# The General Theory of Employment, Interest, and Money

John Maynard Keynes

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John Maynard Keynes
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# Preface

This book is chiefly addressed to my fellow economists. I hope that it will be intelligible to others. But its main purpose is to deal with difficult questions of theory, and only in the second place with the applications of this theory to practice. For if orthodox economics is at fault, the error is to be found not in the superstructure, which has been erected with great care for logical consistency, but in a lack of clearness and of generality in the premisses. Thus I cannot achieve my object of persuading economists to re-examine critically certain of their basic assumptions except by a highly abstract argument and also by much controversy. I wish there could have been less of the latter. But I have thought it important, not only to explain my own point of view, but also to show in what respects it departs from the prevailing theory. Those, who are strongly wedded to what I shall call 'the classical theory', will fluctuate, I expect, between a belief that I am quite wrong and a belief that I am saying nothing new. It is for others to determine if either of these or the third alternative is right. My controversial passages are aimed at providing some material for an answer; and I must ask forgiveness if, in the pursuit of sharp distinctions, my controversy is itself too keen. I myself held with conviction for many years the theories which I now attack, and I am not, I think, ignorant of their strong points.

The matters at issue are of an importance which cannot be exaggerated. But, if my explanations are right, it is my fellow economists, not the general public, whom I must first convince. At this stage of the argument the general public, though welcome at the debate, are only eavesdroppers at an attempt by an economist to bring to an issue the deep divergences of opinion between fellow economists which have for the time being almost destroyed the practical influence of economic theory, and will, until they are resolved, continue to do so.

The relation between this book and my *Treatise on Money* [*JMK* vols. v and vi], which I published five years ago, is probably clearer to myself than it will be to others; and what in my own mind is a natural evolution in a line of thought which I have been pursuing for several years, may sometimes strike the reader as a confusing change of view. This difficulty is not made less by certain changes in terminology which I have felt compelled to make. These changes of language I have pointed out in the course of the following pages; but the general relationship between the two books can be expressed briefly as follows. When I began to write my *Treatise on Money* I was still moving along the traditional lines of regarding the influence of money as something so to speak separate from the general theory of supply and demand. When I finished it, I had made some progress towards pushing monetary theory back to becoming a theory of output as a whole. But my lack of emancipation from preconceived ideas showed itself in what now seems to me to be the outstanding fault of the theoretical parts of that work (namely, Books III and IV), that I failed to deal thoroughly with the effects of *changes* in the level of output. My so-called 'fundamental equations' were an instantaneous picture taken on the assumption of a given output. They attempted to show how, assuming the given output, forces could develop which involved a profit-disequilibrium, and thus required a change in the level of output. But the dynamic development, as distinct from the instantaneous picture, was left incomplete and extremely confused. This book, on the other hand, has evolved into what is primarily a study of the forces which determine changes in the scale of output and employment as a whole; and, whilst it is found that money enters into the economic scheme in an essential and peculiar manner, technical monetary detail falls into the background. A monetary economy, we shall find, is essentially one in which changing views about the future are capable of influencing the quantity of employment and not merely its direction. But our method of analysing the economic behaviour of the present under the influence of changing ideas about the future is one which depends on the interaction of supply and demand, and is in this way linked up with our fundamental theory of value. We are thus led to a more general theory, which includes the classical theory with which we are familiar, as a special case.

The writer of a book such as this, treading along unfamiliar paths, is extremely dependent on criticism and conversation if he is to avoid an undue proportion of mistakes. It is astonishing what foolish things one can temporarily believe if one thinks too long alone, particularly in economics (along with the other moral sciences), where it is often impossible to bring one's ideas to a conclusive test either formal or experimental. In this book, even more perhaps than in writing my *Treatise on Money*, I have depended on the constant advice and constructive criticism of Mr R. F. Kahn. There is a great deal in this book which would not have taken the shape it has except at his suggestion. I have also had much help from Mrs Joan Robinson, Mr R. G. Hawtrey and Mr R. F. Harrod, who have read the whole of the proof-sheets. The index has been compiled by Mr D. M. Bensusan-Butt of King's College, Cambridge.

The composition of this book has been for the author a long struggle of escape, and so must the reading of it be for most readers if the author's assault upon them is to be successful,—a struggle of escape from habitual modes of thought and expression. The ideas which are here expressed so laboriously are extremely simple and should be obvious. The difficulty lies, not in the new ideas, but in escaping from the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds.

13 December 1935 J. M. Keynes

# Preface to the German Edition

Alfred Marshall, on whose *Principles of Economics* all contemporary English economists have been brought up, was at particular pains to emphasise the continuity of his thought with Ricardo's. His work largely consisted in grafting the marginal principle and the principle of substitution on to the Ricardian tradition; and his theory of output and consumption as a whole, as distinct from his theory of the production and distribution of a *given* output, was never separately expounded. Whether he himself felt the need of such a theory, I am not sure. But his immediate successors and followers have certainly dispensed with it and have not, apparently, felt the lack of it. It was in this atmosphere that I was brought up. I taught these doctrines myself and it is only within the last decade that I have been conscious of their insufficiency. In my own thought and development, therefore, this book represents a reaction, a transition away from the English classical (or orthodox) tradition. My emphasis upon this in the following pages and upon the points of my divergence from received doctrine has been regarded in some quarters in England as unduly controversial. But how can one brought up a Catholic in English economics, indeed a priest of that faith, avoid some controversial emphasis, when he first becomes a Protestant?

But I fancy that all this may impress German readers somewhat differently. The orthodox tradition, which ruled in nineteenth century England, never took so firm a hold of German thought. There have always existed important schools of economists in Germany who have strongly disputed the adequacy of the classical theory for the analysis of contemporary events. The Manchester School and Marxism both derive ultimately from Ricardo,—a conclusion which is only superficially surprising. But in Germany there has always existed a large section of opinion which has adhered neither to the one nor to the other.

It can scarcely be claimed, however, that this school of thought has erected a rival theoretical construction; or has even attempted to do so. It has been sceptical, realistic, content with historical and empirical methods and results, which discard formal analysis. The most important unorthodox discussion on theoretical lines was that of Wicksell. His books were available in German (as they were not, until lately, in English); indeed one of the most important of them was written in German. But his followers were chiefly Swedes and Austrians, the latter of whom combined his ideas with specifically Austrian theory so as to bring them in effect, back again towards the classical tradition. Thus Germany, quite contrary to her habit in most of the sciences, has been content for a whole century to do without any formal theory of economics which was predominant and generally accepted.

