

The Influence of Money
Upon the Social
Organization.

A Thesis

Theodore C. Coleman
California Institute of
Technology
May, 1926

Table of Contents.

	(page)
1. Introduction-----	1.
2. The Influence of Money upon the Home----	10.
3. The Influence of Money upon Industry----	26.
4. Conclusions-----	59.

REFERENCE BIBLIOGRAPHY

(Name of Book)	(Author)
"Money"-----	Fester & Catchings
"Bonds & Stocks"-----	Roger Babson
"Monetary Reconstruction"-----	H.A.Hawtrey
"Modern Currency Reforms"-----	Kemmerer
"An Introduction to Economic History"-----	Gras
"Financial Organization"-----	Moulton
"Economics for the General Reader"-----	Cley
"Business Administration"-----	Marshal
"Current Economic Problems"-----	Hamilton
"Principles of Industrial Organization"-----	Kimball
"The Money God"-----	J.C.Van Dyke
"Outline of History"-----	H.G.Wells
"American Business Law"-----	Frey
"Modern World"-----	West
"Introduction to Public Finance"-----	Plehn

Introduction

Outline

1. The Influence of Money upon Thought:
 - a) Classical quotations.
 - b) With reference to fundamental instincts.
 - c) Where money has no influence.
2. Money as a Medium of Exchange.
 - a) The early practice of barter:
 - b) Dividing barter into:
 - 1) Selling goods for money.
 - 2) Keeping the money.
 - 3) Buying new goods.
 - c) Necessity for medium of exchange in modern industry.
3. The Use of Money as a Standard of Value:
 - a) A standard is necessary.
 - b) The selection of gold as a standard.
 - 1) Gold is subject to price fluctuations.
 - 2) The accumulated supply.
 - 3) The desirability of Gold.
 - c) Paper currency.
 - d) Inflation.
 - e) The double standard and Gresham's Law.

Introduction.

The Influence of Money upon the Social
Organization.

The extraordinary importance that has been attached to money throughout the ages may be appreciated when such modern writers as Alexander Delmar suggest that the history of money is the history of civilization. While this view is not accepted by most writers on the subject, all are nevertheless agreed that money has played a role of enormous importance in the affairs of men. Even in the classics are found quotations which stress this importance of the pecuniary unit upon ethical as well as economic standards.

- Horace: "Make money, money, man;
Well, if so be, if not, which way
you can."
- Timocles: "Money's the life and soul of mortal
man. Who has it not, nor has ac-
quired it, is but a dead man, walk-
ing mongst the quick."
- Milton: "Money brings honor, friends, con-
quests, and realms."
- Pope: "There's London's voice. 'Get money,
money still, and let virtue follow
if she will.'"
- Tennyson: "But the tinging of the guinea
helps the hurt that honor feels."
- Paul of
Tarsus: "For the love of money is the root
of all evil."

Money is a man-made product. To ask whether the creative instinct in man is a stronger influence upon society than the desire for money is like inquiring whether the chicken comes from the egg or whether the egg comes from the chicken. This desire has grown from an artificial beginning into a role of such prime importance that it is often referred to as one of the fundamental instincts. However, the mind of man is so complex that it is impossible to classify one instinct as being separate and distinct from another. In this connection it might be interesting to note the instincts which psychologists claim to be universal in the human species, and which must be used to explain the innumerable similarities in the behavior of human beings, detached in space and time from each other.

- | | |
|--------------------------------------|--|
| <p>Fundamental Instincts.</p> | <ol style="list-style-type: none"> 1. The instinct of gregariousness. 2. The instinct of parental bent: motherly behavior, kindness. |
|--------------------------------------|--|
3. The instinct of curiosity, manipulation, workmanship.
 4. The instinct of acquisition; collecting, ownership.
 5. The instinct of fear and flight.
 6. The instinct of mental activity: thought.

7. The housing or settling instinct.
8. The instinct of migration: homing.
9. The instinct of hunting.
10. The instinct of anger: pugnacity.
11. The instinct of revolt at confinement: at being limited in liberty of action and choice.
12. The instinct of revulsion.
13. The instinct of leadership and mastery.
14. The instinct of subordination: submission.
15. The instinct of display: vanity, ostentation.
16. The instinct of sex.

In our present complicated society these fundamental instincts may only be expressed by the employment of external forces which ultimately revert to a consideration of money. For example, the instinct of gregariousness may only be satisfied when a person has means enough to afford transportation, unless he be satisfied to employ the methods of the tramp. The instinct of curiosity: manipulation, workmanship, may only be satisfied after the acquisition of a certain capital, unless the manipulation be a very simple one. The instinct of acquisition is closely associated with the desire for money. Thus, one may inspect the entire field of human endeavor and

find that money is closely associated with every branch of activity.

Where money
has no in-
fluence.

Nevertheless, there are some phases of human conduct which are not affected by monetary considerations. Here all "rule of thumb" predictions fail. In fact, no where in the line of conduct can man's action be predicted with certainty.

"We know not whence we come or why; we know not where we go or how." For instance, the pure instinct of love or sex is not likely to be influenced by money. Furthermore, men are much more interested in an economic return up to a certain income, beyond which they gradually loose interest, unless they be extremely greedy. This level is the point of saturation, beyond which it is not necessary to go to satisfy the material needs and conveniences of life. Needless to say, this saturation point varies from one individual to another.

Medium of
exchange.

Most dictionaries define money as a medium of exchange. This is the essence of the layman's thought on the subject, and it is the function upon which the most emphasis is usually laid by writers on monetary

theory. They usually begin by tracing the inconvenience of barter to a natural development of money, and then proceed to show the advantage of the use of money over the older forms of exchange.

Barter.

This function of money as a medium of exchange divides barter into three groups: (1) selling goods for money; (2) keeping the money; and (3) using the money to buy other goods. The service of money in this connection means not only that it saves time in effecting exchange, but that it makes possible large scale specialized production. Thus, it is clear that the function of money as a medium of exchange is responsible for our modern industrial tendencies, namely: increase in size, specialization, standardization, extreme division of labor, and more scientific methods of organization and management. Without a medium of exchange business transactions would have to be of the very simplest nature; trading would be confined to local areas, and production would have to be carried on a small scale basis.

Standard of Value.

A second very important function of money is its use as a standard

of value. Something was needed to use as a standard by which all values could be judged, hence the pecuniary unit was chosen. Aside from the important qualities of durability, homogeneity, divisibility, and cognizability, gold is especially superior to all other commodities as a standard, for the reason that it fluctuates less widely than does the value of wheat, iron, or other commodities which might have been used for one purpose.

Gold.

Gold, as a commodity is subject to forces of supply and demand just as is any other commodity. The supply of gold is influenced directly by the conditions of production at the mines, the discovery of a new mine tends to depress the value of gold as a standard, by greatly increasing its supply, and the exhaustion of a rich vein conversely tends to raise the value of gold by preventing an increase in supply. Changes in the cost of production also influences the supply to a slight extent. Gold differs from most commodities in that the supply at any given time is not merely the output of a previous year's mining. It is a highly durable commodity, and consequently the present stock has been accu-

culating throughout centuries of production. Taking all things into consideration, gold is the most stable and best suited commodity for a standard of value.

Paper
Money.

Practically all governments have issued paper currency to be used in the place of the actual metal coins. This currency is backed either by the actual gold and silver, or by credit, or by a combination of both. Consequently, at times of economic insecurity the people have lost faith in the credit of their government, due to its practice of inflation or to other unstable conditions, and consequently the pecuniary unit has not remained as a constant standard of value. Of recent years Germany and France present familiar examples of this phenomenon. Until the currency can be restored to a normal value, these countries will remain economically insecure.

Double
Standard.

At certain stages of human progress, notably in the United States, there has been a movement on foot to adopt a double standard. The so called "Free Silver Campaign" of 1898 is an example of this movement. Certain individuals believed that

by keeping a fixed ratio between the value of silver and gold, both of these metals could be used as a standard of value. The adoption of this plan is very unadvisable because of the action of Gresham's Law. When gold became scarce everyone would exchange their silver for it, keeping it completely out of circulation. When silver became scarce, the converse would be true. This would not provide for stability.

Conclusion

For the sake of clearness let us sum up the contents of this introduction. The desire for money has had so great an influence upon human thought and action that it is often referred to as being a fundamental instinct, regardless of its artificial nature. However, in some instances money has had apparently no influence upon human thought or action. Money is generally conceived as a medium of exchange, being a natural outgrowth from the impracticability of barter. Furthermore, without a medium of exchange the present day system of production and distribution could not be affected. In the last place, money is universally adopted as the standard of value. Because of the impracticability of the double standard, and because of its qualifications, gold is the most universally acceptable standard.

The Influence of Money upon the Home.

Outline.

1. The simplicity of home life in the collective and nomadic stages in economic development:

a) Collectional society not dependent upon money and very little dependent upon barter.

b) Growth of barter with village economy.

c) Development of feudalism.

2. Outgrowth of money from Town Economy:

a) Interdependence of people detached from the land.

b) Commercialization of slavery.

c) Commercialization of immorality.

d) The influence of money upon marriage laws.

e) The influence of money upon the creation of a double moral standard for men and women.

