter-hup there processed.

Although we can thus describe how some of the customers of a retail market have obtained the purchasing media used to buy goods, many other customers are found in the retail markets. A convenient way of describing how these others have obtained the purchasing media that enable them effectively to demand ter-hup at the retail level is to follow the flow of purchasing media through wholesale, manufacturing, and other levels of processing. That we shall begin in the next chapter.

**NOTE:** When this publication is used as a textbook, we recommend that the instructors obtain from corporations operating local supermarkets copies of their annual reports. By studying these reports in as much detail as is desired, the students may classify the actual disbursements reported as is indicated in this chapter.

#### IV.

### PROCESSING AT THE WHOLESALE AND MANUFACTURING LEVELS

**T**HE activities of wholesale processors are similar in many respects to those found at the retail level. However, some differences should be mentioned.

A few wholesale agencies are distributors for only one manufacturer. Many distribute only items in certain major classifications such as hardware, food (sometimes only certain types of foods such as frozen or perhaps canned foods), notions, etc. Other wholesalers may handle only one or a few products rather than all the items produced by even a single manufacturer.

Of course, the number of customers served by most wholesalers is substantially less than the number patronizing, for example, a large department store. Moreover, the number of suppliers from whom a wholesaler obtains ter-hup ordinarily is much less than the number of suppliers patronized by many retail stores. Such differences are not especially important to anyone who is simply trying to understand the general economic procedures of wholesale agencies.

To a greater extent than the retail stores, wholesalers provide storage facilities in order to care for seasonal changes in the supply of ter-hup and for unpredictable as well as predictable shifts in demand. Much of the supply of canned vegetables and fruits is purchased each fall by wholesale distributing agencies and is sold gradually during the winter and spring months. Air conditioning equipment and refrigerators may be accumulated by wholesalers during the winter and spring for sale to retailers in the late spring and summer months as a means of meeting the seasonal bulge in demand for such items.

Wholesalers usually choose a site for their operations where goods may be received in freight-car lots or by ship or barge in even larger quantities. Of course, wholesalers also need good facilities for outgoing shipments, frequently by truck, express, or mail. Railroad sidings, pier or canal-dock terminals, and good trucking facilities (highways, access streets, platform and loading areas, etc.) are important to most wholesalers.

The customers of wholesale agencies sometimes come to warehouses or display areas in order to buy, but most of the buying from wholesalers is done through salesmen intermediaries or from catalogues. A typical wholesaler might receive hundreds of telephone, telegraphic, and letter orders in the course of a day or week. Orders made up by traveling

salesmen sometimes are mailed in each evening for handling the next day.

Rarely does the buyer from a wholesaler offer purchasing media in exchange for each article or for each lot of purchases as is done at the retail level. Wholesalers usually record the orders shipped and send bills with each shipment, but payments ordinarily are expected monthly for the ter-hup purchased by any retailer during the month preceding. Such payments by retailers almost invariably are made by check rather than by using other forms of purchasing media.

In the preceding chapter, we explained how the retail stores obtained purchasing media, thus answering the question, How do the customers of wholesalers get the purchasing media? Another significant question is, What do the wholesalers do with the purchasing media received in payment for goods? The answer to this question is almost precisely the same as the answer to the similar question about retail stores. Except for a few minor differences, the uses numbered 1 to 11 in the preceding chapter apply also to wholesalers.

An even larger portion of the purchasing media received by most wholesalers is used to pay for incoming goods. The exchange value added by processing at wholesale usually is substantially less than the exchange value added by processing at the retail level. Consequently, all but a relatively small percentage of the purchasing media received by wholesalers and other large distributors is passed along to manufacturers.

The eighth use of purchasing media described in the preceding chapter was to pay interest and principal on outstanding loans. Probably wholesalers generally have occasion to borrow larger amounts in relation to their sales than do many retailers. Supermarkets for example, have a rapid turnover of goods, and most customers pay for the ter-hup they obtain at the time of purchase. Consequently, such a retail store has less need to borrow than have many wholesalers. However, the fact that some wholesalers may be borrowing more purchasing media from the banks and consequently repaying more as well as paying more interest than do many retailers is a difference in the amount of rather than a difference in the kind of behavior involved.

### *Manufacturers*

“Manufacturing” frequently is used in a vague and unscientific manner for some of the processing involved in the preparation of ter-hup for the ultimate consumers or users. For the purposes of this report, we can make the name “manufacturing” sufficiently precise by explaining that it refers to those economic behaviors primarily concerned with man-made modifications in the form and composition of pieces of ter-hup. On the other

hand, wholesaling and retailing are concerned largely with modifications of the location and time aspects of the items being processed (the ter-hup). Thus the ter-hup received from a manufacturer by a wholesaler or retailer usually is in its final form or composition, but must be shifted to locations where it will be easily accessible to consumers or must be stored and held until consumers want it, or both these types of hu-pr-ef (human processing effort) must be applied.

Those who buy directly from the manufacturers, except for the relatively few individuals who happen to purchase some goods from manufacturers' retail stores, usually order from a catalogue or give their orders to manufacturers' salesmen. Of course, manufacturers may process some articles before orders are received and in anticipation of such orders. But it is apparent that processing of items for which no orders have been received must be held within narrow limits in order to avoid costly errors. Storage of unwanted goods is expensive; consequently, most manufacturers process ter-hup after orders have been received or within the limits found by experience to be safely in accordance with orders to be received. Many manufacturers process ter-hup *only* in accordance with orders to be received, and rarely does the quantity processed without orders constitute an important portion of the total processed by many manufacturers.

From the foregoing it will be apparent that most manufacturers, unlike wholesalers and retailers in most instances, usually have what is called a "backlog" of orders. This is the accumulated total of items already ordered and, in effect, already "sold." The ter-hup is shipped after the manufacturing processes are completed, and bills then are sent to the buyers.

As do most buyers from wholesalers, many buyers from manufacturers settle their accounts monthly. Consequently, manufacturers receive substantial amounts of purchasing media from their customers each month.

Manufacturers also obtain large amounts of purchasing media directly from the banks in the form of credits to their checking accounts. Some of these credits are obtained by borrowing just as wholesalers and retailers borrow, that is, by giving the banks promissory notes. The banks then credit the manufacturer's checking account just as though he had deposited currency or other purchasing media. Of course, amounts of purchasing media thus created by the banks and loaned to manufacturers are repaid and canceled out as are the similar purchasing media created and loaned by the banks to wholesalers and retailers.

Many manufacturers also obtain purchasing media through a somewhat different process. When a freight carload of ter-hup is sent to a particular wholesaler, the manufacturer may prepare what is called a draft and accompanying bill of lading. The draft may be a "sight" draft payable on

receipt or it may be due in 30, 60, or 90 days. The papers are sent through banking channels; but before the wholesaler can obtain the bill of lading entitling him to claim the goods from the railway company, he has to sign or "accept" the draft. That is, the wholesaler pays the draft by having it deducted from his own checking account if it is a "sight" draft, or the wholesaler agrees to pay the draft at the end of the stipulated period.

The manufacturer's bank ordinarily credits his checking account with the amount of such a draft (less small charges) without delay. Thus the manufacturer has the additional purchasing media to use without waiting for the draft to be collected. (Various technical differences in the handling of such documents are important to bankers and students of such matters but need not detain us here.) As far as the manufacturer is concerned, he has sold his goods and has received purchasing media in exchange. His only remaining responsibility in the matter is a contingent one; that is, if for some reason the wholesaler does not pay the draft when it is due, the manufacturer ordinarily will have to do so. Such happenings are rare exceptions rather than the general rule.

In recent decades in the United States, manufacturers to an increasing extent have borrowed more directly by using their promissory notes rather than drafts. A banker who believes that he can rely on the representations made to him is willing to accept a manufacturer's promissory note and his assurance that goods have been shipped for which payment in due course is expected. On the strength of that representation, the banker will create a purchasing-media addition to the manufacturers' account just as would have been done if a draft and bill of lading had been used. Of course, in this instance the bank looks to the manufacturer rather than to the wholesaler or his banker for payment of the note when it is due.

Manufacturers borrow on a large scale as described above. Much of the wages of employees must be paid weekly, and payments for raw materials must be made promptly. Sometimes weeks or even months are required for manufacturing processes. The gap, which is nearly continuous for many manufacturers, between necessary outlays and the receipts from sales is filled by borrowing purchasing media created by the banks.

From a somewhat different point of view, one can say that the banks create purchasing media representing exchange value added to ter-hup by manufacturing processes. Then those who participated in the processing or who have some claim to a share in the ter-hup processed are given corresponding amounts of purchasing media. Thus the individuals concerned obtain the means of buying the ter-hup or ter-hup equivalent in value on which they have a valid claim.

In what ways do manufacturers dispose of the purchasing media they

receive? In answering this question, we may simply refer again to the eleven typical ways that retailers and wholesalers were found to have used their purchasing media. Only the differences, which are minor and in extent rather than kind, require further discussion.

For many manufacturers the portion of purchasing media used to pay for incoming goods, for what are called "raw materials," is relatively small. Especially if the processing at the manufacturing level is complex and requires a long time, the cost of the raw materials usually is but a small portion of the value of the item finally shipped.

The second use of purchasing media, to pay employees, ordinarily takes a substantial part of the total. In many instances, manufacturers pay all employees by checks but in some instances those paid weekly are paid in currency and coin. In order to make such payments, the manufacturer cashes his own check at the bank and thus obtains the currency and coin in the denominations needed for his payroll. The amount is of course deducted from his checking account when the check is cashed by the bank.

The third use of purchasing media, to pay for new equipment, also takes a large part of the total for many manufacturers. Far more and much more complex and costly machinery ordinarily is found in factories than is found in wholesale and retail stores.

Many manufacturers probably borrow to a greater extent than do wholesale and retail stores. This is true not only of borrowing to finance goods in process but also for the more permanent needs of the business. Many manufacturers borrow in order to buy equipment, and many borrow, on a first mortgage or otherwise, in order to obtain funds for the purchase of their sites or their buildings or both.

With the modifications noted above, manufacturers dispose of the purchasing media they obtain much as do wholesalers and retailers. Of course, those who participate in the manufacturing process or who have some legal claims on the exchange value added to ter-hup by such processes are consumers like all other individuals. Thus we see how a large segment of the customers of retail stores obtain the purchasing media used to buy goods.

As yet, however, we still have not completely answered the question, How do all the customers of a retail store get the purchasing media in the first place? We next consider the processes that precede manufacturing in order to find another portion of the answer.

**NOTE:** When this publication is used as a textbook, we recommend that the instructors obtain copies for each student of the annual reports issued by several manufacturing concerns. In order to present a broad range of

information, manufacturers of at least the following three classes of ter-hup might well be included:

1. Nondurable consumer ter-hup (food, clothing, etc.)
2. Durable consumer ter-hup (automobiles, appliances, furniture, etc.)
3. Ter-hup used to process other ter-hup (machine tools, locomotives, etc.)

Students should study the receipts and disbursements, classify the latter, and glean such additional information as they can from the reports.

As will readily be apparent, by comparisons over periods of several years, by ratio analysis involving comparisons of different types of companies, and by other methods of analysis the student can extend the scope of his inquiry as may be desired in the time available.

Even college graduates, for the most part, have only the vaguest notions concerning profit margins, etc. More widespread acquaintance with the facts would help many to understand better the economic behaviors of men.

## V.

### PROCESSING IN AGRICULTURE, MINING, FISHING AND HUNTING

**A**T this stage of our report, we diverge briefly from the main line of the discussion to comment on something that developed in the course of our inquiry. We initially used the label "ter-fir-ess" to refer to "the terrestrial globe on which the organism, man, is found, exclusive of the oceans, the rivers, and the air, but including all things other than man found in or on the earth in a natural state and likewise including the space aspect of the Earth that constitutes the area of man's activities."

In examining the processes characterized as manufacturing, however, we found some that use the air as a raw material. Specifically, certain manufacturers of fertilizers and explosives undertake what is called "fixation" of the nitrogen that constitutes roughly 80 percent of the air. Evidently, then, we should not have excluded the air if we wished to apply the label "ter-fir-ess" to *all* the things found in a natural state by man, exclusive of man himself, that are processed by him for his subsequent use.

Moreover, we also found in the supermarkets fish and other ter-hup taken from the sea. One of the other ter-hup was the magnesium used in parts of the wheeled baskets used by the customers in collecting the ter-hup they wanted. Thus it would seem that the oceans, lakes, and rivers as well as the air should be included with the things labeled "ter-fir-ess."

In preparing this report we have chosen not to revise the first chapter by substituting there the revised application of the label "ter-fir-ess," because we believed that readers might understand better by following the same path we took in conducting our inquiry. Moreover, discussion of the matter at this stage of the report facilitates emphasizing an aspect of scientific method that we find is inadequately understood by many of the Earth's economists.

The advance of any science consists in substantial part of improvement in accuracy of specification. Accurate specification or precise naming is a matter of degree. The application of a scientific name is *not* either perfect or imperfect, correct or erroneous; such applications are either more or less accurate, the more accurate being ordinarily the more useful for the purposes of scientific inquiry.

In any particular science the accuracy of specification may be well advanced, so much so that the "knowledge" may be adequate and useful for many purposes. Nevertheless, the door to further improvement in

accuracy of specification remains open. In other words, to use "definition" momentarily as a label for naming behavior, we might say that, in successful scientific inquiry, definitions are not slurred over, disregarded or used loosely as was illustrated in Chapter II, but are abandoned or modified only in the interest of more meticulously precise naming behavior.

We have found, then, that in order to be more precise, we must include all aspects of the globe on which the organism, man, is found, exclusive of man himself, if we are to apply a single label for all things found in a natural state on or in the earth that are processed by man for his use. And again it is desirable to emphasize that the organism, man, is himself as much a part of the natural cosmos as anything else found therein. Our ability to differentiate man within his environment implies no ability to study man separated from his environment. What we learn about man's economic behavior we learn only through observation of the organisms' transactions with their environments, which of course includes their fellow organisms.

### *Agriculture*

Several decades ago in the vicinity of Chicago, most men were familiar with agriculture or farming. Today, the situation is different. Many urban dwellers have only the vaguest notions about farming. Consequently, a few detailed comments are in order.

Neither "agriculture" nor "farming" have become scientific terms as commonly used. Nevertheless, they will suffice for the purposes of the present discussion. Farming is the human processing behavior concerned with fostering plant and animal life in order that the matured plants or animals or things derived from them may be available for human use.

Many diverse behaviors are included under the label "farming." These include clearing land of trees and brush, removing rocks, draining and filling swamp land for crops or pasturage, plowing, harrowing, planting, cultivating, irrigating, spraying or otherwise protecting crops against pests and disease, as well as picking and otherwise harvesting the crops. And with reference to animals, farming or ranching behaviors include domesticating, breeding, feeding, guarding, training for special purposes in some instances, and sometimes slaughtering, although the latter activity today is in most instances organized on a factory basis. The foregoing are not intended to be all inclusive and in complete detail, because that is unnecessary for the purpose of this report.

One of the most important types of farming is dairying. This involves fostering animal life in the form of cows and obtaining their milk for human consumption. In addition, cows no longer useful as sources of milk ordinarily are slaughtered and used for food.

Farming or agriculture may include such diverse processing behaviors as harvesting seaweed and growing Christmas trees, picking berries and breeding elephants in captivity for circuses, planting minute irritants in oyster shells in order to cultivate pearls and clearing South American jungles for banana plantations, growing tobacco and breeding the mice on which tests are made to see whether or not smoking the tobacco tends to encourage cancer, growing poultry for eggs and meat and raising domesticated ostriches so that their feathers may be used for women's hats, and a large variety of other processing behaviors.

In general, farming is the initial processing of many aspects of ter-fir-ess. Of course, once the processing has begun on any item of what had been ter-fir-ess, the modified aspects of that item (modified in form, composition, place, or time) then would be labeled ter-hup. This is in accordance with the terminology initially adopted. In some instances the human organisms that farm also consume or use the ter-hup. For example, the farmer's family may eat some of the eggs obtained from domesticated birds and drink some of the milk obtained from domesticated cattle. In such instances, there is no further processing (as far as economic behavior is concerned) of that portion of the ter-hup.

By far the most of the ter-hup obtained through farming behavior, however, is processed further by other agencies such as manufacturers, wholesalers, and retailers. From those to whom the ter-hup is sold, farmers receive purchasing media in payment. Moreover, farmers are like most other human organisms in that they are customers of the retail stores and other agencies where ter-hup of one kind or another can be purchased. Thus we see how another portion of those who patronize retail stores obtain the purchasing media used to buy ter-hup.

Farmers likewise may use some of the purchasing media they receive for each of the eleven purposes already discussed, with minor differences in degree as indicated below.

Relatively few farmers pay a substantial portion of the purchasing media received for incoming goods to be processed. Some farmers buy calves or more mature cattle in order to "finish" them for market on the "feed lots" where they are fed grains. In such instances the farmers pay relatively large sums for the ter-hup they are to process. Frequently, however, farmers already own the cattle from which they breed offspring; perhaps raise their own feed for dairy cows, and even may raise their own seed for future crops such as wheat. In the latter instances, the portion of purchasing media received that is paid for ter-hup to be processed may be extremely small.

Although many farmers have employees to be paid (customarily called

“hired men”), of the total purchasing media received by farmers from the sale of ter-hup a relatively small portion is used to pay employees. In this respect, farmers are more nearly in the position of wholesalers and retailers than of many manufacturers.

Many farmers do not own the land and buildings they occupy. Consequently, they have to use some of the purchasing media they receive to pay the owners of the farms. (Rarely are farm buildings owned by another than the owner of the land on which they are situated.) In many instances, the payment to the owner of the farm is in the form of a share of the ter-hup rather than in the form of purchasing media. In that event, the owner of the farm rather than the tenant farmer would offer that portion of the ter-hup on the market and receive the purchasing media for which it was sold.

Farmers, like manufacturers, wholesalers, and retailers, may have occasion to borrow. Such borrowing may be for the financing of new structures or such improvements as draining, filling swampland, etc.; or the borrowing may be for the financing of harvesting and marketing crops. Interest must be paid on such loans and in due course principal must be repaid.

Some farms are operated as incorporated businesses, in which event dividends to the owners of shares require some of the purchasing media received. For the most part, however, farmers keep, or in effect pay to themselves, both a portion that corresponds to pay for employees and a portion that, in an incorporated business, would be labeled a “profit.” The fact that few farmers differentiate between the portion of what they keep that would correspond to an employee’s pay for the work done and the portion corresponding in business accounting terminology to “profits” is not important here.

### *Mining*

The hu-pr-ef called “mining” may be described as finding particular items of ter-fir-ess (nearly all nonliving in contrast with the living organisms fostered by farmers), removing such items from the places where they are found, in some instances screening or otherwise processing the material mined in order to remove unwanted materials and obtain the desired material in a more concentrated form, and transporting the material to the next processing stage. In some instances, the miner transports the material only a short distance, perhaps to a railway siding near the entrance to a mine, and from there specialized transporting agencies take over.

Mining includes deep mine operations such as those in the anthracite coal regions and in some areas where gold is found, operations near the surface of the ground where large machines are used to remove the overburden of ordinary earth and rock thereby uncovering the material

desired such as iron ore, dredging for sand and gravel in the beds of rivers, boring holes as much as three or four miles deep and sometimes under the ocean for petroleum, quarrying marble from open cuts in the earth, and various other operations.

Some of the corporations engaged in mining retain the ter-hup in their possession through numerous processing stages until it is offered to the final consumer in a retail market. Integrated operations of this character are frequently found among the petroleum mining companies. However, some of the largest of such companies do not operate their own retail outlets.

In other instances, the mining agency sells its ter-hup at or near the site of its activities to a widely assorted group of customers who use that ter-hup as raw material for further processing. Such is the disposition of much of the sulphur mined, of the phosphate rock, etc.

As far as the disposition of the purchasing media received is concerned, mining agencies are like manufacturers in some respects and like farmers in others, as will be apparent from the following.

Mining agencies (ordinarily corporations rather than individuals) usually use little of the purchasing media received for the purchase of incoming goods. However, a substantial part of the receipts frequently are paid as "royalties" to the owner of the site for the privilege of removing the material mined. In some respects, such payments are similar to the payments for the use of land area or business sites by manufacturers, wholesalers, and retailers and are likewise similar to the payments made by tenant farmers for the use of their farms.

Mining agencies usually own whatever buildings they may need for their operations. Consequently, sums corresponding to the amount a wholesaler might pay an outside owner for the use of his building would be retained by a mining agency.

Borrowing also is resorted to by mining agencies. Whenever such borrowing is to finance shipments to customers or to markets, the usual commercial borrowing situation arises. The commercial bank lender creates purchasing media in the form of a credit to the miner's checking account. This purchasing media in effect represents the ter-hup that has been sent to market and facilitates distribution of the respective shares of that ter-hup to the employees, the suppliers of fuel, etc., the owner of the site, and others entitled to a share. Of the purchasing media received from buyers, part must be used for interest on such loans and repayment of principal. There may of course be other borrowing of a long-term nature as well.

With the modifications indicated above, the disposition of purchasing

media by mining agencies corresponds to the eleven uses previously discussed. Thus we see how another portion of the customers of retail stores obtain the purchasing media with which they buy ter-hup in retail markets.

### *Fishing and Hunting*

The hu-pr-ef known as fishing and hunting may be described as killing or capturing either fish or wild animals and birds and the further initial processing of the meat, hide, feathers, etc., for human use. In the vicinity of Chicago in North America we found little of either of these activities. However, ter-hup such as fur coats, frozen fish, women's hats decorated with bird feathers, etc., were found in abundance. We therefore investigated the sources of these articles.

Fishermen and hunters ordinarily dispose of the ter-hup obtained quite promptly by selling it to various agencies such as factories, food processors (which may be considered a kind of factory), wholesalers, and in some instances directly to retailers or even to consumers. Some hunters in the northern wilds of Canada accumulate their characteristic forms of ter-hup for periods of several months before taking them to market (a trading post) for sale. Whale hunters in the Antarctic also accumulate their characteristic kinds of ter-hup for several months before returning in their ships to the marketing areas. However, such prolonged processing by fishermen and hunters is unusual rather than the general rule.

Many individual human organisms hunt or fish just as many farm, but numerous corporate agencies also carry on these activities through employees. Considering the overall disposition of purchasing media by those engaged in hunting and fishing, the standard eleven uses apply with some modifications.

Perhaps the most marked difference in the disposition of their purchasing media by hunters and fishermen is that few pay any private owners for the privilege of initial processing in various places. Occasionally, fees are collected by the owners of private hunting and fishing preserves, but the hunters and fishermen who use such facilities more often than not are interested in these activities as sports rather than as means of obtaining ter-hup.

In the vicinity of Chicago in North America, the Great Lakes and various other bodies of water are not privately owned. Moreover, the sea, for the most part, is not privately owned. Much of the land area of ter-fir-ess is now owned as a private monopoly privilege by numerous individuals and agencies, but the oceans and large lakes have not, for the most part, been similarly made established institutional monopoly privileges.

Of course, neither hunters nor fishermen can remain permanently away from the sites where their processing activities are completed or their ter-hup is sold. Fishermen have wharves and boathouses for which sites are required, and hunting agencies such as the Hudson Bay Company of Canada have numerous trading posts and other facilities requiring the use of specific sites. For such sites, the fishing and hunting agencies must pay the owners as do other processors. When they do own any sites they need for part of their processing the fishermen and hunters can keep for their own use the portion of purchasing media that otherwise would be paid to other owners of such sites.

Thus we see how still more of the purchasing media used to buy ter-hup in retail markets is obtained in the first place by the individual and corporate customers. But there are customers of the retail stores whose purchasing media has been obtained in ways not yet disclosed. To these we turn in the next chapter.

