

GOLD
AND
THE FUTURE

The writer is indebted for information to Mr. W. W. ROCKHILL's "Inquiry," Mr. J. G. McDONALD's "Life of Rhodes," "The World Almanac and Book of Facts" (a wonderful book), the International Labour Bureau and some American and Japanese Chambers and Departments of Commerce, and to the Chambers of Commerce of the British Empire who have afforded him unique opportunities of visiting the British Dominions overseas.

But for all the errors or misconceptions that this book may contain the writer alone assumes responsibility.

APRIL, 1928.

In some cases, where it applies, silver is included in the term gold.

GOLD
AND
THE FUTURE

By
W. L. P. KNIGHT

Published by
HEADLEY BROTHERS
18, DEVONSHIRE STREET, LONDON, E.C.2

X61;1.1.N2

F8

Copyright, 1928

8121

CONTENTS

CHAP.		PAGE
I	THE PROBLEM STATED -	7
II	THE EXISTING IDEA -	10
III	THE DIAGRAM - - -	12
IV	CREDIT - - -	14
V	COMMODITIES - - -	17
VI	THE PRACTICAL PROOF -	24
VII	THE TEST OF THE IMAGINATION	29
VIII	EQUIPOISE - - -	35
IX	INFLATION - - -	41
X	INTERNATIONAL EXCHANGE	47
XI	THE PARASITIC GROWTH -	51
XII	COMMODITIES AGAIN -	54
XIII	EXCHANGE OF LABOUR -	57
XIV	BEGINNINGS - - -	60
XV	EXAMPLES - - -	61
XVI	CREEPING OVER AFRICA -	65
XVII	CONJECTURE - - -	68
XVIII	THE UNIT - - -	71

CONTENTS

CHAP.		PAGE
XIX	THE ORIENT - - -	75
XX	CHINA'S POPULATION -	78
XXI	RESTRICTIONS REMOVED -	81
XXII	THE MEASURE OF TIME -	83
XXIII	THE TEMPERATE ZONE -	86
XXIV	EAST TO WEST - - -	87
XXV	THE ESTIMATE - - -	92
XXVI	WAR AND COMMUNISM -	99
XXVII	EUROPE - - - -	100
XXVIII	THE BRITON - - - -	101
XXIX	THE INDIVIDUAL - - -	104
	CONCLUSION - - -	105
	APPENDIX I - - -	108
	APPENDIX II - - -	109
	APPENDIX III - - -	110
	APPENDIX IV - - -	111
	APPENDIX V - - -	112

I

THE PROBLEM STATED

GOLD ceased to be used as a medium of exchange in Great Britain at the time of the War, 1914-1919. When it ceased to be so used gold reserves as held by the banks and treasuries became no longer necessary nor desirable for currency purposes.

The banks, governments or central banks of countries where gold is no longer circulated need not keep any gold reserves in support of currencies.

Gold does not stabilise currency nor is it necessary for a currency system, even although that system is based on what is called a gold standard.

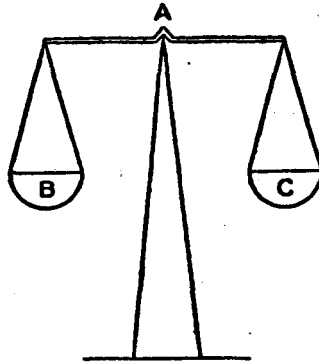
A statement of this kind is valueless in itself. No one is convinced by it, even although it may ultimately be found to be true.

The task before the writer is to try to convince the reader by argument, link by link, of its truth.

To do this, permission is asked to use a symbol, other than the letters of the alphabet, themselves symbols.

The symbol is in the form of a simple balance scale.

A standard with a cross-beam supported on a knife edge with scales each side pendant from the end of the beam.



This symbol, like the scale, is for the purpose of showing a tendency towards equipoise. Like the scale, it is never fixed, never stationary, except so far as the standard support is concerned. Although the movement may be small, almost infinitesimal, nevertheless the tendency to constant readjustment is there and without that constant movement the machine would be useless for any purpose whatsoever.

For what the writer has to say, the symbol of the scale should be kept constantly in mind.

It is not possible to prove the statements made without taking into account the whole business of exchange : personal, national and

international and assessing its relation to economics. The word economics is used with hesitation, because the so-called science of economics is subject to so many limitations and constructions.

The first few chapters are largely devoted by the writer to a definition of the economic law as he sees it. He is going to attempt to detail its scope and limitation and finally to draw certain fairly definite conclusions therefrom.

Obviously the correctness of the conclusions drawn will be subject to the soundness of the conception of the law itself.

Whilst the term "economic law" is used it must be emphasised that these two words are used for want of better words. The use of the word "law" implies that there is something fixed and definite, an unalterable principle. That is far from the case. It is psychological and is thus subject to constant change and adjustment and unexpected development. Often the word tendency might be substituted for the word law.

The writer hopes with the use of the symbol of the scale to give more definite precision to the law than would otherwise be the case.

II

THE EXISTING IDEA

MEN desire to exchange with one another the products of their labours to their mutual advantage.

It has been found that a common medium of exchange facilitates this desire.

Many media of exchange have been used for this purpose. Gold is perhaps the best known of these media. Paper currency, although used by the Chinese in the fourteenth century, has recently come into general use.

Where a gold standard has been adopted, it has apparently been accepted that gold is used as the medium of exchange.

Currency issues in paper have been made with what is described as a gold backing.

The equivalent value or a proportionate value of the paper issues is kept in specific gold in very safe keeping.

This is done with great rectitude.

So far as the writer can observe the mind of the financial authority, it works like this:—

That gold is a backing to paper issues of money and that it forms the foundations of a

monetary system. That without gold, the paper money, certificates, bills, and all the multifarious instruments of exchange would be insecure.

That the quantity of gold in reserve may be used to affect the price of commodities.

That increased quantity of gold is likely to raise prices and that reversely its scarcity will lower prices.

That great power over business and exchange rests in the hands of those who control these gold reserves.

That the possession of this gold conveys the power to expand or contract credit.

That in fact gold has some quality in relation to currency that is not possessed by other commodities.

That gold and paper currency should maintain some sort of equilibrium in relation one to the other.

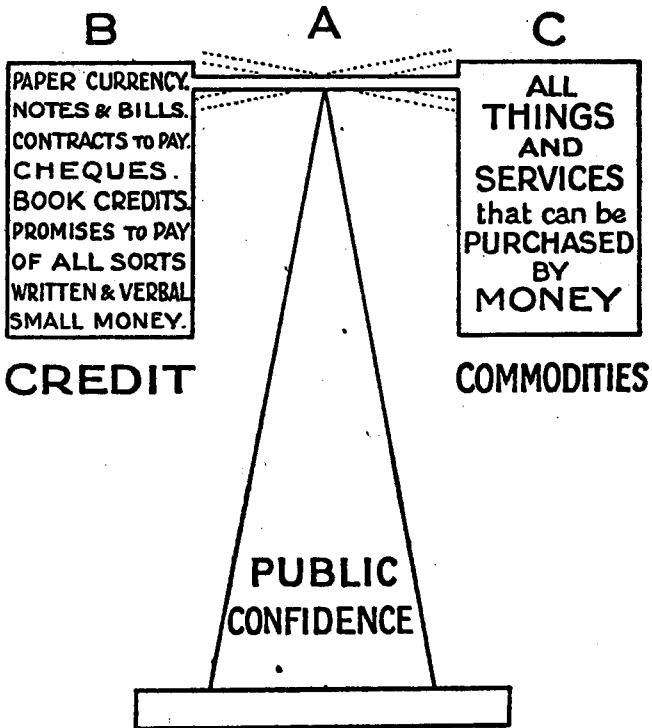
These, then, seem to the writer to be the ideas prevalent amongst financial authorities.

These also seem to the writer to be erroneous ideas.

III

THE DIAGRAM

To get nearer to the subject it is now necessary to set up another and a different conception of the business of exchange.



Having set out the diagram, whilst it appears right in principle it gives too much fixity to an idea which is essentially unfixed, moveable and almost nebulous. The reader is again asked to make allowance for this now and all through the succeeding chapters.

At point A there is a constant see-saw movement. Never still. The extent of this movement in normal times is usually small.

The central standard on which the organisation rests is public confidence and nothing else—belief induced by practice—a sentiment only, very steady and continuous and seldom questioned. It is, of course, obvious that as C rises B falls and *vice versa*, so on always and indefinitely. The contents of the two scales B and C will be defined in the next two chapters.

IV

CREDIT

THE contents of B, the credit side of the balance, are now to be defined.

With the exception of countries where gold and other tokens are still in daily use and with the exception of the value of the metal used for small coins, silver, copper, nickel, etc., the credit side of the balance has no intrinsic value. The cost of printing and circulating the instruments of credit, whatever they may be, is another exception. These exceptions are negligible in value when compared with the total of the credit represented. It may therefore be said that B contains nothing of any intrinsic value.

Its contents are a credit, a promise, a belief, a faith. What is this belief, this faith?

It is that the instruments of credit, in whatever form they may take, can, at the will of the holder, be exchanged for commodities of intrinsic value such as he requires.

This belief is not generally disappointed.

Normally this system of exchange works, and

works to the satisfaction of the holders of the instruments of credit.

Now if it works in items and in detail, obviously then in items and in detail a balance or equipoise is set up between credit and commodities. They are exchangeable.

Then it must be true that in the total of these credit items and details there must also be a tendency to balance and to equipoise against the total in the commodity scale, and on this a sound theory can be constructed.

A further reference to these instruments of credit shows that they consist of all coinage, pounds sterling, dollars, marks, francs, all coinages in general use; bank notes, treasury notes, bills of exchange, contracts to pay for services rendered, or goods supplied, commercial cheques created by the drawer of specific amounts over which the banker has no control so long as they do not exceed the credit of the individual; (the total amounts of cheques in comparison with other instruments of exchange is very large. In England the annual clearances exceed £40,000,000,000) stock exchange commitments (only the balances of which are represented by settlement cheques); every bona fide bid at an auction sale for the period it is alive and not killed by the

next bid ; all book credits or other similar obligations until they are discharged ; in fact all forms of promises to pay, written or verbal, that have behind them the surety of performance.

These then are the contents of Scale B.

V

COMMODITIES

Now we will attempt to examine and define the contents of the commodity side of the scale—Scale C.

They are covered by this general definition : that they are all the services or goods that can be purchased by money.

To illustrate this in detail a number of instances will be quoted to show what are and what are not commodities :—

Air that we breathe is not a commodity but air supplied through ventilating shafts to deep mine workings underground or to divers under sea is a commodity.

Rain is not a commodity but water supplied through pipes for household or other purposes is a commodity. When the pipes burst or the dams give way it ceases to be a commodity and becomes a nuisance.

Fire when it burns down forests, houses or buildings is not a commodity but the water that is used to extinguish this fire is a commodity, so also are the fire engines and apparatus used for the purpose.

Fire used to warm houses or to generate steam in boilers, is a commodity, so is electricity in process of generation, distribution and use, but the latent immeasurable supply of electricity is not a commodity. Electricity has perhaps the shortest life of any commodity because at the moment it is produced it is consumed.