3. The change from aristocracy of land to an aristocracy of money:

a) Characteristics of the present scientific age.

b) Marriage and birthrates are influenced by money considerations.

c) Money as a factor in choosing a life's work.

d) The economic needs of the modern home.

The Influence of Money upon the Home.

The Home has been the center of man's being since the beginning of time. This home has taken one form or another, but regardless of its character it has been the ^{nucleus} ~~center~~ ground which men have worked, played, waged war, and made love. Therefore, the influence of money upon man himself has been largely reflected to the home.

<p>Collectional Economy.</p>	<p>Like the lower animals, whom they resembled, the earliest men hunted, fished, gathered berries, moss, and lichens, seized such small animals as snakes and lizards, ate the insects that crawled beneath their feet or that swarmed on their own persons, and grubbed in the ground for wild bulbs and roots. Moreover, they collected such fire-wood or timber as was needed, and even dug beneath the surface of the ground for coloring matter or for metal. Thus, they are given the name collectionists, because they merely collected what nature had provided; making no attempt to improve upon the conditions as they found them, or to store supplies for use in times of shortage.</p>
----------------------------------	--

Men and women worked side by side, although the major portion of the work fell to the latter because the men were often engaged in warfare be-

tween tribes. War, famine, and pestilence worked side by side in keeping the number of people down to a very low figure. The territory they covered in their wanderings was vast. They stayed in one place only as long as food could be had in abundance, moving on to a new home without troubling to carry with them more than the most primitive of personal belongings. It is hard to imagine the filth which man accumulated and lived in. Early homes were not occupied by a single family, but by several families, and such domestic animals as they then possessed slept with them under the same roof. At first they did not understand that human life was created as a result of sexual intercourse, the women believing that their pregnancy was due to the existence of evil spirits. From all indications, the thought of men was occupied with fears, desires, and superstitions. Says H. G. Wells in his "Outline of History", "At first men thought very little about anything but immediate things. Until language had developed to some extent there could have been little thinking beyond the range of actual experience. Primordial man, before he could talk fluently, probably saw very vividly, mimicked very cleverly, gestured, laughed, danced, and lived, without much speculation about whence he came or why he lived

-----".

Village
Economy.

Gradually, as civilization progressed, men found that they could more easily depend upon each other for different necessities of life. Hence, the development of village economy, specialization, and the art of barter. Here the home took on a more permanent aspect. It was the true center of man's activity. Such trading as there was, such manufacturing as then existed, took place in the home of the tradesman or master. Land was still the basis for measuring wealth, and by virtue of inherent or acquired power certain individuals gradually acquired more land than others. To these, the poor naturally turned for help, and there grew up the feudal system, the remnants of which can be observed in Europe today. The landed aristocracy were now able to pay a great deal of attention to their homes, building immense fortified castles for protection, and employing a large staff of domestic servants to perform the household duties. It was during the early and middle stages of feudalism, before the aristocracy began to decay, that learning and culture reached such a high stage of development. However, at that time even the most learned had no idea of progress, and it was not until the

Industrial Revolution, or slightly before, that man realized that the world was not static. Simultaneous with village economy came the introduction of money as a medium of exchange.

Interdepend-
ence of Man.

As the villages grew larger and more people were detached from the land the interdependence of mankind upon each other grew steadily more noticeable. Each individual became a specialist in some one field of endeavor, and he received his compensation in money, part of which was paid in turn for consumption goods. Certain thrifty individuals began to accumulate an excess by virtue of which they commanded more respect and power than their neighbors. At first, the landed aristocracy were contemptuous of this kind of wealth, making every effort to subordinate the rich townsman to themselves in matters both political and social. However, these feudal lords, and even the kings soon fell into the hands of the wealthy merchants, either becoming subordinated to them in influence or adopting the money-making tactics of these formerly contemptuous subordinates themselves.

Change in
Attitude.

The growing change in attitude toward money is an interesting phase of economic development. Modern

man is too apt to overlook the fact that at one time, not so very long ago, the pursuit of monetary wealth was considered a contemptuous and ungentlemanly occupation. But the aristocrats, who for the most part had inherited all of their property, were unable to compete with the younger and more thrifty merchant class, and were forced to adopt the money making tactics of their rivals in self defense.

This illustrates the fact that men have always been better able to accumulate wealth than to use it wisely when it has been accumulated for them. This recognition of the pursuit of money by the old class of landed aristocrats laid the foundation for our present social classes which are, to a large extent, based upon money. The laboring class was not benefited by this change until after certain social reforms which characterized the nineteenth century.

Slavery.

Since the beginning of civilization human slavery of one kind or another has played an important role in the affairs of man. It probably began when one tribe conquered another and placed them in bondage. It reached its height of development in the Greek and Roman Empires. Even such a great mind as that

of Aristotle could not imagine a society in which there was no slavery. Naturally, slaves with other property, were bought and sold for money. This had a great influence upon the home, for while it degraded the slaves it brought leisure to the master. Just as money brings power to the possessor, so does the slave; and the latter were in fact used as a medium of exchange during certain times in history.

Immorality.

Sexual irregularity has always been a failing of the human being. Although prostitution has always existed, it was not commercialized until the introduction of money during the period of early town economy. This commercialization of vice, with its wide influence in spreading disease and unchastity has been one of the very bad influences of money. While sexual laxity would, in all probability, exist if pecuniary considerations were removed, this remuneration for immorality has stimulated it, especially on the part of the desolate female.

The Double Moral Standard.

Money has also had some influence upon the so called double moral standard for men and women. Thus, in England, a law was passed making the illegitimate son of a married woman the heir to the

property of her legal husband, while the illegitimate son of a man was not his legal heir. This property or monetary consideration created a condition in which it was to the advantage of the man to require moral chastity of his wife, while he could be as lax as he had ever been. These apparent insignificant legal procedures can have more influence in starting traditions which greatly influence thought and conduct, than one may suppose.

Polygyny
v. s.
Polyandry.

Throughout the early collector state there was a ceaseless struggle between polygyny and polyandry. The important work of cultivating or hunting animals was man's business, and accordingly women were at a discount, though they were still useful for collecting herbs and roots. Accordingly, a group of men would take one wife (Polyandry) the surplus of women being kept down by killing female infants. But there were forces at work making for polygyny. When a tribe was rich in animals, every man could enjoy the luxury of at least one wife. And when a tribe was engaged in frequent warfare, it was almost necessary for a man to have more than one wife, so that the birthrate would be high to make up for the

waste of life involved in warfare. Plant culture also put women at a premium, for men disliked the drudgery involved. Accordingly a man sought two or more wives to work in the gardens.

Christianity.

While money did not directly influence the above changes in marriage customs, as gradually it replaced land as a sign of wealth, it enabled certain men to buy and to keep more wives than others. This custom has existed down until the present day in certain parts of the orient. The subordination of women had a marked effect upon the home. Christianity was the strongest agency towards the promotion of monogamy, and it is doubtful, with the present status of women, whether an economic cause will be strong enough to re-introduce polygyny or polyandry to the western civilized world. Nevertheless, the present marriage and divorce laws are not entirely satisfactory and this important type of social legislation will require a great deal of study before the problem can be adequately solved.

The Modern Home.

Although it is impossible to distinguish one age from another precisely, the present age has several vital differences from any in the past.

First, men are more dependent upon each other than they ever have been before. This is a natural result of the increased amount of specialization and the universal use of money as a standard of value, as well as its use for a medium of exchange. This has its direct influence upon the home, for to-day nothing for household use is secured except by money. Everyone is familiar with the analysis of a single real for the purpose of illustrating man's dependence on his fellows in each part of the world for food. Rent, clothing, and all incidentals are matters of monetary considerations. In the case of the ownership of the house, the rent amounts to a sum, the equivalent of which would be received as interest from the capital invested in the home, were it invested somewhere else at a conservative rate of interest. Thus, every item of expense illustrates the dependence of man upon his fellows. The household budgets for different rates of income will be shown on a later page. Every home is commercialized to a more or less extent.

Communication
and
Transportation.

The second characteristic which distinguishes this age from any other is the increase

in communication and ^{the} availability of transportation. Where before it required weeks to communicate with other countries, now it is a matter of hours. Transportation, likewise, has been made quicker, safer, and more available to everyone. The developments have come largely through the influence of money. If it were not for the immense amount of capital available for the promotion of great transportation and communication systems, they never would have been made possible. This increase in communication and transportation facilitates the dissemination of knowledge, promotes an accelerated life, and greatly complicates civilization. In fact, man has created something, through the application of well directed capital, which seems to be beyond his comprehension or control.