**NOTE:** As for the other processors, we recommend that published annual reports be obtained from corporations engaged in farming (sugar companies, for example), mining, and hunting or fishing. Students should analyze these reports, note their similarities and differences, and compare them with the reports published by other types of processors. Of course, for any particular group of students, the time devoted to this aspect of the study program will depend on the time for the course as a whole. There is much scope for the initiative of instructors in such broadening and deepening of the course.

## VI.

### OTHER CUSTOMERS OF THE RETAIL MARKETS

**I**N the preceding sections of this report, we described how some of the customers of the retail markets obtain the purchasing media that are offered in exchange for ter-hup in those markets. A large number of the individual and corporate customers are found to have acquired purchasing media through direct or indirect participation in processing at the retail, wholesale, manufacturing, or farming or other levels. Other individuals have acquired purchasing media in connection with the processing at such levels because they have claims of one kind or another on a share of the exchange value added to ter-hup. However, many more customers of the retail markets are found. They include professional men, experts in various types of human behavior, such as scientists, artists, educators, and so on. They also include the providers of miscellaneous services, such as barbers, gardeners, plumbers, policemen, and many others.

Now some of these types of human behavior are related directly or indirectly to processing things for human consumption or use. To the extent that individuals engaged in any of the activities are thus occupied, their human processing effort would be part of the activities already named "hu-pr-ef." A few examples will clarify the point.

One accountant may be employed by a wholesaler or other processor of ter-hup and thus be a member of the organized group participating in that activity. Another accountant may be a specialist in income-tax accounting for individuals and therefore may not be concerned, even indirectly, in the processing of ter-hup.

Bankers, as has already been noted, play an indirect part in the processing of ter-hup through their lending activities and through origination of the purchasing media used at various stages. However, bankers also exhibit characteristic behaviors in relation to individual consumers, sometimes lending to them and often acting as trustees, custodians, etc., of the property of individuals.

Repairmen in garages service passenger cars of individual consumers and the trucks of processing businesses. Consequently, some of the time they are repairing or otherwise servicing ter-hup already in the hands of consumers, and sometimes they are servicing ter-hup used in the processing of other ter-hup that is being taken to market.

Policemen at times are facilitating the processing of ter-hup, for example by directing the flow of mixed truck and passenger-car traffic; and at other times may be serving only the drivers of passenger cars on a

parkway where trucks are excluded. In the latter instance, the policemen are even indirectly participating in the processing of ter-hup only to the extent that the occupants of the passenger cars are themselves on business (salesmen, for example) and their hu-pr-ef is facilitated by the policeman's activities.

At first thought readers of this report may wonder whether the difficulty of appropriately naming the economic behaviors of some men, at least of deciding whether a particular man at any time is engaged in processing ter-hup or not, may interfere with further inquiry. We have not encountered any difficulty in this connection, however, for reasons that are explained below.

It will be remembered that we are developing the answer to the question, How do the customers who buy in retail and other markets where ter-hup is sold obtain the purchasing media offered in exchange? We cannot, by observing the items of purchasing media themselves, ascertain how they happen to be in the possession of particular individuals or corporations at particular times, but the records available do provide the information needed for the purpose of this report.

When an accountant is a member of the processing team engaged in operating, for example, a wholesaling business, he is paid by that corporation (or individual if the firm is owned and operated as a personal enterprise). Thus we can readily see that the accountant has obtained the purchasing media he uses to buy goods at retail from the purchasing media distributed by wholesale processors.

Bankers receive part of their compensation in the form of charges to business accounts for discounting notes, handling checks and deposits, etc. Evidently, this portion of the compensation of bankers and their employees represents a share of the value added to ter-hup by manufacturers and other processors. The other compensation that bankers receive, for example that for managing property as a trustee for an individual or handling his checking account, consists of purchasing media originally obtained by the individual served (perhaps from farming or other processing efforts) and paid to the banker for services rendered.

A garage employee may service a truck one hour and a passenger car used privately for pleasure rather than business during another hour. Consequently, the pay the mechanic receives may in part be purchasing media representing exchange value added to ter-hup by transportation (the work of the trucking agency) and in part be purchasing media originally obtained by some individual who has participated directly in processing of ter-hup. In the latter instance, transfer of the purchasing media to the mechanic is a means of effecting an exchange of some of the car owner's

ter-hup (or his share in some ter-hup he had assisted in processing) for the work done in repairing his passenger automobile.

Civil-service employees generally are paid by government agencies, municipal, state or Federal. The purchasing media distributed by these agencies to government employees as salaries are obtained by taking in the form of taxes purchasing media first obtained by others in various ways including all of those described in this and preceding chapters. In effect, the government agencies take (using the force of policemen, courts, and jails whenever necessary) ter-hup originally processed by others and distribute it to government employees. By this means, the ter-hup required to maintain a standard of living such that some men will be willing to function as civil servants is obtained and made available to them in return for their efforts.

We have now described how nearly all of the individuals who appear as customers in retail stores such as supermarkets obtain the purchasing media used to buy ter-hup. However, there are some articles of ter-hup that never pass through such typical retail markets. Some ter-hup is used or consumed not by individuals for their personal sustenance, welfare, or gratification, but by other agencies for the processing of other ter-hup. For example, a machine that grinds wheat to make flour never is offered on a retail market such as those mentioned and is of no direct interest to most individual consumers.

Nevertheless, much human processing effort is applied to making such machines and innumerable things used similarly in processing other ter-hup. Included among such things are the following: Diesel locomotives for the railroads and sewing needles for the machines of clothing manufacturers, factory buildings covering hundreds of acres and corner newsstands for newspaper sellers, electronic calculators costing millions of dollars and the familiar cash registers at the supermarket exits, ocean-going tankers holding thousands of barrels of oil and gas-station pumps at the corner of the street, gigantic presses that can mold an automobile fender at one stroke and the adjustable wrench in the hands of the mechanic in a garage, earth-moving equipment that moves dirt by the ton and the shovel one man may be using to dig a small ditch, and elevators for 60-story buildings as well as the simple hydraulic adjustable ramp that raises or lowers a truck so that loading or unloading is easier. These and thousands of other items are processed by numerous individuals who receive purchasing media that represent part of the value of the resulting ter-hup. Such individuals likewise are among the customers of the retail markets.

Now it will be apparent that, if all the individuals who receive purchasing media were to attempt to buy only those kinds of ter-hup usually

eaten, worn, or otherwise used for personal gratification (such as that sold in supermarkets and many other retail stores), the total effective demand (demand backed by purchasing media) would substantially exceed the value of their ter-hup in those markets. Only because some of the purchasing media obtained by individuals is used to buy other types of ter-hup, such as Diesel locomotives, electronic calculators, etc., is it possible for the flow of purchasing media to the markets to equal the value of goods being offered in the retail stores and other markets.

Evidently, the flow of purchasing media may be considered in two broad streams. One portion is brought to the retail stores by customers seeking what may be called *consumer ter-hup*; another portion is used partly through retail stores (hardware stores, for example) but largely through other agencies for the purchase of what may be called *processing ter-hup*.

Sometimes the purchases of processing ter-hup are made directly by individuals, as when a mechanic buys a new pair of pliers in a hardware store. In large part, however, purchases of processing ter-hup are made by corporations and often with purchasing media provided by individuals who have invested in the corporation's stock or bought its bonds. Thus, for example, Diesel locomotives are purchased largely with purchasing media obtained by the railroad companies from investors who accepted equipment bonds in exchange for savings loaned to the railroads. The bonds are documentary evidence of the pledge by the railroad to repay the borrowed funds with interest.

Some individuals who save part of the purchasing media they receive hoard that purchasing media by accumulating currency in some storage place in their homes or by accumulating idle purchasing media in their checking accounts. However, most individuals invest their savings; that is, the purchasing media not spent by them for consumer ter-hup are used directly for the purchase of processing ter-hup or are placed with agencies such as savings banks, insurance companies, investment trusts, etc., that spend the purchasing media directly or indirectly for processing ter-hup.

We have now ascertained how the customers of retail stores obtain the purchasing media used to buy consumer ter-hup. In the course of that inquiry we have also found how purchasing media are obtained by those individuals and corporations who buy processing ter-hup, whether directly from manufacturer or through intermediate marketers of such ter-hup. Thus we have described how all ter-hup is distributed among those who use it.

Although the use of purchasing media to represent ter-hup being processed in order to facilitate the ultimate exchanges among all who have

claims on any portions of that ter-hup has been described, we have not yet reported how the respective shares are determined. Evidently, the individual human organisms receive varying amounts of the purchasing media that constitute claims on ter-hup. How the various amounts obtained by each type of individuals are determined remains to be described.

Before attempting to inquire how the relative shares of ter-hup are determined and reflected in the distribution of purchasing media, we shall consider the purchasing media used and the agencies concerned with its origination, circulation, and cancellation.

## VII.

### ORIGINATING, CIRCULATING, AND CANCELING PURCHASING MEDIA

**T**HIS section of our report discusses aspects of economic behavior concerning which brilliant monetary economists have reached a wide variety of incompatible conclusions after studying the same economic developments. Like the several blind men who offered a variety of descriptions as each touched a different part of an elephant, many monetary economists seem to be blind to some of the economic facts of life. How else can one account for such a variety of findings by people who by no means are ignorant simpletons?

The range of views extends from those who would require 100-percent reserves for all money in use to those who recommend a continually expanding money supply without any necessary relation to internationally acceptable reserves or to the exchange values of things offered in the markets. Some urge the gold standard, and some decry gold as a "barbarous metal!" that should have no place in the money-credit affairs of modern men.

So insistent on their own views have those in the various schools of thought become that communication among them is difficult. Unfortunately, few seem to feel any responsibility to the public that would incline them to study views different from their own and clarify the reasons for such wide divergence. We shall attempt here to describe aspects of the problem in such a manner as to account for the variety of answers to the basic question: How should a money-credit system function in order best to serve its purpose in an expanding economy?

Thus far we have used the word "money" as though it were a name for something agreed upon by all concerned. That is not the situation. Without at this time describing many of the different applications of this term or name, we shall simply avoid using it. From this point on we shall use more accurately descriptive terms suitable for scientific discourse. Fortunately, we need not invent new words and thereby develop a technical terminology that might be more confusing than enlightening. Accurately descriptive words and phrases in common use among those who would read this report are available and will be used.

The words "designate," "label," and "name," are used here in the ordinary way of referring to naming, *i. e.*, the process of applying names to things (including objects, events, and relations among them). In order that their inquiries may develop useful warranted assertions, scientists have found that painstaking care in designating or naming whatever they wish

to talk or write about, is essential. Those who will not trouble to exercise such care seem doomed to wander in the semantic swamps where so many would-be scientists, including far too many economists, have been lost for decades. Also to be emphasized is that descriptions of things including events are simply expanded or elaborate namings. What are sometimes called explanations, we prefer to label descriptions of what happens under specified circumstances. Hopefully, these brief comments will help readers of this report to avoid the semantic swamps.

Lest our procedure be misunderstood, we emphasize that what follows is a description of what may have happened under certain circumstances, or in some instances of what has happened, or in some instances what may happen in the future. All assertions made are scientific hypotheses; that is, they are invitations to check against the facts of economic behavior. We do not offer axioms, or self-evident "truths," or assumptions and then proceed by purportedly logical development to prove anything or thereby arrive at scientifically warranted assertions. This disclaimer is necessary because we often find that readers accustomed to older methods of inquiry assume that we must be following their procedures. The extent to which the assertions offered in this report are useful will be determined by the extent to which such descriptions of what happens under specified circumstances are confirmed by the measured facts reflecting economic behavior in the past and the future.

An outline of the subsections that follow may assist readers:

1. First is a summary description of economic activity including the process of exchange in modern markets.
2. Second is a simple description of the operation of a satisfactory purchasing medium using the operations of a baggage checking service as a means of describing certain operations in familiar words.
3. Third is a description of the evolution of commercial banking and the purchasing media actually used.
4. Fourth is a description of what has happened in recent decades including presentation of certain research findings of facts that confirm some of the hypotheses offered and thereby qualify them to be labeled scientifically warranted "theories" or assertions about what happens under specified circumstances.

### ***Processing and Exchanging***

The description of man's economic behavior in preceding chapters makes clear that the origination, circulation, and cancellation of purchasing media are operations incidental to the effective coordination of man's

behavior. In effect, the purchasing media used may be regarded as claim checks that entitle the holders to obtain things in the markets. Evidently then, purchasing media must be originated to represent newly processed things; the circulation or exchange of such purchasing media must be arranged for; and, when the thing represented by particular purchasing media has been withdrawn from the exchange process by the final consumer's purchase, that purchasing media or a corresponding amount must be canceled or withdrawn from circulation. Unless all three of these operations, origination, circulation, and cancellation, are done efficiently, inadequate amounts of purchasing media might be in existence at one time, too much at another time, and exchange processes would be impeded if the circulation of purchasing media were not properly handled.

In the paragraphs that follow we sketch in bold strokes a simplified picture of the economic activity in a modern industrial society. No attempt is made to analyze in detail the multitude of activities that result in the things and services people want. We present only a general view and focus attention on only a few of the more significant relationships.

Millions of people are taking raw materials found on or comparatively near the surface of the earth or from the lakes, rivers, oceans, and air and are passing these materials along to others. Some are taking fish from the sea, others trees from the forest, others grain from the fields, and others cattle from the open ranges. In a bewildering variety of ways these things found in their natural state or cultivated by man are extracted or harvested or otherwise taken from their place in nature and passed along to others for further processing.

Sometimes the raw materials are altered in form or substance as well as in place and time before they are passed along. In nearly all instances, however, the first man to handle these items rarely prepares them for human consumption. Unlike their primitive forebears, few men in a modern industrial society both take raw material from nature and prepare it for final use.

For the most part, the raw materials are passed along to millions of other men who labor in refineries, factories, mills, and finishing plants of almost limitless variety. Some of the original materials pass through several stages as the semi-finished output of one industry becomes the raw material for another until the final result is an item ready for use.

And after the things have been thus processed they are passed along to others, sometimes to jobbers or wholesalers, subsequently to retailers in most instances, but also in some instances directly to users. Finally, the things reach millions of others who eat some of the items, wear others, live in others, ride in others, and in a number of other ways consume the

numerous items and ultimately discard them, thus returning them to or near the surface of the earth or the sea from whence they came.

The multitude of transactions as materials in various stages of processing are passed along involve successive sales from the point of view of those giving up the items, or purchases from the point of view of those acquiring them. Each such transaction is both a sale and a purchase. What does such a transaction involve?

Clearly the end result of the processing is that the many participants effect an exchange of some items for other items they wish to consume. Moreover, millions of other individuals who do not participate in the manufacture, storage, and distribution of things obtain some of the items by offering their services in exchange. However, few of the transactions involve barter (the exchange of some things directly for other things or services); nearly all of the enormous number of exchanges in a nation like the United States involve not barter but the use of one or another of the three principal types of purchasing media; *i.e.*, coins, currency, or checking accounts (demand deposits).

Many millions engaged in processing things receive weekly or monthly wages in the form of transferable purchasing media. These may be in the form of paper currency and coins or in the form of checks that the recipients have their banks add to their own checking accounts (demand deposits). Evidently these are claims on the things currently processed; that is, these purchasing media can be used to buy the items in the markets. In fact, it is by the use of such purchasing media that the innumerable exchanges are effected.

Now what are the principal characteristics that such an exchange or purchasing medium must have? The answer can readily be outlined merely by observing what functions it serves.

Evidently the purchasing medium must be or must represent some kind of common denominator. If the individuals producing automobiles received claims on automobiles and the individuals producing wheat received claims on wheat (so many bushels of a certain kind and specified quality), the subsequent exchange processes would have nearly all the disadvantages of barter. Such claims would not be the general purchasing media used in modern industrial society.

The only practicable common denominator thus far discovered is some particular thing that has been processed (produced). Presumably, any one of the innumerable items processed might be used as a common denominator in terms of which the exchange values of all other items could be stated. Such a common denominator having been agreed upon, tacitly or

otherwise, claims on specific amounts and qualities of that common denominator also can be used as exchange or purchasing media.

Once such a common denominator of exchange values has been selected, it or claims on it are readily accepted by each individual, because he knows from experience that every other offerer of things or services in the marketplace will sell his things or services for the common denominator or claims to specific amounts of it. This widespread acceptance as the common denominator of exchange values thus is essential if such a purchasing medium is to be satisfactory.

But widespread acceptance alone is not enough to make a satisfactory purchasing medium. Exchange transactions are greatly facilitated when the acceptable common denominator is also standardized as to amount and quality. For example, silver has at some times and places been used as a purchasing medium. Silver is produced in an infinite variety of degrees of purity, but refining silver to measurable standards of purity is practicable. Silver, like many other things, can readily be made available in different quantities also of virtually infinite variety from pieces too small to be seen with the naked eye to blocks weighing several tons.

Men long ago found that a unit amount of the common-denominator item, standardized as to quantity and quality, greatly facilitated the counting and exchanging process. Then for the more elaborate description, "one ounce of silver nine-tenths fine (or pure)" men could substitute in all their accounts the simple symbol "\$1.00" or the word "dollar" and, if a merchant received some silver in exchange for a table, instead of recording in his books that he had received "two pounds and three ounces of silver," he could use the shorthand symbol of \$35.00." In England where silver was for long thus used, they did not even trouble to devise a new word for the exchange unit, but called it a "pound," meaning one pound by weight of refined silver.

In surveying the American scene we have found that silver was once the common-denominator commodity but that the people of the United States changed long ago to gold. Although "dollar" once meant a specific amount of refined silver, the definition was changed in 1849 so that "dollar" from then on was also the short name for a specified amount of gold, nine-tenths fine; and in 1873 the gold dollar was substituted for the silver dollar as the standard unit in the United States. Thus we find that, in addition to being widely acceptable as a common denominator of exchange values, the exchange or purchasing medium should be standardized as to quantity and quality in the interest of efficient record keeping as well as to facilitate the bargaining processes incidental to numerous exchange transactions. Obviously, the work of detailed specification is greatly

reduced when only the item bought or sold need be specified in detail and the purchasing medium can be taken for granted.

Many of the millions who receive purchasing media in one form or another do not immediately exchange them for items to be consumed. By depositing some of their purchasing media in savings banks, buying bonds or other securities, paying life insurance premiums, etc., they thus save and invest. In these ways they carry out plans to have funds available, either as income from the investments or by selling the investments, for the purchase of things for consumption at a later date.

In the meantime, of course, the purchasing media thus transferred to savings banks, life insurance companies, and others are used to buy things in the markets, ordinarily the new items of plant and equipment needed by industry and others.

But we are concerned with another aspect of the problem here. Presumably, those who save and invest as well as those who enter into numerous contracts of various kinds that extend over more or less prolonged periods want the purchasing media that are returned later to have the same, or nearly the same, exchange value as the purchasing media they save and invest or lend. That is, the value of the common denominator of exchange values used should be relatively stable over long periods.

Economists have described these desirable characteristics of purchasing media as follows:

1. Usable as a medium of exchange.
2. Constituting a standard unit of exchange value.
3. Serviceable as a store of value.

Of course, for any commodity to serve as a store of value, it must be virtually imperishable; that is, it must not rust, rot, or decay. In order that millions of standardized units may be readily available, it must be easily refined and coined or otherwise manufactured in standard units or multiples thereof. In order that it may serve as a medium of exchange, it must be convenient and widely acceptable for that purpose.

In the course of our inquiry it was not apparent at first that the characteristics mentioned above are all so important. In the United States *claims* for the standard unit have superseded it in circulation. Checks and paper currency are used in nearly all the exchange transactions today. These transferable claims to various amounts of the thing used as the basic purchasing medium can be handled more efficiently than the coins or bar metal can be transferred from one holder to another.

As anyone can readily see, once claims, that is, pieces of paper or paper

records, are substituted for the thing used as the basic purchasing media in most exchanges, the risk of counterfeiting increases greatly. Moreover, a new risk arises, the risk that paper currency and other claims will be legally issued or created far in excess of any reasonable relationship to the exchange value of things currently in or en route to markets. We shall discuss this aspect of the problem in greater detail later.

For the time being, we wish only to emphasize that the records of nearly all exchange transactions are reflected in the accounts of those who specialize in handling the transferable claims to the thing used as the basic purchasing medium. These are the banks, whose extensions of credit (creation of claims) and crediting and debiting of checking accounts constitute a major part of the process.

Even if the purchasing media in use, the currency and checking accounts, had no effect on buying and selling activities, the record would be important as a clue to the course of economic activities in general. But the record is seen to be of even greater importance when one realizes that the amount of purchasing media frequently is increased without reference to the actual exchanges to be performed and sometimes is decreased with a similar disregard of the job to be done. Under such circumstances, the money-credit system becomes not the innocuous means of facilitating exchanges but an "engine of inflation" or of deflation as the case may be.

### *A Satisfactory Purchasing Medium*

Everyone who lives in a modern industrial country readily can see that innumerable exchanges of some things for other things are essential. Nearly everyone who either is engaged in processing things (growing, or harvesting, or manufacturing, or transporting, or selling, etc.) or is providing services (haircuts, theater performances, medical care, legal advice, etc.) is not *directly* satisfying his own desires but those of others. By means of innumerable exchanges individuals obtain what they want for themselves, *i.e.*, for their own consumption or use.

From childhood everyone participates in some of the vast number of exchanges; practically everyone is a buyer on numerous occasions, and many are more or less professional or skilled sellers. Therefore, the fact that nearly all exchanges are effected by using purchasing media (coins, or paper currency, or checks) is familiar to all.

A casual observer might well conclude, therefore, that nearly everyone surely understands all that one needs to know about the purchasing media (sometimes called money) so frequently used. Such is not the situation, however. Not only is money a mystery to many people who use it regularly, but also money and its uses rarely are described adequately by the

supposed experts. Part of the difficulty encountered by the experts is attributable to the apparent inability of many to use the word “money” in a scientific manner. We shall not digress here to give examples of such inadequate usage because we wish to proceed to other matters. At this point we simply inform readers that we shall not attempt to rehabilitate the word “money” for our purposes but instead shall describe the uses of coins, paper currency, and checking accounts. For any of those or for all three from time to time we may apply the name “purchasing media.”

Lest some readers conclude that what has confused the experts must be beyond the ability of most people to understand, encouragement is in order. We have taught many graduate Fellows in the last 2 decades, some of whom already had their Doctorate degrees. From their undergraduate and postgraduate textbooks and instructors, none had obtained adequate comprehension of the basic principles of commercial banking, which is concerned largely with the origination, circulation, and cancellation of purchasing media. Nevertheless, all were able to understand the descriptions that we have developed. Moreover, based on communications from many readers of Institute publications, we are convinced that one need not be a postgraduate student of economics in order to comprehend. Our belief is that anyone capable of understanding a baggage checking service has sufficient intellectual ability to understand descriptions of the basic principles of commercial banking.

The operator of a baggage checking service must:

- a. Receive a continuing inflow or supply of baggage and issue a claim check for each item.
- b. Hold all baggage where it will be readily available or offered on demand to holders of claim checks.
- c. Deliver baggage to the holders of claim checks when they present the checks and demand their baggage in exchange.

Certain basic principles that the operator of a baggage checking service must apply if his job is to be properly done are obvious:

1. Claim checks should be originated and issued only for baggage actually received. Issuing claim checks in excess of the baggage received clearly could result in serious problems when the demand for baggage by holders of claim checks later exceeded the baggage on hand.
2. Claim checks should be issued to represent all baggage received; otherwise a surplus of baggage that could not readily be claimed by anyone would accumulate in the storeroom.
3. Whenever any holder of a claim check demands his baggage, the

claim check taken in exchange should be destroyed, or at least should not be reissued except to represent more baggage brought to the storeroom.