Copper, which conveys and distributes the electric fluid is a commodity with a very long life.

Most metals when they are discovered, mined and collected, or in process of being discovered, mined or collected are commodities, but the metallic endless resources of undeveloped areas are not commodities.

Wool and cotton when grown are commodities but by gradual wear and consumption they pass out of Scale C.

Marketed fresh eggs, vegetables and fruit pass in and out of Scale C. rapidly.

Wheat is a commodity sensitively subject to the economic law. Its floating cargoes are guided magnetically by the operations of exchange and their prows turn this way and that way in accordance with the value breezes that blow. This is true in a lesser extent of other grains, but it should be remembered that vast quantities of cereals, mealies, rice and seeds are consumed by

the grower and therefore are outside the economic law and thus do not come within Scale C.

Sugar is a very universal commodity. It has been used as the material for all sorts of dodges and experiments to defeat the working of the economic law. All have failed but are tried again by a new generation who know not the law.

Preserved foods, meats, dairy produce, wines, beers, drinks, during the progress of their growth or preparation, are within the law, but immediately they are eaten or consumed or rot they cease to be commodities.

Paper, rubber, leather, are commodities, but a newspaper ceases to be a commodity (except as waste paper) immediately its contents are known or read.

Coal in the getting, gas in the reservoir and explosives are commodities until they are burnt or exploded.

Transportation through varying agencies, man bearers or coolies, man-drawn vehicles, donkeys, mules, bullocks, horses, cycles, railways, ships, internal combustion engine vehicles and aeroplanes. Their services are all commodities increasing in sensitiveness to the economic law in the order named.

Agricultural produce that is marketable is a commodity, but all that is consumed by the

producer and his household and all the immense weight of produce resulting from private gardens and allotment holdings, even though they be exchanged between the producers on the principle of barter, this for that, are *not* commodities.

The weight and importance of this produce is enormous and it is *not* subject to the economic law.

Houses, buildings, and machinery as they come to be sold or are erected or made for sale, are commodities, but in as far as they are affected by their fixed location or their particular convenience or traditional interest to the owner or occupier or user, so in these and in many other respects they become more or less commodities.

Jewellery and ornaments of all sorts, diamonds and precious stones are commodities except when they are held as heirlooms or as remembrances and have a traditional or personal value to the owner, then for that period they are outside the economic law.

The crown jewels of a royal family are not commodities, but if that royal family disappears the jewels come again within the scope of the economic law.

The services of the doctor, the lawyer, the

registrar, etc., in as much as they are paid for by fees for definite services are commodities, but the advice and surgery that the doctor gives without fees to his hospital patients is not governed by the economic law, nor is the personal interest that a professional man takes in his client and to whom he affords his help and support as an individual beyond the limits of his fees.

The paid services of Ministers of State and their entourage, Members of Parliament and other officials are commodities but the valuable public services unpaid or in excess of payment by councillors and men in high and lowly public positions are not commodities. Voluntary gifts as a whole, whether in money or goods are not subject to the economic law.

The future prospects of development of mines, lands, inventions, so far as they may have incurred valuable thought or labour, are commodities.

The services of the whole of industry, expressed in wages and salaries, are commodities, but the bit of work over the contract and the extra time or concentration given in, and that support to an undertaking which arises from a sense of loyalty, zest and interest beyond the mechanical performance of the task are not

commodities and not subject to the economic law, but are of transcendent importance.

The extra support beyond the pay given by persons in a household for domestic work or the care and education of children, the services of the neighbour who drops in to help in cases of illness or domestic crisis, such services are of untold value but are not controlled by the economic law.

The whole process of human conception and generation, the care of offspring by the parents and later the care of the parents by the offspring and all the attentions arising therefrom, immense and important as they are, do not come within the law directly.

Pictures and statuary, the product of great artists, only rarely become commodities. The reproductions of them in all forms are commodities. The enjoyment of them through public galleries, all photography and moving pictures, all mechanical representations are subject to the economic law. So is current literature. The work of the great masters of art and literature is outside the law.

Crime, theft and embezzlement are not commodities. Knowledge and wisdom, the power to endure, human character, high personality, integrity and their effects are on the top of the economic law.

Examples can be multiplied indefinitely, but enough has been said to show that only part of human effort comes within the definition of commodities, and that a large realm of activities still goes on and may go on, outside the sphere of the economic law.

One article has not yet been included in the list—gold. As gold is used and required for domestic or manufacturing purposes, for wedding rings, ornaments and adornments for dental or surgical purposes or as a means of transferring value from one place to another so it is a commodity. In so far as it is set aside for the supposed support of or control of a monetary system in the form of a fixed reserve against currency it is not a commodity and is outside the economic law altogether.

It cannot be fitted into the credit side of the scale because it is not available for the purpose, it cannot become a commodity because it cannot be exchanged for credit. For the purposes of exchange and the economic law, it is non-existent for the period that it is held as a fixed reserve.

A stock of over a thousand million sterling value in gold is held by the banks, treasuries or financial authorities of the English-speaking peoples.

VI

THE PRACTICAL PROOF

THE emphatic conclusions of the last chapter call for careful scrutiny and practical proof.

The writer hopes to provide two proofs, one drawn from practice and the other equally convincing, drawn from the imagination.

This chapter will deal with the practical proof. The figures about to be used are not actually correct but they are correct enough to provide the comparison that it is intended to be drawn from them. They are quoted in sterling, five dollars to the English pound.

It will not perhaps be disputed that for comparative purposes the totals of cheque clearances (that is the value of cheques passing through bankers' clearinghouses) are some indication of monetary activity and some gauge as to the comparative extent of exchange operations.

The United States bank clearances amount approximately to one hundred billion pounds. (£100,000,000,000) in a year. Similar bank clearances in Great Britain amount to say, forty billion pounds (£40,000,000,000) in a year

The writer is aware that these figures do not represent the whole of monetary activities in either country. There are all the transactions in both countries arising from the use of authorized currency and there are all the transactions in stocks and shares and commodities and of which transactions only the balances are cleared by cheque. But these transactions would be common to both countries, so is the element of time and frequency of turnover. Being common to both countries, the whole of these are left out of the argument.

The argument then deals only with the cheque clearances and their comparison to gold reserves.

Now it is supposed to be necessary in Great Britain, to maintain the soundness of her monetary transactions, to hold a gold reserve of, say £150,000,000.

If we accept bank clearances as an indication of monetary activity, we can say that an annual business of forty billions is carried on, with a gold reserve of one hundred and fifty millions and carried on with much success. Indeed, sterling stands high in the international money markets of the world.

The question is this.

With these two figures in mind, what is the amount of gold reserve that is necessary to carry on the monetary activities of the United States, of America, whose bank clearances amount to, say, one hundred billion sterling compared with the forty billions in Great Britain? The answer is:—not more than two and a half times the gold reserve that is held in Great Britain. That is, the United States needs on this computation, 375 millions in gold to support her money and no more.

But she has 900 millions. She therefore has 525 millions in excess of what is necessary according to the standard of successful operation of the monetary position in Great Britain. But if gold is really necessary for this purpose and in the proportions named for Great Britain, then surely an excess of gold by so large an amount in the United States must have some considerable influence on the position. But has it? It has not. Is it that this excess has been handled with great skill and ability? Why acquire the large increase and then neutralise its effect with skill and ability?

If then this great excess has had no disturbing effect on the functions of money, what would be the effect if the excess were a deficiency from the supposed required standard of quantity?

Let us look at the problem from the other angle. Let it be supposed that it *is* necessary to work a monetary business of at least one hundred billions per annum, to hold in reserve the sum of 900 millions in gold as is the case in the United States. Then it can be argued that the sum of 150 millions is much too small a reserve to operate a monetary business of forty billions in Great Britain and in consequence faith in sterling would decrease. But during the process of accumulation of excessive gold reserve in the United States, sterling as compared with dollars has increased up to a value above what is called parity.

The only assumption to come to is that neither the 900 millions gold in the United States, nor the 150 millions gold in Great Britain are really the foundations of currency in either country, and as support for such are neither necessary nor effective, and the conclusion must be drawn that since gold ceased to supply the need of currency in general use, reserves of gold have become redundant.

Would gold reserves serve a purpose in times of War? In such times they are the more tightly held by the holders and more securely guarded. If released at all they might be used to buy the allegiance of wild peoples who still believe

that gold holds some magical power within it, that is if such peoples could be found.

The conclusion then is that the holding of these gold reserves is a delusion and that they have become by process of the growth of credit entirely disproportionate to the magnitude of the operations of the economic law.

VII

THE TEST OF THE IMAGINATION

IN this chapter the reader will be asked to draw on his imagination.

It has been the writer's privilege to visit a gold mine. Twenty people protected with overalls and caps are passed into a cage holding exactly the number in two tiers, ten in each tier. At the sound of a whistle this cage rapidly descends with its breathless contents thousands of feet below the surface, and as the cage is lowered the pace decreases and the passenger appreciates the fact that he is dangling at the end of a rope thousands of feet in length. Passing through uneven galleries men are seen drilling the face of the rock, the result of which is collected and sent in eight-ton skips to the surface. It is then stamped into powder and in solution passes over corduroy tables. This corduroy has the power of holding a large percentage of the gold which is thus collected. The remainder is treated with cyanide of potassium and further quantities of gold are obtained from it.

The gold thus found is melted in crucibles and

poured into moulds and assumes the form of ingots, brick-shaped.

This mining process has become a very scientific one. The labour employed is well treated and amply and scientifically fed and medically cared for. The proportions of illness and accident are small. Great managing ability is employed and outputs very large in value are obtained.

The gold ingots are passed from one country to another and a considerable quantity of it finally finds its way into the Treasury vaults in Washington.

Restless human energy has hurled these minute particles of gold from their age-long resting place 5,000 to 7,000 feet deep to the earth's surface, has sent them chasing across the world, has put them to sleep again in the strong vaults of the treasuries of the United States or other similar underground safe deposits. Man has employed his best energies, great courage and character in this work. Why? In this process of finding, mining, transmitting and finally storing, has this mineral assumed some qualification that does not apply to other minerals or substances and if so at what point in its discovery and development has this unusual qualification become apparent?

The white man has induced and trained scores of thousands of native peoples to help him in his task but the product of it all lies again idle and at rest in the elaborate underground depositories which other men have carefully constructed.

Let us apply a simple test to the position drawn from the imagination.

Suppose that there is in the possession of the central banks and treasuries of the United States as security for and in support of currency, a sum of gold specie or bullion, or both, valued at £940 million and suppose that £900 million of this is deposited in the innermost treasury vaults at Washington, the odd amount spread about in the tills of the banks in noticeable positions, say for window dressing purposes.

Again suppose that on one Saturday night Nature, by some extraordinary freak of silent earthquake, opened a cavity 5,000 to 7,000 feet deep immediately under this gold reserve of £900 million and swallowed it up completely, and irrevocably closed over it again. As it were the bottom of the vaults dropped out and the gold only disappeared unobserved. In fact, went back into the earth from which it had been taken with so much labour and energy. Suppose that this took place quite silently and the iron doors

and protection of the safe deposits were undisturbed and no one—no one at all—knew of this occurrence.

On Monday morning, when the offices, the banks, the exchanges opened for the day's business would there be the slightest alteration in the usual conduct of affairs? Would prices vary in consequence?