This increase in rapid transit and communication has done more to distinguish the modern from the ancient home than any other one influence. Many writers declare, with a grain of truth, that this new characteristic is threatening its very existence. Undoubtedly, the individual in the family sees less of his relatives than he ever has in any other period of history. The father is gone all day, the mother, through increased pros-

perity is not obliged to spend the major portion of her time (nor should she have to.) performing household duties, and the children remain at school or on the playgrounds. The evenings are employed in amusement, or study, by each separate individual. It is not exaggerating to say that the majority of city families get to-gather but once a day, for the evening meal. This change in home life, due to the indirect influence of money, may be responsible for a decay in our civilization, for it produces a restlessness, a lack of restraint, and an artificial outlook which can destroy the characteristics which make for the real understanding of life. On the other hand, the children who do successfully survive from such a system of parentage are more apt to possess superior qualities of self reliance, adaptability to surroundings, and fairmindedness than their predecessors.

<p><u>Birth rate.</u></p>	<p>Money, to-day, has some influence upon the birth rate, especially among the higher classes of society, and this influence will grow as the practice of birth control becomes more universal; which from all indications it is bound to do. According to the malthusian doctrine (1) population is necessarily</p>
---------------------------	--

limited by the means of subsistence; and (2) population invariably increases where the means of subsistence increases, unless prevented by some very powerful and obvious checks, and (3) these checks which keep population on a level with the means of subsistence are all resolvable into restraint, vice, and misery. Malthus, however, had no idea that birth control might destroy his theory. Already, intelligent persons have deliberately limited the size of their families to within their adequate means of support. It is not true, on the other hand, that economic prosperity is the controlling factor with the birth rate, for as prosperity of the parents increases, the fewer, rather than the greater, is the number of children. To-day, as in Rome, the families of the illiterate classes continue to be large, while the educated classes produce fewer children as they grow more prosperous.

Getting
Married.

Just as money is an important consideration in determining the size of the family, so is it to be considered by any young man and woman when they plan to get married. It is a well known fact that the average age at which both a man and a woman

marriages is increasing. This is due primarily to the increased economic burden to be carried by the head of the family. Furthermore, as the marriage age increases, the more difficult it becomes for the adult to remain chaste. Thus, the influence of money upon moral standards may be very great.

**Choice of
a Profession.**

To-day, monetary considerations influence largely the choice of a profession, hence the growing popularity of practical education, and the discard of the old cultural studies. For instance let us consider the average yearly salaries of the various professions: (Statistics based upon 1900.)

Lawyers-----	\$1500	per year.
College Professors----	1276	" "
School Teachers-----	600	" "
Clergymen-----	700	" "
Physicians-----	1500	" "
Dentists-----	1200	" "
Journalists-----	800	" "
Architects-----	1000	" "
Engineers-----	1000	" "
Authors-----	500	" "
Artists-----	400	" "

Since that time the percentage of increase

in each of the professions has been as follows:

Lawyers	224%
Physicians	175
Dentists	508
Clergymen	24
Journalists	50
Professors	200
Architects	200
Engineers	400
Authors	15
Actors	50
Artists	20
School Teachers	250

With the exception of the School Teachers, who for the most part are women, the professions which pay the most have attracted to them the greatest numbers.

Plutocracy.

Similarly we have replaced an aristocratic order of society based upon family distinction by a semi-plutocracy. Of course this is not universally true. Here and there are to be found the old traces of classification according to family, intelligence or other characteristics, but generally speaking, people (in the United States especially) are classed according to wealth. People of one general economic level live

in the same district, belong to the same clubs and have the most in common. Ask the ordinary individual what he would rather have than anything else, and he will reply "money". It is towards the achievement of that end that most men of the twentieth century are bent. This attitude is not all together to be condemned, for money means power, and without that man is naught. It is in the abuse of this power that man should be blamed.

Budgeting.

In concluding the discussion of the influence of money upon the home it might be ^{well} to give an example of the modern apportionment of a man's income for a family of four. Most intelligent men budget their incomes in one way or another, and the statistics which follow represent but one method of budgeting.

Income per mo.	Food	Shelter	Clothes	Operating	Insur.	Development	Invest
100%	40%	30%	12%	5%	7%	4%	2%
\$100	\$40	\$30	\$12	\$5	\$7	\$4	\$2
100%	40	25	13	7	7	5	3
\$150	60	37.50	19.5	10.5	10.5	7.5	4.5
100%	35	25	14	9	7	6	4
\$200	70	50	28	18	14	12	8
100%	30	25	15	11	8	7	4
\$250	75	62	38	27	20	18	10
100%	27	25	15	12	8	9	4
\$300	81	75	45	36	24	27	12
100%	22	23	15	14	8	11	7
\$400	88	92	60	48	32	44	28

* Operating includes Taxes.
Development includes recreation and education.

Outline.

The Influence of Money upon Industry.

1. Historical Sketch:
 - a) Industry and Village Economy.
 - b) Industry and Town Economy.
 - c) The Industrial Revolution.

2. The Development of Industry through Capital:
 - a) The Increase in size of industry.
 - b) Specialization.
 - c) Standardization.
 - d) The extreme division of labor.
 - e) Methods of scientific Management.
 - f) The organization of industry.
 - g) The growth of the stock exchange.
 - h) Modern Business Cycles.

3. The Economic Problems created by modern industry:
 - a) Labor problems.
 - b) The distribution of wealth.
 - c) Competition versus Combination.
 - d) Waste.
 - e) Speculation on the Stock Exchange.
 - f) Conservation of natural resources.
 - g) The development of International trade.

The Influence of Money upon Industry.

In order to study the influence of money upon industry it might be valuable to first trace its development. By industry is not meant commerce or trade. Men, from the earliest times, have exchanged goods. To a certain extent they have also manufactured them, the term manufacturing being used to refer to the production of goods by means of congregated labor and the use of machinery. However, this manufacturing was not carried on on a large scale until the beginning of the nineteenth century.

Village
Economy.

At the time of village economy trade flourished, but industrial activity was in its infancy. What did exist was in the form of handicraft. There was the village shoemaker and goldsmith (who incidentally acted as the village banker). Women made cloth and clothing in their own homes. There were potters, carpenters, blacksmiths, and the like. The chief characteristic of this industry was the fact that there were practically no factories, where great numbers of workers united their efforts in one task.

**Town
economy.**

The town developed out of the village. It was characterized by a growing economic ascendance over near-by villages. When there came into being a class of traders who resided in a market place in the village, and who had stores which not only supplemented the market place but became its rival, then the economic town was born. But town industry was similar to that of the village. The handicrafts were extended, guilds of tradesmen were formed, a class of masters, workers, and apprentices grew up, but the manufacturing methods remained essentially the same.

The use of credit, and of borrowed capital for industry was unknown. Loans were of a purely personal nature, being made more for accommodation than for any other reason. No interest was charged, it being considered an ungentlemanly and unchristian practice. The Jews, in this connection, played

The Jews.

an important role. Since the time of Christ, they had been socially ostracized in Europe. They could not engage in the handicrafts because of the hostility of the guilds, they could not engage in commerce, few of them owned agricultural property, so it was natural

that the one remaining activity, money lending, which was shunned by christians, should fall to their lot. As they were not influenced by christain traditions they did not hesitate to charge interest on the money which they loaned, and this principle later had a great influence upon the development of our present industrial system.

The Joint
Stock Co.

During the early period of metropolitan economy, before the Industrial Revolution, men began to show a marked tendency to unite in commercial and industrial activity. This was a natural outgrowth of the increasing dependence of man upon his fellows, caused by a concentration of population in fewer centers of activity. First, there was the union of individuals to form wholesaling establishments. Next came the development of the exchange, where wholesalers congregated to do business, and finally the joint stock company developed. Any venture that required much capital, and encountered great risk was difficult for one man to undertake; consequently a joint stock company was formed. The first joint stock company in England was the Russian Company, although of more importance later were the East India Company, the Hudson Bay Co, the

Virginia Company, and others. Of course this paragraph does not relate directly to industry, but commerce and industry have become increasingly inter-related, and it is well to consider some phases in the development of the former.

**Industrial
Revolution**

the year
About ^{the year} seventeen hundred and fifty there began a simultaneous movement in England and on the

Continent toward the improvement of the implements of spinning and weaving. No doubt, the increased potential monetary returns from factories employing improved methods of spinning and weaving was an incentive toward this development. In England a great incentive was also given to invention by the offer of the government of prizes of 50 and 25 pounds for the first and next best improved method of spinning. The government's interest lay in the fact that the policy of foreign expansion then under way, made it very desirable to secure more textiles for export, and the weak part of the industry was the spinning, which was then done on the primitive spinning-wheel. The many unsuccessful efforts to improve spinning and weaving culminated in the "Four great inventions" preceeded by a fifth, which ushered in the Industrial Revolution.

**The Four
Inventions.**

First, came the invention of the steam engine, by James Watt, in 1769. Then came in quick succession the invention of the "spinning jenny" by a weaver, James Hargreaves in 1770, the "water frame" by Richard Arkwright, in 1771, and in 1779 both these inventions were superceded by the invention of the "mule" by Samuel Compton, a spinner, whose machine combined all the good features of his predecessors and was so called as being a hybrid offspring of these former inventions. Finally, the invention of the power loom in 1785 by Dr. Edmond Cartwright, a Kentish parson, gave to the weaving industry what these other inventions had given to the spinning industry.