If the reader who has followed the discussion thus far has understood it, he already has grasped certain basic principles of commercial banking; in that respect he is better informed about money-credit matters than are many, we suspect by far the most, of the world's commercial bankers. What follows is a description of the organization and issue, circulation, and cancellation of purchasing media, which are claim checks used to demand the things offered in the markets of modern nations.

The markets and the commercial banking system constitute the "baggage checking service" of a modern economy. Processors of an almost infinite variety of things bring them to various markets offering raw materials, manufactured items, wholesale lots and retail quantities. In cooperation with the processors, the commercial banking system issues purchasing media representing the things offered in the markets. Such purchasing media are circulated:

1. First by managers of processing operations who pay wages, dividends, etc. to those entitled to shares of the things processed.
2. Second, to some extent by being exchanged for personal services, or to repay debts, or for other transfers not constituting immediate demands for things in the markets.
3. Third (and in some instances second), to demand processed things available in the market.

At this point, readers should note a difference between the usual claim checks for baggage and the purchasing media just described. Properly issued claim checks for baggage usually have numbers or other means of identifying the baggage for which they were issued. The person who brings his suitcase to the baggage checking counter wants the same suitcase when he chooses to present the claim check and demand his baggage.

The purchasing media serving as claim checks against things in the markets also have various numbers, but the numbers indicate the estimated exchange values of the things represented. During the evolution of commercial banking, the claims checks or purchasing media issued at one time had both numbers and names such as "this claim check represents 100 bushels of wheat offered for sale in my warehouse." Note that even then, a step away from ordinary baggage checks had occurred, because the particular lot of 100 bushels (of which many presumably were available at the markets) was not specified on the claim check or purchasing media. This procedure is only one step removed from barter (the exchange of physical things in the markets).

Many years ago a further step was taken when only the quantity of one item widely used as the medium of exchange was specified. Today in the United States all purchasing media, or claim checks used as purchasing media, state only the exchange value in dollars (1/35th of an ounce of gold in an alloy 9/10ths fine) of whatever things they were issued to represent. By examining the purchasing media, whether coins, paper currency, or checks, one cannot tell what things or even what kind of things were represented when the purchasing media were issued; one knows only that the purchasing media purport to represent exchange values specified in dollars. (We urge readers to remember that "dollar," by U.S. statute, is the legal name for 1/35th of an ounce of gold in any alloy 9/10ths fine.)

At first thought, the change to having purchasing media (or claim checks) marked in dollar amounts to represent exchange values may seem a fundamentally significant divergence from the manner of operating a baggage checking service. However, claim checks for baggage are marked so that the holder may later have the use of his own luggage; purchasing media claim checks are marked so that the holder may later have the use of the value he has added to things in the markets by his processing efforts. The latter individual does not want whatever he placed in the markets, he wants to use a corresponding value of other things available in the markets. When this is understood, one readily sees that the difference noted does not alter the basic principles previously described.

How well do the three basic principles of operating a baggage checking service apply to the operation of modern markets and the commercial banking service? This question can be answered by restating the three principles with minor variations and appropriate comments.

1. Purchasing media should be originated and issued only for the gold-exchange value of things actually processed and received in or available to the markets.

a. Originating and issuing purchasing media in excess of the gold-exchange values of things being made available in the markets clearly could result (and has resulted) in serious problems when the demand for things by holders of purchasing media later exceeds the usual exchange values of the things offered for sale. More specifically, under such circumstances, prices generally would be bid up to higher levels as prospective buyers sought to use the excess purchasing media.

b. As prices rose above expected levels, the first consequences would be windfall profits for sellers and a relative shortage of supplies in the markets. All processors would be encouraged to increase output, even to expand greatly plant and equipment. If such expansion were financed in part by issue of still more excess purchasing media, the economy would

experience an upward spiral of prices and wages. If continued indefinitely the end result could be great depreciation (loss of buying power) of the purchasing media, even to the point of it becoming worthless, as has happened on many occasions.

c. If the upward spiral is halted and excess purchasing media are withdrawn from circulation, the speculative boom will collapse, things offered at high prices will remain unsold, and processors will be forced to reduce output until prices and wages fall to a lower but sustainable level. This has happened many times in many nations during the past few centuries.

2. Purchasing media should be originated and issued to represent the usual gold-exchange values of *all* things processed and received in the markets for sale.

a. If this is not done, prospective buyers will not have sufficient funds to buy all things offered at the usual prices. Prices generally will decrease.

b. As profit margins of processors are reduced by the fall in prices, some processors will become bankrupt and cease operations. Even those able to continue operations will be forced to reduce output by using only the more modern and highly efficient plant and facilities.

c. As prices and wages fall, gold production will be encouraged, because output still sells at the rate of 35 dollar claims for each ounce of gold in an alloy 9/10ths fine, but costs of mining decrease as prices of machinery and wages decline. Lower grade ore then can be mined, and in time output will increase. Inasmuch as delivery of gold to the commercial banking system ordinarily results in the creation of additional purchasing media, more purchasing media gradually will become available to prospective buyers. This will tend to correct partially but probably not wholly the economic disturbance described, but contraction of processing activity and widespread unemployment might have occurred.

3. Whenever the holder of purchasing media uses some to demand things in the markets, that purchasing media should be withdrawn from circulation and should not be reissued except to represent more things processed and made available for sale in the markets.

a. If the withdrawal is not effected, purchasing media in excess of the usual values of things offered will remain in the hands of prospective buyers. In this event, the upward spiral of prices and wages previously described will follow, as later will the recession aftermath.

b. Inasmuch as some processors are shipping things to markets

each week, or sometimes even daily, purchasing media originated and issued to represent what they are offering in the markets could remain in existence while the steady flow of things to markets continues. (This procedure involves what is called a "line of credit" provided by commercial banks to such processors and is described later when the methods of creating, circulating, and withdrawing purchasing media are discussed in detail.)

We have pointed out that increasing prices, wages, and business activity may follow when excessive quantities of purchasing media are issued, and that recession aftermaths are to be expected when the process is reversed. Everyone knows that periods of "boom" prosperity have occurred in the past and that recessions, sometimes severe depressions, have followed in each instance. This does not prove that excessive issues of purchasing media and subsequent correction of such errors were responsible, but the known facts are an invitation to investigate further. The first question is: How can the commercial banking system create and issue excess purchasing media and how can the process be reversed? This question can be answered by describing the evolution of commercial banking.

### *The Evolution of Commercial Banking*

We begin this subsection by focusing attention on the buying and selling found in all modern economies. We note that buying and selling are aspects of transactions that include something transferred from the seller to the buyer and something else transferred from the buyer to the seller. Always there is the something sold (a physical thing or a service, such as an opera performance); and always there is something given in exchange, what might be labeled the medium used for purchasing, or purchasing medium.

We now focus attention on the things bought and sold in the Nation's markets. Clearly, many services, such as those of barbers and beauty salons, opera performances, clothes cleaners, and others are rendered directly to the consumers in exchange for purchasing media. Such services are not embodied in (or reflected in) changes in the form, substance, location, or time of availability of other things to be offered in the markets. The services themselves are offered directly and sold as such.

Somewhat different are the innumerable physical things offered in the Nation's markets. These may range from newly mined ore, or agricultural products, or forestry products, or many others that have been initially processed for marketing, to completed suits, shoes, watches, automobiles, and innumerable other items being offered in retail markets. By far the most of these things are processed for buyers (consumers) who have not

been identified when the things are being processed (which includes placing them on shelves in the retailer's store). On the other hand, when many services are rendered, such as those already described, the buyers have been identified and in many instances already have paid for the service to be rendered. Those who have not paid beforehand (as for an opera performance) almost invariably pay immediately after the service is rendered (as to a barber, for example).

Some writers on economic problems have chosen not to differentiate as we have here between the principal classes of things (including services) available in the markets. Such writers note that human effort is involved for both types and have chosen to group them in one classification for this reason. However, the differentiation (observing and naming a difference) that we have done in this report serves a useful purpose that is described later.

We now focus attention on the innumerable things other than services offered in the Nation's markets. Readers are reminded that these things may pass through successive markets for:

- Raw materials
- Semi-processed materials
- Factory output
- Wholesale lots
- Retail quantities

In every business day innumerable transactions occur in all the various markets. Somehow, purchasing media must be available for use in all markets if the many transactions in a modern economy are to occur. Barter is out of the question. (How could the General Motors employee who had provided a small part of the human effort involved in processing an automobile for market carry his share of an automobile around the markets as he bargained for his food, shelter, and clothing?)

Some readers might imagine that one step removed from barter might work. For example, a farmer, after depositing his wheat in a grain elevator and obtaining a warehouse receipt or claim check for 1,000 bushels of wheat, might go to organized markets and trade his warehouse receipts or claim checks for the somewhat similar claim checks on clothing and farm machinery. Thus he could obtain the things he wanted. However, even this procedure, although far more practicable than direct barter, clearly would not adequately serve the needs of a modern industrialized economy.

Obviously, if some kind of purchasing medium could be devised that represented the value in exchange of each thing or type of thing in the markets, exchanges could more readily be effected. By using suitable

portions or amounts of such purchasing media, prospective buyers could buy what was offered in the markets.

At this point we should note that every seller is a buyer, not of course a buyer of what he is selling but of something else or of many other things. All who have shares in anything offered for sale, because some of them helped to process it, or because some of them provided the plant and equipment (bondholders and stockholders), or because some of them in some way obtained a legal right to a share, all of these persons and businesses wish to exchange their shares of some things for other things. The problem at this point may be described in a question: How can purchasing media be created and issued to those entitled to share in things offered in the markets in such a manner that not only will the total amount be correct at all times, but also will be of such nature that each portion of purchasing media used to buy anything shortly will pass out of existence and not be available to buy other things after the things originally represented have passed through the markets and are no longer available for purchase?

Describing the desired result somewhat differently may be helpful. Purchasing media are needed that:

1. Can be created to represent things offered in all the markets; and,
2. Can be distributed among those entitled to share in those particular things; and,
3. Can be removed from circulation as things are bought and thus removed from the markets so that any particular amount of purchasing media representing an automobile already sold, for example, does not remain in circulation thereafter where it could be used again in the markets to compete in buying other things that also are represented by other purchasing media created to represent them.

If anyone unfamiliar with modern commercial banking were requested to develop purchasing media such as those described he might well have difficulties. For example, how would the exchange value of anything be stated, in what units?

Fortunately, the development of man's trading activities provided the answer to this question long before anyone thought of asking it. In all human societies that have developed to date, one or a few things have come to be used as media of exchange. Over the centuries, various precious metals and finally gold became used as the most satisfactory medium of exchange.

Using gold or any other precious metals as purchasing media presented no particular difficulties as long as these exchanges merely were a some-

what more sophisticated form of simple barter. However, as the division of labor among specialists became greater, the number of exchanges required increased greatly.

Warehouse receipts or claim checks for gold were developed long ago in order to avoid the inconvenience of transporting large quantities of the precious metal. Then someone made an interesting discovery. No one knows who the enterprising goldsmith was or when the discovery was made.

In the following paragraphs, the evolution of commercial banking is described step by step. No attempt is made to date each successive step in the evolutionary process. Many of the original dates for successive steps are lost in the haze of man's unwritten history; and some of the successive steps have recurred in recent decades and may be expected to recur again wherever formerly well-developed money-credit processes have been destroyed.

**Primitive Markets:** We begin with a primitive society where exchanges were simple barter. The grower of wheat exchanged it directly for skins obtained by the tribal hunters, for meat obtained both by the hunters and by those who had cattle, and for gold obtained in crude form by some members of the tribe from alluvial deposits. Why gold was generally desired, other than for the fact that it was used for ornaments and because it could be exchanged again for other things desired, need not concern us at this point.

As the tribe increased in number and the exchanges to be made increased greatly, a time came when the bartering was concentrated, for the most part, at a convenient meeting place. Today we should call that meeting place a market or shopping center.

Of course, many other things than those mentioned were exchanged in the markets, but the principles we are seeking to understand can be illustrated by discussing only a few. We choose to focus attention on wheat, beaver skins, and gold.

As trading increased, the time came when some individuals became specialists in marketing. One chose to deal in wheat, another in beaver skins, and another in gold. Once these specialists had established themselves, many of those bringing in things to barter discovered a process more convenient than carrying on their backs the things they wished to offer in exchange. The processor of wheat delivered wheat to the warehouse and took in exchange a claim check or warehouse receipt for his wheat. Similarly, the processors of skins and gold took warehouse receipts from the merchants specializing in skins and gold, respectively.

**Claim Checks:** Those who thus had obtained claim checks on wheat, skins, and gold then exchanged the claim checks among themselves until

they had claims on the things they wanted. When each had claim checks for whatever he wanted, he went to the appropriate merchant's warehouse and obtained wheat, or skins, or gold in exchange for the respective claim checks.

The earlier claim checks for wheat presumably read:

This certifies that John Doe has placed in my warehouse 35 bushels of wheat, which I promise to deliver to the bearer of this claim check on demand.

Arthur Smith, Wheat Merchant

Similar warehouse receipts or claim checks were written by the merchants handling skins and gold. In some instances the claim checks were not redeemable by the bearer unless the claim check had been endorsed or signed over to him by the original depositor of the wheat, but these details need not concern us.

**Gold as the Medium of Exchange:** As the market increased in size and activity men found, to an increasing extent, that gold or claim checks on gold were a convenient medium of exchange. On more and more occasions those who had gold or claim checks on gold found that they could obtain what they wanted with the least difficulty in persuading others to accept what they had to offer. Each seller saw for himself how readily he could buy other things he might want with the gold and how conveniently he could hold gold until he might wish to buy other things.

As a result of the increasing use of gold and claims on gold in effecting exchanges, men developed the habit of estimating the exchange value of other things in amounts of gold. Thus, prices, instead of being thought of and talked about in such ways as, "two bushels of wheat equal in exchange value one beaver skin," came to be thought of and talked about in such ways as, "one bushel of wheat equals one thirty-fifth of an ounce of gold, and one beaver skin equals two thirty-fifths of an ounce of gold (also the exchange value of two bushels of wheat)."

**The Goldsmiths:** At about this stage in the development of banking, the gold merchants, or goldsmiths as they were called, saw the possibility of greatly simplifying the marketing and exchange processes. A goldsmith suggested to a wheat merchant that more growers of wheat would bring their wheat to his warehouse if he would give them in exchange claim checks on gold instead of claim checks on wheat. When the merchant replied that had neither gold nor claim checks on gold to offer, the goldsmith explained that claim checks on gold could be borrowed until such time as the merchant might sell the wheat.

The wheat merchant decided to experiment as suggested. When the

next wheat grower arrived with a load of wheat, the merchant offered him a choice between claim checks on wheat and claim checks on gold. When the wheat grower said he preferred claim checks on gold, the merchant stepped next door and gave the goldsmith the claim checks on wheat accompanied by his note promising to redeem the claim checks on wheat with gold or claim checks on gold. Whereupon the goldsmith gave the merchant claim checks on gold, which were delivered to the wheat grower in exchange for the wheat he had delivered. The wheat merchant's promissory note read like this:

This is to certify that I have received and now offer for sale in my warehouse 100 bushels of wheat for which this note is a claim check. Received this date from the goldsmith 100 claim checks for one thirty-fifth of an ounce of gold each. As the wheat is sold I promise to return to the goldsmith corresponding claim checks on gold with interest at 6 percent, and if I fail to return all the claim checks within 30 days the goldsmith may claim the wheat not yet sold.

Arthur Smith, Wheat Merchant

And each of the 100 claim checks on gold issued by the goldsmith read like this:

I promise to pay to the bearer on demand one thirty-fifth of an ounce of gold.

William James, Goldsmith

Shortly thereafter, the goldsmith made an interesting discovery. At first he had issued claim checks on gold totaling no more than the gold in his possession. His discovery was that few people who obtained his claim checks ever demanded gold. Most of them used the claim checks on gold as purchasing media to buy other things, and the sellers returned the claim checks thus obtained to the goldsmith as agreed in order to repay their borrowings. Occasionally, some individual demanded gold, but even that gold usually returned to the goldsmith, for safekeeping if for no other reason, within a short time.

**Commercial Banking:** The much greater convenience to all concerned provided by the claim checks, especially those on gold, facilitated great increases in trade. Soon the goldsmith was being urged to issue claim checks on gold for greater amounts than the gold he had. By that time, he knew from experience that few who had claim checks would want gold if other things were available for purchase in the markets. Consequently, the goldsmith reasoned thus:

1. When I received gold from those who deposited it with me, I

gave them claim checks. If I now issue more claim checks on the same gold, I must:

a. First, make sure that these additional claim checks do not exceed but in effect represent the gold-exchange value (price measured in gold) of other things being offered in the markets; otherwise, the people who have my claim checks on gold may buy all of the other things for sale in the markets and still have enough claim checks left to demand more gold than I have.

b. Second, in order that there be no mistake, arrange that my loans of additional claim checks on gold are secured by bills of lading that prove things are offered in the markets or by promissory notes of borrowers who *assure* me that they are offering in the markets additional things at least equal in gold-exchange value to the claim checks I lend them.

c. Third, I must make sure that the merchants repay their loans promptly by returning to me the claim checks on gold that they receive when they sell wheat, skins, etc. Thus I shall be sure that there are not more claim checks outstanding than the total gold-exchange value of things left in the marketplace including my gold. Obviously, I must lend my claim checks only for short periods and must insist that a merchant promptly repay me whenever he sells the wheat or other thing that, either actually or in effect, serves as security for his promissory note (and is represented by the claim checks he borrowed from me.) Only if some manufacturer or merchant were placing in the market additional items after the first were sold would I renew a loan instead of requiring it to be repaid.

2. The goldsmith might also have reasoned: Some people may think that I have issued too much purchasing media, more claim checks on gold than I can redeem. But if the claim checks on gold used to demand gold from me exceed the gold I actually have, there would be a relative shortage of claim checks available for buying other things in the markets: prices (the gold-exchange values) of many things would fall, and people who had withdrawn gold temporarily would be induced to spend it for the things available at bargain prices in the markets. The sellers then would repay their borrowings from me by depositing gold as well as claim checks on gold, and my gold holdings (reserves) would be restored. In a short time, there would be no claim checks on gold outstanding, or at least no more than I could readily redeem with gold if necessary.

3. Clearly, I must be careful not to overestimate the gold-exchange values (prices) of the things being offered on the markets, and I must be sure to issue claims on gold only to represent the total gold-exchange value of things offered on the markets plus my gold. Because my gold always is

available to anyone who demands it by presenting claim checks, my gold also is on the markets. But I must be careful to make sure that the total of outstanding claim checks that I have issued never exceeds the gold-exchange value of all things offered in the markets *including my gold*.

Once the goldsmith initiated operations as just described, sound commercial banking was underway. Soon, more of the goldsmiths in the first market and then in other markets undertook the new business of commercial banking. However, for a long time they continued to be known as goldsmiths.

Today, those who perform these functions are known as commercial bankers; but by far the most of them do not understand or at least do not act as though they understood the basic principle of sound commercial banking. They ignore the principle that the new claim checks issued, that is, additional currency and checking accounts, should represent things (including gold) being offered in the Nation's markets.

*Supplementary note:* Today, when a commercial banker receives gold, he usually credits the depositor's checking account instead of issuing new claim checks in the form of paper currency to the depositor. (In the United States, now that gold coins no longer circulate, the commercial banking system receives gold certificates from the U.S. Treasury and credits its account; but this does not alter the principle here discussed.) Both checking account and currency are used as claim checks, or purchasing media, in the markets.

As will be clear if the description above is read carefully, some of the claim checks (today, in the form of currency or checking accounts) represent gold and some represent the gold-exchange value of other things being offered in the Nation's markets. Thus the total of claim checks (purchasing media) in circulation may be several times the total of gold held by the commercial banks.

Some economists, noting the technical form of the claim checks, *which all purport to be claims on gold*, believe that the claim checks in excess of those that do represent gold directly are excessive and constitute inflationary purchasing media with, when used, a resulting disturbance of prices and business equilibrium. (Such economists relate this situation, quite properly, to the so-called "fractional reserve" arrangement for commercial banks generally.) Thus they have concluded that 100-percent reserves should be required.

Two important aspects of commercial banking are overlooked by such economists.

1. When all claim checks issued (all currency and checking ac-

counts in use) do represent things (including gold) being offered for exchange in the marketplace, the purchasing media being used to demand things for sale do not exceed but equal the gold-exchange value of those things. Thus no tendency to distort prices or business activity arises; and,

2. As is described in detail later in this section, claim checks or purchasing media that do not represent either gold or other things being offered in the markets are issued by the commercial banks on occasion. Such excess purchasing media are inflationary in that they make possible the use of an amount of purchasing media to demand things in the markets greater than the approximate gold-exchange value of those things. Prices rise, and business activity is distorted. Booms occur followed by recessions when the commercial banks reverse the process.

Evidently, commercial bankers should understand what may be called the basic principle of sound commercial banking and should be shrewd judges of the gold-exchange value of things being offered in the markets and reflected in the commercial loans made by the bankers. When making such loans, the commercial bankers create additions to the checking accounts of the merchants and manufacturers or others involved in processing things; and such additional purchasing media, although purporting to be claims on gold actually represent the things offered in the markets.

Even as able a student of money, credit, and banking as Dr. Murray N. Rothbard seems to be afflicted with a "blind spot" in this connection. In his booklet *What Has Government Done to Our Money?*,\* he refers to commercial bankers as issuing "... uncovered or 'pseudo' warehouse receipts ... which represent nothing." He has failed to note that there are three classes of claim checks (or warehouse receipts or purchasing media) issued by the commercial banks:

1. Those claim checks representing gold being offered in the markets via its representative claim checks; and,

2. Those claim checks representing other things being offered for exchange in the markets; and,

3. Those claim checks representing various thing that are not being offered in the markets.

Clearly classes one and two are the same in principle in that they represent things (including gold) being offered for exchange in the markets. On the other hand, class three claim checks are fundamentally different in that they do not represent anything available in the markets for

---

\* Murray N. Rothbard, *What Has Government Done to Our Money?*, Larkspur, Colorado, Pine Tree Press, 1964.

exchange (or for sale). These are the excessive or inflationary purchasing media.

When the Federal Reserve System was under debate in Congress, recognition of the basic principle of sound commercial banking was evidenced, and that principle was embodied in the Federal Reserve Act. Subsequently, it was first disregarded and then largely forgotten. Today, few bankers and even fewer economists seem to have any understanding of it. Obviously, fractional reserve requirements are a purely arbitrary rule-of-thumb means of protecting a commercial banking system against the ignorance of its managers.

Once sound commercial banking was discovered, or at least after it was generally understood, what happened? What has occurred that prevents the more advanced nations of the world from enjoying optimum economic growth free of the distortions that now threaten worldwide money-credit disorders? The short answer is that the basic principle of sound commercial banking has been so long disregarded that few bankers today ever heard of it and few economists understand it. But a more extensive description is desirable in order to make clear what has occurred.

Although the description of sound commercial banking given above may seem satisfactory to many readers, a question has been raised by some writers. They ask: Inasmuch as those offering services also need buyers who are ready with purchasing media, why shouldn't the commercial banks create more purchasing media (currency or checking accounts) so that services also may be more readily sold? In order to answer this question fully, several aspects of the situation must be described.

First, the commercial banks create purchasing media to represent things offered in the markets so that those who participated in processing the item, for example, automobiles, may have purchasing media (claim checks on gold in the form of currency or checking accounts) representing their respective shares in the item offered for sale. The purchasing media created and loaned to an automobile manufacturer who has shipped cars to market may be distributed to assembly-line workers, suppliers of materials, white-collar workers, stockholders, and others who are entitled to a share of the factory's output. The barber or other provider of services usually has no such problem. In fact, some such as opera singers collect from the public before the performance is given. The automobile manufacturer needs purchasing media, while his cars are being offered for sale, in order to distribute shares to those entitled to them; but the provider of services in almost all instances receives the purchase price as soon as, or in some instances even before, the service is rendered.