Perhaps, therefore, I may expect less resistance from German, than from English, readers in offering a theory of employment and output as a whole, which departs in important respects from the orthodox tradition. But can I hope to overcome Germany's economic agnosticism? Can I persuade German economists that methods of formal analysis have something important to contribute to the interpretation of contemporary events and to the moulding of contemporary policy? After all, it is German to like a theory. How hungry and thirsty German economists must feel after having lived all these years without one! Certainly, it is worth while for me to make the attempt. And if I can contribute some stray morsels towards the preparation by German economists of a full repast of theory designed to meet specifically German conditions, I shall be content. For I confess that much of the following book is illustrated and expounded mainly with reference to the conditions existing in the Anglo-Saxon countries.

Nevertheless the theory of output as a whole, which is what the following book purports to provide, is much more easily adapted to the conditions of a totalitarian state, than is the theory of the production and distribution of a given output produced under conditions of free competition and a large measure of laissez-faire. The theory of the psychological laws relating consumption and saving, the influence of loan expenditure on prices and real wages, the part played by the rate of interest—these remain as necessary ingredients in our scheme of thought.

I take this opportunity to acknowledge my indebtedness to the excellent work of my translator Herr Waeger (I hope his vocabulary at the end of this volume[1] may prove useful beyond its immediate purpose) and to my publishers, Messrs Duncker and Humblot, whose enterprise, from the days now sixteen years ago when they published my *Economic Consequences of the Peace*, has enabled me to maintain contact with German readers.

7 September 1936 J. M. Keynes

[1] Not printed in this edition [Ed.].

# Preface to the Japanese Edition

Alfred Marshall, on whose *Principles of Economics* all contemporary English economists have been brought up, was at particular pains to emphasise the continuity of his thought with Ricardo's. His work largely consisted in grafting the marginal principle and the principle of substitution on to the Ricardian tradition; and his theory of output and consumption as a whole, as distinct from his theory of the production and distribution of a *given* output, was never separately expounded. Whether he himself felt the need of such a theory, I am not sure. But his immediate successors and followers have certainly dispensed with it and have not, apparently, felt the lack of it. It was in this atmosphere that I was brought up. I taught these doctrines myself and it is only within the last decade that I have been conscious of their insufficiency. In my own thought and development, therefore, this book represents a reaction, a transition away from the English classical (or orthodox) tradition. My emphasis upon this in the following pages and upon the points of my divergence from received doctrine has been regarded in some quarters in England as unduly controversial. But how can one brought up in English economic orthodoxy, indeed a priest of that faith at one time, avoid some controversial emphasis, when he first becomes a Protestant?

Perhaps Japanese readers, however, will neither require nor resist my assaults against the English tradition. We are well aware of the large scale on which English economic writings are read in Japan, but we are not so well informed as to how Japanese opinions regard them. The recent praiseworthy enterprise on the part of the International Economic Circle of Tokyo in reprinting Malthus's 'Principles of Political Economy' as the first volume in the Tokyo Series of Reprints encourages me to think that a book which traces its descent from Malthus rather than Ricardo may be received with sympathy in some quarters at least.

At any rate I am grateful to the *Oriental Economist* for making it possible for me to approach Japanese readers without the extra handicap of a foreign language.

4 December 1936 J. M. Keynes

# Preface to the French Edition

For a hundred years or longer English Political Economy has been dominated by an orthodoxy. That is not to say that an unchanging doctrine has prevailed. On the contrary. There has been a progressive evolution of the doctrine. But its presuppositions, its atmosphere, its method have remained surprisingly the same, and a remarkable continuity has been observable through all the changes. In that orthodoxy, in that continuous transition, I was brought up. I learnt it, I taught it, I wrote it. To those looking from outside I probably still belong to it. Subsequent historians of doctrine will regard this book as in essentially the same tradition. But I myself in writing it, and in other recent work which has led up to it, have felt myself to be breaking away from this orthodoxy, to be in strong reaction against it, to be escaping from something, to be gaining an emancipation. And this state of mind on my part is the explanation of certain faults in the book, in particular its controversial note in some passages, and its air of being addressed too much to the holders of a particular point of view and too little *ad urbem et orbem.* I was wanting to convince my own environment and did not address myself with sufficient directness to outside opinion. Now three years later, having grown accustomed to my new skin and having almost forgotten the smell of my old one, I should, if I were writing afresh, endeavour to free myself from this fault and state my own position in a more clear-cut manner.

I say all this, partly to explain and partly to excuse, myself to French readers. For in France there has been no orthodox tradition with the same authority over contemporary opinion as in my own country. In the United States the position has been much the same as in England. But in France, as in the rest of Europe, there has been no such dominant school since the expiry of the school of French Liberal economists who were in their prime twenty years ago (though they lived to so great an age, long after their influence had passed away, that it fell to my duty, when I first became a youthful editor of the *Economic Journal* to write the obituaries of many of them—Levasseur, Molinari, Leroy-Beaulieu). If Charles Gide had attained to the same influence and authority as Alfred Marshall, your position would have borne more resemblance to ours. As it is, your economists are eclectic, too much (we sometimes think) without deep roots in systematic thought. Perhaps this may make them more easily accessible to what I have to say. But it may also have the result that my readers will sometimes wonder what I am talking about when I speak, with what some of my English critics consider a misuse of language, of the 'classical' school of thought and 'classical' economists. It may, therefore, be helpful to my French readers if I attempt to indicate very briefly what I regard as the main *differentiae* of my approach.

I have called my theory a *general* theory. I mean by this that I am chiefly concerned with the behaviour of the economic system as a whole,—with aggregate incomes, aggregate profits, aggregate output, aggregate employment, aggregate investment, aggregate saving rather than with the incomes, profits, output, employment, investment and saving of particular industries, firms or individuals. And I argue that important mistakes have been made through extending to the system as a whole conclusions which have been correctly arrived at in respect of a part of it taken in isolation.