Would Wall Street or Throgmorton Street or the Bourses of Europe show the least unusual flutter or tremor in the conduct of their business? No! a hundred times No!

All the credit and currency business of the world would continue exactly the same as if this gold was on the surface. Men would buy and sell, convert their holdings from one interest to another, carry on all the intricate operations of commerce and finance without the slightest unusual check or hindrance. And this unbroken confidence would continue perhaps for years until somebody discovered that the gold was gone and then there would be an upheaval. The news would be broadcast and published in the sensational newspapers of the world.

“Remarkable disappearance of Gold Reserves.”

“Collapse of Money Markets.”

“Panic on Exchange.”

Then what would be likely to happen?

Treasury officials would probably call up the central banks and they would consult financiers of great reputation. Official consultations would be held and a manifesto or guarantee would be issued on their authority and the man in the "Street" would say, "Well, we have done without these reserves for so long, we can do without 'em altogether now."

The newspaper headlines would soon read :

"Rush to cover."
"Money Markets improving."
"Exchanges steady."
"Confidence restored."

Within days, perhaps within hours, newspaper paragraphs would appear :

"Under influence of bankers' manifesto, the money markets resumed their usual appearance." "On with the dance !"

But what is the inevitable and undeniable conclusion to be drawn. It is that the idea that gold is necessary in any quantity to support currency is a delusion and that the whole weight of exchange consequent on the working of the economic law is built up on and supported by a sentiment only and that sentiment is public confidence and nothing else.

Public confidence has replaced gold.

In a later chapter on Inflation the writer hopes to show on what this public confidence depends.

Will the reader turn back to the diagram on page 12 and he will notice the supporting column is pyramid in shape with a broad base and a fine knife edge at the apex. This partly visualises the sentiment of public confidence in its support of economic movements.

VIII

EQUIPOISE

THE term credit is used as defined in Chapter IV.

The idea of equilibrium between credit and commodities has become very clear and convincing to the writer, it may, however, not be so clear to the reader. It is therefore desirable to elaborate it further.

It cannot be disputed that specific amounts of credit are exchangeable for commodities. If that be so in detail and in fact, is it not true also that the total sum of credits is exchangeable for and therefore equal in value to the total sum of commodities. This seems logical, but it is not entirely correct in practice. But it is correct to say that they have a constantly varying relationship with a tendency to equal one another in total volume.

The whole business of exchange is one of flux, of change, of transition, and of movement, with a tendency to equilibrium.

Any effort to stabilise or to fix in definite relationship is an effort to neutralise the benefit of the economic law.

The function of the economic law is to adjust,

to guide, to keep in flow and transition and supply the commodities and services needed by the individual.

An attempt was made to fix the relationship of two articles only, gold and silver, through bimetallic legislation and of course it failed.

An examination of the contents of the credit scale reveals that with regard to bills of exchange, contracts to pay, cheques drawn, standing book credits, either with banks or merchants, and all bona fide promises to pay, it is the business of the banker, the merchant, the financial house and the individual to see to it and to satisfy himself that the security is *there* and that the commodities stand behind the credit.

If in the end of the process the commodities are not behind the credits the consequent loss sustained falls upon the banker or the individual. This ensures his care and he thus becomes the guardian of the principle of equipoise between credit and commodities.

Expansion and contraction of credit is largely individual and split up into myriads of transactions. Nobody specially dictates a policy in respect to it. It is the result of contract and bargain by the contracting parties. It is influenced by political outlooks and by all the

sentimental winds that blow. Its volume, however, is dictated by the volume of the unconsumed commodities produced. The producer of the unconsumed commodities therefore is the creator of the credit which is raised against them.

The same rules of care and restriction that influence the banker and the individual should apply to the ordinary hand to hand currency issued by the nation or by the authorisation of the nation.

It should never be issued except in exchange for the unfettered control of intrinsic commodities. Gold held in fixed reserve is not one of them.

To establish further the idea of equipoise the reader must visualise a state of constant flow and return between commodities and credit. A never-ending, never complete interchange.

Never complete because practical restrictions come into the problem.

Certain simple examples will illustrate this.

A child who has a shilling to spend roves up and down the street gazing at a thousand different articles in shop windows, any one of them are his up to the amount of his credit, the purchase can be immediate and the consumption complete.

£100 is not quite so easy to spend.

£10,000 is still less easy to spend, questions of choice, of ownership, of legal titles, of storage have to be considered.

With £100,000 the difficulties still further increase. In fact, there are limitations to the power of a person or small group of persons to spend or take out of the commodity side of the scale large amounts at once.

They can only take what they have the power of consuming. Even with a determination to destroy articles of value, the effort, if continued, becomes laborious and a sort of average consumption is the result although large amounts of credit may be assessed to the individual or in other words he may be very rich.

What actually happens in the case of large personal expenditure is that a considerable proportion of the amount is only transferred and flows back again in the credit side of the scale under another ownership. In the case of large, lavish and foolish expenditure, a proportion of it falls into the hands of other people, as highly paid servants or officials, persons who make large profits on transactions, sales and contracts, who are less foolish and more saving than the previous owner and whose savings or unexpended receipts find their way back into

the credit side of the scale. Equilibrium is only slightly disturbed and the extent to which it is disturbed is the actual consumption or destruction of commodities.

Inborn in the minds of many men is the wish to save, to consume less than they have the right to consume, according to the certificates of credit that they may possess.

Still further there are men who expend foresight, energy and invention in designing machines and in creating organisations that will produce commodities largely in excess of their personal needs. They thus become rich and sometimes very rich.

The sum total of such efforts, by weighing down the commodity side of the scale, not only replaces the wastage of consumption but forms a balance upon which fresh credits can be raised and so confers benefits on all those affected by the operations of the economic law.

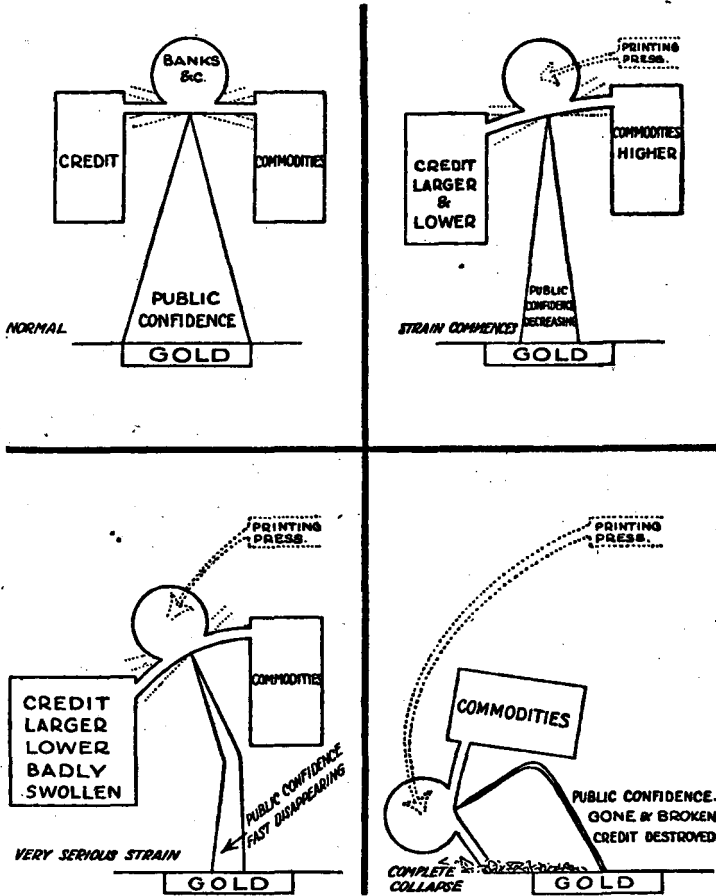
IX

INFLATION

OF all the subtle, cruel crimes that man can devise against his fellows, one of the worst is the crime of inflating the public currency.

The authority that commits this crime is uttering a lie, "a double distilled lie," a lie multiplied a millionfold and more.

A working man, after his week's work is over, accepts as his reward certain slips of paper which he believes (whether it is so printed on or not) represents the right to buy the things that he needs for his subsistence and the subsistence of his family. He believes that with these slips of paper he can pay his rent, give so much to his wife for bread, meat, groceries and something for the children's clothes and deal with the balance as he thinks fit. The authorities who print and circulate these slips of paper know and always have known that the receiver accepts them in the belief that he can exchange them for the commodities he now requires or may require hereafter, up to the value stated thereon. Everyone in a modern country believes that. Every time those slips of paper pass from one



Four diagrams representing the process of inflating the public currency. Fig. 1 represents normal conditions and Fig. 4 complete collapse of the economic condition. Gold in fixed reserve, which is said to be the basis and support of currency, remains unchanged and helpless in face of the attack of inflation.

person to another it is a further confirmation by the parties, by the giver and the receiver, that they certify the right of the holder to receive commodities up to the value stated thereon.

If they are not exchangeable for the expected commodities and the holder asks the issuing authority the reason why? Is it any explanation for the authority to say, "Oh, we have only a little bread or meat, not enough to go round, but if you save up enough certificates you can have a gold ingot some day, or at least you can't have a gold ingot but we have got one in our safe keeping, quite a nice bright gold ingot, which we will keep very carefully for you, although it's not the slightest use your ever expecting to receive it because by law we have to keep it in a fixed reserve."

Will the reader now study the group of four diagrams which represent the writer's view of the process of inflation as it affects the economic equilibrium.

It will be noticed that when deliberate inflation is sanctioned and allowed, gold in reserve as a basis does not prevent its disasters, neither does it correct them. The gold, in fact, remains unaltered when other things are in chaos.

The act of feeding into the circulating medium spurious certificates soon has the effect of

lowering the credit side of the scale. It not only lowers the spurious certificates themselves but it also drags down therewith equally the value of all instruments of sound credit and all the healthy institutions erected thereon.

The commodity side of the scale rises as the credit side falls and concomitantly in the inverse ratio acts and reacts therewith in violent efforts to regain an equilibrium.

If, however, the inflation be continued, finally the whole organization gives way, it collapses, public confidence is totally withdrawn, and there only remains chaos unspeakable.

What are the conditions of this chaos ?

They are terrible.

Men who have worked with the laudable object of providing for themselves and their dependents, find that they have been tricked, been fooled, been defrauded.

They see on one side of the street warehouses, stores, bulging with supplies and the necessities of life, whilst on the other side of the street their own children are starving. There is no remedy but force, but force is no remedy.

Inflation has arrested distribution.

Processions of hungry people march hither and thither without aim or order, controlled only by machine guns.

Men with money that won't buy become hopeless and demented and the most violent criminals are the leaders of the mob, whilst old ladies, hitherto sparsely provided for, starve silently in their single rooms without knowing the reason why. The crime of it ! The pity of it !

The nervous system of the economic organisation has been villainously and deliberately undermined.

This is an evil that need not occur. It is not necessary. It is not an "act of God." It can be avoided.

It is sometimes attributed to the speculator in currency, but the speculator has not the power of upsetting the equipoise unless the movement is initiated by those in authority.

The speculator takes advantage of the evil that has already been done.