Second, creating new purchasing media for prospective *buyers* of ser-

vices, rather than for sellers of them, would put such purchasing media in circulation until the buyers chose to repay. In passing from one hand to another such added purchasing media could be used to buy things already represented by other purchasing media in circulation. Note that sellers who obtain newly created purchasing media from the banks, as when bills of exchange are discounted (borrowed on) repay as the items are sold, thereby removing from circulation the purchasing media created to represent the things before they were sold. The original credit to the seller's checking account is first reduced by distributing purchasing media to those entitled to a share; then the receipts from the sale are deposited or added to the seller's checking account; finally, the banker debits the account (subtracts from it) the face amount of the original note, thereby canceling the purchasing media originally created when the loan was first made, *i.e.*, when the note was discounted.

Third, those who have claim checks representing things (including gold) in the markets choose to forego buying some of the things they might have purchased and instead transfer some of their purchasing media (claim checks) to people offering services, who then buy the things not purchased by the first holders of the claim checks. In effect, each person offering a service is suggesting to those who have claim checks representing things offered in the markets: "Do have a haircut, or a seat at the opera, or whatever service I offer and let me have the food or clothing or other things in the market represented by the claim checks you can use to buy my services."

**Intermarket Trading:** In a market area not far from the first primitive market area described, the cost of producing wheat was less because the valley land was richer. On the other hand, beaver skins were available in larger quantity with less effort in the first market area because of the many hillside waterways where beaver could be trapped. In the second market area the exchange value of wheat for gold decreased (the price of wheat declined), and in the first market area the price of beaver skins was lower than it was in the second market.

Even in the days of simple barter, exchange values of wheat and skins in the two markets had differed. But with regular use of gold or claims on gold as purchasing media, the difference in exchange ratios (price difference) became more apparent and the advantages of regular trade between the two areas became obvious. Thus inter-area commerce increased to the mutual advantage of all concerned.

At first the goldsmiths wondered whether or not the supply of gold would be adequate for the increasing number of exchanges and growing volume of commercial banking for which many more claim checks on

gold were needed. But as the goldsmiths became better known, more gold was brought to them for safekeeping. In addition, producers took advantage of new inventions stimulated by the general advance of a trading civilization. Crude pumps were developed to provide water for hydraulic washing of gravel, the new wheeled carts lessened costs of hauling supplies, etc., and other costs of producing gold were similarly lessened. Thus gold production was stimulated.

In addition to their lending to merchants, which was still continued, the goldsmiths began creating and lending claim checks on gold to traders shipping from one market to another and to processors of wheat and skins, such as the millers and furriers. For a time the goldsmiths were careful to apply the basic principle of commercial banking, *i.e.*, that each new issue of claim checks on gold created for a borrower should, in effect, represent either additional gold received by the goldsmiths or other things being offered in the markets.

**Savings Deposits:** In time some of the people employed by manufacturers, merchants, and traders found that their wages and salaries would buy more than their immediate needs for consumption. Consequently, they began to save and invest part of their incomes. At first, they invested directly in new houses to rent and in other productive things, but later some of them realized that the goldsmiths were in a position to make such investments, safeguard the documents concerned in their vaults, and exercise continuing supervision. By mutual arrangement the goldsmiths then undertook to receive such savings and invest them. For example, a salaried executive would bring part of his salary each month in the form of claim checks on gold to the goldsmith. A record of this deposit was made by the latter; this record was known as a savings account or time deposit.

Of course, the purchasing media in the form of claim checks received by the goldsmiths from savers were already in existence; those claim checks had been created and issued originally by the goldsmiths as commercial loans were made; some individuals who had received the claim checks from the merchants and other borrowers chose not to buy some of the things in the market but to deposit some of their claim checks at the goldsmiths; consequently, things that those claim checks represented still were for sale in the markets, and those claim checks, although the same in all outward appearance as other claim checks, could be loaned or invested by the goldsmiths in other than commercial loans. As far as those claim checks were concerned, the goldsmiths could safely disregard the commercial-loan principle, because those claim checks had been issued in the first place to represent things being offered and *still available* in the markets. Of course, the goldsmiths promptly invested or loaned those claim checks, and anyone who borrowed them from the goldsmiths

could find things of equivalent value already in the markets for him to buy.

Readers may wonder whether the goldsmiths might not become confused by making two types of loans with similar claim checks. To avoid this possible confusion, the goldsmiths kept an exact record of the savings deposited with them. Consequently, they always knew precisely how much they could invest in bonds, mortgages, or other loans that did *not* involve simultaneous offerings of things in the markets.

**Inflating:** Thus far, the possibility of departure from the basic principle of sound commercial banking has not been described in detail. At least a summary description is necessary.

During a period of peace and general prosperity when markets were functioning well and the goldsmiths were actively conducting their usual business of both commercial lending and investing savings entrusted to them, an unusual event occurred. A would-be borrower who had nothing to offer on the market desired one of the new chariots then becoming fashionable. He asked his goldsmith friend for a loan, but was at first told, "I am sorry to disappoint you, but my records show that all the savings deposited with me already have been invested. As you can understand, a loan to you for the purpose you have indicated would not be a commercial loan because you would not be simultaneously offering anything on the market from which the proceeds of sale would repay the loan. Therefore, I should not create and issue new claim checks on gold in order to lend them to you. Until I receive more savings, I should not lend to you for such a purpose." (Savings are brought to the goldsmiths in the form of claim checks that the owners do not wish to spend but are willing to have others spend if they will repay later.)

The would-be borrower, a long-established customer of the goldsmith's, had his reply ready. "I realize that what I am asking is unusual, but what harm can result? If you fear for the safety of the loan, I can give you a chattel mortgage on the chariot I buy; it will serve as security for the loan. If I fail to repay when the note falls due, you can repossess the chariot and re-offer it on the market yourself. Moreover, I am willing to pay an unusually high rate of interest. You will be well protected and can profit by the arrangement."

Now the goldsmith in this instance, although by no means stupid, was not well-informed on the principles of sound commercial banking. He had fallen into the habit of thinking more about the security for his loans than of their purpose. Finally, he had had no experience with and could not foresee the consequences of departing from the basic principle of sound commercial banking. He therefore issued some additional claim checks on

gold and loaned them to the persistent borrower. Thus was inflating begun.

As soon as the borrower had the claim checks in his hands he rushed to the market and bought one of the few chariots then available. Within the next several days, other individuals who in the usual course of events would have purchased chariots likewise sought to buy. The chariot merchant realized that demand for his products was exceeding the supply; his haggling over prices altered in tone with the result that chariots soon commanded higher prices.

The chariot merchant then dispatched a letter by mounted messenger to the manufacturer of chariots ordering an additional number for early delivery. The manufacturer was so pleased with the increasing evidence that his products were finding favor in the seemingly more affluent society that he decided to push ahead with plans long under consideration for expansion of his manufacturing facilities. He went to the goldsmith and proposed to borrow on a large scale by giving either his note or bond (another form of promissory note) in which the goldsmith could invest savings at his disposal.

**More Inflating:** The goldsmith's reply was, "I can see how advantageous your early expansion seems to be; but, unfortunately, I have already invested all the savings at my disposal. In fact, my noncommercial, investment-type assets (holdings of bonds, mortgages notes, etc.) already exceed the savings heretofore with me plus my capital funds. You will have to wait until additional savings are brought to me for investment."

But the chariot manufacturer was eager to proceed; consequently he urged, "Your loan will be well secured. Within a year at most, I shall be producing additional chariots from the new plant, and in 8 or 10 years your loan can be repaid in full. Surely, what I am proposing is a sound loan."

Thus the goldsmith was finally persuaded to create more claim checks on gold and lend them to the chariot manufacturer. The latter then started bidding for labor and construction materials in order to construct his new plant. Of course, the new purchasing media thus made available to purchase things in the markets were in excess of the gold-exchange value of things then being offered in the markets for sale. Inevitably, competitive bidding forced prices and wages up. In this community a period of boom prosperity began. All makers of things found demand in the marketplace suddenly increased; all tried to increase their plants, and all bid for scarce materials and labor at higher and higher prices. The goldsmiths were urged to make more and more noncommercial loans at higher and higher rates of interest, and the more they disregarded the "old-fogey" principles

of sound commercial banking, the more their new-found "wisdom" seemed justified by the turn of events.

At least, such were the effects at first. Then subtle changes in past procedures began to appear. Merchants in this market area discovered that they could buy at lower prices in other market areas. First wheat, then skins, and finally even chariots were being brought in from adjacent market areas in large quantities. The local merchants of course had to pay for the things thus brought in, and they gave the claim checks on gold issued by the local goldsmiths.

Then the goldsmiths made an important discovery. Formerly, few of the claim checks they issued were presented as demands for gold. Most claim checks had returned to the goldsmiths as merchants repaid loans and then were reissued for new commercial loans. Almost no one in the local market had seemed to want gold. However, the goldsmiths in other markets (Communities B, C, etc.) had no use for the claim checks issued by goldsmiths in the market where prices (exchange values of other things for gold) had increased so greatly; consequently, the claim checks were presented as demand claims for the gold held by goldsmiths in Community A.

At first, the goldsmiths in Community A were not concerned about the outflow of gold from their vaults. Occasionally in the past, claim checks had been presented for their gold, and they had encountered no difficulty in satisfying the desires of those who, for one reason or another, wished to hold gold. In this instance, however, the demand for the goldsmiths' gold persisted. Soon the gold left in their vaults was far below the amounts that they formerly had considered reasonable in relation to claim checks outstanding.

**Deflating:** At this stage, the goldsmiths in Community A became alarmed. Unless some way could be found to alleviate their situation, they soon would be bankrupt. First, they turned to the borrowers who were building new factories or who had bought new chariots and urged them to repay their borrowings. But the manufacturers told the goldsmiths, "Surely, you remember that we have bought bricks and mortar with the claim checks you loaned to us. Someone else has those claim checks, now, and we shall not be able to repay for a few more years." And those who had borrowed to buy chariots said, "We simply cannot repay the claim checks we borrowed until our future earnings are received in the months ahead."

Finally, in desperation, the goldsmiths turned to the merchants and said, "We cannot lend you more claim checks to buy more goods; we must have repayment of our outstanding loans to you that soon will be due." Then the rush to liquidate began. Merchants marked down prices in order to

persuade more shoppers to buy with claim checks that could be used to repay loans. Merchants canceled orders for things from manufacturers in order to avoid becoming obligated for incoming goods. Manufacturers reduced production, and the number of unemployed in Community A greatly increased.

As prices generally fell, prices of secondhand chariots declined rapidly. Soon some of the goldsmiths in Community A realized that their loans secured by chariots were “frozen” because the borrowers were unemployed and the chariots involved were worth much less than the unpaid loans. These goldsmiths repossessed chariots and sold them at auction, but the proceeds of such sales were insufficient to cover the unpaid loans. Some of the goldsmiths then realized that their own capital, and more, had been lost; they too were bankrupt and were forced to close their doors to the dismay of many savings depositors and of others who still held the claim checks on gold issued by those particular goldsmiths.

**Gold Production:** One of the interesting developments during the days of boom prosperity and afterward was the trend of gold production. When businessmen generally were frantically bidding for raw materials and labor at rising prices and wages, gold production markedly decreased. The reason was not difficult to ascertain. From the viewpoint of the gold producers, the prices of everything they had to buy and the wages they had to offer in order to attract labor rose rapidly. The gold producers thus were forced to discontinue producing in all but the richer gravel deposits and mines. Labor and new machinery that might ordinarily have been used in producing gold were diverted to other activities.

Later, after prices generally and wages had fallen extensively and many were unemployed, gold miners found that old abandoned mine shafts and gravel deposits could be worked again. Even placer mining by individuals became popular.

Some of the economic theorists in this society had become concerned during the early days of the depression and developed learned theories about the “shortage” of gold, blaming that for the depression difficulties. However, their books hardly were published before gold production was stimulated again as described above and increased to levels never before reached.

With our understanding of the entire situation in Community A, we can see that the decrease in gold production was desirable. It tended to discourage further issuance of claim checks on gold by the goldsmiths when they already had issued too many. Moreover, the subsequent increase in gold production during the depression had the opposite effect in that it made more gold available to the goldsmiths and encouraged them to

create more claim checks on gold. For all new gold delivered to the goldsmiths they gave claim checks that were purchasing media, which made possible increased demand for other things. In addition, as their gold holdings increased once more, the goldsmiths were in a better position to resume commercial lending.

**The Divergent Views:** Returning now to our reference to the blind men describing the elephant, we readily can see how various economists have happened to offer divergent views on money-credit problems.

1. Some economists have focused attention on the fact that claims on gold have greatly exceeded the gold held by bankers. They have been blind to the fact that a large part of the claims on gold, although in the same form as the claims on gold issued for gold deposited, actually represent other things offered in the markets. These blind men argue for 100-percent reserves.

2. Some economists have focused attention on the deflating process and have been blind to the fact that deflating does not occur unless there has been prior inflating. These blind men argue for an ever-expanding money supply at some rate that seems to them reasonable.

3. Some economists have focused attention on the loss of purchasing power during a period of inflating by savers, holders of life insurance, etc. These partially blind men argue for restoration of the gold standard with claims on gold redeemable on demand, but too often they fail to consider what has happened during the prolonged inflating and fail to suggest a practicable means to restore sound commercial banking.

4. Some economists have focused attention on the seeming shortage of gold during a prolonged period of inflating. These blind men argue that somehow gold is at fault, that it is a "barbarous metal" seemingly perverse in its restrictions on their freedom of managing the money supply. They apparently do not realize that the seeming shortage of gold is simply a warning that unsound commercial banking has once again been continued for too long.

### *Findings of Facts*

**Sources of Purchasing Media:** The purchasing media available to the public in the United States include all coins, the paper currency (consisting largely of Federal Reserve notes but including Treasury currency), and checking accounts (or, as the banks label them, demand deposits). On the other hand, promissory notes are not purchasing media, but are a promise to deliver purchasing media at a future date. Similarly, the retailer who orders goods from the wholesaler does not make use of purchasing media when, on receiving the goods, he gives an implied promise to pay in the future by

requesting that the goods be charged to his account. All purchasing media in use, or that someone holds available for use, have come from one of the sources described in the paragraphs that follow; and all new purchasing media that may be created probably will come from one of these sources.

The first and an important source of purchasing media is the thing chosen as the basic or standard purchasing medium. In the present industrial civilization, the money commodity is gold. (We shall use the phrase "money commodity" as a shorter and more convenient label for the thing used as the basic or standard purchasing medium.) In fact, the qualities of this commodity that make it a desirable basic purchasing medium have been recognized for thousands of years. Only during the 19th century, however, did gold become the money commodity for such a large portion of the world's population as now uses it.

In spite of the so-called departure from the gold standard, gold is still the money commodity of modern civilization. There is no need here to trace its history, nor to forecast its remote future. For our purposes at this time we need only point out that existing gold held as reserves of the various banking systems actually is being used as purchasing media, and that new gold, except that used in industry and the arts, becomes purchasing media, although it may circulate in an altogether different form than the gold coins or gold certificates that formerly were available.

When the Treasury acquires gold the seller receives a check drawn on the Treasury's account; and, except when a gold sterilization policy was in effect for several months after December 1936, the Treasury ordinarily counterbalances these drafts against its checking account by depositing certificates representing the gold with the Federal Reserve banks. The effect is the same as though the Treasury first had deposited a certificate representing the gold in the Federal Reserve bank, and had then drawn a check against that bank in the amount of the value of the new gold. When the seller of the gold deposits the Treasury check for credit to his own account in his local bank, his checking account is thereby increased. The local bank in turn deposits the Treasury check in the nearest Federal Reserve bank, and thereby increases its reserve account.

By this means purchasing media equivalent in value to the gold sold to the Treasury are made available to the seller; and, when he uses the funds to buy something desired, the purchasing media pass on to someone else and thus remain in circulation. Furthermore, if the reserves of the member bank involved are increased by the new credit to its deposit at the Federal Reserve bank, the member bank is tempted to expand its loans or investments, in order to use the excess reserves profitably, thereby increasing still further the purchasing media in circulation.

**Other Sources:** A second source of purchasing media is the commercial lending function of a commercial banking system. The borrower whose note is discounted receives a bookkeeping credit to his checking account that is not previously deducted from someone else's account. This action places at his disposal new purchasing media (in addition to those previously existing) that represent things that the borrower offers in the markets and that therefore are not inflationary.

The third source of purchasing media is the currency issued by the Treasury in the form of United States notes, Treasury notes of 1890, Federal Reserve banknotes, national banknotes, dollars, subsidiary coin, and minor coin. Because this kind of currency is created by the direct action of the Treasury and does not reflect either an increase of gold or in other things coming to market, the Treasury currency is regarded as inflationary purchasing media. However, to the amount of any gold kept idle in the general fund and not used to issue gold certificates, Treasury currency is regarded as noninflationary because it in effect represents gold not otherwise represented in the channels of trade.

The fourth and fifth sources of purchasing media are also the commercial banking system and also involve a bookkeeping credit to the borrowers' checking account as in the commercial lending mentioned above. However, purchasing media derived from these sources do *not* represent things that the borrower offers in the markets. The loans involved thus are investment-type assets of the commercial banks.

Our research on banking data has made possible estimates of two important categories of loans of this type. Commercial banks make term loans for periods of a year or more (often 5 to 10 years), which are much longer than the periods of time required for offering things in the markets. Purchasing media so created are used for buying new plant and equipment or for other investment purposes. Thus, they do not represent things being offered in the markets and are therefore inflationary.

Another important source of inflationary purchasing media originating in the commercial banking system that was revealed by our research is short-term speculative inventory loans. The commercial banks sometimes have created and loaned purchasing media that manufacturers and other processors used for buying stocks of things that they did not offer in the markets. Instead, the businesses held the things in their inventories in the expectation that their prices would increase later. The additional purchasing media created for buying the things thus are inflationary.

The sixth source of purchasing media is the commercial banking system's investment in Federal Government obligations to the extent that such investments exceed the capital and saving accounts of commercial banks

that are available for that purpose. We refer to this source as “monetized Government debt,” because the commercial banks create *new* purchasing media in exchange for these Federal debt obligations.

Turning now to the accompanying chart, the reader will find that the six sources of purchasing media are differentiated by contrasting shading in order to facilitate an understanding of the situation. The data shown are for bank call dates during each year prior to 1933, and monthly thereafter.

**Gold as a Source of Purchasing Media:** As is apparent from the chart, the money commodity is the source of the relatively stable portion of the circulating purchasing media. Just prior to the 1914-18 World War, the total was approximately \$2,000,000,000. Subsequent changes prior to early 1934 were gradual; but in that year a sharp upward trend began as a result of the influx of gold at a higher price per ounce following devaluation of the dollar; and the trend continued upward until 1941.

The rapid upward movement of commodity prices in late 1936 and early 1937 discouraged gold mining by increasing costs. For several months at that time, the rate of increase in gold production diminished, but the drastic deflating of late 1937 and early 1938 brought a decline in commodity prices. Gold production was again encouraged, and the volume of gold imports trended upward more steeply than before. The flight of gold to this country from Europe and elsewhere in late 1939 and 1940 accentuated this trend.

A peak in the Treasury’s gold holdings was reached in August 1949, when stocks totaled \$24,600,000,000. By the end of 1968 the gold holdings had decreased to about \$10,400,000,000.

Although accurate records of gold production throughout the world have not been available for much of the war period, estimates that probably are not far from correct have been made. From the maximum of about 42,000,000 ounces in 1940, production decreased to less than 24,000,000 in 1945. In part, this reflected wartime closing of gold mines because of manpower shortages, but the principal cause of the decrease was the rising cost of gold mining. The wartime inflating in the major industrial nations of the world caused higher prices for equipment and higher wages for labor. After the war, gold production increased as operations were resumed in mines forced to close during the war.

However, the rate of increase in annual world gold production decelerated during the early 1960’s, and such production reached a peak of approximately 47,000,000 ounces during 1966. Production decreased about 2 percent between 1966 and 1967 as a result of the adverse influence of worldwide inflating.



The annual world output of gold increased somewhat during 1968, presumably reflecting the higher prices that were available to major producers from selling gold in free markets instead of to monetary authorities.

**Commercial Loans:** During much of the period covered, commercial loans of the banking system have been a principal source of purchasing media. Under ideal circumstances, all the available purchasing media would be derived from the money-commodity source (gold) and commercial loans. Then, all purchasing media that appeared in the markets for things and services would in effect be tickets representing things (either gold or other things) that were being offered for exchange in the markets, and the buying and selling processes would be nearly as simple as direct barter. Provided there were no counterfeiting of tickets (purchasing media), a balance necessarily would exist between demand for all things and the supply of them. However, something very much like counterfeiting actually does occur, as was explained earlier.

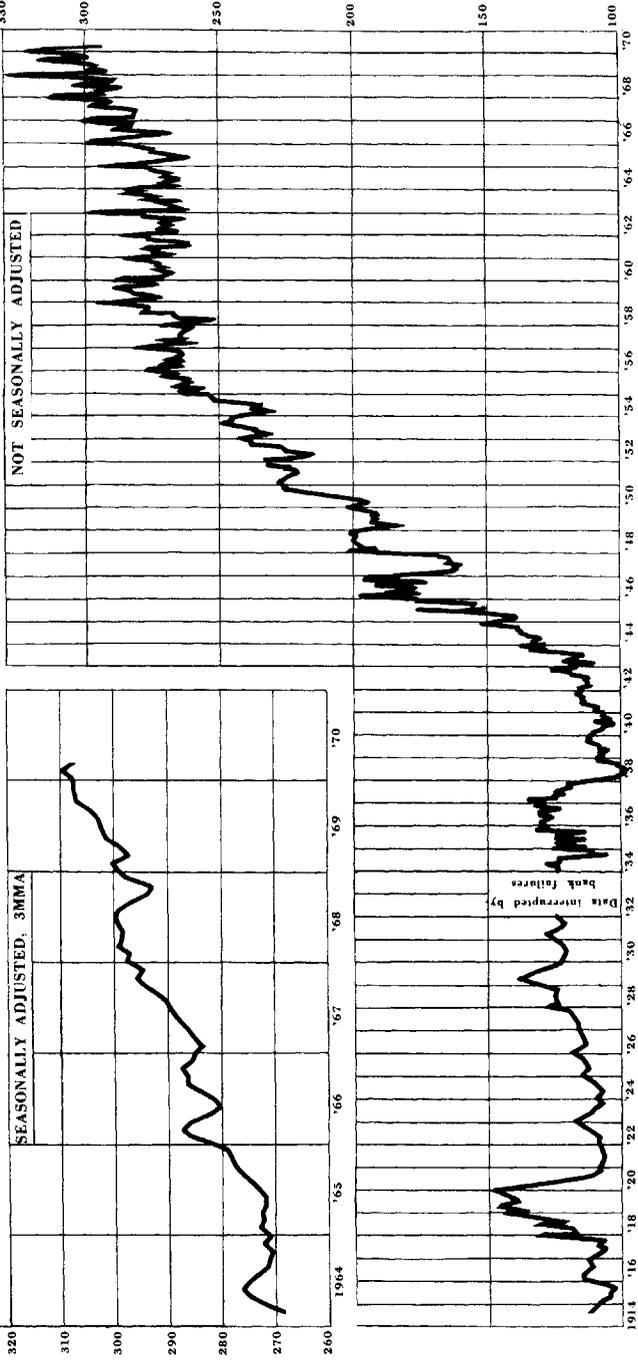
**An Index of Inflating and Deflating:** In order to know when inflating and deflating are occurring and how much of the purchasing media in use at any time is inflationary, a measuring device is desirable. Because any excess or deficiency of purchasing media must appear in the demand deposits (checking accounts) of the banking system or the record of currency in circulation, the savings banks, which do not handle checking accounts, can be left out of consideration. Data for all commercial banks in the country must be included.