**Old and
New
Methods**

The overthrow of the old hand-craft methods of industry was inevitable. These inventions in the textile industries were followed by like changes in all industry. In many places this overthrow was violent and complete, though handicraft production of goods continued elsewhere on a large scale for some time after the introduction of the new methods. Viewed from the standpoint of modern machine construction all early inventions were

crude and their great importance lies in the application of principles involved. These principles are as a rule not well understood and are often confused with other phenomena^{or} incidental to the change. For instance, this change is often spoken of as a change to machine industry. This is not true, for machines were used before. The true significance of the Industrial Revolution, therefore, is that prior to that time the tool was always an adjunct to the skill of the worker. The Great Inventions carried transfer of skill to the point where the skill of the worker became an adjunct to the tool or machine. The increasing needs of man, the creative instinct and the desire for money all contributed toward this great change.

Increase in
Size.

One of the most striking features of modern industry is the increase in size of factories and other industrial undertakings. To-day, factories employing 5000 men are common, those employing 10,000 men are not unusual, and a few plants, such as the General Electric Company in Schenectady, employ as many as 25,000 men within the confines of a single yard. Statistics show that the number of corporations as compared to privately

owned enterprises tends to increase, thus indicating a tendency toward mass financing and constant growth in size of industrial undertakings. While a desire for more money on the part of industrialists may not be entirely responsible for this growth, the fact that size depends upon capital invested indicates that big industry and the life around it is greatly influenced by the pecuniary unit.

This increase in size takes place in one or all of three ways. The first is by natural growth of an individual plant by aggregation. The second is by integration, that is by extending the control over the supply of raw materials or the disposal of finished products, by acquiring the methods and the processes that are concerned in these operations. The third method is by consolidation, that is, by combining industrial undertakings of a similar character under one management whether these undertakings are single plants or integrated industries. The economic reasons for this tendency toward growth and expansion may be conveniently divided into two groups: First, economics that lead to reduced cost of production, and second, economics that give greater competitive power for other reasons.

As for the first point, it does not necessarily follow that the larger the plant, the lower will be the cost of production because other modifying factors such as the interest on investment, overhead charges etc. will offset such gains due to quantity production. Here again, money determines the point beyond which it is not profitable to expand.

Specialization. A second characteristic of modern industry is specialization.

The underlying principle of specialization is division of labor, but the term division of labor has become associated with the individual worker, whereas specialization is, in general, far reaching in its effects, and influences industrial enterprises of all kinds. Factories have become specialists of production. The factory of to-day is no longer self-sufficient to its purposes, but depends upon many sources, not only for its raw material, but often, also, for the greater part of its tools and appliances, great and small. There is a somewhat curious reversal of this general law that sometimes occurs and that should be noted. It may occur that an enterprise may not, in the beginning, find it profitable to operate, say a foundry, but as the business grows there may come a time when the quant-

ity of castings used is sufficient to warrant the operation of such a foundary.

As the field of an enterprise narrows, the character of its plant necessarily narrows, the range of the tools and the work of a specialized shop being narrower than these of the older establishments. This narrowing of work may have a very serious influence upon the life of the community, and upon the national ideals, as will be shown later under Labor Problems.

Standardization.

Modern industry shows an inclination towards standardization. This movement, as a whole, is beneficial, in that it eliminates much waste, although it is claimed by some that standardization will also eliminate individuality and originality. However, it is doubtful whether specialization will be carried to the point of eliminating individuality in matters of personal taste. By standardization is meant the reduction of any one line to fixed types, sizes, and characteristics. The basis for its use is, evidently, economic production. It is, in a way, an extension of specialization. There is another very important ground for standardization, and that is the desirability of having parts interchangeable. To sum up, standardization insures

prompt delivery to the customer, lower prices, and interchangeable parts. Also, the quality of the product is more likely to be satisfactory. Perhaps the most serious of its disadvantages is its tendency towards inflexibility; hence toward impending progress. For economic reasons, standardization has greatly influenced our industrial system. The greatest progress in this respect probably lies in the future.

**Division
of
Labor.**

The division of labor in modern industry has already been spoken of. This division of labor does not apply alone to the performance of manual operations. Mental tasks as well have been effected. Productive industry is as a rule divided into three branches, namely, financing, producing, and selling. The productive branch is again divided into planning and building. This last division is new, in as much as it separates the mental labor from the actual builder. This move has been generally opposed by the labor organization, but they have some just grounds upon which to base their opposition, for division of manual and mental labor has in some cases been carried too far.

This introduces the question of scientific

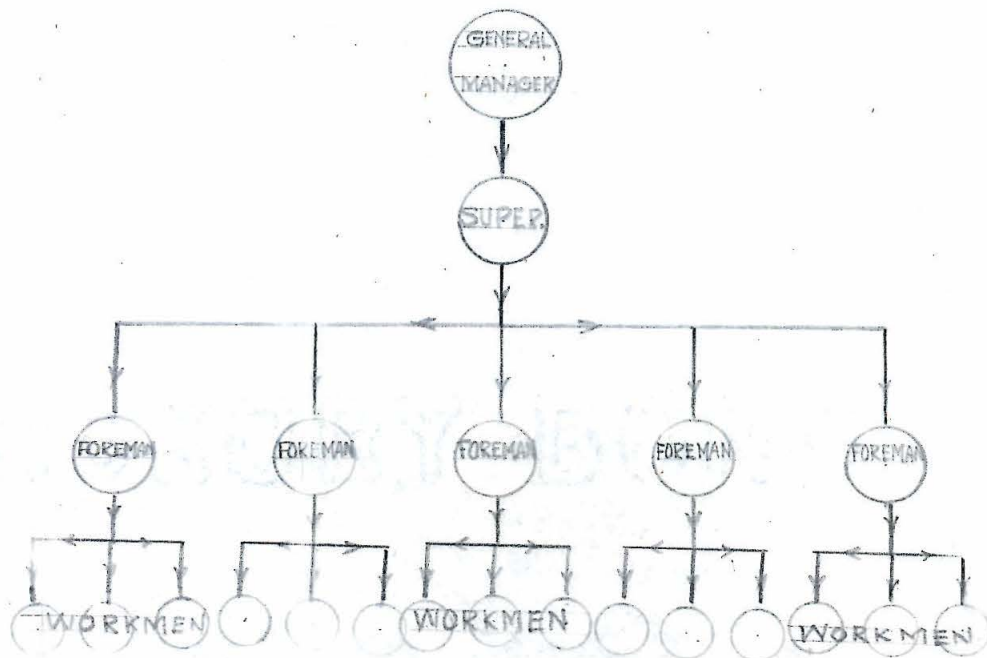
management and organization. Until recent years the management and organization of industry had remained an empirical art. About thirty years ago, however, due largely to the efforts of Frederick W. Taylor, a study of management methods was begun with the view of applying "scientific" methods such as in their employment in problems of production. There are several principal reasons for the rise of this movement. It has undoubtedly come as the result of increased need for efficiency in industry, and this efficiency is judged by the profit from the enterprise. So long as industry was conducted on a small scale, personality and imperical knowledge was sufficient to coordinate the workers, but in a very large concern this is impossible. Therefore, the science of management was necessary. The entrance into the field of many technically trained engineers has greatly aided the movement. Naturally, these men have carried with them the analytical methods they learned from the mathematician, the chemist, and the physicist, and it is not too much to say that in many ways, they have developed a new idea of industrial organization and management.

Organization. | While no one form of organization can be adapted for all concerns, the gen-

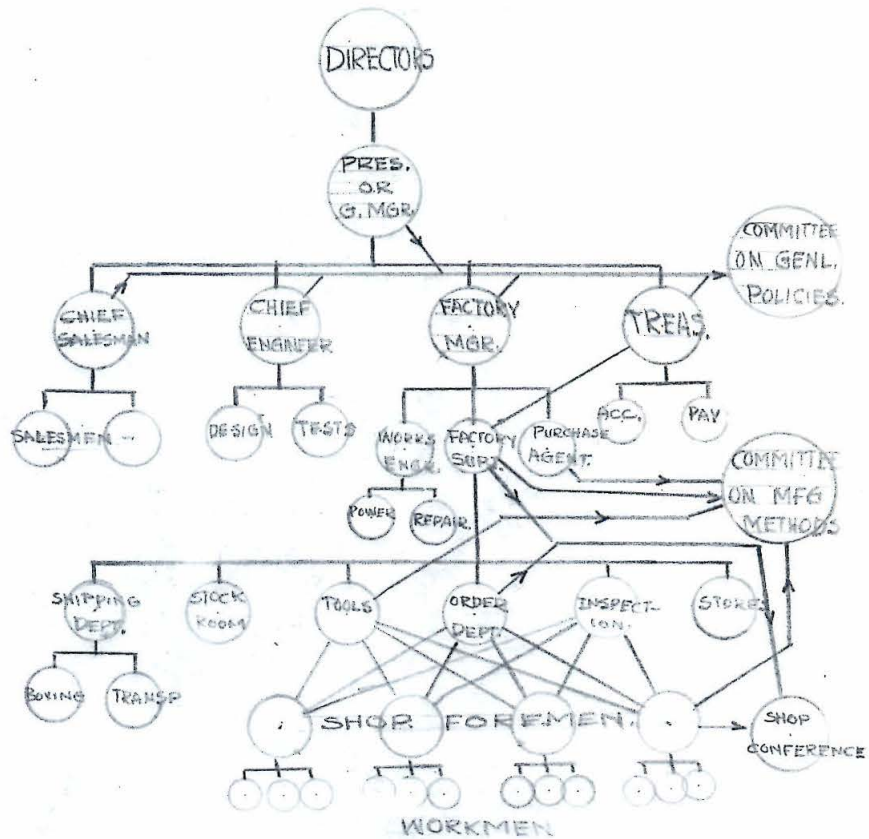
eral principles of modern organization are briefly as follows:

1) Departmentalization or dividing into parts, each part to perform one or more function towards the general end. (Such as sales, purchase, engineering, planning, production, etc.)