Of all the great responsibilities that devolve upon governments, one of the greatest is that they should see to it that against every public instrument of promise to pay there shall be equal and far more than equal value of commodities or their equivalent to meet the promise when it is presented.

But the mind of man is resourceful and out of this welter of trouble he looks up and begins again to reconstruct. He turns to other leaders

either constitutionally or violently by revolution, he resorts again to barter, this for that, my work for your food. He establishes numerous small exchanges based on individual responsibility, he uses the established currency of other more favoured countries.

Perhaps by frequent changes of leadership he at last throws up some personality in whom he can put his trust. The small exchanges begin for convenience to group themselves together again and by degrees the column of public confidence is re-erected and the economic law re-asserts itself and the principle of equipoise between credit and commodities comes to his help.

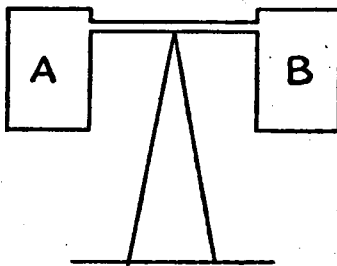
Once more commodities move with facility from where they are, to where they are wanted.

X

INTERNATIONAL EXCHANGE

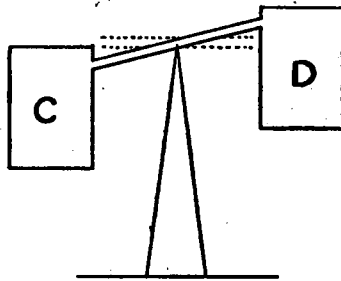
HITHERTO the writer has dealt with the economic law in the abstract but for the purpose of illustrating its working internationally, the reader must be asked to compress the abstract idea into its national limitations.

Fig. 1.



Normal conditions with exchange at parity.

Fig. 2.



When credits exceed commodities.

These figures are intended to represent the workings of exchange in two different countries.

In figure 1 exchange may be called normal, and in equilibrium or parity.

In figure 2 equipoise has been disturbed and credit is lower at C.

As described in the last chapter inflation is a cause of disturbance of equilibrium but there are other causes which it is not now proposed to enquire into.

It is desired to exchange commodities in B for commodities in D and, or, vice versa but the valuations of these different commodities are assessed to the credits in A and C the denominators in each are not at the same parity value. An adjustment therefore is now necessary. The credit in A calls for a larger quantity of the credit in C, that is to say an extra quantity sufficient to bring it up to the level of normal parity, before it consents to exchange.

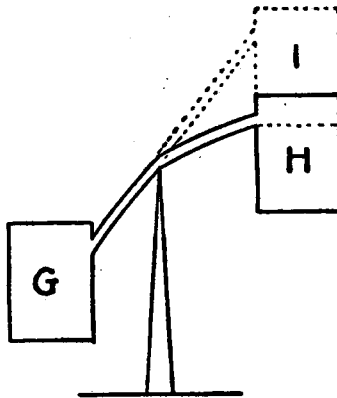
On the exchange of the credits the required exchange of the commodities follows automatically.

Extend this single example of exchange to all nations that wish to exchange with one another and the bulk quantities of the commodities that are to be so exchanged, cancel off the credits one against the other at the varying rates of exchange, transfer the balances in tax-free convenient commodities and there is the underlying principle of international exchange.

The example above is where a slight variation only in credit values exists.

The example below is where a large difference in values of credit exists due to inflation or catastrophe, etc.

Fig. 4.



Violent fall in a national exchange.

Whilst in figure 1 it will be seen that the connecting bar between credit and commodities is rigid and straight, that is where only slow variations take place. In figure 4 it will be noticed that this connecting bar becomes badly bent and strained.

The reason for this is that commodities cannot all of them respond at once to the new values occasioned by the violent action and reaction of credit.

With credit suddenly and violently depressed the corresponding position for commodities would be that as indicated by the dotted line. Some commodities like wheat, coal, iron,—articles of world-wide commerce—respond quickly. Commodities that apply more especially to the internal use of a nation, manufactures and services occurring within the nation, move more slowly, and cannot instantly respond and adjust themselves to the changes in credit.

This gives the speculator his chance, and establishes all the varying anomalies that arise in periods of violent fluctuations.

XI

THE PARASITIC GROWTH.

The writer who has referred to the idea of flow and return between credit and commodities might well be asked how this flow and return is maintained and what is the process of it.

The diagram almost answers the question.

It is the function of the banks to facilitate the flow of credit and in the constant changes of proprietorship to keep account thereof, so far as its operations apply to banking business.

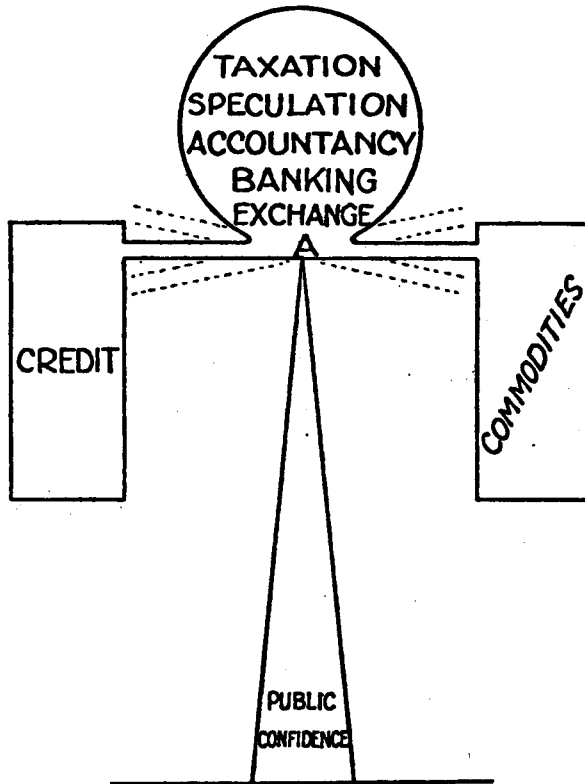
Are banks responsible for the whole of the movements of credit? Certainly not. Credit is influenced, retarded and facilitated by almost all commercial contracts and by an infinity of individual undertakings as well as by the use of public currency.

Credit is not originated by the banks, it is only partially directed by them.

Accountancy so far as it relates to money values is devoted to the same purpose. As it were, it catches the passing credit, adds to it or divides, relabels and sends it on its way again to the credit side of the scale.

The speculator is an observer.

He watches the movements and operation of the economic law and labels and relabels and labels again and again the credit over which he



has partial control. He is guided by what he sees, by what he hears, and by what he divines, but he is not always rightly guided for all that.

He has a regulating and sometimes a useful function to perform.

The tax gatherer also spreads the net of his cunning devices at point A and consumes or relabels the credit he catches according to law. Sometimes he raises artificially the value of certain commodities or services to the great applause of those he benefits. He forgets that by so much as he raises the commodity side of the scale or dips his hand into its contents for the expenses of his operations, by just so much he lowers the credit side of the scale and the unseeing, uncomplaining and unbenefited portion of the community have to work the harder to restore the inexorable equipoise.

He forgets also that the greatest service he can render after providing for safety and order, justice and education and some public services is to loose his grip on the media of exchange circulation.

Many of these monetary institutions with their ornate and pretentious buildings are in danger of becoming parasitic and may overbalance or retard the free and easy working of the law.

XII

COMMODITIES AGAIN

THE writer now desires to direct the reader's attention once more to the subject of commodities.

In Chapter V it has been shown at length that they consist of services and goods that can be purchased by money. An attempt has been made to define them and to show their limitations and their relative importance to other human impulses and motives. The economic law which is built up on these commodities is likewise thus defined, limited and put in its relative importance to other human instincts.

Now, so much depends on the accurate conception of commodities that it is worth while to try and still further define them.

The term service and goods implies that material is considered to form part of their value, but on fuller consideration it will be found that material of all sorts is negligible in value and only assumes value as it becomes the repository of, or vehicle for, the work labour and effort of men and animals and the mental energies of man.

The continent of North America was of little economic value until Columbus discovered it, and its enormous resources only assumed value as men spent their labour upon them.

The same is true of Central Africa and originally true of all parts of the world.

We can therefore in our effort to follow the working of the economic law rule out of the account any idea of material as such.

This enables us to say that the contents of the commodity side of the scale consist of the mental and physical efforts of mankind and the work of animals.

For convenience of expression the writer proposes to combine the foregoing definition into the one word "labour."

Now we have a clearer view of the whole matter. The focus is better. The details stand out more sharply. It is stereoscopic. New views come into the line of vision and new comparisons can be made. The problem can be freshly stated.

The whole of credit is raised against *labour* ; labour performed in the past or to be performed in the future.

An equipoise is established between credit and *labour*.

The whole business that is carried on in the

offices, buildings and the solid edifices of the banks and all the multifarious places where monetary accounts are kept, is for the purpose of assessing the right of one individual or group of individuals to direct the *labour* of another individual or group of individuals so far as that labour comes within the working of the economic law.

Now we see that the whole subject must have a close relationship with the matter of population.

The reader's mind will probably at this point run on and say, "Yes, but surely, if the problem is so simple cannot the machinery be simplified? Is it necessary to have all this complication of stocks and shares and all the speculation therein and all the other complicated monetary arrangements, to which so much thought, time, litigation and exceptional intelligence is devoted?" The writer's answer to this is, Yes, the opportunities for simplification seem unlimited. The combinations of capital now in process is one of them. Another suggested instalment to this simplification is the abolition of the fixed gold reserves.

A stock of over a thousand million sterling value in gold is held by the banks, treasuries or financial authorities of the English-speaking peoples.

XIII

EXCHANGE OF LABOUR

HAVING now reduced the problem to its simpler form, let us apply the idea to international exchange and obviously it resolves itself into ways and means by which the labour of one country can be exchanged for the labour of another country.

In the previous chapter it was said that material only assumes value as it becomes the repository of, or vehicle for the labour of men, etc.

International exchange therefore can take place in three ways.

First there is the transfer of credit in the form of money or certificates of labour. Secondly, in the form of commodities or material on which labour has been impressed. Thirdly, by the transfer of the labourer or worker himself by immigration.

The first of these is rapid in its movements, the last is deliberate and only moves under difficulties.

Credit moves quickly but the labourer moves slowly.

National prejudices and legislative restrictions

retard the movement of the labourer. Distance, the cost of travel, the uprooting of old associations, difference of language and traditions, and many other causes check the movement of the labourer.

But credit, which the legislator fails to harness or restrict, flies about the world with almost wireless rapidity, that is, provided there are money exchanges to which it can fly. This movement in relation to values might be likened to receiving and broadcasting stations as to sound.

By the nature of things, credit endeavours to present itself for exchange where labour is relatively cheap. It is guided by rates of interest.

Crédit sets up an impulse towards international exchange and thus promotes a process of levelling or equipoise between countries and accomplishes a similar result to that achieved by immigration.

The writer places great importance on the recognition of this principle and asks the reader to mark it well as he will refer again to it later on.

Let us repeat it in other words.

A country that has raised itself by industry to a high state of development and acquires by

the operations of the economic law large reserves of credit seeks to employ those reserves of credit or portions of them in countries where a less high standard of development has been attained, and thus a movement towards equipoise between countries is set up.