The absolute amount of the excess purchasing media in circulation can be determined by subtracting from the total of investment-type assets the liabilities such as time deposits and capital funds that justify those assets. The difference found constitutes a net addition to the total of demand deposits (checking accounts) that is not representative of gold or of other things offered in the markets. The trend of this difference, if upward, reflects more inflating and, if downward, reflects deflating.

**The Data Shown:** The Harwood Index of Inflation reflects the amount of purchasing media in excess of that which represents gold and other ter-hup in and en route to markets. The form of the index shown in the chart is called the ratio form, because it is computed by dividing the purchasing media in use (active checking accounts plus currency) by the noninflationary purchasing media. Thus, the index is a measure of relative inflating or deflating, *i.e.*, it reflects relative changes in the amounts of inflationary and noninflationary purchasing media in use. The curve is discontinuous during the period 1932-33 because of inadequate data and the chaotic conditions resulting from the numerous bank failures.

The chart shows four major periods of inflating between 1914 and the

# HARWOOD INDEX OF INFLATION



end of World War II. The subsequent deflating began in late 1919, early 1929, early 1937, and early 1947; but the last was soon followed by renewed inflating that brought the index to a peak at the end of 1950. After a minor deflating, more inflating was reflected in a further rise of the index to a new record in 1954.

Similarly, a minor deflationary period was followed by rapid inflating to a new peak in 1958. A several year period of comparatively little inflating after 1958 was interrupted in the mid-1960's by substantial inflating to a record level at the end of 1968. Some deflating occurred during the first 7 months of 1969.

In general, the index of inflation has been a "leading" indicator of business-cycle changes. (That is, cyclical "highs" and "lows" have been reached by the index prior to the "highs" and "lows" of general business activity.)

When the research on the Harwood Index of Inflation was begun 40 years ago, published banking data were most unsatisfactory. Computation of the index involved a substantial margin of error, and unfortunately the magnitude of the error usually was unknown. Nevertheless, trends of the index over periods of a few years apparently were significant. The absolute level of the index remained obscure, even when its general trend apparently could be ascertained from month to month. In recent years, marked improvements in the reported data have occurred. Apparently, the Federal Reserve Board's statisticians and others belatedly have recognized the significance of certain data required for useful analysis of the money-credit situation.\*

---

\* For a more detailed account of recent improvements in computing the Harwood Index of Inflation see "A Statistical Can of Worms" in *Research Reports* for July 7, 1969.

## VIII.

### HOW WHO GETS WHAT

**W**E turn to the question, How are the shares of ter-hup that go to any individual or agency determined? In order to answer this question, we shall break it down into the following subsidiary questions: (1) How are the shares of those who own portions of ter-fir-ess determined? (2) How are the shares of various direct and indirect processors of ter-hup determined? (3) How are the shares of those who own processing ter-hup determined? (4) How are the shares of those who provide services of one kind or another determined?

As has been indicated in the preceding chapters describing economic procedures, purchasing media representing the value of all ter-hup are distributed to those who participate in the processing activities or who have a legal claim on a share of the resulting ter-hup. Those who provide services of one kind or another for individual consumers do *not* participate, even indirectly, in the processing of ter-hup at any stage. Consequently, the purchasing media that they obtain comes to them from those to whom it was originally distributed as representing shares of ter-hup. Presumably, the share accruing to any individual who received part of the original distribution is not determined by how much he chooses to spend for services rather than for the ter-hup he would be entitled to if he chose to buy in the retail markets.

Viewing the same situation from another point of view, we may note that the share of ter-hup finally obtained by providers of services depends on how much those who have purchasing media representing ter-hup are willing to spend for services. Presumably, the more they desire services of one kind or another in preference to ter-hup, the more will those who first obtain purchasing media claims on ter-hup use such purchasing media to buy services and thus pass along to the providers of such services the means of obtaining ter-hup.

As to what determines the relative shares among themselves of those providing services, we shall comment in greater detail later. At that time we shall also discuss certain relationships between the shares accruing to processors of ter-hup and those obtained by providers of services.

For the time being, then, we postpone consideration of the fourth subsidiary question listed above and turn our attention to the first which was, How are the shares of those who own portions of ter-fir-ess determined?

We pointed out earlier that the owners of ter-fir-ess in the vicinity of Chicago, North America, in fact in much of what is called Western Civili-

zation and elsewhere on the globe, have a monopoly privilege. This monopoly privilege entitles the owner of any ter-fir-ess to prevent others from using any aspect of that ter-fir-ess including the space aspect except on terms acceptable to the owner. There are two limitations on the extent of this privilege that prevent its being absolute. In the first place, the government reserves what is called the right of eminent domain, which is the right to take or use ter-fir-ess for public purposes, but this right is itself limited in most instances by the statutory or customary right of the owner to be compensated at public expense for the loss of his monopoly privilege.

The second limitation on the monopoly privilege is provided by taxing procedures widely used. By appropriate taxes levied on the exchange value of items of ter-fir-ess or on income derived therefrom, public agencies in many instances force owners of ter-fir-ess to pay something to the government for their ownership privilege. Thus, in effect, the extent of the monopoly privilege is lessened.

Except for the limitation just described, however, owners of ter-fir-ess are privileged to charge "what the traffic will bear." In other words, they are at liberty to demand all that others who wish to use their ter-fir-ess will give them. What then determines how much a prospective user of ter-fir-ess will pay for the privilege of such use?

In answering the last question, we shall consider first the space aspect of ter-fir-ess in a large city. Data for Chicago happen to be available, and what we found there likewise is found in most other cities.

One intermediate step is advisable before proceeding with specific illustrations. The prices of items of ter-fir-ess customarily are stated as prices of the ownership privileges. Another way of indicating relative exchange values of items of ter-fir-ess would be to state the annual incomes obtainable by the owners in return for the use of one or more aspects of the items of ter-fir-ess. Of course, the selling prices of the ownership privileges are simply the capitalized annual incomes obtainable. An old-fashioned way of stating such selling prices was "..... years' purchase," the blank being filled in by the number of years required for the income to equal the selling price.

"Twenty years' purchase" once was a customary way of calculating the price of the ownership privilege. In other words, the income capitalized at 5 percent gave the market price of the ter-fir-ess involved. In general, the current prices of items of ter-fir-ess are simply the capitalized actual or potential incomes, the rate of interest used being that generally applicable at the time to investments involving comparable risks, etc.

We turn now to consider the behavior of the managers of a retail store

who propose to obtain the space aspects of a particular portion of territory. They want the site in order to build thereon an appropriate building and conduct therein a retail store. Of course, they need for this purpose a site sufficiently large so that the processing of territory they propose to display for sale may be adequately accommodated.

Having decided on the approximate size of the retail store, the managers will next undertake studies of various possible sites. In all cities, certain areas are more desirable for such stores than are others. Nearness to mass transportation such as subway exits and bus lines is one factor considered in choosing the general area. Another is the presence of other retail stores that may attract shoppers to that general vicinity.

Within the general area considered by the managers as potentially suitable for their operations, they will make a more detailed study of specific sites. The usual procedure is to make a traffic count of pedestrians who may be potential customers. The various sites considered then are compared based on the probable volume of sales to the assumed potential customers. Of course, the traffic count may have a bearing on the size of store to be constructed and may result in a revision of earlier estimates.

Having completed such preliminary surveys, the managers are in a position to begin negotiations with the owners of the various sites that might be usable. Naturally, the company under consideration is not the only one that may be interested in using each possible site. A competing retail store may likewise be interested in a site in that general locality, or some of the retail stores already there may be interested in obtaining more space for their activities. Consequently, anyone who wishes to obtain a site must bid higher than other potential users.

Now it is plain that, if a retail store bids too high for its site, that is, if it contracts to pay too high an annual fee, the enterprise may fail. The only funds available come from the differential between the costs of things sold and selling prices. The latter must meet the competitive prices of other stores, and the former can be minimized by shrewd buying but cannot be reduced to zero.

Evidently also, the managers of the proposed store have a choice of sites where they may conduct their activities. They may go out to a rural area and find a site at some nominal cost such as \$3 to \$5 per acre per year; or they may use one of the best retail sites in a city at an annual fee of hundreds of thousands of dollars. In the cheaper site, they might not be able to earn operating expenses, and in the latter they might earn an excellent return on their investment.

In practice, the annual fees paid for such sites usually are closely

related to the potential customer count. That is, the annual site fee ordinarily is related to the expected or in some instances the actual volume of sales. Contracts for the use of sites frequently stipulate that the annual fee is to be a specified minimum plus some percentage of total sales (or possibly percentages varying with such totals).

Contracts involving percentages of sales on a sliding scale serve a double purpose from the viewpoint of the site owner. Not only do they protect him against possible depreciation of the dollar during the period of the lease, but also they assure him of an increasing fee as greater population in the area or other factors tend to increase sales. Of course, those desiring to use sites but who prefer not to have a percentage-of-sales contract are faced with the competitive demand of others who might offer such contracts. Consequently, even the contracts that do not include a percentage-of-sales provision reflect to some extent the advantage that the would-be user hopes to obtain from a particular site. Judging by the annual site fees found in practice, of which the capitalized values are reflected in annual and estimated sales values of sites, managers of retail stores pay to site owners nearly all of any differential advantage derived from use of a better site.

Managers of wholesale stores and similar distributing agencies are faced with problems somewhat similar to those already described in selecting their sites. As was pointed out in Chapter IV, however, they are not greatly concerned with the pedestrian traffic count so important to retail stores but are more interested in accessibility to railroad sidings, wharves, trucking routes, etc.

Within any metropolitan area, a multitude of smaller retail stores vastly outnumber the large department stores and other large processors at retail. For the most part, the smaller shops are owner-operated, and in many instances the owner is the only operator, possibly with one or two assistants. In general, the aim of each such owner-operator is to use his small stock of processing ter-hup and his own efforts to the best advantage. Many alternative investments of savings, other than the processing ter-hup in his store, and many alternative applications of his own efforts are open to every such owner-operator. For example, he can seek work as a clerk or buyer or in some other capacity in a larger store, or he can seek employment in industry or elsewhere.

The existence of alternatives for owner-operators forces site owners to permit the use of their sites on terms that will yield the owner-operator at least the slight advantage needed to induce him to operate a store. Beyond that, however, the site owner can claim all of the advantages of the location himself, either by means of a percentage-of-sales contract or by

means of a contract that reflects the best estimate of the advantages made by competing prospective owner-operators. In effect, the site owner offers his site at auction to the highest bidder with the important reservation that no one will be permitted to use the site if the owner so chooses. The bidding of competing operators assures the owner of most if not all of the differential advantage pertaining to the particular site.

Manufacturers are in a position similar to that of prospective store owners in relation to obtaining sites. In some instances, particular sites are especially favorable for certain types of manufacturing. For example, availability of ample supplies of coal and water transportation have influenced the selection of many steel manufacturing sites in the Pittsburgh area. For some types of manufacturers, accessibility to markets is more important than nearness of raw materials. In other instances, availability of skilled labor may be important. Recently, following the construction of an arterial express highway around one metropolitan area, many manufacturers of small and easily handled items moved to the area along the highway. In that instance, both easy access to trucking routes and convenient access for employees were important factors influencing the selection of sites.

Farmers must carry on their processing activities where they can grow crops, pasture domestic animals, etc. For such purposes they need not only space but other aspects of ter-fir-ess such as reasonably good soil, satisfactory climate, etc. But for farmers also accessibility to markets is an important factor.

Most farmers have numerous alternative choices of occupations. If they do not choose to operate farms they can seek work as "hired men" for other farmers, and many farmers are able to work in factories, mines, fisheries, lumber camps, etc.

Miners of course must conduct their initial processing of ter-fir-ess wherever they find the necessary ores. Like the farmers, however, they need space for their operations as well as the proper ter-fir-ess. Accessibility to suitable transportation of one kind or another is essential for miners.

Also like farmers, most miners are able to undertake numerous other types of processing such as farming, fishing, lumbering, working in factories, truck driving, etc.

The pieces of ter-fir-ess suitable for farming or that are suitable for mining vary greatly in quality and other aspects that determine the amount and quality of ter-hup that can be processed using those items of ter-fir-ess. An acre of fertile farmland connected by good roads with a nearby city market offers decided advantages in comparison with an acre of rocky land on a hillside far from both a good road and a market. Any capable

farmer can process much more ter-hup on the former site than he can on the latter. And as for mining, ores vary greatly in accessibility, mineral content, and ease of treatment in extracting the desired minerals.

In spite of great differences in soil and other agricultural aspects of two farms, however, tenant farmers using them will be about equally well situated as far as the share of ter-hup they can claim for themselves is concerned. By the bidding of prospective tenant farmers the annual fee paid to the owners of the two farms will reflect all or nearly all of the difference in fertility and other advantages. That such is the situation is generally recognized and readily explained. No tenant farmer will pay a high annual fee for a relatively undesirable farm when a more desirable farm is available on terms that will leave him more of the ter-hup he processes for himself.

In mining likewise, for similar reasons, the royalties paid to the owners of the ter-fir-ess tend to reflect any differences in natural advantages or those attributable to improvements such as highways and railways that may make the output of a particular mine more accessible to market. Miners, either individual or corporate agencies, will not pay a higher royalty for the privilege of working a relatively inferior mine; nor do miners hesitate to pay a higher royalty when the natural or other advantages of mining one site leave them even a slight differential over the net return they could obtain by mining in a less satisfactory site. If for any reasons one miner will not pay the higher royalty, a competitor ordinarily will.

We have already pointed out that fishermen and hunters frequently pay no fee for the ter-fir-ess they process, except possibly for the space aspects of relatively small portions of ter-fir-ess needed as a base of operations. All other processors either pay fees to the owners of ter-fir-ess or, if the processors themselves own the ter-fir-ess to which their hu-pr-ef is applied, they are able to retain for themselves the portion of receipts that otherwise would be paid to an owner.

The relationships already discussed answer one aspect of the question, How are the shares of those who own portions of ter-fir-ess determined? Evidently, the relative shares are determined by the relative advantages obtainable by processing the different items of ter-fir-ess; the greater the relative advantage of processing on one site as compared with another, the greater will the return be to the owner of the first site.

As we have already noted, hu-pr-ef (human processing effort) modifies things in form, composition, time, or space in such a manner as better to fit them for human use. Naturally, the results of such processing are reflected in a higher market value for the items processed at each stage of

the processing. Obviously, then, another way of describing the return to the owner of ter-fir-ess would be to point out that he ordinarily can claim for himself all or nearly all of the increased exchange value from processing that reflects the differential advantages of his site. ("Site" should be understood to refer to the area of a mine or a farm as well as that of a city lot.)

Although the *relative* payments to various owners of ter-fir-ess are determined as has been described, what determines the absolute amount of such payments? For the answer to this question we must ascertain what happens at the point where the return to site owners is a bare minimum, in fact to the borderline between those sites where the owner cannot obtain any return simply in his capacity as an owner and other sites where at least some such return can be obtained.

In an area such as the United States, where virtually all of the space on ter-fir-ess now is privately owned or is reserved for the public domain, space that can be occupied for processing without any payment to the owner is not readily available. However, conditions were much different many decades ago; in fact, until the later part of the 19th century, there still was land free for the taking in the United States. An account of the situation that existed in colonial days will help us to find the answer to our question.

One of the early economists\* reported on the situation as follows:

"Every colonist gets more land than he can possibly cultivate. He has no rent and scarce any taxes to pay. No landlord shares with him in its produce, and the share of the sovereign is commonly but a trifle. He has every motive to render as great as possible a produce which is thus to be almost entirely his own. But his land is commonly so excessive that, with all his own industry, and with all the industry of other people whom he can get to employ, he can seldom make it produce the tenth part of what it is capable of producing. He is eager, therefore, to collect labourers from all quarters, and to reward them with the most liberal wages. But those liberal wages, joined to the plenty and cheapness of land, soon make those labourers leave him, in order to become landlords themselves, and to reward, with equal liberality, other labourers, who soon leave them for the same reason that they left their first master. The liberal reward of labour encourages marriage. The children, during the tender years of infancy, are well fed and properly taken care of, and when they are grown up the value of their labour greatly overpays their maintenance. When arrived at matu-

---

\* Adam Smith, *An Inquiry Into the Nature and Cause of the Wealth of Nations*, Sir John Lubbock's Hundred Books edition, George Routledge and Sons, Ltd., London, 1892 (original edition 1776); pp. 436-437 and 442-443.

riety, the price of labour and the low price of land enable them to establish themselves in the same manner as their fathers did before them.

“In other countries, rent and profit eat up wages, and the two superior orders of people oppress the inferior one. But in new colonies the interest of the two superior orders obliges them to treat the inferior one with more generosity and humanity, at least where that inferior one is not in a state of slavery. Waste lands of the greatest natural fertility are to be had for a trifle. The increase of revenue which the proprietor, who is always the undertaker, expects from their improvement constitutes his profit; which in these circumstances is commonly very great. But this great profit cannot be made without employing the labour of other people in clearing and cultivating the land; and the disproportion between the great extent of the land and the small number of the people which commonly takes place in new colonies, makes it difficult for him to get this labour. He does not, therefore, dispute about wages, but is willing to employ labour at any price. The high wages of labour encourage population. The cheapness and plenty of good land encourage improvement, and enable the proprietor to pay those high wages.

. . . . .

“Plenty of good land, and liberty to manage their own affairs their own way, seem to be the two great causes of the prosperity of all new colonies. In the plenty of good land the English colonies of North America though no doubt very abundantly provided, are inferior to those of the Spaniards and Portuguese, and not superior to some of those possessed by the French before the late war. But the political institutions of the English colonies have been more favourable to the improvement and cultivation of this land than those of any of the other three nations.

“I. The engrossing of uncultivated land, though it has by no means been prevented altogether, has been more restrained in the English colonies than in any other. The colony law which imposes upon every proprietor the obligation of improving and cultivating, within a limited time, a certain proportion of his lands, and which, in case of failure, declares those neglected lands grantable to any other person, though it has not, perhaps, been very strictly executed, has, however, had some effect.

“II. In Pennsylvania there is no right of primogeniture, and lands, like movables, are divided equally among all the children of the family. In three of the provinces of New England the oldest has only a double share, as in the Mosaical Law. Though in those provinces, therefore, too great a quantity of land should sometimes be engrossed by a particular individual, it is likely, in the course of a generation or two, to be sufficiently divided again. In the other English colonies, indeed, the right of primogeniture

takes place, as in the law of England. But in all the English colonies the tenure of the lands, which are held by free socage, facilitate alienation, and the grantee of any extensive tract of land generally finds it for his interest to alienate as fast as he can the greater part of it, reserving only a small quit-rent. In the Spanish and Portuguese colonies, what is called the right of Majorazzo (Jus Majoratus) takes place in the succession of all those great estates to which any title of honour is annexed. Such estates go all to one person, and are in effect entailed and unalienable. The French colonies, indeed, are subject to the custom of Paris, which, in the inheritance of land, is much more favourable to the younger children than the law of England. But, in the French colonies, if any part of an estate, held by the noble tenure of chivalry and homage, is alienated, it is for a limited time, subject to the right of redemption, either by the heir of the superior or by the heir of the family; and all the largest estates of the country are held by such noble tenures, which necessarily embarrass alienation. But, in a new colony, a great uncultivated estate is likely to be much more speedily divided by alienation than by succession. The plenty and cheapness of good land, it has been already observed, are the principal causes of the rapid prosperity of new colonies. The engrossing of land, in effect, destroys this plenty and cheapness. The engrossing of uncultivated land besides, is the greatest obstruction to its improvement.”

. . . . .

From the foregoing, it will be apparent that the owner of ter-fir-ess at the margin, where the least income is obtainable by virtue of the ownership claim, can obtain as an owner only the differential between the value of what can be processed on his ter-fir-ess and on that nearby available free. This record of what actually has occurred accords with what one should expect would occur. Presumably, no man would pay an owner of ter-fir-ess for the privilege of applying hu-pr-ef to that owner's ter-fir-ess if other equally good ter-fir-ess were available free.

Thus one can readily see that the marginal point where the income to an owner of ter-fir-ess is the least portion of the ter-hup processed is established by what men can obtain by applying their hu-pr-ef to ter-fir-ess that is available free. If any man can keep all the ter-hup he processes for himself by applying his processing efforts on free ter-fir-ess, he will not give any part of his ter-hup to an owner of ter-fir-ess unless and except to the extent that the ter-fir-ess in question provides some differential advantage. Of course, that differential advantage is reflected in additional quantities (and greater exchange values) of ter-hup processed. It is that additional quantity, or nearly all of it, that the owner of ter-fir-ess can claim as his.

Perhaps the reader of this report already is wondering how, if the relationships discussed above are as indicated, anything can prevent the

lowering of the margin in a country where the ter-fir-ess is all owned and none is free to the point where those who have no ter-fir-ess of their own would have no right to exist. On second thought, the reader may realize that the elimination of other humans would not be in the interest of ter-fir-ess owners. Consequently the question is, If the relations are as indicated, how is it that the owners of ter-fir-ess do not demand all in excess of a bare subsistence from those who do not own any ter-fir-ess? One answer is that in numerous areas of the world such a situation actually has developed, in fact has continued for so long a period that few humans in those areas apparently imagine that any other arrangements are possible.

In England, for example, just prior to the plagues (the Black Death, or cholera plagues of the late 1200's and early 1300's), all of the ter-fir-ess was owned by a relatively small portion of the population. By far the most of the humans in England were serfs on the great feudal estates.

During the few decades when the plagues swept repeatedly across Western Europe including England, the population of England, as of most other European nations, was drastically reduced. Large areas became uninhabited as even the individuals closely related to former owners of the great estates died out in many instances. As a result, ter-fir-ess became available for the taking. In spite of the edicts of Parliament and the strenuous efforts of surviving feudal lords, many of the former serfs simply went to the free land and by squatters' rights obtained legal possession. As was the case in the American Colonies centuries later, wages rose rapidly as the return that owners of ter-fir-ess could demand decreased. Parliament repeatedly sought to prevent the rise in wages by enacting maximum-wage laws (in interesting contrast with the minimum-wage laws enacted in the United States in recent years), but these were disregarded by the same lords of the manors who enacted them. (At that time the members of Parliament were largely the owners of vast estates or their representative.)

A few centuries later, the landed gentry of England, who still virtually controlled Parliament, enacted a succession of statutes known as the "Enclosure Acts." In effect, these restored to the descendants and other heirs of the original feudal families much of their former domains. The "commons" or free land widely available throughout England thus was again made the property of a selected few, and the descendants of the original "squatters" or owners by right of occupation and use became England's landless and disinherited proletariat. Forced into the growing industrial cities, they had no alternative to begging or stealing than seeking employment at the barest subsistence wage. Their difficulties and those of their children have been described so vividly by Dickens and other writers of the period that further discussion here is unnecessary.

Similar developments have been apparent in numerous other areas of the world. The Bell Report on the Philippines discussed the necessity of permitting Philippine peasants to break the stranglehold of the landlords and retain the fruits of their labor. Dr. Ralph Bunche, acting on behalf of the United Nations, intended to institute such reforms in Korea but apparently was rebuffed by the authorities placed in charge. Land reform of this nature is well under way in Japan and Italy. Supreme Court Justice Douglas has proposed the same solution for the problem of extreme poverty in Asia. Why, then, have not similar consequences developed in the United States?