2) Modification of old forms of line organization by functional and committee systems. This merely specializes the management and creates a staff for administrative purposes. This may well be illustrated by a comparison of the following two diagrams. The first represents graphically the old form of line organization. The second represents the newer modified form.



MILITARY OR LINE ORGANIZATION.



LINE AND STAFF ORGANIZATION.

A great deal might be said about the actual management of the factory or shop, but too much has already been written about this phase of work. The principle to be kept in mind, and which in many cases has been ignored, is that no one system can be drawn up to cover all forms of industrial activity. Flexibility must be maintained, and the general application of time and labor saving principles should be applied in so far as they do not ignore the interest of the workman. After all,

it must be kept in mind that industry is made for man, rather than man made for industry.

Forms of Ownership.

The foregoing has shown that industrial organizations tend to become larger and more complex.

This growth has almost necessarily involved a change in the form of ownership. From the old individually owned factory came the partnership and joint stock company; and from this latter has grown the corporation. This corporation is based upon a charter which is granted to it by the state. A corporation is considered as an artificial person created under authority of law to do certain acts. Any corporation must have capital, subscribed to by authorized stockholders. These stockholders are not liable beyond their interest in the corporation. In this point it differs from the joint stock company. It resembles it however, in that it is not dissolved by the death of a stockholder. The stock may be transferred and the policies of a corporation are determined by a board of directors who hire executives to carry out the work. Undoubtedly, the corporation form of ownership will be the form under which most industry will be conducted in the future. It only

goes to prove that men have found it increasingly necessary to unite their capital, as well as their skill, to meet the increasing needs of civilization.

The Stock Exchange.

Very closely associated with the corporation is the Stock

Exchange. The stock exchanges were founded upon the same principles that the old metropolitan exchanges in Europe were based on, namely: to provide a central market where merchants might meet to exchange goods. At first this stock exchange was for the sole purpose of selling goods and securities. The goods might be spices, gold, or other commodities. The securities might be certificates of government debt, bills of exchange, or shares of companies stock. Side by side on the exchange there were merchants and brokers, traders and stock jobbers. At first the exchange occupied a portion of the street. In New York to-day there remains the "curb exchange". After a time these dealers in securities left the street for a regular building of their own, the Stock Exchange. The brokers then agreed not to buy or sell at less than a certain rate of gain to themselves. And finally, a regular stock exchange was organized. The first securities sold in the exchange were bits

of paper indicating in effect the indebtedness of some person, corporation, or state. As corporations grew their stocks and bonds were circulated on the exchange and offered for sale. A practice known as "listing" stock has arisen, which consists of placing particular stocks recommended by a certain exchange on a preferred list. This practice has been greatly abused in America, and as a rule not much more faith can be placed upon some of the stocks on the list than upon some of those not appearing.

Most famous of contemporary exchanges is the New York Stock Exchange. It is a voluntary association first founded in 1817, limited in its membership to 1100, of whom about 700 are now active. Of the remainder, some are residents of other cities. Memberships on the exchange have usually been sold for \$80,000, though a record of more than \$100,000 was recently established. Numerous prominent capitalists hold memberships merely for the purpose of availing themselves of the reduced commission charges. The Exchange, as such does no business, it merely provides facilities to members, and regulates their conduct, insuring that all transactions are conducted in accordance with the highest standards of integrity. When we re-

flect that much of our modern business depends upon credit we are aware of the importance of such stock exchanges upon the entire nation.

business
Cycles.

The degree of prosperity of the different corporations largely determines the price at which their stocks are sold. However, there occurs a certain amount of artificial price fixing by stock brokers, and this practice greatly upsets the ordinary market conditions. When an entire industry experiences a slump, when monetary conditions are unstable, or when there is a general depression in trade, the prices on the stock exchange take a drop, and there may occur a general period of depression, such as that occurring in 1908, or after the World War. Certain men, notably Roger Babson, have studied the frequency of these depressions, and by plotting time as abscissæ and stock exchange prices as ordinates, have constructed certain graphs, which indicate certain tendencies of "cycles" in business, and enable men to predict future prosperity. Certain stock manipulators, by studying these "cycles" have made enormous profits. All of these illustrations show how greatly modern man is influenced by money.

Labor
Problems.

With the increasing complexity of modern economic organization have come certain very serious problems, although it is questionable whether they are any greater than those which have confronted mankind before. Among the problems which particularly concern labor are: 1) Proper compensation for labor, 2) the bad mental and physical effects of the extreme division of labor, 3) the limitation of output as advocated by trade unions, 4) insecurity of labor, 5) the effect upon the American workman of foreign immigration, and many others. The number of wage earners in all settled communities far exceeds all other classes, and it is hard to imagine the far reaching effect which a change in economic policy in industry will have.

The first problem, the proper compensation of labor, is one about which there has always been much controversy. Its solution depends upon the honest understanding between each class, employer and employee, of each other. Every man is entitled to a decent living wage. Furthermore, there should be an incentive toward which all workmen should work and for which there is an ample reward. Various wage schemes have been put into practice.

no fixed cause being responsible for the success or the failure of any one. Like methods of management, systems of wage payment must be adapted to conditions, keeping in mind the fact that workmen are human beings who deserve to be treated kindly, and who, after all, are infinitely more important and valuable than the machines which they operate. This same principle should be kept in mind in considering the bad mental and physical effects of the extreme division of labor. When the actions and even the thoughts of workmen are made to conform to a set standard, other recreation should be substituted in order to balance his life. If he is forced to act as a machine for from eight to ten hours per day some counteractive force should restore him to his normal state of mind. This is one of the many unsolved problems in industry.

Trade unions have naturally possessed a certain resentment for methods which increase production. This is based upon reasonable ground. It stands to reason that increased productivity indicates increased profits (generally, not always) If these profits go solely into the pockets of employers, why should laborers interest themselves with greater output. Cuts in time-rate

scales when workers earned "too much" have occurred too often. Also, the feeling of rivalry between workers for increased wages if they be working on a straight piece-rate does not promote unionism. Only the honest fixing of permanent rates, with a guaranteed reward for increased effort will solve this problem. In many industries the position of labor is very insecure. Plants, run at intermittent intervals where workers are thrown out of work on very short notice, create a hesitancy in the mind of the laborer toward speeding up production. Also a great hindrance to higher wages is the ever abundant supply of cheap foreign laborers, who, by virtue of their low standard of living are willing to accept low wages and to work long hours. This problem is especially serious in the New England States and on the Pacific Coast, and in and around such great ports as New York City. The cheap negro labor in the south undoubtedly has created the same problem for white labor there. These problems indicate the far reaching effects of economic matters upon the lives of vast numbers of citizens.

Distribution
of
Wealth.

Closely associated with the question of compensation of labor is the problem of distribution of

wealth. It is here that money has its most direct influence upon society. Class struggle, revolutions, rebellions, have been fought over this very point. This struggle has not occurred solely because a few enjoyed luxuries which were denied to the many, but principally because some of the rich have not proven themselves capable of wisely administering the power (by virtue of their money) with which they were endowed. This is always a sore point with the laboring class, and if rich people could only remember it and act accordingly much labor trouble could be avoided. Theoretically, and in many cases practically, money is the reward for superior effort, mental ability or manual skill. When it becomes impossible for men, through no fault of their own, to be rewarded for these traits, then it is time to inquire into the system and to find the trouble. Of course, there is a danger in reaction, for reformers may make the mistake of reducing all individuals to the same general economic level, but any thinking persons will agree that there should be a minimum reward for effort below which it is not only unwise to go, from the point of view of the workman, but also from the point of view of capital. Some advocate a maximum reward beyond which no man

can justly earn, however as yet this is a greatly disputed theory. The purpose here is not to advocate or propagandize, but to show how vital these questions are to the human race. If the reader thinks otherwise, let him suggest a new means of distributing wealth to any group in which he may be and observe how quickly and energetically men disclose and defend their views on the subject.

Competition
versus
Combination.