Let me give examples of what I mean. My contention that for the system as a whole the amount of income which is saved, in the sense that it is not spent on current consumption, is and must necessarily be exactly equal to the amount of net new investment has been considered a paradox and has been the occasion of widespread controversy. The explanation of this is undoubtedly to be found in the fact that this relationship of equality between saving and investment, which necessarily holds good for the system as a whole, does not hold good at all for a particular individual. There is no reason whatever why the new investment for which I am responsible should bear any relation whatever to the amount of my own savings. Quite legitimately we regard an individual's income as independent of what he himself consumes and invests. But this, I have to point out, should not have led us to overlook the fact that the demand arising out of the consumption and investment of one individual is the source of the incomes of other individuals, so that incomes in general are not independent, quite the contrary, of the disposition of individuals to spend and invest; and since in turn the readiness of individuals to spend and invest depends on their incomes, a relationship is set up between aggregate savings and aggregate investment which can be very easily shown, beyond any possibility of reasonable dispute, to be one of exact and necessary equality. Rightly regarded this is a banale conclusion. But it sets in motion a train of thought from which more substantial matters follow. It is shown that, generally speaking, the actual level of output and employment depends, not on the capacity to produce or on the pre-existing level of incomes, but on the current decisions to produce which depend in turn on current decisions to invest and on present expectations of current and prospective consumption. Moreover, as soon as we know the propensity to consume and to save (as I call it), that is to say the result for the community as a whole of the individual psychological inclinations as to how to dispose of given incomes, we can calculate what level of incomes, and therefore what level of output and employment, is in profit-equilibrium with a given level of new investment; out of which develops the doctrine of the Multiplier. Or again, it becomes evident that an increased propensity to save will *ceteris paribus* contract incomes and output; whilst an increased inducement to invest will expand them. We are thus able to analyse the factors which determine the income and output of the system as a whole;—we have, in the most exact sense, a theory of employment. Conclusions emerge from this reasoning which are particularly relevant to the problems of public finance and public policy generally and of the trade cycle.

Another feature, specially characteristic of this book, is the theory of the rate of interest. In recent times it has been held by many economists that the rate of current saving determined the supply of free capital, that the rate of current investment governed the demand for it, and that the rate of interest was, so to speak, the equilibrating price-factor determined by the point of intersection of the supply curve of savings and the demand curve of investment. But if aggregate saving is necessarily and in all circumstances exactly equal to aggregate investment, it is evident that this explanation collapses. We have to search elsewhere for the solution. I find it in the idea that it is the function of the rate of interest to preserve equilibrium, not between the demand and the supply of new capital goods, but between the demand and the supply of money, that is to say between the demand for *liquidity* and the means of satisfying this demand. I am here returning to the doctrine of the older, pre-nineteenth century economists. Montesquieu, for example, saw this truth with considerable clarity,[1]—Montesquieu who was the real French equivalent of Adam Smith, the greatest of your economists, head and shoulders above the physiocrats in penetration, clear-headedness and good sense (which are the qualities an economist should have). But I must leave it to the text of this book to show how in detail all this works out.

I have called this book the *General Theory of Employment, Interest and Money*; and the third feature to which I may call attention is the treatment of money and prices. The following analysis registers my final escape from the confusions of the Quantity Theory, which once entangled me. I regard the price level as a whole as being determined in precisely the same way as individual prices; that is to say, under the influence of supply and demand. Technical conditions, the level of wages, the extent of unused capacity of plant and labour, and the state of markets and competition determine the supply conditions of individual products and of products as a whole. The decisions of entrepreneurs, which provide the incomes of individual producers and the decisions of those individuals as to the disposition of such incomes determine the demand conditions. And prices—both individual prices and the price-level—emerge as the resultant of these two factors. Money, and the quantity of money, are not direct influences at this stage of the proceedings. They have done their work at an earlier stage of the analysis. The quantity of money determines the supply

[1] I have particularly in mind Book xxii, chap. 19 of *L'Esprit des lois.*

of liquid resources, and hence the rate of interest, and in conjunction with other factors (particularly that of confidence) the inducement to invest, which in turn fixes the equilibrium level of incomes, output and employment and (at each stage in conjunction with other factors) the price-level as a whole through the influences of supply and demand thus established.

I believe that economics everywhere up to recent times has been dominated, much more than has been understood, by the doctrines associated with the name of J.-B. Say. It is true that his 'law of markets' has been long abandoned by most economists; but they have not extricated themselves from his basic assumptions and particularly from his fallacy that demand is created by supply. Say was implicitly assuming that the economic system was always operating up to its full capacity, so that a new activity was always in substitution for, and never in addition to, some other activity. Nearly all subsequent economic theory has depended on, in the sense that it has required, this same assumption. Yet a theory so based is clearly incompetent to tackle the problems of unemployment and of the trade cycle. Perhaps I can best express to French readers what I claim for this book by saying that in the theory of production it is a final break-away from the doctrines of J.-B. Say and that in the theory of interest it is a return to the doctrines of Montesquieu.

King's College J. M. Keynes
Cambridge, UK
20 February 1939

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# Introduction by Paul Krugman

History may not repeat itself, but sometimes the rhyming is pretty spectacular. That's definitely true when it comes to recent macroeconomic events: the financial crisis of 2008 was all too reminiscent of the bank runs of the 1930s, and the protracted period of high unemployment that followed clearly echoed the Great Depression. And everything old was new again when it came to policy, too: in response to these shocks, many economists called for policies—like temporary fiscal stimulus to boost spending—whose roots obviously lay in a three-generations-old book, John Maynard Keynes's *The General Theory of Employment, Interest, and Money*. Some politicians even listened to these economists' advice.

Others, especially economists who had pronounced Keynesian economics dead decades before, were appalled. Keynesian ideas had been "proved false", declared John Cochrane of the University of Chicago. His colleague, Nobel laureate Robert Lucas, denounced the analysis behind President Obama's stimulus plan as "schlock economics". And while some governments did follow Keynesian policies, fear of budget deficits eventually led a number of countries into austerity policies that were the opposite of Keynesian.

What nobody could deny was that Keynes was relevant again. At one of the many post-crisis conferences on new economic thinking, the econ-


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omist Mark Thoma famously remarked that new economic thinking largely seemed to involve reading old books. First and foremost among those old books, surely, was *The General Theory*.