It may be well at this point to restate the question. For some decades now, virtually all of the *ter-fir-ess* in the United States has been reserved for the public domain or has been privately owned. How does it happen that the owners of *ter-fir-ess* apparently have not as yet been able to claim effectively all of the *ter-hup* exclusive of that needed to maintain the least skilled and lowest paid workers on a bare subsistence basis? That a higher return for skilled *hu-pr-ef* should exist is not surprising, nor is it surprising that owners of processing *ter-hup* can claim some return for the use of their *ter-hup*; but how does it happen that those who have neither *ter-fir-ess* nor processing *ter-hup* and who have no special skills can get more than a bare subsistence wage?

First, only several decades rather than a few centuries have elapsed since *ter-fir-ess* in the United States was free to anyone who wished it. The direct descendants of the beneficiaries of that situation, those who have inherited the *ter-fir-ess* of the United States are far more numerous and constitute a far larger percentage of the population than was the situation in England, say 100 years ago.

Second, probably a majority and certainly a substantial part of the existing contracts between processors and owners of *ter-fir-ess* have years to run. During a prolonged period of inflation when the monetary unit is depreciating, those receiving payments fixed in dollar amount actually receive a decreasing proportion of the *ter-hup* currently processed. The dollar claims are the same, but the amount for which they can be exchanged decreases. Until most existing contracts are rewritten on a percentage-of-sales basis or some other arrangement that protects the owner of *ter-fir-ess* against the effects of a depreciating dollar, that development alone may markedly reduce the share of *ter-hup* going to some owners of *ter-fir-ess* and thus release a larger share for the processors of *ter-hup*.

Third, the rapid technological advance in the United States makes possible the processing of an increasing quantity and value of *ter-hup* on particular sites. (For example, it quadruples the output of coal mines using

the new mining machinery, greatly increases the ter-hup processed in plants where automation has been brought to a high order of efficiency, etc.) That the private owners of ter-fir-ess may *ultimately* be able to claim the differential benefits of these advances seems obvious; but in the meantime, while the readjustments of contract, etc., are in process, the share of ter-hup that can be claimed by owners of ter-fir-ess may remain below the level at which the balance would provide to those obtaining the lowest wages only a bare subsistence.

**NOTE:** Students should refer to Homer Hoyt, *One Hundred Years of Land Values in Chicago* (Chicago: University of Chicago Press, 1933); and the Institute of Research, Lehigh University, *An Analysis of the Potential Effects of a Movement toward a Land Value Based Property Tax* (Albany: Economic Education League, 1958).

## IX.

### A BRIEF DIGRESSION

**B**EFORE continuing to answer the questions raised at the beginning of the preceding chapter about the distribution of ter-hup among those who obtain portions, a brief digression for the purpose of answering another question seems advisable. Many persons, economists as well as others, noting the effects of private ownership of ter-fir-ess, have urged that such an institutional device is unjust and that it should be eliminated or at least modified. The question to be considered now is, What, if anything, has been done about eliminating or modifying this monopoly privilege, and what are the economic effects of such action?

Although many writers, including some economists, have dealt at length with the moral or ethical aspects of the problem, we do not propose to do so here. Whether or not a small percentage of the population of England, by virtue of "gifts" made by former kings to the ancestors of present owners have a moral right to own the ter-fir-ess of that nation (thereby disinheriting the great mass of the population to such an extent that they have not even standing room in the land of their birth without paying a fee to some owner of ter-fir-ess) is an interesting question. The ethical aspects have been discussed at length by many authors from those who wrote portions of the Bible down to writers of the present day.\* However, for the purpose of this report, we shall concentrate on the economic effects of the custom and its modification.

One of the more vivid descriptions of the economic effects has been attributed to an American author of the 19th century. That he was referring to the situation then existing in England and various other countries of the world will be obvious.†

"'Give me whereon to stand,' said Archimedes, 'and I will move the earth.' The boast was a pretty safe one, for he knew quite well that the standing place was wanting, and always would be wanting. But suppose he had moved the earth, what then? What benefit would it have been to anybody? The job would never have paid working expenses, let alone dividends, and so what was the use of talking about it? From what astronomers tell us, I should reckon that the earth moved quite fast enough already, and if there happened to be a few cranks who were dissatisfied with its rate of progress, as far as I am concerned, they might push it along

\* Perhaps the most effective and widely read exposition of the subject is to be found in Henry George, *Progress and Poverty*, New York, Robert Schalkenbach Foundation, 75th Anniversary edition, 1954.

† Mark Twain, "Archimedes."

for themselves; I would not move a finger or subscribe a penny piece to assist in anything of the kind.

“Why such a fellow as Archimedes should be looked upon as a genius I never could understand; I never heard that he made a pile, or did anything else worth talking about. As for that last contract he took in hand, it was the worst bungle I ever knew; he undertook to keep the Romans out of Syracuse; he tried first one dodge and then another, but they got in after all, and when it came to fair fighting he was out of it altogether, a common soldier in a very business-like sort of way settling all his pretensions.

“It is evident that he was an over-rated man. He was in the habit of making a lot of fuss about his screws and levers, but his knowledge of mechanics was in reality of a very limited character. I have never set up for a genius myself, but I know of a mechanical force more powerful than anything the vaunting engineer of Syracuse ever dreamt of. It is the force of land monopoly; it is a screw and lever all in one; it will screw the last penny out of a man’s pocket, and bend everything on earth to its own despotic will. Give me the private ownership of all the land, and will I move the earth? No; but I will do more. I will undertake to make slaves of all the human beings on the face of it. Not chattel slaves exactly, but slaves nevertheless. What an idiot I would be to make chattel slaves of them. I would have to find them salts and senna when they were sick, and whip them to work when they were lazy.

“No, it is not good enough. Under the system I propose the fools would imagine they were all free. I would get a maximum of results, and have no responsibility whatever. They would cultivate the soil; they would dive into the bowels of the earth for its hidden treasures; they would build cities and construct railways and telegraphs; their ships would navigate the ocean; they would work and work, and invent and contrive; their warehouses would be full, their markets glutted, and

‘The beauty of the whole concern would be  
That everything they made would belong to me.’

“It would be this way, you see: As I owned all the land, they would, of course have to pay me rent. They could not reasonably expect me to allow them the use of the land for nothing. I am not a hard man, and in fixing the rent I would be very liberal with them. I would allow them, in fact, to fix it themselves. What could be fairer? Here is a piece of land, let us say, it might be a farm, it might be a building site, or it might be something else — if there was only one man who wanted it, of course he would not offer me much, but if the land be really worth anything such a circumstance is not likely to happen. On the contrary, there would be a number who would want it, and they would go on bidding and bidding one

against the other, in order to get it. I should accept the highest offer — what could be fairer? Every increase of population, extension of trade, every advance in the arts and sciences would, as we all know, increase the value of land, and the competition that would naturally arise would continue to force rents upward, so much so, that in many cases the tenants would have little or nothing left for themselves.

“In this case a number of those who were hard pushed would seek to borrow, and as for those who were not so hard pushed, they would, as a matter of course, get the idea into their heads that if they only had more capital they could extend their operations, and thereby make their businesses more profitable. Here I am again. The very man they stand in need of; a regular benefactor of my species, and always ready to oblige them. With such an enormous rent-roll I could furnish them with funds up to the full extent of the available security; they would not expect me to do more, and in the matter of interest I would be equally generous.

“I would allow them to fix the rate of it themselves in precisely the same manner as they had fixed the rent. I should then have them by the wool, and if they failed in their payments it would be the easiest thing in the world to sell them out. They might bewail their lot, but business is business. They should have worked harder and been more provident. Whatever inconvenience they might suffer, it would be their concern, and not mine. What a glorious time I would have of it! Rent and interest, interest and rent, and no limit to either, excepting the ability of the workers to pay. Rents would go up and up, and they would continue to pledge and mortgage, and as they went bung, bung, one after another, it would be the finest sport ever seen. Thus, from the simple leverage of land monopoly, not only the great globe itself, but everything on the face of it would eventually belong to me. I would be king and lord of all, and the rest of mankind would be my most willing slaves.

“It hardly needs to be said that it would not be consistent with my dignity to associate with the common rank and file of humanity; it would not be politic to say so, but, as a matter of fact, I not only hate work but I hate those who do work, and I would not have their stinking carcasses near me at any price. High above the contemptible herd I would sit enthroned amid a circle of devoted worshippers. I would choose for myself companions after my own heart. I would deck them with ribbons and gewgaws to tickle their vanity; they would esteem it an honor to kiss my glove, and would pay homage to the very chair that I sat upon; brave men would die for me; parsons would pray for me, and bright-eyed beauty would pander to my pleasures. For the proper management of public affairs I would have a parliament, and for the preservation of law and order there would be soldiers and policemen, all sworn to serve me

faithfully; their pay would not be much, but their high sense of duty would be sufficient guarantee that they would fulfill the terms of the contract.

“Outside the charmed circle of my society would be others eagerly pressing forward in the hope of sharing my favors; outside of these would be others again who would be forever seeking to wriggle themselves into the ranks of those in front of them, and so on, outward and downward, until we reach the deep ranks of the workers forever toiling and forever struggling merely to live, and with the hell of poverty forever threatening to engulf them. The hell of poverty, that outer realm of darkness where there is weeping and wailing and gnashing of teeth — the social Gehenna, where the worm dieth not, and the fire is not quenched — here is a whip more effective by far than the keenest lash of the chattel slave owner, urging them on by day, haunting their dreams by night, draining without stint the life blood from their veins, and pursuing them with relentless constancy to their very graves. In the buoyancy of youth many would start full of hope and with high expectations; but, as they journeyed along, disappointment would follow disappointment, hope would gradually give place to despair, the promised cup of joy would be turned to bitterness, and the holiest affection would become a poisoned arrow quivering in the heart!

“What a beautiful arrangement — ambition urging in front, want and fear of want bringing up the rear! In the conflicting interest that would be involved, in the throat-cutting competition that would prevail, in the bitterness that would be engendered between man and man, husband and wife, father and son, I should, of course, have no part. There would be lying and cheating, harsh treatment by masters, dishonesty of servants, strikes and lockouts, assaults and intimidation, family feuds and interminable broils; but they would not concern me. In the serene atmosphere of my earthly paradise I would be safe from all evil. I would feast on the daintiest of dishes, and sip wines of the choicest vintage; my gardens would have the most magnificent terraces and the finest walks. I would roam mid the umbrageous foliage of the trees, the blooming flowers, the warbling of birds, the jetting of fountains, and the splashing of pellucid waters; my palace would have its walls of alabaster and domes of crystal, there would be furniture of the most exquisite workmanship, carpets and hangings of the richest fabrics and the finest textures, carvings and paintings that were miracles of art, vessels of gold and silver, gems of the purest ray glittering in their settings, the voluptuous strains of the sweetest music, the perfume of roses, the softest of couches, a horde of titled lackeys to come and go at my bidding, and a perfect galaxy of beauty to stimulate desire, and administer to my enjoyment. Thus would I pass the happy hours away, while throughout the world it would be a hallmark of respectability to extol my virtues, and anthems would be everywhere sung in praise.

“Archimedes never dreamt of anything like that. Yet, with the earth for my fulcrum and its private ownership for my lever, it is all possible. If it should be said that the people would eventually detect the fraud, and with swift vengeance hurl me and all my courtly parasites to perdition, I answer, ‘Nothing of the kind, the people are as good as gold, and would stand it like bricks, and I appeal to the facts of today to bear me witness.’”

In various parts of the world where the institutional device of private monopoly of *ter-fir-ess* is used, the custom has been modified in one way or another. Before discussing some of the modifications and their effects, however, it may be well to note that in the United States, during colonial days and for several decades subsequently, the institution of private ownership of *ter-fir-ess* was an effective means of assuring to individual settlers the full benefit of their processing efforts. Clearing the sites for America’s innumerable farms as the frontier moved west was a Herculean task. If some such device as widespread private ownership of small sections of *ter-fir-ess* had not been used, the pioneers might not have had adequate assurance that the fruits of their processing efforts would be theirs. In the absence of such assurance, the economic development of the United States presumably would have followed a different course, perhaps like that of Argentina, a land of feudal estates and ignorant peasants.

The institutional device of private monopoly of *ter-fir-ess* has been substantially modified in New York City, for example. There, by a tax levied on site values, the municipality representing the population in its entirety regularly takes by taxation about one-third of the *ter-hup* that otherwise would go to the site owners. The municipality also taxes improvements, but such taxes are smaller and therefore less a hindrance to the processing of *ter-hup* to the extent that the tax on sites makes possible a lower tax on improvements.

In Pittsburgh, Pennsylvania, a similar modification of the private monopoly of *ter-fir-ess* is carried somewhat further. There, improvements are taxed at only 50 percent of value, although sites are taxed at 100 percent of value. In other words, by taking a larger proportion of the *ter-hup* that otherwise could be claimed by site owners, the municipality reduces its tax on processing *ter-hup* or improvements.

In certain Australian cities including Melbourne and Brisbane, and in much of New Zealand, the type of modification already discussed is carried even further. There, certain local taxes are levied on site values alone with the result that a larger portion of the *ter-hup* that site owners otherwise could demand is taken for community use. Improvements are not taxed at all.

Recently, Pennsylvania has authorized its third-class (the small) cities

to follow a similar practice, that is, to exempt improvements from taxation altogether. If and when some municipality there takes advantage of this recent law, the economic effects will be interesting to note. Presumably, such a community would offer special advantages to industry and to home owners, to all in fact except possibly speculators in site values.\*

In Russia and much of China the private monopoly of ter-fir-ess has been eliminated, and ownership titles have been taken by the state. In all communist and to a degree in the socialist countries the state also has taken title to all the processing ter-hup (the railways, steel industries, other factories, warehouses, stores, etc.). Moreover, in the communist nations the governments have become dictatorships manipulated by an inside clique subject to the usual exigencies of assassination, purge, etc. As far as most of the people in such countries are concerned, the "reform" provided by communism has consisted of substituting for a landed aristocracy a smaller group of monopoly privileged owners dominated by a few or even one ruthless individual, a situation that might be called a "dictatocracy." In spite of the high hopes widely held by some reformers when these experiments were undertaken, the economic consequences have not been satisfactory for many, and there is good reason to believe that the industrial progress on which survival may depend has been retarded; at least, it still is greatly retarded in those countries compared with developments in the United States.

To a degree, however, a process similar to that applied in the communist and socialist nations has been applied in the United States. By means of the graduated income tax, much of the ter-hup annually accruing to private and corporate owners of ter-fir-ess is taken for public use. However, the same principle applied in Russia is applied here, in that although income derived from monopoly privilege is taxed, in some instances at very high rates, income derived from the ownership of processing ter-hup is taxed at the same rates, and so likewise is income derived from processing efforts.

By following the procedure indicated, the United States does to a lesser degree what Russia has done, in effect partially nationalizes both monopoly privilege of site ownership and the ownership of processing ter-hup. The difference is that in Russia 100 percent of the income from each source

---

\* In this connection, however, it is interesting to note that in some Australian cities, where improvements are exempted and taxes are levied on site values, the resulting stimulation of industry has been so great that site values nevertheless have increased. Apparently, in those cities, even more than the present community revenue requirements would have to be taken before a decline in site values would occur. Of course, site values are merely the capitalized values of the annual incomes obtainable by means of the private ownership monopolies.

accrues to the government whereas in the United States varying percentages accrue to the government but also without any differentiation between incomes from monopoly privileges, incomes from the use of an individual's processing ter-hup, and incomes from human processing efforts.

Formerly, the United States treated its processing geniuses differently. The first Henry Ford, for example, was permitted to keep the fruits of his genius and use them for the further expansion of his processing activities. Today, the Government taxes the income of such a processing genius just as it taxes income from monopoly privilege, thereby retarding the more rapid expansion of the processing of ter-hup that otherwise would be possible. Thus the industrial growth of the United States is to some extent delayed. That this outcome was not the intent of those who framed the tax legislation does not prevent the undesirable consequences.

Some observers have urged that all ter-fir-ess should be redivided periodically. Others have even urged that all ter-fir-ess and all processing ter-hup should be divided equally among all of a nation's citizens on the grounds that accumulations of processing ter-hup reflect the monopoly advantages that some citizens have enjoyed, as Mark Twain's discussion suggests. In a nation like the United States, however, where much of the processing ter-hup is owned by millions of individuals either directly or indirectly through their accumulations of savings in the hands of life insurance companies, savings banks, etc., one can readily see that much of the processing ter-hup is owned by others than those who have enjoyed some monopoly advantage in the ownership of ter-fir-ess.

## X.

### THE SHARES OF TER-HUP ACCRUING TO PROCESSORS

**O**F the four questions raised at the beginning of Chapter IX, we have answered the first, How are the shares of those who own portions of ter-fir-ess determined? In answering that we touched on part of the answer to the second question, which was, How are the shares of various individual direct and indirect processors of ter-hup determined? We now attempt to answer this question in greater detail.

As was pointed out in Chapter VIII, the processors of ter-hup beyond the margin where site owners are able to claim part of the product retain all that they process for themselves or can use its full value in exchange to obtain other ter-hup that they want. (Whenever and wherever ter-fir-ess is freely available, those engaged in processing efforts have all the ter-hup that they process as the "fruits" of their efforts.) Whenever such a situation exists, there is established a minimum amount of ter-hup that any processor would demand if he worked for another. Of course, due allowance must be made for the relative advantages and disadvantages of working for oneself versus working for others and other factors; but, as Adam Smith reported long ago, men who by processing on sites free of payments to site owners can obtain more for themselves than by processing on sites where the product must be shared with the owner choose the former instead of the latter.

Moreover, we have explained the tendency, long observed in areas where the ter-fir-ess has been monopolized in a few hands for centuries, for the lowest paid processors to obtain but a bare subsistence. That this tendency has been thwarted or retarded, at least partially in the United States, also has been explained by the widespread ownership of ter-fir-ess, by inflation and monetary depreciation, by the rapidity of the technological advance, and to some extent by taxing procedures. Thus, the present situation in the United States is such that even those processors who receive the least ter-hup in return for their activities apparently are living well above the subsistence level.\*

Above the ranks of those not far from the subsistence level are a succession of other groups of processors. The differences between the respective shares of ter-hup obtained appear to be accounted for by the relative availability of individuals having certain processing skills and abilities compared with others, by the relative difficulty of various types

---

\* Some observers have questioned whether the lowest group of processors is not being maintained above the subsistence level by public relief rather than by the shares of the ter-hup processed that is paid to them for their efforts.

of processing behavior, by the relative agreeableness or disagreeableness of the various tasks to be done, etc.

In brief, one might say that the *relative* compensations received by various processors of ter-hup depend on supply and demand. However, supply and demand do *not* determine the overall compensation of such processors. Considered in their entirety, all processors constitute the supply of such organic sources of human processing behavior and at the same time the items they process constitute the effective demand as some items are offered in exchange for others. That this exchange is effected by using purchasing media representing the items processed in no way alters the underlying relationship. Items of ter-hup, when offered in exchange, constitute the effective demand for other items of ter-hup.

To illustrate how the relative compensations for various processing behaviors are determined, we may consider several specific instances. Even in an industrial society like that in the United States, there are many processors in the general classification of common or unskilled labor. Nearly all mechanics, truck drivers, farmers, fishermen, sailors, hunters and miners could, if they chose, work as common laborers. Moreover, many now working as common laborers could, and, given a little more incentive or opportunity, would work in some of the semi-skilled occupations.

If all processors of ter-hup were grouped according to rates of compensation, we should find no clear demarcation between the different groups. Moreover, at any point in the vertical pyramid (considering the lowest paid as the bottom layer, the highest paid at the top) where we chose to investigate we should find some able to do the work of those in the layer above and most of those in the layer above able to do the work of those in the layer below.

For example, in any office most of the typists are able to function as file clerks and many of the latter can type; some of the typists are stenographers, and all the stenographers can type; some of the stenographers could act as private secretaries, and most private secretaries can function as stenographers. If the demand for stenographers increases, some of the typists will "brush up" on their shorthand in order to take the more lucrative jobs available; if the demand for stenographers decreases, some of the stenographers will perforce seek jobs as typists.

The situation with reference to store clerks, assistant buyers, buyers, store managers, and store owners is similar. The proprietor of almost any small retail store could work as a clerk in a larger store if he chose to do so, and many clerks or assistant buyers or buyers of large stores could operate little stores of their own if they chose. Whether or not they do so depends on the relative attractiveness of the various types of processing

after taking into consideration all aspects including relative compensation expected, degree of risk, independence of action, etc., etc.

Occasionally there may be a demand for processors having certain skills, such as ship-welding during the war years. Whenever the demand for particular processors exceeds the available supply of individuals able to perform such work, the relative compensation of such individuals may become relatively large for a protracted period. However, the relatively large compensation offered will in due course attract additional applicants or encourage many to train themselves for that type of processing; thus the usual relations between the compensation of such workers and others will be restored.

Near the top of the pyramid the compensation for some individuals may be many times that received by those near the bottom layer. However, persons having the managerial abilities required successfully to direct the processing operations of large groups are not readily found. The demand for such individuals nearly always exceeds the available supply; consequently, those capable of such processing behavior receive a relatively high reward for their efforts. The difference between capable and less capable management for any large enterprise has such a great influence on the amount and exchange value of the ter-hup processed by that enterprise that capable managers readily can claim a substantial portion of the difference attributable to their activities.

**Note:** Some of the Earth's economists have reported that the successful manager has a monopoly advantage similar to that of an owner of ter-fir-ess. However, there are important differences. The extraordinarily efficient manager contributes especially effective processing efforts that result in greatly increasing the total quantity of items processed (whether in a factory, retail store, or other business). Only a share of that additional output attributable to his efforts is what he can claim.

On the other hand, an owner of ter-fir-ess need not exert any processing effort at all; he may be simply a "playboy" engaged primarily in finding new ways to dissipate the purchasing media at his disposal. His monopoly privilege permits him to claim a share (in most instances an increasing share) of the ter-hup that others process without contributing in any way to the sum total of processing efforts involved.

In short, the accumulated possessions of the first Henry Ford, for example, were only a part of the greatly increased amount of ter-hup that resulted from his efforts. On the other hand, the accumulated possessions of the Astor family reflect in large part the value of monopoly privileges entitling them to claim increasing quantities of ter-hup that result from the processing efforts of others in New York City and elsewhere.

It would seem that failure to describe the significant differences in these instances of economic behavior should be sufficient to raise doubts as to the adequacy of any economic report.

(Lest misunderstanding result, it seems advisable to add that neither commendation of Mr. Ford nor condemnation of the Astor family is implied by the foregoing. Aside from the fact that we are not at this time and place concerned with ethical judgments, neither Mr. Ford nor Mr. Astor had anything to do with creating the pertinent institutional or cultural arrangements of their times.

Some readers may conclude that only an exceedingly stupid group of human organisms would establish or continue arrangements within their society that showered "wealth" or ter-hup on its creative geniuses and shrewd monopolists indiscriminately. Before concluding that their forebears were singularly stupid, however, present day readers might well reflect on the fact that the Astors' monopoly privileges still continue in substantial part unaltered, while the present generation of American citizens, by means of the "progressive" income tax rates, has made virtually impossible the growth to full effectiveness of new processing geniuses, such as Ford was, with their tremendous contributions to the material well being of mankind and, in this modern but still belligerent world, to the survival of the Nation.)

## XI.

### THE SHARES ACCRUING TO OWNERS OF PROCESSING TER-HUP

**T**HE third of the subsidiary questions raised was, How are the shares of those who own processing ter-hup determined? Before attempting to answer this question, brief consideration of the use made of processing ter-hup is in order.