Next, comes the question of competition and combination. Here again, there arises a great deal of controversy. Those advocating the former claim that competition stimulates the traits of imagination and energy on the part of the directors of competing companies; they say that "necessity is the mother of invention," and that through competition industry will make greater progress, workmen will increase their effort for their own ultimate good, and boycott will be prevented. On the other hand there are those who advocate combination instead. Undoubtedly all big industry seems to be heading in that direction, although they still advocate the system of competition, and are greatly opposed to interference from the state. Those advocating combination claim that a monopolistic concern may secure cheaper production because of

its size, and therefore it will give the consumer the benefit of a reduced price; it will be more stable and therefore laborers under its employ are protected; also they claim that only by means of a large concern may capital be available to be use in research for the advancement of the industry. Like most economic problems this one arouses a great deal of heated argument because it may so violently change the monetary standards of each one of us. Strangely enough, every layman seems to consider his opinion as the final word of truth in economic matters. Undoubtedly, the competitive system has a tendency to kill itself. Some firms are strengthened because of their greater efficiency, and these firms begin to absorb the weaker ones. When this condition in any one industry proceeds far enough, a monopoly results. Or, if there are two or three very strong companies in competition they will often engage in a price reduction war which will drive all the smaller competitors out of business. Tremendous waste is

Waste.

caused by such competition.

Very often a concern will be organized and be fully equipped with the sole purpose of forcing an existing competitor to buy it at an exorbitant price. The new plant, with

43.

its equipment will then be scrapped in order to eliminate it from the field of competition.

This brings us to the consideration of the conservation of natural resources. Statistics are not necessary to prove to anyone that we, here in the United States, have been very wasteful of our resources. The forests are the glaring example. Apparently no thought has been given to the future. This seems to be true when ever the resources are plentiful; after they become more scarce men become more conservative. The oil industry is a glaring example of waste. Oil is discovered in one locality. What happens? Hundred of companies buy land in the vicinity, sink wells, and begin to pump oil from the ground as fast as they can, paying no heed to the condition of the market, each company knowing that if they do not pump fast, all the oil will be taken from under ^{its} ~~their~~ land by ^{its} ~~their~~ neighbors. The desire for immediate returns is their guiding motive. As a consequence, a great deal of the product is thrown away and it is likely that a supply which could be used over a number of years will be exhausted in a very short time. Such waste should be eliminated by proper control. Undoubtedly, the desire for money is largely responsible for most of the waste of our natural

resources as well as for waste in industry.

Speculation.

Very closely associated with waste in industry is a practice known as speculation on the stock exchange by persons who are unfamiliar with market conditions or causes for fluctuations in price of stocks. They merely speculate for the sake of gambling; and incidentally they usually lose. But if the loss to themselves was all, this practice might not be considered detrimental to society. However, they artificially stimulate the demand, which causes undue fluctuations in prices, and a corresponding unsettled condition of the market. Steps are being taken to eliminate such speculation, but much is yet to be accomplished in this respect.

International Trade.

Last, under the general topic of the influence of money upon industry comes the question of international trade. Through the extension of credit, expansion of capital, and rapid means of transportation and communication now available, industries have been able to expand beyond the boundaries of any one country. Certain localities without regard to national boundaries have been found best suited in which to produce special goods. Hence, there has arisen a practice of exchange

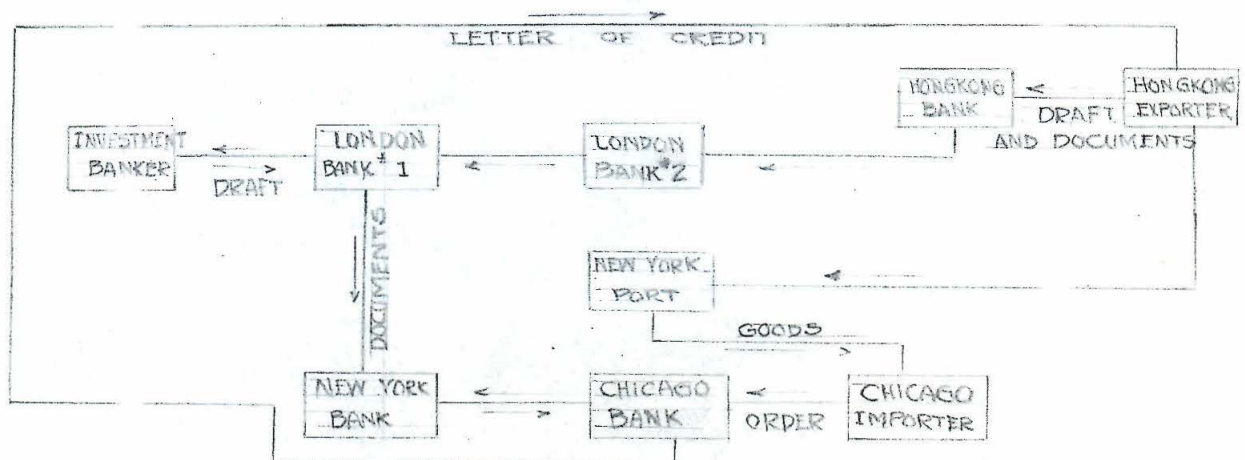
of products between nations. This is made possible financially by a procedure known as foreign exchange. Just as men soon found that it was necessary to depend upon each other for certain necessities of life, so are nations finding that they must cooperate economically for their mutual benefit.

Since payments have to be made in another country they are usually made by a bill of exchange. Thus, an importer can pay for his import by accepting a bill drawn on him by his foreign creditor; more usually he will arrange with a bank or financial house to accept for him bills drawn on them by his creditor. A second method of paying for his goods is to buy for cash in his own country a bill of exchange drawn on some one in the country of his creditor and payable there; this he will send to his creditor in payment for his import. Or, an importer can send bullion in payment; which is much more expensive than sending a bill.

Obviously, the demand for these bills of exchange is not always going to be equal to the supply. When they are in great demand their price will rise above their par value. However,

if the premium on a bill rises above a certain point it will be found cheaper to send bullion. Consequently, if the supply so exceeds the demand as to cause the bills to fall in value the discount from the value of the bill will be great enough to pay the holders to send it to the place on which it is drawn, get it discounted, and pay the expenses of bringing the gold back. Therefore, there will be a maximum and a minimum point between which the prices of bills of exchange will fluctuate. These are called the "gold points".

In order to illustrate the method of carrying on a transaction with a foreign exporter a typical example will follow. The diagram presented herewith will help the reader to visualize the different steps in the transaction.



Suppose an importer in Chicago desires to buy \$5000 worth of silk from a merchant in Hongkong, China. The American importer is not known to the Chinese exporting house and it is out of the question for the Chinese exporter to draw a bill of exchange upon the Chicago importer and to secure the funds by discounting the bill at a Hongkong bank. Moreover, since the importer's credit standing is unknown to the Hongkong merchant, the latter can not well afford to take the chance of shipping the goods on credit and waiting, say, six months for payment. An arrangement is therefore made whereby the credit of the Chicago house is, in a sense, guaranteed by a financial institution in which the Hongkong exporter may have confidence.

The Chicago importer goes to his bank and secures a commercial letter of credit. The letter is addressed to the exporter, and it authorizes a bank, say in London, to accept the six-months sight draft of the Hongkong exporter of silk, up to a certain total sum and under certain prescribed conditions; pertaining to the attaching to the draft of bill of lading, insurance certificate, etc., these terms all being set forth in the letter of credit. The banker in London is indirectly notified, by means of the

Chicago bank's correspondent in New York that the letter of credit has been issued. The letter itself is sent to the Hongkong exporter. Not until the receipt of this letter of credit does the Chinese exporter proceed with the shipment of silk.

As soon as the goods have been shipped, the exporter draws a bill of exchange on the London bank, joins it to the bill of lading and the insurance certificate and then takes the draft to his local bank in Hongkong where it is discounted. The whole transaction is then closed so far as the exporter is concerned. The goods are meanwhile on the way to New York. The draft, with bill of lading and insurance certificate attached, is now sent by the Hongkong bank to its correspondent in London, which presents it to the bank which has agreed to accept it. It is accepted and marked payable at a definite date, say, November 1. When the draft is accepted, the bill of lading and insurance certificate are detached, the accepted bill is returned to the bank that presented it, and the bill of lading and insurance certificate are sent to the New York bank and thence to the Chicago bank, which originally arranged the letter of credit. It may be noted that the accepted draft may be sold by the bank which has

it to other banks in London, to investment houses, or to individuals. In fact, such an acceptance often changes hands many times before it is due.

By the time that the bill of lading and insurance certificate have reached the bank in Chicago, the consignment of goods may also have arrived in the port in New York. The Chicago bank therefore turns the bill of lading and insurance certificate over to the importer of the silk, thus permitting him to secure their shipment to Chicago by rail. The process of payment is as follows:

The importing house pays to the Chicago bank \$5000, some time before November 1. The Chicago bank sends these funds to the New York bank, which turns them over to the London accepting bank before November 1. On November 1 the London accepting bank pays \$5000 to whatever individual or bank may present the bill for payment. If the Chicago or London bank did not receive the funds before November 1, it would have to pay the bill out of its own resources. Both banks therefore, assume some risk, and as compensation each receives a ^{Commission} ~~compensation~~, commonly being one fourth to one half of one percent of the amount of the bill of exchange for every thirty days that it runs. The London bank and the New York bank had

to rely upon the good faith of their respective correspondents. The Chicago bank requested a trust receipt of the importer, before it turned over the bill of lading and insurance certificate to him.

mercantilism.