In this introduction I will address six issues concerning *The General Theory*. First is the book's message—something that ought to be clear from the book itself, but which has often been obscured by those who project their fears or hopes on to Keynes. Second is the question of how Keynes did it: why did he succeed, where others had failed, in convincing the world to accept economic heresy? Third is the question of how much of *The General Theory* remains in today's macroeconomics: are we all Keynesians now, or have we either superseded Keynes's legacy, or, some say, betrayed it? Fourth is the question of how Keynes has held up in the crisis and aftermath. Fifth is the question of what Keynes missed, and why. Finally, I will discuss how Keynes changed economics, and the world.

## The Message of Keynes

It is probably safe to assert that many of those who denounce Keynes—and even some of who claim to support his ideas—have never read his work. In particular, it's often assumed that *The General Theory* is a leftist tract, a call for big government and high taxes.

In fact, the arrival of Keynesian economics in American classrooms was delayed by a nasty case of academic McCarthyism. The first introductory textbook to present Keynesian thinking, written by the Canadian economist Lorie Tarshis, was targeted by a right-wing pressure campaign aimed at university trustees. As a result of this campaign, many universities that had planned to adopt the book for their courses cancelled their orders, and sales of the book, which was initially very successful, collapsed. Professors at Yale University, to their credit, continued to assign the book; their reward was to be attacked by the young William F. Buckley for propounding "evil ideas".[1]

[1] For a hair-raising account of the coordinated effort to prevent American students from learning Keynesian economics, read David Colander and Harry Landreth's *The Coming of Keynesianism to America*, Edward Elgar, 1996.

But Keynes was no socialist—he came to save capitalism, not to bury it. And there's a sense in which *The General Theory* was, given the time it was written, a conservative book. (Keynes himself declared that in some respects his theory was "moderately conservative in its implications" 377). Keynes wrote during a time of mass unemployment, of waste and suffering on an incredible scale. A reasonable man might well have concluded that capitalism had failed, and that only huge institutional changes—perhaps the nationalization of the means of production—could restore economic sanity. Many reasonable people did, in fact, reach that conclusion: large numbers of British and American intellectuals who had no particular antipathy toward markets and private property became socialists during the depression years simply because they saw no other way to remedy capitalism's colossal failures.

Yet Keynes argued that these failures had surprisingly narrow, technical causes. "We have magneto [alternator] trouble" he wrote in 1930, as the world was plunging into depression.[2] And because Keynes saw the causes of mass unemployment as narrow and technical, he argued that the problem's solution could also be narrow and technical: the system needed a new alternator, but there was no need to replace the whole car. In particular, "no obvious case is made out for a system of State Socialism which would embrace most of the economic life of the community" (378). While many of his contemporaries were calling for government takeover of the whole economy, Keynes argued that much less intrusive government policies could ensure adequate effective demand, allowing the market economy to go on as before.

Still, there is a sense in which free-market fundamentalists are right to hate Keynes. If your doctrine says that free markets, left to their own devices, produce the best of all possible worlds, and that government intervention in the economy always makes things worse, Keynes is your enemy. And he is an especially dangerous enemy because his ideas have been vindicated so thoroughly by experience.

Stripped down, the conclusions of *The General Theory* might be expressed as four bullet points:

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[2] "The Great Slump of 1930", reprinted in *Essays in Persuasion, The Collected Writings of John Maynard Keynes*, Macmillan for the Royal Economic Society, 1972, volume IX, p. 129.

- Economies can and often do suffer from an overall lack of demand, which leads to involuntary unemployment
- The economy's automatic tendency to correct shortfalls in demand, if it exists at all, operates slowly and painfully
- Government policies to increase demand, by contrast, can reduce unemployment quickly
- Sometimes increasing the money supply won't be enough to persuade the private sector to spend more, and government spending must step into the breach

To a modern practitioner of economic policy, none of this—except, possibly, the last point—sounds startling or even especially controversial. But these ideas were not just radical when Keynes proposed them; they were very nearly unthinkable. And the great achievement of *The General Theory* was precisely to make them thinkable.

## How Keynes Did It

At a guess, most contemporary economists, if they ever actually read *The General Theory*, did so during their student days. Modern academic economics is an endeavor dominated by the new. Often, a whole literature has arisen, flourished, and decayed before the first paper in that literature receives formal publication. Who wants to spend time reading stuff first published 80 years ago?

But *The General Theory* is still worth reading and rereading, not just for what it tells us about the economy, but for what it tells us about the nature of progress in economic thought. Economics students who read Keynes tend to enjoy Keynes's flashes of wit and purple prose, but labor through or skim his elaborate discussions of methodology. But when older economists—especially those with some experience of the "struggle of escape" involved in producing a new economic theory—reread Keynes, they see his work from a very different perspective. And they feel a new sense of awe. Parts of the book that once seemed tedious are, one comes to understand, part of a titanic effort to rethink economics, an effort whose success is demonstrated by the fact that so many of Keynes's radical innovations now seem obvious. To really appreciate *The General Theory*, one needs a sense of what Keynes had to go through to get there.

In telling people how to read *The General Theory*, I find it helpful to describe it as a meal that begins with a delectable appetizer and ends with a delightful dessert, but whose main course consists of rather tough meat. It is tempting for readers to dine only on the easily digestible parts of the book, and skip the argument that lies between. But the main course is where the true value of the book lies.

I am not saying that one should skip the fun parts. By all means, read them for the sheer enjoyment, and as a reminder of what Keynes accomplished. In fact, let me say a few words about those parts of the book before I myself get to the hard parts.

Book I is Keynes's manifesto, and for all its academic tone, and even its inclusion of a few equations, it is a thrilling piece of writing. Keynes puts you, the professional economist—for *The General Theory* was, above all, a book written for knowledgeable insiders—on notice that he is going to refute everything you thought you knew about employment. In just a few pages he convincingly shows that the then conventional view about the relationship between wages and employment involves a basic fallacy of composition: "In assuming that the wage bargain determines the real wage the classical school have slipt into an illicit assumption" (13). From this, he quickly shows that the conventional view that wage cuts were the route to full employment made no sense given the realities of the time. And in just a few more pages he lays out enough of his own theory to suggest the breathtaking conclusion that the Great Depression then afflicting the world was not only solvable, but easily solvable.