The label "processing ter-hup" is a name for all ter-hup that is used in processing more ter-hup or adding value to ter-hup in process. Examples are: the tractors and other equipment used by farmers; the cattle and other domesticated animals on farms; growing crops; trucks used for transporting goods; the barns where dairy cows and other domesticated animals are housed; the sorting, screening, and grading equipment found at the mouth of a coal mine; the derrick that drills the oil well; the pipe line for petroleum products; the railroads, locomotives, cars, etc., that carry freight; factories and the machinery in them; wholesale warehouses and terminals; retail store buildings, including their fixtures and stocks; and all other items of ter-hup that are in various processing stages prior to reaching the hands of the final consumer.

Now the processing ter-hup in existence at any time *may* reach the consumer by an exceedingly devious and time-consuming route. Consider, for example, a steel ingot as it comes red hot from the furnace. One cannot guess, merely by one visual inspection, precisely how or in what form the processing effort already embodied in the ingot (or represented by it) will reach the hands of an ultimate consumer. Following through a few of the various routes will be informative.

First, we note the course followed by a steel ingot that becomes part of a passenger automobile. After further processing by the manufacturer of steel, the ingot is changed in form to the heavy sheets used for automobile bodies and fenders. Possibly within a few days after the ingot came from the furnace (and only several weeks or a few months after the ore was mined in the Mesabi Range), the sheets are delivered to a manufacturer. If he is working at capacity with a small inventory that turns over (is used and replaced) rapidly, the steel sheet may be drawn and otherwise processed so that it can be assembled as part of an automobile within several days after arrival at the manufacturing plant. The completed car may be shipped to an agency and sold within a few more days. Thus in that instance the particular ter-hup we have observed may have been in various processing stages for no more than 3 to 5 months.

Other ingots may be processed by the steel manufacturer for a builder of machine tools. One such ingot may become the basic material for the

replaceable parts of a machine tool such as the drills, chisels, or other small parts that are rapidly worn out in use. Another ingot may be used for the body of a machine tool, the more lasting part in which the smaller drilling, cutting, or grinding pieces are set.

As the machine tool is used, the drilling, cutting, or grinding portions are brought into contact with other ter-hup in process. As the drilling, cutting, or grinding portion of the machine tool slowly wears away, the other ter-hup being processed is changed in shape the better to fit it for human use. From the standpoint of this report, it is important to keep the transaction as a whole in mind. In effect, the creation of a machine tool is a way of congealing processing effort so that it may be used to advantage later; as the cutting tool wears out, the congealed or stored-up processing effort embodied in it may be said to change the shape of the piece of ter-hup thus being processed. From this point of view, the completed engine block therefore represents or embodies not only the processing effort of the human hands that may have touched it directly but also the human processing behavior that was involved in preparing and using the cutting, grinding, etc., parts of the machine tool.

Perhaps less clear to some observers is the fact that the body of the machine tool likewise may be said to become embodied, bit by bit, in the materials processed. The body of the machine tool likewise represents congealed or stored-up hu-pr-ef; and during the period of the tool's useful life that stored-up hu-pr-ef is, in effect, released to become part of the hu-pr-ef embodied in the final product that was processed by using the machine tool.

Still another steel ingot may be processed by the steel manufacturer until it has the form of a structural shape. As such, the steel may then become one of the steel columns or perhaps a girder in the factory where the machine tool discussed above is placed in operation. The building likewise has a useful life determined by wear and tear and obsolescence. During that useful life, the hu-pr-ef embodied in the structural shape also may be thought of as becoming embodied in the products of the factory. Considering now the lifespan of a factory building (perhaps 50 years), the steel in the frame, the steel in the machines, and the steel or other material in the products all constitute processing ter-hup embodied in the final products. During a half century, steel as structure, as machine tool body and cutting parts, and as raw material is processed over that long period of time. Only one structure is used, but a succession of machine tools are used as new and probably better ones replace those obsolete or worn out. Numerous replacement parts that drill, cut, or grind are used; and an even larger quantity of raw material comes in at one end and leaves as finished product (at least, for that processing stage). Nevertheless, all the items concerned are in the general classifications of processing ter-hup.

Also important to note is the fact that the components of the stream of processing ter-hup over a period of time may vary greatly. In the course of time, all processing ter-hup is, in effect, convertible or interchangeable. For example, the farmer may grow corn and feed it to dairy cattle, or hogs, or sell the corn to be ground into meal. The steel ingot may become a structural shape, a machine, or raw material for consumer ter-hup such as a passenger automobile or electric refrigerator. Thus the processing ter-hup in existence at any time may be substantially different from that a short period earlier or later.

To illustrate in greater detail, the sheet steel being processed for automobiles will be replaced in the hands of the manufacturer as the automobiles are sold but the replacement raw materials may be made into refrigerators during a different season of the year. The farmer who sells his corn receives purchasing media that constitute a demand claim on anything he may choose to process (such as breeding cattle, corn lot steers, a litter of pigs, etc.) assuming that he wishes to continue processing ter-hup corresponding in value to the corn he sold.

### *Two Kinds of Processing Ter-Hup*

Processing ter-hup may be divided into two principal classifications. Some kinds of processing ter-hup are alive and change in form and composition through the natural growth processes of living organisms. A second type of processing ter-hup is inert and offers only the advantage that human effort thus congealed may be more effective for processing than human effort in the raw or human behavior stage. Portions of each type of processing ter-hup facilitate, in fact make possible, the exchanges that so greatly augment the amount of ter-hup available. Each of these will be discussed in somewhat greater detail.

Included among the processing ter-hup that is itself being processed in part through natural growth or biological processes are the following things: domestic fowl and animals of all kinds; crops of every variety ranging from grains through fiber plants such as cotton to forests where the latter are regularly processed by modern forestry methods; and the wines or other things that become more valuable with the passage of time as a result of internal biological processes.

Now any owner of this kind of processing ter-hup usually has, at the end of a season or several months or years, as the case may be, ter-hup having more exchange value than that which he had at the beginning of the period. An orchard in bearing is worth more than the trees were when originally planted; a heifer in another year becomes a much more valuable milch cow; a crop ready to harvest can be sold for more than the seeds

when planted; a vintage champagne reaches its maximum value some years after it is put away.

In some of the instances just cited, hu-pr-ef has been exerted more or less continuously during the period of growing and ripening, but in other instances little or no additional hu-pr-ef has been applied. In all instances, there is accumulation of exchange value in excess of that which ordinarily would result from application of the human processing effort alone.

Included among the processing ter-hup that is itself inert and that offers only the advantage of a more effective albeit less direct application of human processing behavior are the following things: the lever that supplements human muscle; the hoe that weeds more effectively than human hands; the plow that is more useful than a sharpened stick; the automatic machine that processes steel wire to make nails by the hundreds of thousands daily, thus being far more effective than the village blacksmith who hammered out nails in his spare time; and an ever increasing variety of other processing ter-hup that multiplies the effectiveness of the human processing behavior applied to the processing of ter-hup.

In these last items of processing ter-hup there is no differential advantage provided by the biological processes of growth independently of hu-pr-ef, nor is there an advantage arising similar to that provided by exchange, a value clearly in addition to that arising from the processing behavior alone. The situation simply is that, at any state of the march of invention, hu-pr-ef can be made more efficient by embodying some of it in machines that result in the processing of far more ter-hup by the overall total of human effort applied. Once any patent monopoly rights have terminated, the advantages of using any such new indirect processing methods are available equally to all who wish to use them.

Included in both types of processing ter-hup are things essential to modern exchange procedures. For example, a Kansas farmer could grow trees on part of his land and thus eventually obtain lumber for repair or renewal of his house and barn. Likewise, the owner of a forest tract in eastern Oregon could clear sufficient ground to grow his own wheat. However, unless there were radical changes in the climates of Kansas and eastern Oregon, trees would not flourish in Kansas as they do in Oregon nor would wheat flourish in eastern Oregon as it does in Kansas.

By accumulating the necessary processing ter-hup so that exchanges may be effected, the farmer of Kansas and the lumberman of Oregon each can greatly increase the total of wheat and lumber available to them in comparison with what each would have were he to process his own. The activities of processors who specialize in accumulating the necessary ter-hup and effecting the desired exchanges thus result in an addition to the

amount of ter-hup that would be available if the indicated hu-pr-ef were not thus applied. In this connection it is important to note that the added return is a differential *attributable to the possibility of advantageous exchanges*. The same hu-pr-ef applied in taking Kansas wheat an equal distance but to one of the Canadian wheat provinces would result in less rather than more ter-hup to be shared by all parties to the transaction.

### *How Are Relative Shares Determined?*

Evidently processing ter-hup is interchangeable, so to speak, in two directions. Processing ter-hup embodies congealed or impressed hu-pr-ef that can be used in other processing activities. However, processing ter-hup is itself a result of human processing behavior. Thus human effort can be applied directly or through the medium of processing ter-hup in order to process still more ter-hup. Of course, hu-pr-ef will not be devoted to the manufacture of processing ter-hup unless such hu-pr-ef can share in the ultimate consumer ter-hup as does the hu-pr-ef applied directly to processing consumer ter-hup.

Processing ter-hup must be continually added to as it is worn out, used up, or becomes obsolete. There is a continuing succession of daily decisions as to what part of the hu-pr-ef currently available will be applied directly and what part will be applied indirectly through the manufacture of processing ter-hup. Consequently, whenever and wherever the share of the processed ter-hup going to the humans applying processing effort is relatively large, the share accruing to providers of processing ter-hup also must be large, and vice versa.

Unless these relations prevail, appropriate changes in the application of human processing effort gradually will occur. In short, processing ter-hup, being but a congealed yet usable form of human processing behavior, the provider of processing ter-hup can demand a larger share of the status processed whenever human processing effort more directly applied obtains a larger share. Otherwise, there would be an inadequate incentive for the providers of processing ter-hup to apply their own efforts through that indirect means.

But another question arises: Why should owners of processing ter-hup receive any more of the ter-hup currently processed than is needed to insure replacement of the processing ter-hup worn out, become obsolete, etc.? How does it happen that owners of processing ter-hup can get that and more in free competitive markets?

Of course, processing ter-hup will be available for use only if some humans do not consume all the ter-hup that they obtain in one way or another. Abstention from consumption, *i.e.*, saving, is essential if there is

to be any processing ter-hup at all. Some observers have suggested that no one would refrain from consuming unless he were rewarded for his abstinence and that this accounts for the share of currently processed ter-hup that goes to owners of processing ter-hup. Is it true, however, that no one would save without an incentive in the form of a return on his savings? Aren't there many people who foresee the need of having ter-hup for future use and would be glad to save some now if someone would safeguard it and return it or its equivalent value at some time in the future? In fact, aren't there some, perhaps many, who would save even if they had to pay someone a small annual fee to look after the saved ter-hup and see that it or its equivalent in exchange were returned at some future time?

Before answering these questions, let us review again the status of some owners of processing ter-hup. Those who own growing things can expect a supplementary return attributable to the biological process of growth. Those who own processing ter-hup used in effecting exchanges can expect some supplementary return as their share of the increased ter-hup that the exchanges make available to be shared by all concerned. But all processing ter-hup is interchangeable over time. Thus we see that those who own the third type of processing ter-hup are in a position to demand a share of the increment available to owners both of processing ter-hup that grows and of that which benefits from the exchange possibilities. Why should any owner of processing ter-hup keep his in an inert form without any reward when by changing the form of his processing ter-hup over a period of time he could have one of the varieties on which an added return would be available? We assume that through the equalizing processes of free markets the returns to all owners of processing ter-hup of any kind are equalized after due allowance for risk and other variable factors.

## XII.

### THE SHARES OF TER-HUP ACCRUING TO PROVIDERS OF SERVICES

**O**F the four questions raised at the beginning of Chapter VIII, there remains to be answered the question, How are the shares of ter-hup determined for those who provide services of one kind or another? We have already pointed out that those who provide services such as accounting for agencies engaged in the processing of ter-hup receive purchasing media that, in effect, represent a share of the ter-hup processed. Moreover, we have explained that those who provide services for individuals, services not even indirectly involved in the processing of ter-hup, receive purchasing media constituting a claim on ter-hup from those for whom the services are performed.

Providers of services include individuals of many diverse abilities as was described in some detail in Chapter VI. In some instances, the services are virtually unique, such as those of a particular musician or other artist; but in the more numerous other instances the services are not unique. Other individuals might perform the services as well as those now providing them, and those now providing certain services could provide others or none at all.

Large numbers of individuals processing ter-hup at one stage or another could abandon that type of work and seek employment in some service agency or could even offer a service of their own as independent operators. Also to be noted is the fact that many individuals engaged in service occupations could, if they so desired, function equally well in some stage of the processing of ter-hup. Thus there is a large degree of flexibility in the existing arrangements in that most individuals will choose the occupation that suits them best, all factors considered, and will change their occupations when that course of action is considered desirable in order to take advantage of what appear to be better opportunities.

Under such circumstances, one can readily see that supply and demand may be said to govern the shares of ter-hup obtained by those providing services. If increasing numbers of those having a claim on the ter-hup currently produced prefer services of one kind or another to part of the ter-hup on which they have claims, the increasing demand for services will attract more individuals to those activities. For some processors of ter-hup, obtaining claims on ter-hup will be easier if they transfer their activities to the agencies whose services are increasingly demanded. Of course, the shift of individuals away from the processing of ter-hup will make less ter-hup available until a new balance or approximate balance is reached.

On the other hand, if for some reason those having claims on ter-hup demand decreasing amounts of service of one kind or another, some of the individuals who have been rendering such services will be forced to participate directly or indirectly in the processing of ter-hup if they are to have the wherewithal to obtain the ter-hup and services they desire. At the base of the pyramids of those engaged in providing services and those engaged in processing ter-hup, one finds shifting from one to the other especially easy for most individuals. Consequently, the same consideration will govern the absolute level of compensation for the lower levels in each instance.

As for the providers of services at the higher levels of the pyramid (arranged in order of compensation), here there is less possibility of shifting from one type of work to the other. A famous surgeon whose fees are astronomical ordinarily could not expect to shift to the top executive level of a processing industry at a salary comparable to his income as a surgeon. Such individuals, including famous artists, writers, actors, etc., have a partial or kind of monopoly. Their services have an element of monopoly in the sense that they are unique. However, these individuals do not have the same kind of monopoly advantage that is given to the owners of ter-fir-ess.

The monopoly privileges held by owners of ter-fir-ess apply to elements of the physical cosmos essential to their fellow men. The disinherited of England, for example, simply must have the space aspect of ter-fir-ess and some other aspects as well if they are to survive. Occasionally, the skill of a particular surgeon may make the difference between survival and death for an individual patient, but, in general, people are not dependent on the services of any particular doctor and of course are never dependent for survival on the services of some artist, actor, writer, etc. Thus, although such individual providers of services in one sense of the word have a monopoly of their particular talents, that monopoly gives them no means of *forcing* the public to pay or do without either space or other things essential to survival or even to a reasonable degree of comfort. In short, the relatively high incomes obtained by many such individuals of great talents are in a sense the free will offerings of admirers who simply like to see, hear, or otherwise enjoy them but are under no compulsion to do so.

### XIII.

#### PRACTICAL APPLICATIONS

**A**S is suggested by the title chosen for this report, it is intended to be useful; and that implies the information given can be applied practically. As in any science, by "practical application" we refer to the use of "knowledge" or warranted assertions for prediction of future events (what can be expected to happen under certain circumstances) and for adjustment to those events. Such adjustment involves either modification of the external events or modification of the adjustive behavior of the individuals concerned, sometimes both.

Any reader who has grasped the full import of the preceding chapters should be able to find many practical applications during his lifetime. For example, he should not be deluded by the usual characteristics of extreme prosperity attributable largely to prolonged inflating. He should be well aware that the huge windfall profits of business during such a period are temporary and that in due course they will be succeeded by the quite different effects of deflating.

If the reader is wise, he will avoid joining with others who exuberantly contract large debts during a business boom, debts that are repaid so painfully and so slowly during depression. Also, he will realize, that periods of deflating, however painful they may be, likewise are not permanent.

Fortunately, the institutional arrangement in the United States that creates widespread privilege in the form of partial private monopolies of ter-fir-ess has not resulted, at least to the same extent, in the conditions found in much of the rest of the world. In such countries as India, much of the rest of Asia, and large portions of Europe, Africa, and South as well as Central America, a privileged few on the one hand and a proletariat not far from the subsistence level on the other hand constitute most of the population. With the former confident that bribing a tyrant is more expedient than fighting him and the latter in such an insecure status that they are ready to grasp at any straw of hope, even the delusive promises of socialism or communism, such nations lack both stability and prospects of economic growth.

In the United States, as has been noted in the earlier sections of this report, ownership of ter-fir-ess is still widely spread among the population. Moreover, the extent and therefore the effect of such special privilege have been modified by the taxing procedures generally used. Specifically, the income tax to some extent lessens the takings of those who hold monopoly privilege, even if it also "hamstrings" the Nation's potential

Fords and other processing geniuses of the future. (Whether the net result is economically beneficial or harmful perhaps is not readily ascertainable.) Undoubtedly more effective in its direct lessening of the extent and consequences of such monopoly privilege is the tax on site values and on other aspects of ter-fir-ess widely used in the United States.

As is readily demonstrated by simple arithmetic, the present tax on site values in New York City, for example, greatly reduces the shares of ter-hup accruing to the owners of those sites, makes possible lesser taxes on processing efforts and on processing ter-hup (thereby indirectly encouraging the efforts of the human organisms concerned and greater production of ter-hup), and tends to make such sites more readily available at lower costs by discouraging to some extent speculation in ter-fir-ess. (A more precise report perhaps would be to the effect that speculation in site values is encouraged less the higher the tax on site values. As long as the private monopoly privilege yields any net return, speculators will be encouraged to hold out for a greater net return in the future as population increases, technological advances make possible greater output on a given site, etc.)

Elsewhere than in New York City, the situation within the United States is similar in greater or less degree. In Pittsburgh and Scranton, improvements are partially exempt from taxes and the tax on site values provides an even larger share of the funds for public expenditures. In at least some of the third-class Pennsylvania cities taxes may soon be levied only on site values; and improvements (including processing ter-hup) as well as human processing efforts may be exempted, except for the Federal income tax, which is by no means negligible. These experiments under way in the United States may provide most interesting results in future decades.

Of course, as long as the private monopoly of ter-fir-ess remains effective (not offset by certain taxes or otherwise) to the degree that it still is in the United States, the tendency for the share of ter-hup accruing to private monopolists to increase will continue. In other words, the downward pressure on the lowest stratum of human processors tending to reduce their share of ter-hup to the subsistence level will still be effective. Observers who understand these relationships should have no difficulty in seeing how it is that even prolonged inflating or the most rapid technological development thus far have alleviated the situation only for a few years at a time.

During prolonged periods of inflating (referring of course to excessive expansion of the purchasing medium or "money" supply as described herein), hopes are aroused that a "new era" affording freedom from want for all and business prosperity has finally become established on a permanent basis. Several times in the Nation's history such periods of economic

exuberance have lasted long enough to induce unjustified confidence on the part of most individuals. Without exception, these periods have proven to be eras of illusion followed by painful disillusion. When prosperity is being enjoyed by nearly all, few will believe that important underlying problems remain to be solved; and, when depression follows, all too many are willing to grasp at any "straw," to place in public office any piedpiper demagogue, and to pay any price in terms of abandoning some of the more significant developments within Western Civilization for what can at best be a temporary alleviation and sometimes, as in the 1930's, has not even provided that "sop" other than briefly and to a minor extent.

Even such practical matters as foreign relations in a troubled world can be handled more wisely by those who have some understanding of the elementary economic relationships discussed herein. To the extent that economic aid to foreign nations accrues to the holders of monopoly privileges there, such aid may be less effective in the long run than if the net result were the export from the United States of more farm machinery and fewer Cadillacs to such nations. Moreover, when one realizes that the benefit of manna from Heaven would accrue to the great landowners and other beneficiaries of special privileges in most South American countries rather than to the starving peasants and disinherited poor of the cities, one perhaps can at least better understand how to lessen the appeal of communism in that and other parts of the world. In fact, a question arises as to whether economic aid given to the underdeveloped nations of the world can accomplish any useful purpose until changes are made in the customs and laws that have prevented economic growth like that in the United States when it was an underdeveloped nation 2 centuries ago.

In our own country, the informed citizen can do much to preserve the best that has been inherited from the past and to help build wisely for the future. But wise action can be expected only from those who understand correctly. As a beginning toward such correct understanding this small volume may have its most practical application.

## Appendix A

### FREE COMPETITION IS VOLUNTARY COOPERATION

**F**ROM the viewpoint of anyone who is considering all the economic activities of a social group, "free competition" is another name for voluntary cooperation. This may seem a surprising statement, especially in modern times when many advocates of cooperative enterprise are criticizing competition and the profit motive. That cooperation is the opposite of competition seems to be generally assumed. However, careful analyses of the economic activities for which these words are names reveal that "free competition" and "voluntary cooperation" are two different names for the same economic behavior.

Sometimes the specific use of a word becomes plainer when placed in contrast with that which is not referred to. This step in the analysis is especially important for the word "competition" because it is so often associated with war. Phrases such as the "wasteful warfare of competitive enterprise" or the "commercial war" are common figures of speech. In order to avoid this seriously misleading association of ideas, the vital differences between free competition and war must be considered carefully.

#### *Competition vs. War*

Reference to any standard dictionary and brief consideration of the customary uses of these words facilitate explaining the association of competition and war. *Webster's International Dictionary* (Second Edition) includes in its definition of competition the following phrases: "the act of seeking what another is endeavoring to gain at the same time; common strife for the same object; strife for superiority; rivalry for a prize." The word "competition" is common in describing sporting events of one kind or another. In this connection, common usage speaks of the winner, perhaps identifying him as the recipient of a prize; and his rivals in the contest are said to have been defeated. The words, win and lose, victory and defeat, also are associated with war. Armies march on to victory or defeat; and to the winner go the spoils of war, a circumstance that tends to make war even more closely associated with competition for prizes.

That most human beings have formed the habit of associating ideas long has been noted. Only those individuals who develop the additional habit of discrimination necessary for scientific analysis can successfully avoid the fallacies that may be introduced when conclusions are drawn from a careless association of ideas. Therefore, one can readily understand how the close association of such striking ideas as winning, losing, victory, and defeat should have encouraged the generally accepted notion that competition is analogous to war.

When a specific definition of war is used, the difference between it and competition becomes more clear. Webster's first definition of war is "the state or fact of exerting violence or force against another." In this connection, of course, "violence" is used in its most extreme sense. Every war that has been fought has proved again that there cannot be any Marquis of Queensberry rules for war.

Therefore, war is essentially different from free competition. In games, and even in the prize ring, unrestricted violence against the opponent is never permitted; whereas in war it is the accepted mode of conduct. As everyone knows who has trained soldiers for the battlefield, much of the training period is devoted to overcoming acquired habits of fair play, to teaching that a blow below the belt is not only permitted, but is essential to victory. What could possibly be farther removed from free competition?

The distinction between warfare and free competition becomes even more sharply defined when the dictionary's use of "competition" in connection with economic problems is considered. The definition is: "the effort of two or more parties, acting independently, to secure the custom of a third party by the offer of the most favorable terms." Restating the definition for war emphasizes the contrast: "state or fact of using violence against another." These more precise applications of terms reveal that writers who associate free competition with war seriously mislead their readers as well as themselves.

We know, then, that competition is not analogous to war, but that of course does not prove the opening assertion, "From the viewpoint of anyone who is considering all the economic activities of a social group, 'free competition' is another name for voluntary cooperation." Inasmuch as the behavior named "competition" has now been somewhat clarified, the next step is to analyze the actions described by the word "cooperation." Also to be made clear is the significance of "voluntary" as contrasted with "involuntary" cooperation.