A highly developed country spreads its inventions and their results with surprising rapidity to other countries. It sends its emissaries to other countries to discover their resources and possibilities and finances thereon.

Official loans are raised by the less developed countries in the markets of the highly developed countries and in numerous ways the process of equipoise can be seen to be at work.

Many examples of this principle could be stated.

XIV

BEGINNINGS

It is sometimes easier to comprehend a general movement by observing the beginnings of it.

Is it not the case that when on the open ocean one has little opportunity of seeing the working of the tides and the effect of the waves upon the shore? It is only when standing on the coast that it becomes apparent that each wave seems possessed with an individuality and that no wave exactly repeats the action of the previous one, and also that each tide differs from its predecessor and even over a long period of time its continued effect differs. On one coast it is washing away the land and on another coast it is building it up.

But differing as they do, one can recognise over all certain fixed principles.

Wave *will* follow wave and tides *will* rise and fall and the sand and the shingle and the rocks *will* be washed and the balance of the world *will* be held true thereby.

In a less permanent degree the same idea is observable in the working of the economic law and as it progresses the balance of world values will be more or less truly held.

XV

EXAMPLES

It is now intended to cite some examples illustrative of the working of exchange in its earlier and initial stages.

The merchants of Gaul opened up trade and exchange with the people of Britain long before the conquest of the country by Julius Cæsar, and the Romans, as they developed their empire, required tribute or the price of labour. At a nearer period, William Penn to great advantage, opened up exchange with the Indians, who signed their treaties with a drawing of a tortoise. Commodore Perry forced open the door of Japan to trade at Nagasaki. The Huguenots in their flight from France, took with them their trades and industries and replanted them in other lands. In none of these instances was the idea of trade wholly new, but the spread of credit and its facilities has developed out of them.

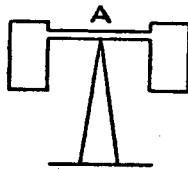
When Japan entered into her treaty with Commodore Perry in the days of her feudalism, her capital was a great and populous city. But how unlike the modern cities with which we are generally familiar. It spread over

a wide area. The artificers and merchants carried on their trades largely in the open streets and there was no apparent need to concentrate the public offices and marts in one central position.

The effect of the introduction of occidentalism was to erect large public buildings, to establish central railway stations and banks, open up wide avenues and streets and introduce modern conveyances.

Posts, telegraphs and telephones were founded and all the other institutions that are to be seen in capital cities were incorporated in a central part.

This was caused by the influence of the economic law, the central machinery of which seeks to group itself round the point A in our much used diagram.



Tokio now has a ring of generating stations with an aggregate installed capacity of 652,000 kw. of which approximately 75% is hydro-electric

and serves nearly 19,000 route miles of transmission and distribution lines.

Another instance of a different character came under the observation of the writer in a Japanese city of the widespread sort that flourished under feudalism. When the change came, a cotton mill was started with credit, machinery and direction from Great Britain.

Its immediate local effect was to provide increased employment and to pay for this labour a sum in excess of the price of labour for other existing occupations.

Soon another cotton mill was erected and this had the effect of still further increasing the rates of pay for labour.

These two mills were financially successful and paid a good interest on the credits employed.

Soon a third mill was erected, which competed for the labour of the other two mills and a further rise in the rates of labour was established.

The difference between the original price of labour in that city and the price established after the third mill had been erected, created a new market, and the supply of that new market itself became a new or increased industry.

The process, very slow at first, has gone on throughout Japan and thus new standards of wages have been brought about, new demands

have arisen, and new markets for its supply have developed. There has been a tendency for the rates of pay for labour to come nearer to the level of the rates of pay in other more developed countries.

Credit therefore in seeking a cheap labour market, has had the effect of bringing about a tendency to equalise the value of labour between the countries concerned.

This principle will be used in future chapters. The recognition of it is very important. May it be stated still again in another way.

In highly developed countries excesses of credit arise. The owners of this excess for the purposes of their own profit, seek out less developed countries where the rate of pay for labour is lower and employ their credits therein.

The effect of this is to raise the rates of pay for labour where credit is thus employed and to create ancillary markets.

By this means a movement towards equipoise in the rates of pay for labour is set up between various countries.

In its beginnings this is special and exceptional but in course of time the movement becomes general and applies to commodities and credits as a whole.

XVI

CREEPING OVER AFRICA

So important is the principle arrived at in the last chapter that the writer desires to test it from observation of quite another part of the world and under quite other conditions.

Will the reader try to visualise the conditions of economic exchange amongst the Matabele in Central Africa just after the death of their chief, Lobengula.

Their tribal life was the result of many generations of experience, and like feudalism, had run on for centuries. Their choice of commodities was extremely small and they had hardly any access to outside markets. The man in consequence secured barely enough for his family's subsistence but exchanged his daughters to the young men as wives at the price of cattle, a useful form of walking money under the conditions. The Matabele chiefs resented the interference of the white man with his commerce and trade, and a lasting feud arose which looked like continuing, when Cecil John Rhodes came on the scene. At this time two European

countries were pressing the Matabele for concessions which would have checkmated Mr. Rhodes' schemes for development towards the North. Something must be done to bring matters to a conclusion and Rhodes decided to direct his courage and his personality to the task. By arrangement he met the Matabele chiefs unarmed in the heart of the lonely Matopos. As he approached them five hundred armed warriors came from behind the granite boulders where they were concealed and threatened his life and person.

His three unarmed companions urged flight but Rhodes immediately left his horse and proceeded on foot into the midst of this menacing crowd. Single-handed, he soundly rated them for their deception and refused to parley with them until they had laid down their arms.

This they ultimately did and mutual terms of settlement were arranged.

The armed braves, delighted with his courage, called him "U-Rhodes, the great Chief, our Father," and undertook to follow his leadership, and as a reward he gave them salt and tobacco. Thus an exchange was accomplished, their allegiance was given for his commodities and the economic law began its inevitable course over 440,000 square miles of territory, which like

Pennsylvania, has been stamped with the name of its courageous founder.

To-day as the traveller goes luxuriously from the Zambesi to Cape Town, he can watch the operations of the law. The black population, unclothed at first, assume a shirt or a skirt or a hat or an adornment and then more and more possessions are in evidence, until they may be seen living in brick houses, working in mines, riding in railways and motor cars and using currency and exchange.

In their tribal state there was little room for these new forces that are now moving them, but the effect of the law is inexorable and even on material that at first is the most unresponsive it finally has its will and to attempt to check it in the end is unavailing.

Thus did Penn, Perry and Rhodes and many thousands of other case-hardened pioneers open the way to economic forces, of the results of which they had not the slightest conception.

XVII

CONJECTURE

WHILST the writer hopes that in preceding chapters he has sketched conclusions that are sound and defensible, he now professes to start on a more adventurous journey and asks the reader to set sail with him on a sea of conjecture and to cross an economic ocean which he thinks as yet is uncharted and unplumbed but not unknown. It will be the writer's endeavour to set some measure to these depths and to find an implement suited to the task. He asks to be allowed to use any symbolic means and comparisons that may direct the reader's attention to the harbour of conclusions that he hopes to reach.

If, however, the reader is unconvinced by the proceeding pages and looks on the results as "tosh" and the meanderings of an impudent fellow who ought to leave such matters to the recognised experts in finance, then he is advised to close this book with a bang and toss its remaining chapters into the waste paper basket, or better still, consign them to the ever hungry flames.

But if he chooses to sign on for the voyage, let a feeling of sympathy and confidence prevail, let a loose rein be given to the writer, let the eyes be turned upward and outward in expectation and not downward in criticism.

There is no intention to be exactly accurate in either the facts or the figures that will be quoted. They are generally for comparative purposes only.

But the writer must insist on taking with him as a guide the symbol of the scale and that this shall be the compass and the principle of equipoise be an instrument of measure with which he hopes to take soundings into the infinite possibilities of the human mind.

Hitherto the argument has mainly been relative to value in the abstract but now also the idea of volume must be introduced.

In the problem that is to be developed, the ordinary use of figures, piling up billions on billions, would not suffice to give the idea it is intended to convey. Dollars, sterling, francs, marks, and all such denominations fail to provide a measure of value suited to the occasion.

The unit of value that it is proposed to adopt is the whole of the commercial and industrial and of course financial activities of the United States of America as they were carried on about the year 1927. This is the unit.

The fact that the first four letters of our proposed measure of value spells UNIT is coincident and not intentional.

It is intended that the unit shall mainly include those activities described as commodities in Chapter V, together with the consequent credit that they can produce.

XVIII

THE UNIT

IN 1927 :

The United States of America had a quarter of a million miles of railroad.

It had 118,628,000 people and increases the population by $1\frac{1}{2}$ millions a year.

It produced 832 million bushels of wheat, 2,645 million bushels of corn, 1,323 million pounds of tobacco and 18 million bales of cotton.

It has eleven thousand millionaires.

Its coal, oil, timber and minerals are immense in quantity.

It has 22 million automobiles.

Its tourists spend 456 million dollars abroad.

It has nearly three million miles of roads.

The greatest ships in the world sail to and from its shores.

It has the tallest buildings and one of them will accommodate as many persons as a small town.

It has quadrupled its population in seventy-five years.

Its people are well fed, well educated and well

behaved, generous and kind. It is a grand country.

It has a long coast line on the Atlantic ocean and on the Pacific ocean.

It has not the largest population in the world but its wealth and activity per capita exceeds that of any other country.

Its people have a very intelligent appreciation of value and they answer with eagerness to the movements and requirements of the economic law.

It is said that the increased output per person from the year 1919 to the year 1926 was 40 per cent. This is due to labour-saving machinery and devices and the elimination of waste.

Year by year an increasing growth of mechanical economies is unfolding itself. It is particularly resourceful in meeting and overcoming calamities.

With regard to the Mississippi floods it is reported that "700,000 persons had been removed from their homes to safety and cared for. Eighty concentration camps, extending for a thousand miles, had been prepared, some of the camps accommodating 20,000 people. Altogether, over 340,000 individuals had been sheltered in these camps and more than 250,000 had been given rations outside the camps.

"Scores of thousands of these folk have been re-clothed, sanitation and health have been safeguarded, hundreds of thousands of them have been vaccinated, and hundreds of thousands more have been inoculated for typhoid. Outbreaks of contagious disease have been stamped out. Ills of which this mass of people would have been ignorant have been attended to by camp physicians. They have been given instruction in hygiene and in personal health. It is unhesitatingly stated that these people will be returned to their homes more sound in body and in mind than when they came."

This country has attracted millions of people from other lands, impressed its democratic stamp upon them and offered them new hope and new scope.

Its activities have been specially noticeable on its Western sea board, large cities have arisen and developed rapidly and in some senses have taken the lead in modern development.

It would seem as if the Westward rush had met a check on the shores of the Pacific ocean, and this had intensified its growth.

In this country of rapid development the accumulations of credit are beginning to look elsewhere, seriously, for their deployment.

This country, then, with all its multifarious inventions, ambitions, organisations and desires is the unit of value that it is proposed to use.

Computed partly on population, partly on bank clearances and partly on the output per person, it might be said to be three times as large as Great Britain.