It is a bravura performance. Modern readers who stop after Book I, however, without slogging through the far denser chapters that follow, get a sense of Keynes's audacity, but not of how he earned the right to that audacity.

Book VI, at the opposite end of *The General Theory*, really is a kind of dessert course. Keynes, the hard work of creating macroeconomics as we know it behind him, kicks up his heels and has a little fun. In particular, the final two chapters of *The General Theory*, though full of interesting ideas, have an impish quality. Keynes tells us that the famous victory of free trade over protectionism may have been won on false pretenses—

that the mercantilists had a point. He tells us that the "euthanasia of the rentier" (376) may be imminent, because thrift no longer serves a social function. Did he really believe these things, or was he simply enjoying tweaking the noses of his colleagues? Probably some of both.

Again, Book VI is a great read, although it has not stood the test of time nearly as well as Book I. But the same caution applies: by all means, read Keynes's speculations on the virtues of mercantilism and the vanishing need for thrift, but remember that the tough stuff in Books II through V is what gave him the right to speculate.

So now let us talk about the core of the book, and what it took for Keynes to write it.

There is no shortage of people willing to challenge conventional economic wisdom; I receive countless books claiming to do just that. The vast majority of these books' authors, however, do not understand enough about existing economic theory to mount a credible challenge.

Keynes, by contrast, was deeply versed in the economic theory of his time, and understood the power of that body of theory. "I myself", he wrote in the preface, "held with conviction for many years the very theories which I now attack, and am not, I think, unaware of their strong points" (p. xxi). He knew that he had to offer a coherent, carefully reasoned challenge to the reigning orthodoxy to change peoples' minds. In Book I, as Keynes gives us a first taste of what he is going to do, he writes of Malthus, whose intuition told him that general failures of demand were possible, but had no model to back that intuition: "[S]ince Malthus was unable to explain clearly (apart from an appeal to the facts of common observation) how and why effective demand could be deficient or excessive, he failed to provide an alternative construction; and Ricardo conquered England as completely as the Holy Inquisition conquered Spain" (32).

That need to "provide an alternative construction" explains many of the passages in *The General Theory* that, 80 years later, can seem plodding or even turgid. In particular, it explains Book II, which most modern readers probably skip. Why devote a whole chapter to "the choice of units", which does not seem to have much to do with Keynes's grand vision? Why devote two more chapters to defining the meaning of income, savings, and investment? For the same reason that, to give an example I know well, economists working on applications of increasing returns to international trade and economic growth theory in the 1980s lavished many pages on the details of product differentiation and monopolistic competition. These details had nothing much to do with the fundamental ideas behind the new theories. But the details were crucial to producing the buttoned-down models economists needed to clarify their thoughts and explain those thoughts to others. When you are challenging a long-established orthodoxy, the vision thing does not work unless you are very precise about the details.

Keynes's appreciation of the power of the reigning orthodoxy also explains the measured pace of his writing. "The composition of this book", wrote Keynes in the preface, "has been for the author a long struggle of escape, and so must the reading of it be …" (p. xxiii). Step by step, Keynes set out to liberate economists from the intellectual confines that left them unable to deal with the Great Depression, confines created for the most part by what Keynes dubbed "classical economics".

Keynes's struggle with classical economics was much more difficult than most economists can easily imagine today, although those who engage in public debate with non-economists may have a better sense of what he faced.

Modern macroeconomics textbooks usually contain a discussion of something they call the "classical model" of the price level. But that model offers far too flattering a picture of the classical economics Keynes had to escape from. What we call the classical model today is really a post-Keynesian attempt to rationalize pre-Keynesian views. Change one assumption in our so-called classical model, that of perfect wage flexibility, and it turns back into *The General Theory*. If that had been all Keynes had to contend with, *The General Theory* would have been an easy book to write.

The real classical model, as Keynes described it, was something much harder to fix. It was, essentially, a model of a barter economy, in which money and nominal prices do not matter, with a monetary theory of the price level appended in a non-essential way, like a veneer on a tabletop. It was a model in which Say's Law applied: supply automatically creates its own demand, because income must be spent. And it was a model in which the interest rate was purely a matter of the supply and demand for funds, with no possible role for money or monetary policy. It was, as I said, a model in which ideas we now take for granted were literally unthinkable.

If the classical economics Keynes confronted had been what we call the classical model nowadays, he would not have had to write Book V of *The General Theory*, "Money-wages and prices". In that book Keynes confronts naïve beliefs about how a fall in wages can increase employment, beliefs that were prevalent among economists when he wrote, but play no role in the model we now call "classical".

So the crucial innovation in *The General Theory* is not, as a modern macro-economist tends to think, the idea that nominal wages are sticky. It is the demolition of Say's Law and the classical theory of the interest rate in Book IV, "The inducement to invest". One measure of how hard it was for Keynes to divest himself of Say's Law is that to this day some people deny what Keynes realized—that the "law" is, at best, a useless tautology when individuals have the option of accumulating money rather than purchasing real goods and services. Another measure of Keynes's achievement may be hard to appreciate unless you've taught introductory macroeconomics: how do you explain to students how the central bank can reduce the interest rate by increasing the money supply, even though the interest rate is the price at which the supply of loans is equal to the demand? It is not easy to explain even when you know the answer; think how much harder it was for Keynes to arrive at the right answer in the first place.

But the classical model wasn't the only thing Keynes had to escape from. He also had to break free of the business cycle theory of the day.

There was not, of course, anything like a fully-worked out model of recessions and recoveries. But it is instructive to compare *The General Theory* with Gottfried Haberler's *Prosperity and Depression*, written at roughly the same time, which was a League of Nations-sponsored attempt to systematize and synthesize what the economists of the time had to say about the subject.[3] What is striking about Haberler's book, from a modern perspective—aside from the absence of any models—is that he was trying to answer the wrong question. Like most macroeco-

[3] Gottfried Haberler, *Prosperity and Depression*, League of Nations, 1937.

nomic theorists before Keynes, Haberler believed that the crucial thing was to explain the economy's dynamics, to explain why booms are followed by busts, rather than to explain how mass unemployment is possible in the first place. And Haberler's book, like much business cycle writing at the time, seems more preoccupied with the excesses of the boom than with the mechanics of the bust. Although Keynes speculated about the causes of the business cycle in Chap. 22 of *The General Theory*, those speculations were peripheral to his argument. Instead, Keynes saw it as his job to explain why the economy sometimes operates far below full employment. That is, *The General Theory* for the most part offers a static model, not a dynamic model—a picture of an economy stuck in depression, not a story about how it got there. So Keynes actually chose to answer a more limited question than most people writing about business cycles at the time.