### *Voluntary vs. Involuntary Competition*

The word "cooperate" is simply defined as "to act or operate jointly with another or others." Usually a common objective is implied, such for example as their mutual benefit. Therefore, although two or more parties are involved in a war, the fact that all concerned are using violence against others does not make them joint operators in the sense in which those words are used in describing cooperation. Evidently, therefore, cooperation and competition have at least something in common, inasmuch as each excludes the idea of war.

We now consider what behavior is referred to by "voluntary" as con-

trusted with “involuntary” cooperation. Again the selection of certain notions that should be excluded will be helpful.

Except for a Robinson Crusoe cast upon a desert isle, or an occasional hermit who has wholly withdrawn from contact with his fellow men, all human beings must cooperate with their fellows to a certain minimum degree. The unalterable circumstances of man’s existence force cooperation. In fact, the species would soon cease to exist if this minimum of cooperation, including cooperation between the sexes, were discontinued. For all practical purposes, therefore, every living individual must cooperate with others to some extent.

For the purposes of this discussion, analyzing what the minimum degree of cooperation must be at any particular time or place is not essential. We need only remember that the unalterable circumstances of man’s existence force upon him some degree of cooperation. To cooperation required for the preservation of the race (such as the cooperation of a mother nursing her child) we apply the name “inevitable cooperation.”

After the boundary of cooperation forced by unalterable circumstances is passed, customs, institutions, and laws established by men may force cooperation on the part of individuals. Such involuntary cooperation may be so extensive that virtually all the economic activities of men are prescribed by the state or other agency that forces the maximum degree of involuntary cooperation.

### *What Is Free Competition?*

In an earlier section of this discussion, the phrase “free competition” was used repeatedly, but only competition was described. Inasmuch as the ideas suggested by the qualifying word “free” are essential to a clear understanding of the subject, description of what is meant by “free competition” is necessary.

Many writers who use this phrase “free competition” fail to realize that competition implies action in accordance with certain rules of procedure. Free competition, therefore, does not carry any implication of a “free for all” fight, with gouging, biting, kicking, and scratching all permitted.

Evidently, the rules and regulations governing or affecting competition may tend to create a fair field with no favor; or they may, on the other hand, through the award of special privileges of one kind or another, give advantages to some that are denied to their fellows. The phrase “free competition” implies the former condition. “Free competition,” therefore, implies that each individual concerned must of course comply with the rules, but that the rules, including all the customs, institutions, and laws of the social group, are such as to ensure a fair field with no favor. Further-

more, there is no implication that free competition has ever actually existed or does now exist in any locality. It may have existed in the past, may exist somewhere at present, and conceivably may exist in the future at some time or place, but the fact that it does not now exist in the United States, for example, does not lessen the usefulness of the notion for the purpose of this discussion.

Referring again to the economic behavior called "competition," we repeat the definition: "the effort of two or more parties, acting independently, to secure the custom of a third party by the offer of the most favorable terms." In other words, economic competition is the effort of two or more people to produce and offer a commodity or service for a third party on the most advantageous exchange basis from his point of view. In short, where there is free competition the competitors are striving to perform those economic functions that are most desirable from the viewpoint of the consumer, and of course nearly all of the consumers are likewise competitive producers. (In this connection, specialization or the division of labor not only increases the effectiveness of human effort but also raises to a higher level the minimum degree of cooperation required in an economic society.)

If now we enlarge our viewpoint, so that instead of considering only a few individuals, we regard the social group in its entirety, free competition is seen to be that situation in which men are voluntarily cooperating. All of the group, by purchasing what they prefer, encourage those best qualified to provide the desired economic things including services. Each of the group who is offering things in the markets voluntarily seeks to cooperate by performing in that economic role where he can most effectively serve his fellows and thereby maximize his own reward in the marketplace. In practical effect, under perfectly free competition, producers cooperate with consumers by endeavoring to provide the best of whatever is desired at the least cost. Thus "competition" and "cooperation" become, under such conditions, merely different labels for the same highly efficient economic behavior.

Also important in this connection is the fact that the economic behavior we label "free competition" or "voluntary cooperation" results in the greatest possible total of benefits for all who participate. Unlike the competition in games where some lose what the victors win, and unlike war where even the winner may lose more than he gains, freely competitive economic behavior enables each participant to gain the greatest possible reward by voluntarily cooperating in a procedure whereby all concerned benefit.

One need only look about the world and observe conditions as they are to

see the facts brought out in this discussion. In the early days of this country, when free land was available for the taking, the Nation was closer to a condition of perfectly free competition or voluntary cooperation than it is today. Perhaps the world's nearest approach to free competition or voluntary cooperation still is found in this country, in spite of the increasing interference with free competition that has resulted from the growth of special privilege and government intervention. In Russia, on the other hand, there is today nearly the opposite extreme. There is what was originally intended to be a fully cooperative society, but free competition has been nearly eliminated, and we find in its place involuntary cooperation, forced labor, in fact widespread slavery. Both careful reasoning and the obvious facts point to the same conclusion, that "free competition" is another name for voluntary cooperation, and that the elimination of free competition leads to a condition of involuntary cooperation, that is, slavery.

In this brief discussion we have not attempted to ascertain whether or not free competition is desirable. That, no doubt, depends on the results to be achieved, the personal desires of those who are involved, and many other factors. Once the public fully realizes that free competition is voluntary cooperation, much nonsense that has been written on the subject can be discarded; and a fresh start can be made in the consideration of pressing problems, with the confident expectation of more useful results.

## Appendix B

### THE SIGNIFICANCE OF FREEDOM

**E**VER since John Stuart Mill wrote his famous essay "On Liberty," reasoning men have understood that freedom of thought, belief, and expression is an essential ingredient of freedom for the individual. That the ownership of one human being by another could not be tolerated in a society of free men was established in the United States by the Civil War and has been confirmed by most of the rest of the world as men have grasped at the elements of freedom. In our country, the Constitution recognizes that freedom for the individual includes inalienable rights or defenses against even the most powerful state or Federal Government; defenses that long-established customs have now made an integral part of our legal procedure.

Freedom for the individual is an acknowledged primary aim of our form of government. This government was based on the assumption that such freedom makes an individual responsible for his actions (because authority to act implies responsibility for the consequences of the act); that such responsibility fosters cultivation of judgment, ability, and character in men; and, finally, that the best society and the one most fitted to endure in the long run is one composed of the most highly developed individuals rather than one composed of the slaves of an all-powerful state.

That enslavement of the individual must inevitably make him irresponsible and thereby retard growth of judgment, ability, and character is sometimes forgotten. The childlike gaiety of slaves frequently has been construed as the acme of happiness (although few free men seemed eager to enjoy that happiness by sharing their bondage). But the human being who is not permitted to assume the responsibilities of a grown man must remain a child. And the Constitution of the United States obviously is based on the assumption that the best society will result when human beings are permitted and encouraged to become responsible adults.

When this theory of society was first elaborated and put into practice, it was scoffed at as a theory that had not been tested by experience. Nearly 2 centuries have elapsed since then, however, and much evidence now substantiates that the theory is sound. In this relatively short period of history, the Nation has grown, and civilization within the United States has flourished. Our Nation leaped ahead of the great industrial nations of Europe, one after another, in its ability to provide what mankind wants; art and science have benefited on a scale beyond the imagination of the peoples of the Old World; and our progress has surpassed the comprehension of the vast populations of India and Asia. That this great advance of civilization was attributable neither to greater natural resources nor to a basically more intelligent people is

evident; Europe, South America, Africa, and China each has natural resources that equal or exceed those of the United States. Our people are descendants of European stocks, for the most part. There remains primarily the great difference in application of the principle of freedom to account for the flowering of civilization in the United States.

### *Incomplete Freedom*

Nevertheless, few believe that the situation in the United States is perfect. Its defects need not be described in detail, so apparent are many of them. Evidently our fundamental theory of the good society is unsound, or we have failed in part to apply that basic theory.

Some men have accepted the first explanation and would turn back the clock of history and establish a society in which the individual would be less free and more a chattel of the state (as has occurred in some nations of Europe during our time). Rarely do we find such thoughts given clear expression, but men are to be judged rather by actions than by words; and the actions of many men clearly show that they either have never understood or no longer believe in the principle of freedom for the individual. Before acceding to the desires of these backward-looking individuals, we should consider the alternative possibility; that we have failed in part to apply the theory of freedom, that we have not yet fully explored the road toward freedom and therefore may find our goal farther along the road we have traveled rather than somewhere back upon it.

At first glance, our notion of freedom seems to be complete. We choose those who govern our cities, states, and the Nation; we have reasonably well-observed constitutional defenses against usurpation of individual rights by the Government; and we have freedom of religion, thought, and expression. Some talk of freedom from fear, but every adult knows that there will never be freedom from fear in general, although there already is freedom from some fears in particular. Some talk of freedom from want, but most people realize that men who are free to dispose of their things as they please never can be guaranteed freedom from want; valuable slaves are the only human beings who have ever had this freedom. (Possibly even these wanted more than they received.) What, then, are the aspects of freedom that may have been overlooked?

Sometimes, when an idea is difficult to grasp in all its aspects, we find that to consider its opposite is helpful. In this way we may obtain a clue to the application that seems to elude us.

The opposite of freedom is slavery. Aside from the loss of freedoms already discussed, are there other important features of slavery? The answer becomes obvious when we ask why men have been enslaved in the past.

The one most compelling reason for a man to enslave his fellows apparently always has been so that he, as master, could require them to work for him without giving them in return more than part of the fruits of their labor. To put the matter bluntly, chattel slavery was, and still is in parts of the world, a legalized robbery, a means by which some men are forced to live a part of their lives for the benefit of others called masters. From this fact, we may draw the conclusion that, when some men are privileged to take from others a part of the fruits of their efforts without recompense in kind or in corresponding value, to that extent the second group of men are enslaved.

Inasmuch as slavery in any degree is the negation of freedom, an essential aspect of freedom is that every man should receive the fruits of his efforts either in kind or in corresponding value. Possibly some persons will assume that the freedom to make employment contracts, which citizens of the United States have to a marked degree, automatically prevents any interference with freedom to retain the fruits of one's efforts. If a man thinks his efforts are worth more than he gets for them, he is at liberty to quit his job and seek other work for which he may be adequately compensated. Of course, freedom to seek does not guarantee finding, but most people probably believe that, as a practical matter, a man can find a full reward for his services if he will seek diligently enough, except perhaps in occasional periods of business depression.

The question therefore becomes, Is this general assumption true or are many members of our society actually deprived of a portion of the fruits of their efforts and to that extent enslaved? Again we can more readily gain enlightenment by considering the reverse side of the picture.

Nothing more than ability to add and subtract is needed to prove that, when some men are robbed of the fruits of their efforts, the appropriators get something for nothing; at least they get something without giving in exchange its full equivalent value. Consequently, if there are men in a society who are able to get something for nothing, other men must be getting nothing for something. We must therefore ask, are there people in the United States who are able to get something for nothing?

The answer to this seems obvious; thousands, perhaps millions, of persons in the United States get something for nothing. The more conspicuous members of this class constitute part of the idle rich, and there are several types of fortune among them.

### *Processing Ter-Hup, Earned or Inherited*

Lest the foregoing be misunderstood, three classes of the wealthy should be carefully differentiated. Unfortunately the usual reaction of the

underdog is to resent all who have more income than he has. The three groups to be considered are:

1. Those who have earned their processing ter-hup and large incomes by extraordinary ability and efforts. Such a man as the first Henry Ford, perhaps, would be in this group.

2. Those who have inherited processing ter-hup that represents a reward for work done by their ancestors. The younger Edison perhaps is an example of this class.

3. Those who have acquired, by inheritance or otherwise, monopoly privileges of one sort or another that enable them to demand an income without giving anything in return. The present generation of the Astor family, to some extent, is an example of this class.

Now there can be no question about those in the first group. They give value received for their incomes and therefore cause no one to be deprived of the fruits of his efforts. Many people do not understand that those in the second group likewise give value received. That they do so is clear if they simply spend the funds (dissipate the processing ter-hup) accumulated by their ancestors. But what if they live on the interest or dividends from securities representing buildings or manufacturing plants produced by their ancestors?

The early religious view was that all interest was usury and all usury was sin, a robbing of the needy by the rich. This still is the socialist point of view. However, processing ter-hup in the form of buildings, machines, factories, etc., is essential to much further processing and makes possible the processing of much more ter-hup for final consumption. If this is so, the individuals in the second group do not have the power to appropriate the fruits of the efforts of others without an equivalent return.

Now processing ter-hup (which is defined as that part of ter-hup used for processing more ter-hup) is actually ter-hup in the process of manufacture and exchange; that is, it is ter-hup not yet placed, in its entirety, in the hands of the ultimate consumer. To illustrate:

1. Cattle on the range are processing ter-hup part way along in the processes of production and exchange.

2. Manufacturing plant is a form of processing ter-hup, which is in some stage of a gradual conversion to ter-hup for the ultimate consumer. A lathe wears out as it is used to make wooden spindles for chair rungs. The chair, therefore, has embodied in it both the human effort immediately involved and the human effort originally devoted to making the lathe. Making the lathe, in effect, stores up human effort in a certain form that

can be converted into other products farther along toward the ultimate consumer. Evidently such processing ter-hup is in the processes of production and exchange.

3. A merchant's inventory or stock of ter-hup for sale obviously is in the processes of production and exchange en route to the ultimate consumer.

Exchange makes possible more efficient processing because it enables human effort to specialize in types of work yielding the maximum results in each locality. The lumbermen of the Pacific Northwest can process lumber with relatively little human effort, compared with the effort involved in growing and cutting lumber in Kansas. The farmers of Kansas can grow wheat with less human effort per bushel than would be required for wheat growth in the lumber areas of the Pacific Northwest, where even extensive clearing to prepare the fields would not better the climate for wheat growing. Provided more wheat is grown in Kansas than is consumed there and more lumber is cut in the Pacific Northwest than is used there, an exchange can be made that is mutually advantageous for the obvious reason that the farmers and the lumbermen thus share a much larger total of ter-hup than they would have if each farmer spent some of his time growing trees and sawing them and each lumberman took time from lumbering to clear fields and cultivate wheat.

Obviously, processing ter-hup is required for this purpose. Some wheat and some lumber must be saved (not consumed immediately) and placed in the channels of exchange. En route, some of the lumber may become furniture as a result of adding processing ter-hup and human effort to it; and the wheat may become flour, which then includes the original wheat plus the human effort of the miller plus that part of the milling machinery (a portion of its useful life) used in making the flour.

Thus we see that the consumer benefits from the human effort that is stored up in processing ter-hup, such as a factory or its equipment. *In addition* the processing ter-hup contributes an increase in the total product that results from specialization with consequent greater output per unit of human effort.

Evidently, then, individuals who provide the processing ter-hup can be given equivalent value in the form of a share of the final product plus an additional portion of the final product or its money value representing the added ter-hup processed. In other words, the man who owns a machine can take enough of the money value of the product to compensate him for wearing out the machine plus some more without taking any of that part of the product directly attributable to the later contribution of human effort made by the operator of the machine. Whether the owner of the machine

built it himself or inherited it from some ancestor does not affect this aspect of the situation.

The additional amount paid to the owner of a factory, over and above that needed to buy a new factory when the existing one is worn out, usually is called interest, or sometimes dividends. (However, the interest on some bonds, say a Government bond, is not of this character for obvious reasons; and dividends paid from monopoly gains are also not of this character.)

Although those who inherit processing ter-hup get something for nothing, they get it at the expense of the ancestor whose effort created the processing ter-hup; and the interest or dividends received subsequently come not from that share of the currently processed ter-hup that is attributable to the efforts of the factory operatives, but from the additional ter-hup made possible by the existence of processing ter-hup (*i.e.*, ter-hup in the process of production and exchange). Interest and dividends *of this character* therefore do not deprive those who are currently applying their effort of their full share of the ter-hup processed.

### *Monopoly Privileges*

On the other hand, one can see that the income derived from a monopoly privilege must ordinarily be at the expense of those devoting their human effort to processing ter-hup. Consequently, all who get something for nothing as a result of owning monopoly privileges of one sort or another are in effect and to a degree enslaving their fellow men who work for a living. To the extent that some men are forced to give up part of the value resulting from their efforts, they are enslaved. Do such conditions actually exist? An example will prove that they do.

Nearly 200 years ago, George III by a stroke of the pen and for no real value received gave certain favorites some monopoly privileges in the New World. Today, the descendants of those favored individuals have an absolute monopoly privilege to demand a substantial fee for the use of many thousands of acres of fine farm land. If they choose, they may prohibit the cultivation of the land. Ordinarily, however, the monopoly privilege is used to obtain a share of the product, and the share thus obtainable usually is nearly all of the crop that is over and above the amount that can be produced at the margin of cultivation where crop yields are low in proportion to the human effort expended. Any would-be farmer who will not pay this large share of his produce for the privilege of using the better land has no alternative but to get even less for his efforts on the nearest free land available.

In some instances, monopoly privileges of the type under discussion

pertain to areas within growing cities. What was once open prairie has become a center of productive activity; railroads make it a center for advantageous exchanges; roads built by the county, state, and Federal Government facilitate local shipments and exchanges; people congregate there, thus providing a pool of potential workers, a good labor market; large numbers of consumers live there; they build churches, schools, theaters and other attractions that bring still more people because life is pleasant there; and owners of processing ter-hup find manufacturing advantageous in this locality where labor and consumers have congregated. What does this do for the holder of a monopoly privilege?

Here is a specific instance. A single plot of land, perhaps an acre in extent, is located in an American city, but the descendant of a king's favorite holds the monopoly privilege, the right to say "If you wish to use this space on the surface of the earth, pay me (in this instance) \$235,000 annually (*i.e.*, a claim on things processed to that value)." And a large corporation is currently paying this fee, although the holder of the monopoly privilege has written in the contract that the company, at the end of 30 years, must tear down any building erected and give up the use of this space if the holder of the monopoly privilege so desires!

The specific instance just cited is only one of millions of such instances. What the grand total of the takings based on such privileges would be, no one knows, but it is a substantial share of the ter-hup currently processed.

Here then is proof that hundreds of thousands of those who apply their efforts of brain and hand are deprived of a portion of what they process. In effect, part of their time is devoted to making goods for holders of monopoly privileges who give no return for value received. For a portion of their lives, those applying effort in production are, in effect, enslaved; and to precisely that extent are they deprived of their freedom.

Thus, one can see that, in at least one important respect, we in the United States have failed to continue on the road toward perfect freedom. We have stopped short of the goal, so much short that most of the people of the United States spend a substantial portion of their lives in partial slavery, bound by ties they do not understand, bonds strengthened by legal traditions and the growing economic power of the "masters" or owners of widespread monopoly privileges. And the poorer classes of the population, little understanding the nature of their bondage but suffering its evil effects, follow any demagogue who offers them a hope of change in the belief that any change, even a move backward toward the Dark Ages, will be a change for the better. Thus, men come to power who neither understand nor care for the principles of freedom and, to satisfy the masses who

elected them, pass laws that reverse the movement toward freedom and take us back along the road on which mankind has struggled to move forward for hundreds of years.

Slavery, in effect and to a degree, still exists in the United States. That it stunts the growth, especially the intellectual development and sense of responsibility, of a major portion of the population is all too probable. That it is therefore the principal danger to our form of society, to Western Civilization in fact, is not beyond the bounds of possibility. But the question is, What is the remedy; how can monopoly privileges of the character we have described be ended without completely disrupting the social scheme? This may be the all-important question to which we must find an answer or perish as have other civilizations before ours.

## **PUBLICATIONS AND SUSTAINING MEMBERSHIPS**

You can receive our twice monthly *Research Reports* and monthly *Economic Education Bulletin* by entering a **Sustaining Membership** for only \$16 quarterly or \$59 annually. If you wish to receive only the *Economic Education Bulletin*, you may enter an **Education Membership** for \$25 annually.

## **INVESTMENT GUIDE**

At your request, AIER will forward your payment for a subscription to the *Investment Guide* published by American Investment Services, Inc. (AIS). The *Guide* is issued once a month at a price of \$49 per year (add \$13 for foreign airmail). It provides guidance to investors, both working and retired, of modest and large means, to help them preserve the real value of their wealth during these difficult financial times. AIS is wholly owned by AIER and is the only investment advisory endorsed by AIER.

## AIER PUBLICATIONS CURRENTLY AVAILABLE

<i><b>Personal Finance</b></i>	<i><b>Prices</b></i>
THE A-Z VOCABULARY FOR INVESTORS (ISBN 0-913610-02-X) .....	\$ 7.00
COIN BUYER'S GUIDE .....	10.00
COPING WITH COLLEGE COSTS .....	6.00
THE ESTATE PLAN BOOK .....	10.00
HOMEOWNER OR TENANT? How To Make A Wise Choice (ISBN 0-913610-03-8) .....	6.00
HOW SAFE IS YOUR BANK? .....	8.00
HOW TO AVOID FINANCIAL TANGLES .....	8.00
HOW TO BUILD WEALTH WITH TAX-SHELTERED INVESTMENTS .....	6.00
HOW TO INVEST WISELY .....	6.00
HOW TO PLAN FOR YOUR RETIREMENT YEARS .....	6.00
HOW TO PRODUCE SAVINGS IN THE ADMINISTRATION OF AN ESTATE ....	3.00
HOW TO READ A FINANCIAL STATEMENT .....	9.00
HOW TO USE CREDIT WISELY .....	6.00
INFLATION OR DEFLATION: What Is Coming? .....	6.00
INTERNATIONAL INVESTING: Theory, Practice, and Results .....	5.00
LIFE INSURANCE FROM THE BUYER'S POINT OF VIEW .....	8.00
SENSIBLE BUDGETING WITH THE RUBBER BUDGET ACCOUNT BOOK ....	5.00
TOWARD AN OPTIMAL STOCK SELECTION STRATEGY .....	6.00
WHAT WILL THE NEXT RECESSION MEAN TO YOU? .....	5.00
WHAT YOU NEED TO KNOW ABOUT MUTUAL FUNDS .....	6.00
WHAT YOUR CAR REALLY COSTS: How to Keep a Financially Safe Driving Record .....	6.00
 <i><b>Economic Fundamentals</b></i>	
THE AIER CHART BOOK .....	3.00
BREAKING THE BANKS: Central Banking Problems and Free Banking Solutions .....	12.00
CAUSE AND CONTROL OF THE BUSINESS CYCLE .....	6.00
THE COLLAPSE OF DEPOSIT INSURANCE .....	4.00
FORECASTING BUSINESS TRENDS .....	6.00
GOLD AND LIBERTY .....	8.00
KEYNES vs. HARWOOD — A CONTRIBUTION TO CURRENT DEBATE .....	6.00
THE POCKET MONEY BOOK A Monetary Chronology of the United States .....	2.00
RECONSTRUCTION OF ECONOMICS .....	6.00
USEFUL ECONOMICS .....	6.00
 <i><b>General Interest</b></i>	
AMERICA'S UNKNOWN ENEMY: BEYOND CONSPIRACY .....	9.00
CAN OUR REPUBLIC SURVIVE? Twentieth Century Common Sense and the American Crisis .....	6.00
 <i><b>Behavioral Research Council Division of AIER</b></i>	
THE BEHAVIORAL SCIENCES: ESSAYS IN HONOR OF GEORGE A. LUNDBERG* .....	8.00
A CURRENT APPRAISAL OF THE BEHAVIORAL SCIENCES* .....	15.00
USEFUL PROCEDURES OF INQUIRY* .....	15.00

Note: Educational discounts for classroom use are available for all of the above publications. \* Hardbound.

---

*ECONOMIC EDUCATION BULLETIN*

AMERICAN INSTITUTE FOR ECONOMIC RESEARCH  
Great Barrington, Massachusetts 01230

Periodical postage paid at  
Great Barrington, Massachusetts

*ADDRESS SERVICE REQUESTED*