It is not to be expected that the rate of increase of population will be maintained unchecked, as the figures have been swollen by immigration, but it is reasonable to estimate that it will be at least double its present number in 65-75 years' time and that there will be an appropriate increase in all its consequent operations.

There will then be found to be one additional unit, making two units together.

XIX

THE ORIENT

ON the other side of the Pacific Ocean is the Orient: Japan, China, Korea, Manchuria, Mongolia, Formosa. The writer, when speaking of these six countries as a whole, will call them "the Orient."

What is there between the Orient and the United States? The Pacific Ocean, a wonderful water-way. Thousands of the largest vessels could easily connect the two and could be increased quickly and indefinitely.

The combined population of the Orient is approximately four times that of the United States, but the total values of its earnings are much less.

Japan after the treaty with Commodore Perry about 1854 and the opening of her country to foreign trade and influence, has increased her wealth, her industry and her prestige. Her population has nearly doubled in the last forty years.

Manchuria has increased since the introduction of the economic law in the form of the trans-Manchurian railway. The increase in her

population from 15 millions in 1915 to 22 millions in 1924 is nearly 50 per cent. in ten years, partly due to immigration.

Korea and Formosa with Japanese credit and administration pouring into them increased rapidly.

What about China? Poor China! Great China!

How much she has suffered in the past.

How much she still suffers.

But what a future. It is this future that the writer dares to forecast and to measure.

The writer has seen in a narrow crowded street of a native city, a white man cracking his riding whip across the bare back of an overloaded coolie because he did not move his burden quickly. He remembered, after years, the look on the face of that coolie of intense hatred and resistance to white interference and brutality. The writer has also refused the invitation to witness the beheading of a prisoner provided as an afternoon pastime.

China, that revered the scholar and loved wisdom and fine feeling and knew how to express it when Europe was barbarous and the United States unknown.

China, who knew the use of paper money in the fourteenth century, A.D., and called it

“flying money,” “convenient money” and “evidence notes.” Ming notes printed on mulberry bark paper, promised “death to the counterfeiter,” and doubtless would have made the same promise to the inflationist.

But this is sentiment and the writer apologises for the outbreak and returns to within the tether of the economic law, itself based on sentiment.

Some guidance may be sought from the past, so the next chapter will be on the population of China, for many facts and figures concerning which the writer wishes to express his indebtedness to Mr. William Woodville Rockhill's report, published in 1905.

XX

CHINA'S POPULATION

CHINA'S population has been held in check by drought and consequent famine, by internal wars and rebellions, by floods, by female infanticide and infant mortality, by pestilence, plague and cholera, by absence of sanitation and the ignorance of hygiene, by the use of superstitious remedies instead of practical medical knowledge and by the absence of surgical practice. Contagious diseases of all sorts have been allowed to run their course.

In 1761 her population was said to be 190 millions, in 1812 360 millions, in 1842 413 millions, in 1882 381 millions and now it is estimated at 400 millions.

Between 1743 and 1783 it is recorded that there were no exceptional calamities, such as famine, flood, plague, cholera, or war, but infant mortality, bad sanitation, no hygiene, no practical medical knowledge, or surgical practice and ordinary contagious diseases were all running their course. During this period of forty years the average annual increase was said to be 1.83 per cent.

Figures are given for losses in the latter half

of the nineteenth century of over forty-seven millions, arising definitely from famine, rebellion and flood.

In 1854-1864 the T'ai-P'ing rebellion is said to have resulted in a loss of over 20 million lives. This was about equivalent to the total population of Great Britain at that time.

In 1849 13 $\frac{3}{4}$ millions died of famine.

In 1878 9 $\frac{1}{2}$ millions from the same cause.

The flooding of the Yellow river in 1888 cost two million lives.

In 1898 another flood of "China's sorrow" covered two hundred square miles with a deposit of salt and sand from two to ten feet deep.

The following three sentences are from Mr. Rockhill's report :

"Father Amiot, writing from Peking, May 20th, 1786, tells of a terrible drought which for the three past years had visited the provinces of Kiang-nan, Ho-nan, and Shan-tung. The people in vast numbers sought to reach other provinces, but thousands upon thousands died on the roads and their corpses were devoured by the survivors.

"As regards the extraordinary loss of life attending military operations in China, Du Halde states that in 1635 the Chinese, to defend the city of K'ai-feng Fu in Ho-nan against the rebels, cut

the Yellow River dikes. The whole city was submerged and 300,000 persons lost their lives.

"The history of Ch'ang Hsien-chung, told by Du Halde, by Father d'Orelans, by Father de Mailla, and others, is an example of what has frequently occurred in China during its long history. In the disturbed period which followed the overthrow of the Ming dynasty this person overran with his troops the provinces of Ho-nan, Kiang-nan, Kiang-hsi, and Ssü-ch'uan. It is said that for the slightest offence not only was the offender himself put to death, but the same punishment was visited on all the inhabitants of the same street. Five thousand eunuchs were beheaded because one of their number refused to treat him as Emperor. He called some 10,000 students to the examinations at Ch'êng-tu Fu in Ssü-ch'uan and had them all put to death. He had butchered over 600,000 persons in that province alone! On leaving Ch'êng-tu to march into the adjoining province of Shen-hsi he had all the inhabitants chained, led out of the city, and executed. Then he ordered his soldiers to put to death their own wives as troublesome impediments in times of war, and he gave the example by having his own wives executed. So reads his story. If it is not all true, much of it certainly is."

XXI

RESTRICTIONS REMOVED

THE reader will naturally say, how extraordinary that China with all those fearful drawbacks, disasters and devastations, should have been able not only to maintain but to increase her population.

Shall we now examine these restrictions and see how they might be affected by the operations of the economic law.

Famine! Who thinks of famine in the United States, with a quarter of a million miles of railway transportation.

If scarcity occurs in one part it is quickly remedied by supplies from another part of the world. Nobody starves.

China has 7,500 miles of railways, and others building.

But would not a million motor lorries or trucks, with the help of long-distance railways supply the necessary transportation at a cost of a thousand million dollars. Then allow two thousand million dollars for road repairs and reconstructions. Perhaps for three thousand million dollars the fear of famine can be

removed and the needs of four hundred million people supplied.

The United States has over twenty thousand million dollars invested in her railways alone to supply the needs of 120 million people.

Floods! In the great floods in the United States numerous lives are not lost. Wireless and telephony keep the endangered people informed and make escape possible. Wireless and telephony can do the same in the Yellow River as on the Mississippi and the engineers' ability is as effective in one country as another.

Infant mortality! Insanitation! Ignorance of Hygiene! A ring of broadcasting stations and twenty million receiving sets and instructors lecturing on the science of health and other subjects to schools and homes alike, and what would that do in half a generation?

It would also make, likin ridden, invertebrate China into a tightly knit entity.

The bonds that have held down population can be unknotted and the dread age-long fear of famine, flood and devastating disease removed.

The operations of the economic law and its efforts towards equipoise and equality are the instruments that can effect this reform, but when?

XXII

THE MEASURE OF TIME

CHINA has consistently resisted foreign interference. Towards the end of the nineteenth century arose a statesman high in the Councils of the Chinese Court, Li Hung Chang. He visited Europe and he and his attendants appeared in their rich oriental clothing in the social drawing rooms of London and elsewhere.

When he returned he took back to China a broader mind and a wider outlook.

Partly as a result of this, in the early years of the twentieth century, the Chinese government granted a number of railway and other concessions to foreigners. The populace, however, resented the encroachments of the iron road and pulled up by night the rails that were laid by day.

Li Hung Chang died. About this time came into prominence a forceful, wide-eyed young mandarin, who saw that occidental methods must be adopted. He secured sufficient influence to organise a fine, well drilled body of men, whose care it was to ceaselessly guard the railways and the stations and to whom the writer owed some protection in the past.

The name of the young mandarin, Yuen Shai Kai, might be associated with the names of Penn, Perry and Rhodes, already quoted as examples of the army of case-hardened personalities who have opened the way for the operations of the economic law.

About that time students from China were being sent to schools in Japan, some to the United States, and some even found their way to the Universities of Europe. These students have been replaced by others and a flow and return has been maintained ever since.

About that time also numbers of Chinese labourers were employed under white supervision in South Africa and earned a very good reputation. Thus and in many other ways an increasing intercourse between the once exclusive Orient and the ever-ready Occident has resulted.

Later the movement was accentuated by numbers of Chinese who were brought to Europe during the Great War for labour purposes and who crowded what remained of the streets of St. Quentin and the valley of the Somme, cheek by jowl, with tens of thousands of German prisoners. The return of these men to their own country provided another means of introducing to the Orient the ways and methods of the Occident.

About 1900-1903, the writer endeavoured to form some opinion as to the period of time that would elapse before the great change in the Orient would develop itself, and he then estimated it at about three short generations or from ninety to one hundred years. During the last twenty-five years this estimate has been justified by events.

The long-continued struggle for control seems like an inevitable phase of the change and the writer thinks that within a short period (shortened, if international help is accepted) it will result in the establishment of a constitution suited to the Oriental mind, which will be strong enough to command the respect of its own people, to safeguard its finances and assume their responsibilities and to open its ports to international intercourse in the same manner as is the case in other civilised countries. It will then be recognised by the governments of the world and the wave of development will begin apace. The writer expects that the full tide of this movement will be reached in about two generations or about sixty-five to seventy-five years and the estimate he is about to set before the reader is based on this period.

XXIII

THE TEMPERATE ZONE

FOR a time let us leave the immediate vicinity of the Pacific.

Let us glance at a map of the world under Mercator's projection with the object of establishing a very simple fact.

It is this. That the energetic peoples of the world have not flourished in the Arctic nor the Antarctic regions, and within the records of history they have not greatly flourished in the region of the Equator.

It may be said that the peoples that have shown the greatest vitality have flourished in the temperate zone and that therefore it is within the temperate zone that we must look for the human developments of the future.

XXIV

EAST TO WEST

THE object of this chapter is to show by reference to chronological history that the high tide of human vitality has almost consistently moved by the rise and fall of nations and empires from East to West and that the movement has been generally within the compass of the temperate zone.

The writer is not now prepared to discuss the cause for this direction but so much importance attaches to it that some reference to history seems inevitable.

The writer has not the matter that will enable him to trace this movement link by link across Asia prior to the time that Rameses II was making treaties to protect humanity and commerce with kings whom he had conquered in Asia Minor about 1450 B.C., but perhaps authorities could be found who would say that so far back as that, or even before that period, an advanced state of civilisation and evidences of industrialism already existed in China and Korea.

It is significant that the civilisation of the

Orient has been maintained intact up to the present day, whereas the Egyptian empire has totally disappeared.

In those remote days the spirit of empire and industrialism moved slowly and deliberately and meandered about. Centuries elapsed before any very decided steps were taken in the Western direction, but perhaps the Assyrian empire could be cited as a stepping stone to Greece.

Then Rome, with her long and penetrating influence, comes into view.

A long period passes, partly occupied by the Holy Roman Empire.

Presently the Spaniard ruled the seas, and after him the Dutchman traded with the world.

The French Empire pushed on the movement with a brief, brilliant and glorious career.

The tough hardy race that resisted Napoleon almost simultaneously discovered the power of steam and applied it.