Indeed, most of Book II of *The General Theory* is a manifesto on behalf of Keynes's strategic decision to limit the question. Where pre-Keynesian business cycle theory told complex, confusing stories about disequilibrium, Chap. 5 makes the case for thinking of an underemployed economy as being in a sort of equilibrium in which short-term expectations about sales are, in fact, fulfilled. Chapters 6 and 7 argue for replacing all the talk of forced savings, excess savings, and so on that was prevalent in pre-Keynesian business cycle theory—talk that stressed, in a confused way, the idea of disequilibrium in the economy—with the simple accounting identity that savings equal investment.

And Keynes's limitation of the question was powerfully liberating. Rather than getting bogged down in an attempt to explain the dynamics of the business cycle—a subject that remains contentious to this day—Keynes focused on a question that could be answered. And that was also the question that most needed an answer: given that overall demand is depressed—never mind why—how can we create more employment?

A side benefit of this simplification was that it freed Keynes and the rest of us from the seductive but surely false notion of the business cycle as morality play, of an economic slump as a necessary purgative after the excesses of a boom. By analysing how the economy stays depressed, rather than trying to explain how it became depressed in the first place, Keynes helped bury the notion that there is something redemptive about economic suffering.

*The General Theory*, then, is a work of informed, disciplined, intellectual radicalism. It transformed the way everyone, including Keynes's intellectual opponents, thought about the economy. But that raises a contentious question: are we, in fact, all Keynesians now?

## Mr. Keynes and the Moderns

Until the Great Recession struck, many modern macroeconomists seemed to be under the impression that we have left Keynes behind, for better or for worse. But that impression, I'd argue, was based either on a misreading or a non-reading of *The General Theory*. Let's start with the non-readers, a group that included me during the several decades that passed between my first and second readings of *The General Theory*.

If you do not read Keynes himself, but only read his work as refracted through various interpreters, it is easy to imagine that *The General Theory* is much cruder than it is. Even professional economists, who know that Keynes was not a raving socialist, tend to think that *The General Theory* is largely a manifesto proclaiming the need for deficit spending, and that it belittles monetary policy. If that were really true, *The General Theory* would be a very dated book. To put it crudely, if you imagine that Keynes was dismissive of monetary policy, it is easy to imagine that Milton Friedman in some sense refuted or superseded Keynes by showing that money matters.

The impression that *The General Theory* failed to give monetary policy its due may have been reinforced by John Hicks, whose 1937 review essay "Mr. Keynes and the classics" is probably more read by economists these days than *The General Theory* itself. In that essay Hicks interpreted *The General Theory* in terms of two curves, the IS curve, which can be shifted by changes in taxes and spending, and the LM curve, which can be shifted by changes in the money supply. And Hicks seemed to imply that Keynesian economics applies only when the LM curve is flat, so that changes in the money supply do not affect interest rates, while classical macroeconomics applies when the LM curve is upward-sloping.

But in this implication Hicks was both excessively kind to the classics and unfair to Keynes. I have already pointed out that the macroeconomic doctrine from which Keynes had to escape was much cruder and more confused than the doctrine we now call the "classical model". Let me add that *The General Theory* does not dismiss or ignore monetary policy. Keynes discusses at some length how changes in the quantity of money can affect the rate of interest, and through the rate of interest affect aggregate demand. In fact, the modern theory of how monetary policy works is essentially that laid out in *The General Theory*.

Yet it is fair to say that *The General Theory* is pervaded by skepticism about whether merely adding to the money supply is enough to restore full employment. This was not because Keynes was ignorant of the potential role of monetary policy. Rather, it was an empirical judgment on his part: *The General Theory* was written in an economy with interest rates already so low that there was little an increase in the money supply could do to push them lower.

Many of today's most prominent macroeconomists came of intellectual age during the 1970s and 1980s, when interest rates were consistently above 5 percent and sometimes in double digits. Under those conditions there was no reason to doubt the effectiveness of monetary policy, no reason to worry that the central bank could fail in efforts to drive down interest rates and thereby increase demand. But *The General Theory* was written in a very different monetary environment, one in which interest rates stayed close to zero for an extended period.

Ten years ago economists might have imagined that such an environment was unlikely to reappear—although Japan has had near-zero interest rates since the mid-1990s. But after the 2008 crisis near-zero interest rates once again became the norm in advanced economies; even at the time of writing, in 2017, the Federal Reserve had only begun a tentative rise in rates, and the European Central Bank was still keeping rates as low as possible.

Keynes made it clear that his skepticism about the effectiveness of monetary policy was a contingent proposition, not a statement of a general principle. In the past, he believed, things had been otherwise. "There is evidence that for a period of almost one hundred and fifty years the long-run typical rate of interest in the leading financial centres was about

5 percent, and the gilt-edged rate between 3 and $3^1/_2$ percent; and that these rates were modest enough to encourage a rate of investment consistent with an average of employment which was not intolerably low" (307–308). In that environment, he believed, "a tolerable level of unemployment could be attained on the average of one or two or three decades merely by assuring an adequate supply of money in terms of wage-units" (309). In other words, monetary policy had worked in the past—but not now.

Now it is true that Keynes believed, wrongly, that the conditions of the 1930s would persist indefinitely—indeed, that the marginal efficiency of capital was falling to the point that the euthanasia of rentiers was in view. I will mention why he was wrong, at least for a couple of generations, in a moment.

Before I get there, however, let me talk about an alternative view. This view agrees with those who say that modern macroeconomics owes little to Keynes. But rather than arguing that we have superseded Keynes, this view says that we have misunderstood him. That is, some economists insist that we've lost the true Keynesian path—that modern macroeconomic theory, which reduces Keynes to a static equilibrium model, and tries to base as much of that model as possible on rational choice, is a betrayal of Keynesian thinking.