An economic policy known as mercantilism, although found unwise, still has a great deal of influence among legislators. This policy, developed by European statesmen aimed at making the nation strong economically, not by allowing all men and all classes to work out their own economic welfare, but by guiding, restraining, and restricting. Home industries of all kinds were to be helped, by means of prohibitions against importing certain foreign wares, by protective tariffs, and even by bounties on the production of wares for export. (this latter practice is rare) It was essentially a political policy with an economic basis. The nation was to be made economically strong so that it might remain politically independent and masterful. The whole policy was based on the principle that a nation's exports should exceed her imports. Since its introduction it has been found that a nation may become money poor. It does not

necessarily follow that an influx of gold is a sign in increasing wealth. Gold does not have the buying power between nations that it does between individuals.

Undoubtedly, international trade has come to stay. In the future it is doubtful whether it will be as hampered by tariffs and count^{ie} as it has been in the past. However, this is a mere conjecture. Undoubtedly, satisfactory trade relations between nations will do much towards establishing international peace permanently.

Outline.

Conclusions.

1. The Influence of Money upon the Educational System:
 - a) Early history of education.
 - b) The Introduction of the Scientific Method.
 - c) The public school system.
 - d) Modern colleges.
 - e) The trend of education.

2. The Importance of Government Finance:
 - a) The House of Representatives and finance.
 - b) Methods of taxation.
 - c) War finance.
 - d) The need for study in government finance.

3. The future:
 - a) Why progress?
 - b) The development of social control.
 - c) The danger of materialistic philosophy.

Conclusions.

There are no phases of human life which are not touched in some way by money, but two activities of man, education and government, are so important that they can not be left unmentioned. It is through education that man has learned to take the forces of nature and employ them for his own benefit. In this respect he has made marvelous strides. But in the matter of his relationships with his fellows man has been slow to evolve from the earlier stages in his development. War and strife, which have played so important a role in past history seem just as threatening now as ever, perhaps even more so, for modern methods of warfare contain such potentialities of horror that they are exceedingly unpleasant topics to dwell upon. Perhaps the very terror of modern warfare will cause men to think twice before they engage in it. It seems strange that man's capacity for dealing with things should be so much ahead of his capacity for dealing with his neighbors; and yet this is true. **Scientific Methods** have been applied very successfully to the material world. In the future these same methods must be applied in as far as they may, to human relations. It

is with this question of relationships that modern education has its chief field for exploration.

In early medieval times education was conducted on a cultural basis. Every-thing referred back to the Greek and Roman civilizations. The studying of these ancient languages occupied most of the time of the undergraduate. Most of his time as a graduate was applied towards the reading and interpretation of ancient writings by philosophers, politicians, and poets. The study of science at this time was in its infancy, and with the exception of a few geniuses, such as Galileo, Bacon, and Newton, very few men knew much about it. A great deal of this classical reading was done by monks. It must be remembered that comparatively few men could read or write, even in the vernacular, this art in itself was a matter of great effort, for there were few schools where the ordinary man could attend. Most of the education was under the direction of the church. The best Cathedral schools claimed to teach the "seven liberal arts" of the ancient classical education. These seven studies were language, rhetoric, philosophy, music, arithmetic, geometry, and astronomy. Cheap paper was not introduced before 1500 A. D., hence all early writing was

done on parchments. The printing press did not come until after 1400, which meant that writing was laborious and the copies of ancient documents were extremely rare. To sum up this early classical education of the Middle Ages in the words of Dr. Dana Munro, "In arithmetic the students were taught to keep simple accounts, in music what was necessary for church services, in geometry, a few simple problems, in astronomy, enough to calculate the date of Easter." Such schools could not advance learning, but they did keep alive some desire for it.

Stimulated by the rising need for money, new towns set up lay schools to train men for business and trades. These schools taught reading and writing, a little arithmetic and geography, teaching not in Latin but in the vernacular. Thus, these trade and business schools established in order to enable men to make money brought about a movement to bring education to greater numbers and to fit it to the needs of daily life. Influenced by these "money" schools, the church schools began to add new studies to their curriculum such as medicine and law.

Having its origin in the famous cathedral school of Notre Dame, the University of Paris was

born. At first a few scholars established themselves in the "Latin quarters" in Paris, teaching ~~a~~ few students in their own dwellings. Soon these scholars banded together, secured buildings and lecture halls, thus creating the first university. Again the economic system had influence in education. When these teachers organized they copied the form of the ancient guilds. The professors or doctors were "masters", deriving the term from that used in the trades of the town.. They licensed the more advanced students, after completion of the course in arts, as "bachelors of arts", authorizing them to teach younger students in these courses from which they themselves had graduated. These bachelors corresponded to the journeymen of the trade guilds, while more elementary students corresponded to the apprentices. The forms of public examination from one of these stages to another were copied too, from guild customs.

Other great universities grew up from church schools, as for example the University of Salerno, in Southern Italy, and the University of Bologna. A new step, however, was taken when the government of Sicily, through the extension of public revenue created the University of Naples. Follow-

ing this lead, over fifty universities dotted Western Europe before the year 1400, when the printing press was introduced.

Roger Bacon, a Franciscan, was probably the first advocator of the scientific method. He spent his life pointing out the lacks of the cultural education and trying to make clear the principles of true science. He was a devoted student, working under difficulties incredible to us. Fourteen years he spent in prison, for his opinions. More than once he sought all over Europe for years to find a copy of a book. He knew much about chemical explosives, he understood magnetism, probably foresaw the possibility of using steam as a motive power. He prophesied that in time wagons and ships would move with incredible speed without the help of horses or sails, and also that man would learn to navigate the air.

This briefly illustrates the influence of money upon the early development of our educational systems. These early schools and colleges were candidly based upon training a dominant master class. The church and the state alike were afraid of educated peasants and workers. But gradually, as the importance and the power of these classes

became more apparent this emphasis was changed. The people, where they could, demanded that public funds be expended to educate the masses. This gave rise to the development of our present educational system. Education has followed closely in the wake of the rising economic prosperity of the general public. The public school system has made great progress, especially in the United States, where the people have had control of the purse strings. At the present time the illiteracy in this country is something less than three percent. Education is compulsory in practically every state in the union. A large percentage of the local taxes goes towards the erection and the maintenance of public schools and equipment, and the payment of teachers salaries. In California, and in many other states, child laborers under eighteen years of age must attend school for a certain minimum time per week. Undoubtedly, this application of public funds for this cause is not only beneficial, but of great value as an investment.

Intermediately ^{situated} between a common school and the so-called colleges of higher learning there are a great number of trade and vocational schools, business colleges, and correspondence schools of

one type or another, offering courses in practically every branch of education. Most of these courses are of an entirely practical nature, which might be expected from the temperament of their founders, the Germans and the English speaking people. They bear out the inference in ^{an} earlier part of this thesis that modern education tends toward the practical dealing with things, rather than an understanding of life. The reason for the popularity of these schools is that they claim to enable one to make more money.

More important than this elementary training is the development of higher education. Here, both public and private funds have been applied, although the latter forms the greatest percentage of college endowments. In America the emphasis has been upon the materialistic side of the college. But unfortunately money has hindered, rather than aided higher education, for it has placed the emphasis upon size rather than upon quality. For instance, one university in a southern state was endowed for over \$10,000,000, and yet it is doubtful whether it will ever contribute greatly to the art of learning because of this great gift. Perhaps that is putting it a bit strongly, for any college which teaches anything ^{useful} to mankind is

making a contribution, but the American universities, with all of their up-to-date facilities have not been able to come up to the standards of a few of the European colleges.

Already there is a tendency towards limiting the number of college students by making the requirements for admission higher. The colleges are doing this in self-defense, and undoubtedly they have learned the value of individual instruction and the necessity for more intelligent students. Unfortunately, the criticism that some colleges are mere "country clubs" is too true.

In connection with the influence of money upon education it might be well to speak of its influence upon inter-collegiate athletics. Competition in sports started in a small way between colleges many years ago. Football, the distinctive American college sport, began to attract large crowds of spectators, and in recent years the large colleges have commercialized this sport to such an extent that the football coach receives as high a salary as does the president of the university. (For example at the University of California the president receives \$18,000 per year, as does also the football coach.) and the

college is able to erect expensive stadiums, athletic buildings and have a great deal of surplus from the yearly gate-receipts. Furthermore, most college authorities encourage winning athletic teams for the sake of the publicity obtained for the college. Thus, even our institutions of higher learning have adopted some of the commercialized methods of modern industry.

No doubt, the success or the failure of this nation depends upon the effectiveness of our educational system. Mass education, in the case of the college, does not promote quality. If American education is to be successful, it must change in many respects. It must get away from the influence of money. It must place the emphasis upon the understanding of human life, and not solely upon the understanding of things. It must make life richer and more perfect, rather than more materialistic.