From thence onward the westward movement has become comparatively a mad race.

Systems of transportation have followed one another with increasing rapidity.

The transatlantic movement so labouriously commenced by Columbus, has become a week of luxurious travel or a joy flight.

But let us pause for a moment and turn back to an empire most carefully planned and perfectly designed and yet which failed. Is it that the German Empire was born out of time and out of place, that the Western urge was not behind it, that it was too late, but that its people are now happier in sharing the fate of Europe than they would have been in dominating it?

To return to the Atlantic. Can any one say that the unprecedented development of America has not taken place in a Westward direction?

Has she not drawn, sometimes with the lure of gold and other magnetic forces since the days of the Pilgrim Fathers until now, millions of the most virile, adventurous and energetic from amongst the peoples of Europe.

Anyone standing on the shores of the Hudson river may see, day by day, and year after year, boat after boat in almost ceaseless procession, arrive from the East to the West with their expectant freight.

Many of these people after hesitancy in the Eastern States, have found their way westward along the lines of great railways that have been flung across the continent with feverish energy and haste.

Both literature and the drama set before the eyes in the East the Romance of the West. Young men and young women with good homes and settled prospects nevertheless pack their bags and join the Westward throng.

This movement has rushed forward until it has met the Pacific coast and in the "wash-up" a line of cities has come into rapid existence and one of them in California has reached an estimated population of 1,300,000 in the lifetime of a man.

In the meantime the whole country has become electrified. Electrified in fact and in spirit. Action, movement, zeal, animation.

HALT !!

Who cries halt! to such a movement?

Halt? Halt on the shores of the most placid water way in the world?

Halt? when its energies exceed its requirements?

Halt? when the Western urge has the sanction of centuries behind it?

Halt? when credit is seeking new markets in which to employ itself?

Halt? when there is still remedial work in the West to be done?

Halt! who cries Halt?

But if you don't cry halt you MUST cry

FORWARD!!!

and the case is won and the conception of a new
world springs into evidence.

So comes the completion of the circuit. The
welding of the rim. "The Cycle of Cathay."

XXV

THE ESTIMATE

THE term unit is intended to imply the whole of the economic activities of the United States. Its industries, commerce and finance; its credits and its commodities as they were in the year 1927.

The object of the table is to estimate the increase in these economic activities in an area covering the United States of America, the Pacific Ocean and the Orient (as previously defined) as it might be sixty-five to seventy-five years hence. The population of the United States is taken at 120 millions and the population of the Orient as 480 millions. The writer is alone responsible for the estimate.

In sixty-five to seventy-five years it is estimated that the population of the United States will have doubled.

In the last seventy-five years it has quadrupled but immigration has contributed largely to this. There are other reasons for thinking that that rate of increase may not be fully maintained.

Units of
Increase.

1 unit.

For the purposes of this estimate the writer is taking the industrial status of the individual worker in the United States at an average of five dollars per working day.

He is taking the average industrial status of the worker in the Orient at twenty-five cents per working day. There is little basis to go on for this estimate. If it is too high the ultimate results are affected very little.

If it is very much too low then the ultimate results will be proportionately different. As explained in previous chapters, the introduction of machinery, organisation and finance into low Oriental labour markets has the effect of raising wages with a tendency towards equalisation with other countries.

If, then, that tendency continued for sixty-five to seventy-five years and the value during that time of Oriental labour reached an average of \$2.75 per working day it would give an estimated increase of two units in the Orient.

2 units.

With security and the relief from catastrophic checks in the Oriental population, a violent rebound upwards in population may be expected. This expectation is sustained by the prospect of a new national hope and outlook, as well as by the age-long desire for progeny which has characterised Oriental thought for so long.

In sixty-five to seventy-five years it is not unreasonable to expect the Oriental population to nearly quadruple itself.

If this be so and an average individual industrial status of \$2.75 per working day be attained by the increased working population it gives a further six units to the estimate.

6 units.

Then in this period there is to be expected a further simplification of machinery of production and organisation, a better understanding of economics, many improved processes not yet discovered, increased longevity and more freedom from disease. But it must be remembered

that unforeseen checks to the movement are certain to arise.

Having all these matters in mind it is proposed to add one more unit to the calculation.

1 unit.

This is the total estimated increase in sixty-five to seventy-five years :

10 units
in all.

As the writer re-reads this forecast he becomes aware of a sense of smug precision unsuited to a problem so large and so complex and so widespread but the reader is asked to make allowance for this and to look on the estimate as relative and comparative only. It is the result of an endeavour to express in measured terms a vision of the future.

Again, as the table is perused it would appear that the figures are largely under-estimated. This is due to the writer's lack of courage and his amazement at the results already arrived at ; perhaps the reader can further adjust the figures to the possible facts and fill in more details.

The increase in the population of the United States will probably be much greater than estimated.

There are all the Pacific Islands and adjacent and near-by countries and their probable increase not taken into the account at all.

The Philippines, into which the United States was thrust by the sinking of the "Maine" and since has found them a suitable outpost from which to watch the gates of the Orient, must be taken into account.

In the next sixty-five to seventy-five years this estimate indicates that there will be in the region covered by the United States of America, the Pacific Ocean and the Orient, an increased industrial and financial activity equal to ten times the whole of the industrial and financial activities in the United States in the year 1927 and that eight-tenths ($\frac{8}{10}$ ths) of that increase will be on the Oriental side of the Pacific Ocean.

It will be noticed that the relative industrial status of the working individual in the Orient in sixty-five to seventy five years' time is estimated to have reached only a little over half the industrial status per person at present existing in the United States.

There is no reason why the industrial status of the individual in the Orient should not in time reach parity with the industrial status of the individual in the United States.

With the same or similar machinery and

organisation and the same will to perform, the accident of race is no bar to the same results.

It will be remembered that in previous chapters it was shown that the creation of unconsumed exchangeable commodities was the basis of credit and it will be therefore seen that this estimated increased Oriental activity will be capable of sustaining a credit that is equal to eight times the existing credit of the United States and that so far as the existing credit is seeking employment abroad now, so will that tendency be increased tenfold in sixty-five to seventy-five years' time.

The natural sequence to this is that the rate of interest will decrease and become very low, one per cent and less is easily conceivable, and that as the rates of interest decrease, the competition of credit to employ itself will increase and thus more than ever world-wide employment will wait on labour. Through the principle of equipoise a state of equality in material things will be brought about beyond the dreams of the most sanguine reformer. This, however, cannot fully occur until the economic law has worked out its results in all parts of the world.

Also it will be seen that the Orient will come

into control of large amounts of credit, so that it may become a foremost financial centre.

It is interesting but it need not be ominous to visualise a board of financial directors combining the large administrative ideas of the American and the subtle and rapier-like intellect of the Oriental. They might find a way to escape from this welter of nonproductive intricacies of stocks and shares, deferred and preference, founders and ordinary, debentures and consolidated, conversions, clean and dirty, watered and sound, at pars and premiums.

Hitherto unthought-of economies may come into the perspective and it is not impossible to imagine that there can arise a method or series of methods that will successfully replace cities full of office buildings for the purpose of assessing the right of the individual to command in the economic sense the services of his fellows.

XXVI

WAR AND COMMUNISM

CAN war stop this economic movement? No, but it can seriously check and deflect it. War with all its horrors and injustices, its pain, fear and discomfort, its licence to deception, its monotony and its aftermath of disappointment—bad as it is—it is incidental to the greater movement of re-creation, production and exchange.

And Communism, seeing only the glaring examples of individual inequalities and being blind to the kernel of necessity in which the economic law is operating, seeks to destroy the whole machinery and if successful produces a result not unlike that of inflation. Even if this destruction be accomplished, the urgent need of exchange re-asserts itself and the principle of equipoise is re-erected upon its mechanisms.

XXVII

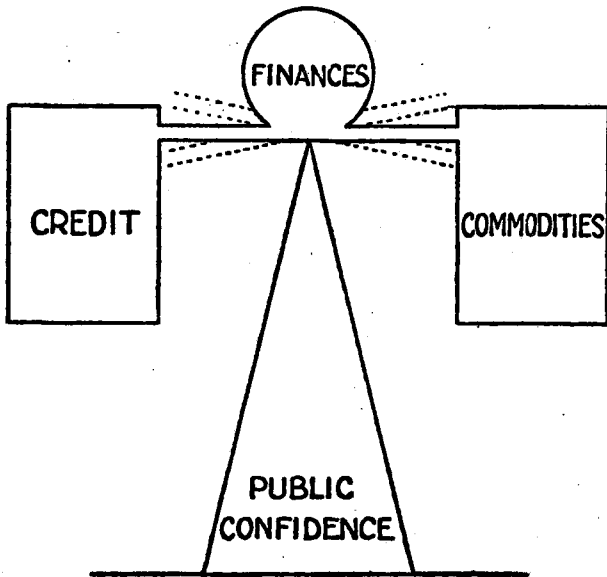
EUROPE

WELL ! what of Europe ?

Let her "strike sail."

Under treaty conditions let her abolish armaments, throw down dividing barriers, submit issues of public currency to international supervision and guarantee, cast overboard her gold reserves, think, work and play and set her helm right into the teeth of the economic cyclone arising around the Pacific and she can ride the impact with profit and advantage.

XXVIII
THE BRITON



FOR the last time attention is called to the diagram illustrating the writer's conception of the working of the economic law, and the above is intended to represent a healthy constitution. Based on a wide foundation of public confidence, there are dependent from the beam two receptacles for commodities on the one side and credit

on the other. At the point of incessant and ceaseless movement is the circulating head, the nerve centre, and the importance of keeping a free circulation and the operations of the head proportioned to the whole has been demonstrated.

The conduct of the function of the circulating media is of prime importance and on it the happiness of men and nations greatly depend.

To keep it steady, high character, a sense of justice and undoubted integrity is essential.

Is that the reason why the Briton has controlled the centre of the world's finance for so long, pays his debts and still keeps his sterling above par? Is it why the Briton has established colonies that have grown into large dominions and still attaches them to himself? Is it the secret of the power that has enabled him to administer with comparatively a handful of officials, most of Asia except the Orient, and with patience and ability to keep order where chaos such as has reigned in China would ensue? At the same time, step by step, train and encourage the Asiatics to erect for themselves that column of public confidence on which the economic law operates? Is it for this that fifty million native peoples elsewhere are dependent on the Briton, with his

cathedral influences for guidance and administration? Is it for this reason that China's welfare and financial soundness for years rested on the shoulders of a single Briton, Sir Robert Hart? Is this the reason that the British Government decided on the restrained defence of Shanghai and so steadied the whole transitory situation? Will it be to the British character that the Orient will turn again for counsel and advice as it has done in the past?

But it would seem inevitable that when the days of very rapid development arrive in the Orient it will be the countries bordering on the Pacific that will be mainly concerned.

XXIX

THE INDIVIDUAL

Now the harbour of conclusion has been reached and it is time for the travellers to part.

If the writer finds a reader who follows his reasoning with understanding then he is repaid for the expression of his thoughts and he parts from him with regret.

The high tides of human affairs are generally unperceived by the individual who day by day comes and goes on his appointed task.