Is this right? On the issue of rational choice, it's true that compared with any modern exposition of macroeconomics, *The General Theory* contains very little discussion of maximization and a lot of behavioral hypothesizing. Keynes's emphasis on the non-rational roots of economic behavior is most quotable when he writes of financial market speculation, "where we devote our intelligences to anticipating what average opinion expects average opinion to be" (156). But it is most notable, from a modern perspective, in his discussion of the consumption function. Attempts to model consumption behavior in terms of rational choice were one of the main themes of macroeconomics after Keynes. But Keynes's consumption function, as laid out in Book III, is grounded in psychological observation rather than intertemporal optimization.

This raises two questions. First, was Keynes right to eschew maximizing theory? Second, did his successors betray his legacy by bringing maximization back in?

The answer to the first question is, it depends. Keynes was surely right that there is a strong non-rational element in economic behavior. The rise of behavioral economics and behavioral finance is a belated recognition by the profession of this fact. On the other hand, some of Keynes's attempted generalizations about behavior now seem excessively facile and misleading in important ways. In particular, he argued on psychological grounds that the average savings rate would rise with per capita income (see p. 97). That has turned out to be not at all the case.

But the answer to the second question, I would argue, is clearly no. Yes, Keynes was a shrewd observer of economic irrationality, a behavioral economist before his time, who had a lot to say about economic dynamics. Yes, *The General Theory* is full of witty passages about investing as a game of musical chairs, about animal spirits, and so on. But *The General Theory* is not primarily a book about the unpredictability and irrationality of economic actors. Keynes emphasizes the relative stability of the relationship between income and consumer spending; trying to ground that stability in rational choice may be wrong-headed, but it does not undermine his intent. And while Keynes didn't think much of the rationality of business behavior, one of the key strategic decisions he made, as I have already suggested, was to push the whole question of why investment rises and falls into the background.

What about equilibrium? Let me offer some fighting words: to interpret Keynes in terms of static equilibrium models is no betrayal, because what Keynes mainly produced was indeed a static equilibrium model. The essential story laid out in *The General Theory* is that liquidity preference determines the rate of interest; given the rate of interest, the marginal efficiency of capital determines the rate of investment; and employment is determined by the point at which the value of output is equal to the sum of investment and consumer spending. "[G]iven the propensity to consume and the rate of new investment, there will be only one level of employment consistent with equilibrium" (28).

Let me address one issue in particular: did Paul Samuelson, whose 1948 textbook introduced the famous 45-degree diagram to explain the multiplier, misrepresent what Keynes was all about? There are commentators who insist passionately that Samuelson defiled the master's thought. Yet it is hard to see any significant difference between Samuelson's formulation and Keynes's own equation for equilibrium employment, right there in Chap. 3: $\phi(N) - \chi(N) = D_2$ (29). Represented graphically, Keynes's version looks a lot like Samuelson's diagram; quantities are measured in wage units rather than constant dollars, and the nifty 45-degree feature is absent, but the logic is exactly the same.

The bottom line, then, is that we really are all Keynesians now. A very large part of what modern macroeconomists do derives directly from *The General Theory*. So how has the framework Keynes introduced held up?

## Keynes in the Crisis

Would economists have seen the crisis coming if more of them had been reading Keynes in the original? Probably not. It's true that Keynes's emphasis on the instability of expectations, the way in which conventional views of valuation can suddenly shift, would have given pause to those economists who refused to believe in the very possibility of asset bubbles or sudden panic. But acknowledging the possibility of crisis is very different from seeing any particular crisis coming.

But given Keynes's decision to put the causes of the business cycle in the background, *The General Theory* isn't mainly about booms and busts; it's about the behavior of an economy that is already busted, that is, one in which demand is persistently depressed. So the real test of Keynes came not during the period of severe financial disruption but during the long period of high unemployment and depressed demand that followed.

Which propositions did the post-crisis environment test? The core of *The General Theory*, as I've argued, lies in Book IV, which refuted Say's Law and replaced the classical theory of interest with a "general" theory that put central emphasis on liquidity preference. This new approach in effect made three predictions. First, it said that once interest rates were close to zero, even large increases in the quantity of money would have little effect, certainly that they would not be inflationary. Second, it said that because interest rates in such an environment would reflect liquidity preference, not the willingness to save, even large dissaving by the government—i.e., large budget deficits—wouldn't drive up interest rates. Third, given the non-responsiveness of interest rates, deficit spending wouldn't crowd out private spending—in fact, changes in government spending would have a multiplier effect, so that increases or reductions in public spending would be reinforced by additional increases or reductions in private spending.

Non-Keynesians disagreed violently with these predictions. When central banks expanded the monetary base as part of "quantitative easing" to fight the crisis, there were widespread predictions of high inflation. When a combination of declining revenues, rising spending on safety net programs, and deliberate stimulus led to large budget deficits, many insisted that interest rates would soar. And while many governments did initially offer some fiscal stimulus, from 2010 on many officials embraced the literally anti-Keynesian doctrine of "expansionary austerity", which said that cutting spending would actually raise employment.

As it turned out, the first two predictions were overwhelmingly confirmed by events. Massive monetary expansion—the Federal Reserve quintupled the monetary base between 2007 and 2014—produced no hint of an inflationary takeoff. The US government's deficit ballooned from 1 to 9 percent of GDP, but long-term interest rates actually fell.

The third prediction wasn't well tested by the fiscal stimulus of 2009–2010, which was both relatively small and endogenous—it only happened because economies were already in trouble. A better though not perfect test came from the widespread turn to fiscal austerity, especially from cash-short countries in the euro area. There was a very strong correlation between the depth of austerity imposed and the size of economic contraction, suggesting that there is indeed a Keynesian-type multiplier in which cuts in government spending are reinforced by induced cuts in private spending.[4]

So how did a Keynesian approach fare during the aftermath of the Great Recession? Extremely well—so well, in fact, as to pose a problem for those demanding new economic thinking in response to the crisis: what, exactly, should that new thinking do when ideas from an old book worked so well?

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[4]Olivier J. Blanchard and Daniel Leigh, "Growth forecast errors and fiscal multipliers" *American Economic Review,* May 2013.

That said, Keynes didn't have a magic crystal ball. What did he miss?