<p>Government Finance.</p>	<p>The handling of public revenues has been one of the most important, if not the most important functions of the government. Failure to collect taxes from the people was a cause of the downfall of the Roman Empire. Disputes with the king over matters</p>
--------------------------------	---

of taxation led Parliament to deprive him of power in England. Oppressive taxation precipitated the French Revolution, the matter of money led to the Connecticut compromise which gave the lower house in Congress (representing the people) the sole right to initiate finance legislation. In every period in every nation's history has money played an important part in shaping that nation's history.

Since the beginning of the time when man first found it necessary to unite with his fellows and form the state it has been necessary for each member to contribute his share of the state's expenses. Because of the ancient origin of this great problem one might conclude that fair and uniform methods would have been devised for collecting these taxes. However, there is as much confusion to-day as there has ever been, and there are as many tax systems as there are states. This is due largely to the failure of statesmen to consider the problem from a scientific viewpoint. They have resorted to methods which would raise a definite sum for a definite purpose without regard for system or justice.

Taxes are usually classified into four divisions. First, the largest and most important, are taxes which confer a common benefit on all citizens.

Second, are those which confer a special benefit on certain classes, but which are treated as a common benefit because of the incapacity of these classes. Third, are those which confer both a special benefit on certain persons and a common benefit on all the others. Last, are those which confer only a special benefit on individuals.

Under the first division come taxes which pay for the administration of government, police and fire protection and many similar benefits. It is clear that each person should have a share in these taxes, in as much as they are common benefits. Under the second division come taxes for the support of charitable institutions, county hospitals, jails, and insane asylums and the like. All persons are not agreed as to the justification of these common taxes, but it is generally conceded that it is for the benefit of society to take care of the weak. Taxes which only help the individual and have no effect upon society should not be paid by the members of society at large. Falling in the third division are such taxes as those which pay for the maintenance of waterways and harbors. While these confer a special benefit upon shippers, at the same time it is to the advantage of all to have good transportation facilities. Last, come taxes which only benefit

individuals, such as licenses and custom taxes. These are paid by the persons benefited. So far, I have discussed taxes from the point of view that each person should pay in an amount proportional to the benefit he derives from their expenditure. This is known as the benefit theory. But tax experts have found it next to impossible to determine how much each individual is benefited by these expenditures. Also, some individuals, through no fault of their own are not able to pay in proportion to the benefits they receive. Because of these difficulties a second theory, the faculty theory, is most generally accepted as being the more practical. This theory assumes that each person should pay in proportion to his ability to pay. Here again, the tax experts run up against a difficulty. How can a man's ability to pay be determined?

The Prussian system, before the war, came into use and it was the nearest approach to the realisation of the taxation of faculty of any in the world. The income tax, which had long been regarded as the foundation of the tax system was subjected to a reform in 1891. It was decided that a perfect system should contain two kinds of progressive taxes: one that taxed larger incomes more heavily than

small ones; another that taxed incomes from property more heavily in proportion than incomes from labor. This tax accomplished the result of imposing a differential rate on funded income as against unfunded income. The abandonment by the state of the three old taxes, on land, buildings, and industry, rendered this reform of local taxation possible.

The French, as opposed to the Germans, secure the greater part of their revenue from indirect taxes. That is, from custom duties and excises. The only advantage of this method seems to be its unobtrusiveness. The people do not realize that they are paying taxes. This trick was often employed by the old monarchs, and doubtlessly the French system can be traced back to the days of the monarchy. The deep rooted effect of this tax tradition has been especially apparent within the past year, for the French people, in their present financial crisis, are opposed to any increase in taxation except through the indirect method. This decision has been condemned by most economists, and it is doubtful whether France will recover until she resorts to direct taxation.

There has been no unified system of taxation in the United States. The principal federal taxes

have been custom duties and excises. The states, on the other hand, have confined themselves to direct taxes. However since the outbreak of the World War the federal government too has had a leaning towards direct taxation. The inheritance and income taxes are notable examples.

What seems to hinder tax reform in this country is a feeling of selfishness and narrowness on the part of certain classes and individuals. They are unwilling to accept a temporary loss for the ultimate good of all. Our protective tariff policy serves as a good illustration of this human failing. It was adopted in order to protect infant home industry; to make this country industrially independent. Now, that our industry has become strong, the manufacturers still foster a high tariff because it enables them to make larger profits. The consumer must pay, and yet he is willing to pay because he believes that American industry and American labor needs protection. Most economists condemn this theory, and yet the United States will likely retain her protective tariff.

The National Tax Association has prepared a plan which may help to do away with the tax chaos in this country. They propose: 1) A personal income tax. The tax should be levied upon all per-

sons in respect to their net incomes. It should not be collected from business concern incomes.

2) A tax should be levied upon tangible property, levied at the place where such property is located. Intangible property will be exempt.

3) Equalization of the burden of taxation upon public service corporations. 4) A business tax levied upon net income derived from business carried on within the taxing state. 5) Improved administration of the tax assessments and collection.

The financial administration of modern warfare has become so complicated and war debts have become so burdensome that some economists claim that the very problem of finance will cause statesmen to think twice before declaring war. At the present time France seems to be in such a bad financial plight that the redemption of all government debts and the establishments of a complete new monetary system seems to be the only way out of their plight.

During the World War two new forms of taxation were introduced, the war profits and excess profits taxes. There is some dispute over the desirability of waging war on borrowed money, but it ~~seems~~ ^{seems} to be quite true that a major war must be paid for at the time of the war by the

people. For example, during the last war there was no source of revenue which the United States Government could borrow from except the money of her own people. Hence, she sold short-term bonds of small denominations. But where is the money to pay for these bonds to come from? The borrowed money was used to buy war materials which were destroyed. The only ~~price~~^{way} ~~would~~^{was} be to tax the people and then turn it back to them to pay for their bonds. Were not the people donating the price of the bonds to the government? ~~By~~ Making the people pay for a war at the time of its occurrence will be harder for the time being, but when peace has come trade will be stimulated rather than depressed as it was following the last war and the customary slump and hard times will not result. Of course the best way to eliminate trouble is to make war impossible. It is not complimentary to the disposition of man to think that war will always be necessary.

Wisdom and study of finance in government is sorely needed. The problems of finance have increased in complexity much faster than has the capacity of man to solve them. Human beings will take the advice of experts in most matters, but when it comes to economics, the general opinion seems to be that every man knows as much about

the subject as there is to be known. Therefore, to overcome this prejudice, and to accept the advice of experts is our first task in remedying conditions in government finance.

Conclusion.

The question, "why progress?" is often asked, and it expresses

a view which can not altogether be condemned. So far as man can predict however, no matter how far we progress there will always be problems to be solved; therefore, it is much wiser to take the the point of view that progress is worthwhile. The fascinating thing about the universe is the inexhaustible supply of complexities. Progress is used here in the sense to mean the attainment of the greatest good for the greatest number. This point of view has replaced the old idea that only a few individuals should enjoy a better life.

I do not agree with the socialistic psychology, which essentially as I understand it can be summed up as follows: "It is better to live poorly with a feeling that no man has more, than to forfeit freedom for the sake of more comfortable conditions." For example, the Russian peasants are free at the present time, but their standard of living is much lower than it was before the Revolution. The present

generation of peasants are repaid for their poverty by the new feeling of freedom, but the next generation will accept freedom as a matter of course, and be unhappy because their economic condition is poor. Thus, the struggle will be renewed, and the only result will be reduction of all people to the same general standard, which will only be a temporary adjustment, or an admission of the fact that they can not suddenly raise their standard of living, but must progress slowly.

Although I do not agree with socialistic psychology, I do think that free and unscrupulous competition is not possible or advisable of attainment, for, as I have pointed out in this thesis, men have found it increasingly necessary to cooperate in every branch of endeavor. The day of individual ownership of industry has gone for ever. The corporation, whether it be under the guidance of government or not, has come to stay. Most men now and in the future will be employees. To this extent will we be socialized. Furthermore, the methods of industry must be subjected to popular control. But I do not think that the government is capable of actually administering industry, either at present, or will

17.

it be in the near future. To do this effectually a new type of civic conscience must be developed, and no matter how advisable it is to centralize production and distribution, to put it in the hands of the government, as it is now conducted, would be to take a step backwards. This may be done someday, but not now. I do think that the people, by acquiring the stock of the corporations, will arrive at a more satisfactory system of control than by placing this control in the hands of the political state. Already, great progress has been made in this direction. To be sure, the large majority of stockholders at present do not have control over the corporations, but this reform can be brought about as easily as have reforms to regulate the actions of trusts been brought about in the past. Even though the people can not get control of the corporations, it is better to have industry run as it is now than to trust it to the hands of the present class of politicians.

Money has a greater influence in modern life than any one factor. Civilization, by its very nature, is artificial. To live to-day is to adapt ones self to the man-made conditions, restrictions and traditions. Therefore, to discount the value of money because it is not natural

is to ignore the actual conditions under which we live.

But one must not over-evaluate money. Particularly true in America this materialistic philosophy has excited the criticism of most intelligent foreigners who enter this country for the first time. This is regrettable. It may lead to the destruction of the United States as a permanent world power. Money is valuable only as a means. Man must employ it towards an end which is far from materialistic, which recognizes the true values of life, if he is to be permanently happy.