In many of his interests and avocations he is independent of the economic law and may by the exercise of a Diogenic content almost entirely escape its influence.

If by chance he does look out on a great array of facts and figures none the less the individual, with his inexhaustible reserves of heart and intellect, remains paramount.

The part is greater than the whole.

With what vision he possesses he may see things as they are, a little of things as they have been and sometimes forecast something of things as they may be. Then he may fit himself into the pattern and so pay homage to a rich design.

CONCLUSION.

THE general recognition of the principle of equipoise between credits and commodities as previously defined would have the effect of releasing nearly two thousand million pounds sterling of human effort, as a first instalment of its results. That is the value of the gold holdings. The writer claims far more than this. It demonstrates a principle of economics, an automatic adjustment of money affairs. Even as he pens these words responsible governments are again making laws with the view of fixing the rates of exchange for currencies. A glance at the symbol of equipoise would show at once that any attempt to fix exchange is doomed to failure in the beginning. It can only lead to further complication, further distress and further disaster.

The value of sound money and free exchange is so important now and has so large a bearing on the future of the working world that no effort should be spared to recognise a clear principle.

Dealing as it does with the sum total of economic effort and invention it becomes

supremely important. There is no limit to its value. A misconception of it has so much power to destroy.

This book with the symbol of the scale claims to have set the recognition of this principle in order and to have made it clearer and more lasting.

The important application is this:—*That all issues of public currency should be secured against an equal value of actual commodities.* That is all.

If this principle be followed human happiness so far as it is affected by the economic law is further safeguarded in the future.

In applying the principle of equipoise between countries, to the largest economic problem within view, that is the prospective development of the Orient, a most surprising and amazing result is attained:—the expectation within a comparatively few years of a new world.

New populations and markets will arise on so large a scale that the whole outlook and balance of industrialism from one end of the world to the other will be changed.

There will be a new orientation.

All future economic policies will have to take this prospect into account.

The principle of equipoise between credits and commodities, the principle of industrial balance between countries, leading finally, by the operations of credit, to a greater economic equality amongst men and peoples, may provide a guide by which to construct, to judge and to measure the appropriate policies of the future.

APPENDIX I.

GOLD HOLDINGS OF CENTRAL BANKS AND GOVERNMENTS, END OF YEAR, 1927.

United States	..	..	..	3,977,181,000
England	..	..	..	741,698,000
France	..	..	..	710,339,000
Germany	..	..	..	444,158,000
Italy	..	..	..	239,180,000
Austria	..	..	..	11,883,000
Belgium	..	..	..	99,878,000
Bulgaria	..	..	..	9,250,000
Czechoslovakia	..	..	..	29,766,000
Denmark	..	..	..	48,780,000
Estonia	..	..	..	2,722,000
Finland	..	..	..	7,979,000
Greece	..	..	..	9,890,000
Hungary	..	..	..	34,432,000
Latvia	..	..	..	4,632,000
Lithuania	..	..	..	3,320,000
Netherlands	..	..	..	160,796,000
Norway	..	..	..	39,458,000
Poland	..	..	..	58,041,000
Portugal	..	..	..	9,267,000
Rumania	..	..	..	29,006,000
Russia	..	..	..	97,043,000
Spain	..	..	..	502,484,000
Sweden	..	..	..	61,685,000
Switzerland	..	..	..	99,785,000
Yugo-Slavia	..	..	..	17,133,000
Canada	..	..	..	151,978,000
Australia	..	..	..	105,121,000
New Zealand	..	..	..	38,280,000
S. Africa	..	..	..	40,032,000
India	..	..	..	119,097,000
Other Countries	..	..	..	1,299,303,000
Total in dollars	..	..	..	9,203,597,000

APPENDIX II.

CHINA'S POPULATION.

Extracted from Mr. Rockhill's Report.

Enumerations of the population of China, 1761, 1812, 1842, 1882 and 1885.

Provinces.	1761.	1812.	1842.	1882.	1885.
Chih-li	15,222,040	27,990,871	36,879,838	*17,937,000	*17,937,005
Shan-tung	25,180,734	28,958,764	29,529,877	36,247,835	36,545,704
Shan-hsi	9,768,189	14,004,210	17,056,925	12,211,453	10,791,341
Ho-nan	16,332,570	23,037,171	29,069,771	22,115,827	22,117,036
Kiang-su	23,161,409	37,843,501	39,646,924	20,905,171	21,259,989
An-hui	22,761,030	34,165,059	36,596,988	*20,596,988	*20,596,988
Fu-kien	8,063,671	14,779,158	25,799,556	25,000,000	23,502,794
Che-kiang	15,429,692	26,256,784	30,437,974	11,588,692	11,684,348
Hu-pei	8,080,603	27,370,008	28,584,564	33,365,005	33,600,492
Hu-nan	8,829,320	18,652,507	20,048,969	21,002,604	21,005,171
Shen-hsi	7,412,014	10,207,256	10,309,769	*8,432,193	3,276,967
Kan-su		15,354,875	19,512,716	*5,411,188	*5,411,188
Ssü-ch'uan	2,782,976	21,435,678	22,256,964	67,712,897	71,073,730
Kuang-tung	6,797,597	19,174,030	21,152,603	29,706,249	29,740,055
Kuang-hsi	3,947,414	7,313,895	8,121,327	*5,151,327	*5,151,327
Yün-nan	2,078,802	5,561,320	5,823,670	*11,721,576	*11,721,576
Kuei-chow	3,402,722	5,288,219	5,679,128	*7,669,181	*7,669,181
Kiang-hsi	11,006,640	23,046,999	26,513,889	24,534,118	24,541,406
Total	190,257,423	360,440,395	413,021,452	381,309,304	377,636,198

The figures given in the censuses of 1761, 1842, 1882, and 1885 were supplied to Father Amiot, Sacharoff, Popoff, and Rockhill by the Chinese Board of Revenue. Figures in the returns for 1882 and 1885 marked with an asterisk are those given to Sacharoff for the year 1879. They are the latest official estimates.

The figures given under the census of 1812 are taken from Sacharoff, whose authority was presumably the official Ta Ch'ing Hui-tien.

APPENDIX III.

WAGES OF WORKERS IN THE UNITED STATES IN CHIEF INDUSTRIES.

The chief industries (including kindred products) by value of products in 1925 with number of wage earners and amount of wages paid, were :

Class of Industries.	Wage Earners.	Wages. Dollars.
Food, etc.	664,760	793,681,000
Textiles, etc.	1,627,141	1,654,013,000
Iron and steel, etc. (not including machinery)	851,270	1,284,339,000
Chemicals, etc.	380,595	505,886,000
Transportation equipment, air, land and water	559,578	908,488,000
Machinery (not including transport equipment)	858,843	1,225,359,000
Paper, printing, etc	536,766	805,516,000
Lumber, etc.	921,145	978,375,000
Metals and metal products other than iron and steel	275,292	380,781,000
Leather and its manufactures	315,288	356,246,000
Stone, clay and glass	353,036	467,012,000
Railroad repair shops	457,755	668,192,000
Rubber products	141,121	190,563,000
Tobacco manufacture	132,132	111,558,000

APPENDIX IV.

AVERAGE DAILY EARNINGS IN THIRTEEN IMPORTANT CITIES IN JAPAN.

February, 1928.

Industry.	Yen reckon 2 yen to the dollar (about 2/-)
<i>Textiles :</i>	
Silk filature—Women	0.84
Cotton spinning—Women	1.14
Silk twisted threads—Women .. .. .	.84
Cotton machine weaving	1.03
Silk hand-weaving	1.15
Knitted Goods—Men	1.70
" Women .. .. .	.83
<i>Metals :</i>	
Turning	2.35
Finishing	2.42
Casting	2.38
Founding	2.33
<i>Ceramic :</i>	
Porcelain	1.99
Glass	2.09
Cement	2.06
Bricks	1.87
Tiles	1.92
<i>Other Industries :</i>	
Industrial Drugs	1.62
Matches—Men	1.42
" Women .. .. .	.66
Oil	1.85
Japanese paper	1.47
European paper	1.71
Leather	2.14
Flower	1.88
Sake brewing	1.92

The above figures apply to skilled industries in important cities only. If rural and agricultural rates of pay and servants and labourers were included the average would be reduced.

A comparison of these rates of pay with those in practice under feudal conditions shows that Japan has already advanced some way along the road towards national equipoise.

From China no statistics are available but the industrial Movement referred to is in its infancy. The daily rates of pay are very low and probably the estimate made for the average of the whole of the Orient is not seriously understated. It will be remembered that there is a very large preponderance of population in China.

APPENDIX V.

UNITED STATES.

POSITION OF THE CENTRE OF POPULATION: 1790-1920.

[The centre of population may be said to represent the centre of gravity of the population. If the surface of the United States be considered as a rigid level plane without weight, capable of sustaining the population distributed thereon, individuals being assumed to be of equal weight and the plane to be supported, as on a pivotal point, at its centre of gravity, the influence of each individual in maintaining the equilibrium of the plane would be directly proportional to his distance from the pivotal point or centre of gravity. This is the point referred to by the term "centre of population."]

CENSUS YEAR.	LOCATION.						APPROXIMATE LOCATION BY IMPORTANT TOWNS.	MOVEMENT IN MILES DURING PRECEDING DECADE.			
	North Latitude.			West Longitude.				From point to point in direct line.	Westward.	Northward.	Southward.
1790	39	16	30	76	11	12	23 miles east of Baltimore, Md. . . . .	..	..	..	..
1800	39	16	6	76	56	30	18 miles west of Baltimore, Md.	40.6	40.6	..	0.5
1810	39	11	30	77	37	12	40 miles northwest by west of Washington, D.C. (in Va.)	36.9	36.5	..	5.3
1820	39	5	42	78	33	0	16 miles east of Moorefield, W. Va.	50.5	50.1	..	6.7
1830	38	57	54	79	16	54	19 miles west-southwest of Moorefield, W. Va.	40.4	39.4	..	9.0
1840	39	2	0	80	18	0	16 miles south of Clarksburg, W. Va.	55.0	54.8	4.7	..
1850	38	59	0	81	19	0	23 miles southeast of Parkersburg, W. Va.	54.8	54.7	..	3.5
1860	39	0	24	82	48	48	20 miles south by east of Chillicothe, Ohio	80.6	80.6	1.6	..
1870	39	12	0	83	35	42	48 miles east by north of Cincinnati, Ohio	44.1	42.1	13.3	..
1880	39	4	8	84	39	40	8 miles west by south of Cincinnati, Ohio (in Ky.)	58.1	57.4	..	9.1
1890	39	11	56	85	32	53	20 miles east of Columbus, Ind.	48.6	47.7	9.0	..
1900	39	9	36	85	48	54	6 miles southeast of Columbus, Ind.	14.6	14.4	..	2.8
1910	39	10	12	86	32	20	In the city on Bloomington, Ind.	39.0	38.9	0.7	..
1920	39	10	21	86	43	15	1.9 miles west of Whitehall, Clay township, Owen County, Ind. 8.3 miles south-southeast of Spencer, Washington township, Owen County, Ind.	9.8	9.8	0.2	..

From the report of the Fourteenth Census of the United States, 1920, Department of Commerce, Washington. Showing the movement of the centre of population in a Westward direction.