## What Keynes Missed

The strongest criticism one can make of *The General Theory* is that Keynes mistook an episode for a trend. He wrote in a decade when even a near-zero interest rate wasn't low enough to restore full employment, and brilliantly explained the implications of that fact—in particular, the trap in which the Bank of England and the Federal Reserve found themselves, unable to create employment no matter how much they tried to increase the money supply. He knew that matters had not always been thus. But he believed, wrongly, that the monetary environment of the 1930s would be the norm from then on.

It didn't turn out that way. Depression-type conditions didn't return after World War II, or for 60 years thereafter. Not until 2008 did we find ourselves in a world that looks like the one Keynes focused on. Why did it take so long?

Part of the answer is that Keynes underestimated the ability of mature economies to stave off diminishing returns. Keynes's "euthanasia of the rentier" was predicated on the presumption that as capital accumulates, profitable private investment projects become harder to find, so that the marginal efficiency of capital declines. In interwar Britain, with the heroic era of industrialization behind it, that view may have seemed reasonable. But after World War II a combination of technological progress and revived population growth opened up many new investment opportunities.

But there was an even more important factor that kept interest rates relatively high, and monetary policy effective: persistent inflation, which become embedded in expectations, and was reflected in higher interest rates than we would have if the public expected stable prices. Inflation was, of course, much higher in the 1970s and even the 1980s than after 1990. Yet expectations of inflation still played a powerful role in keeping interest rates away from zero. For example, in December 2007 the interest rate on 10-year US government bonds was 4.1%; the interest rate on 10-year "indexed" bonds, whose return is protected from inflation, was only 1.8%. This tells us that even in 2007, when inflation was considered well under control, most of the 10-year rate reflected expected inflation rather than expected real returns.

The irony is that persistent inflation, which for a long time made *The General Theory* seem less relevant than it would in the absence of that inflation, can be attributed in part to Keynes's influence, for better or worse. For worse: the inflationary take-off of the 1970s was partly caused by expansionary monetary and fiscal policy, adopted by Keynes-influenced governments with unrealistic employment goals. (I am thinking in particular of Edward Heath's "dash for growth" in the UK and the Burns–Nixon boom in the US). For better: both the Bank of England, explicitly, and the Federal Reserve, implicitly, pursued a deliberate strategy of encouraging persistent low but positive inflation, precisely to avoid finding themselves in the trap Keynes diagnosed.

Keynes did not foresee a future of persistent inflation (nor did anyone else at the time). This meant that he was excessively pessimistic about the future prospects for monetary policy. It also meant that he never addressed the policy problems posed by persistent inflation, which preoccupied macroeconomists in the 70s and 80s, and led some to proclaim a crisis in economic theory. (In fact, some of the models widely used today to explain the persistence of inflation even in the face of unemployment, notably "overlapping contracts" models that stress the uncoordinated nature of wage settlements, are quite consistent in spirit with what Keynes had to say about wage determination). But failure to address problems nobody imagined in the 1930s can hardly be considered a flaw in Keynes's analysis.

Furthermore, even Keynes's belief that 30s-type problems would be the norm looking forward looks a lot more reasonable now than it used to. Circa 2000, the conventional wisdom was that 2 percent inflation was sufficiently high that episodes in which monetary policy lost traction because of the zero lower bound on interest rates would be rare and brief. Obviously that turned out to be wrong.

Moreover, worries about "secular stagnation"—about a shortage of investment opportunities leading to persistently low interest rates even during periods of expansion, which in turn makes depression-like episodes highly likely, even the norm—have made a comeback. With a sharp slowdown in working-age population growth in advanced economies, and an apparent slowdown in productivity growth, Keynes's bleak vision of the future absent consistent government support for demand may be coming true after all.

## The Economist as Saviour

As an intellectual achievement, *The General Theory* ranks with only a handful of other works in economics—the tiny set of books that transformed our perception of the world, so that once people became aware of what those books had to say they saw everything differently. Adam Smith did that in *The Wealth of Nations*: suddenly the economy was not just a collection of people getting and spending, it was a self-regulating system in which each individual "is led by an invisible hand to promote an end which was no part of his intention". *The General Theory* is in the same league: suddenly the idea that mass unemployment is the result of inadequate demand, long a fringe heresy, became completely comprehensible, indeed obvious.

What makes *The General Theory* truly unique, however, is that it combined towering intellectual achievement with immediate practical relevance to a global economic crisis. The second volume of Robert Skidelsky's biography of Keynes is titled *The Economist as Saviour*, and there's not a bit of hyperbole involved. Until *The General Theory*, sensible people regarded mass unemployment as a problem with complex causes, and no easy solution other than the replacement of markets with government control. Keynes showed that the opposite was true: mass unemployment had a simple cause, inadequate demand, and an easy solution, expansionary fiscal policy.

It would be a wonderful story if *The General Theory* showed the world the way out of depression. Alas for romance, that is not quite what happened. The giant public works programme that restored full employment, otherwise known as the Second World War, was launched for reasons unrelated to macroeconomic theory. But Keynesian theory explained why war spending did what it did, and helped governments ensure that the postwar world didn't slip back into depression. And who is to say that depression-like conditions would not have returned if governments, taking their guidance from Keynesian economics, had not responded to recessions with expansionary policies?

There has been nothing like Keynes's achievement in the annals of social science. Perhaps there cannot be. Keynes was right about the problem of his day: the world economy had magneto trouble, and all it took to get the economy going again was a surprisingly narrow, technical fix. But most economic problems probably do have complex causes and do not have easy solutions. Maybe there are narrow, technical solutions to other economic problems, from lagging development in Latin America to soaring inequality in the United States, and we are just waiting for the next Keynes to discover them. But at the moment it does not seem likely.

One thing is certain: if there is another Keynes out there, he or she will be someone who shares Keynes's most important qualities. Keynes was a consummate intellectual insider, who understood the prevailing economic ideas of his day as well as anyone. Without that base of knowledge, and the skill in argumentation that went with it, he would not have been able to mount such a devastating critique of economic orthodoxy. Yet he was at the same time a daring radical, willing to consider the possibility that some of the fundamental assumptions of the economics he had been taught were wrong.

Those qualities allowed Keynes to lead economists, and the world, into the light—for *The General Theory* is nothing less than an epic journey out of intellectual darkness. That, as much as its continuing relevance to economic policy, is what makes it a book for the ages. Read it, and marvel.

City University of New York Paul Krugman
USA