The Great Depression and Keynes’s

*General Theory*

John Maynard Keynes corresponded with George Bernard Shaw for decades after meeting him at Cambridge. Shaw was not only a famous playwright, but also an amateur economist (see Chapter 7). In January 1935 Keynes wrote to Shaw:

To understand my state of mind, however, you have to know that I believe myself to be writing a book on economic theory which will largely revolutionize – not, I suppose, at once but in the course of the next ten years – the way the world thinks about economic problems.¹

Keynes’s forecast was remarkably accurate. His characterization of his project as “a book on economic theory,” however, was a slightly misleading. Despite the eventual publication title of *The General Theory of Employment, Interest, and Money*, he was – as many commentators have noted – very much writing a tract for the times.

Keynes considered it his duty to tackle current issues. In a memorial for Alfred Marshall written in 1924, Keynes declared that the day of the theoretical economic treatise had passed. The modern economist must aim for current policy relevance: “Economists must leave to Adam Smith the glory of the quarto, must pluck the day, fling pamphlets into the wind, write always sub specie temporis and achieve immortality by accident, if at all.” In much the same spirit his biographer Roy Harrod attributed to Keynes the belief that “progress in economics would lie in the application of theory to practical problems. His recipe for the young economist was to know his Marshall thoroughly and read his *Times* every day carefully.”²

Keynes's success over the next three decades at revolutionizing the way the world thinks was celebrated by *Time* magazine in 1965, when it put Keynes's portrait on the cover and titled its cover story “The Economy: We Are All Keynesians Now.” The story applauded the apparently successful use of Keynesian macroeconomic thinking by the economists, on leave from academia, who were then formulating policy for the administration of Lyndon Johnson:

Keynes and his ideas, though they still make some people nervous, have been so widely accepted that they constitute both the new orthodoxy in the universities and the touchstone of economic management in Washington….

In Washington the men who formulate the nation’s economic policies have used Keynesian principles not only to avoid the violent cycles of prewar days but to produce a phenomenal economic growth and to achieve remarkably stable prices…. Basically, Washington’s economic managers scaled these heights by their adherence to Keynes’s central theme: the modern capitalist economy does not automatically work at top efficiency, but can be raised to that level by the intervention and influence of the government…. In Washington the ideas of Keynes have been carried into the White House by such activist economists as Gardner Ackley, Arthur Okun, Otto Eckstein (all members of the President’s Council of Economic Advisers), Walter Heller (its former chairman), M.I.T’s Paul Samuelson, Yale’s James Tobin and Seymour Harris of the University of California at San Diego.

Keynes’s influence on policy was most famously confirmed when the next U.S. President, Richard Nixon, told an interviewer in 1971: “I am now a Keynesian in economics.”

**THE DEPTHS OF THE DEPRESSION**

After nearly four years of sharp decline, with industrial production falling by more than half, the U.S. economy hit bottom in early 1933. It struggled upward for the next four years, but in 1937 began to decline sharply again. From May 1937 to May 1938 industrial production fell by one-third. A second recovery then began. By September 1939 production was back to its September 1929 level – but had lost a decade of normal growth. Economists Harold L. Cole and Lee E. Ohanian have reported: “Real gross domestic

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3 Available online at http://www.time.com/time/covers/0,16641,19651231,00.html.
4 “The Economy: We Are All Keynesians Now,” *Time* (31 December 1965), available online at http://www.time.com/time/magazine/article/0,9171,842353-1,00.html. For more on the influence of Keynesian fiscal policy advice see Chapter 15.
product per adult, which was 39 percent below trend at the trough of the Depression in 1933, remained 27 percent below trend in 1939.” Not until 1942 did real output finally return to its pre-Depression trend line.6

Why was the economy languishing through the 1930s? A number of economic historians have cited government policies that hampered market adjustments and thereby delayed recovery. Thomas E. Hall and J. David Ferguson’s 1998 account of “perverse economic policies” included the Smoot-Hawley tariff of 1930 and the tax hike of 1932 under the Hoover administration; followed by the National Industrial Recovery Act (NIRA) and the Agricultural Adjustment Act (AAA) of 1933–5, the payroll tax of the Social Security Act of 1935, and other tax hikes in 1933, 1934, 1935, and 1936 under Roosevelt.7 Other authors have emphasized that Hoover tried to prop up nominal wages in the face of shrinking nominal demand, and Roosevelt redoubled the effort in the National Labor Relations Act (NLRA) of 1935, policies that priced workers out of jobs.8 Cole and Ohanian, studying the NIRA and the NLRA, have found that “New Deal cartelization policies are an important factor in accounting for the failure of the economy to recover back to trend.”9

Milton Friedman and Anna J. Schwartz famously emphasized perverse monetary policy in explaining the depth and persistence of the Great Depression. In their account, the initial decline was so deep because the money supply contracted by one-third between 1930 and 1933. Prices and wages that did not immediately decline in the same proportion, because of natural or policy-enhanced “stickiness,” were now too high to clear product and labor markets, creating unsold inventories and unemployment. They pointed out that the Federal Reserve, having taken over superintendence of the banking system from private clearinghouse associations, failed to do what the clearinghouses had done in previous crises to shore up the banks, stem bank runs, and prevent such a large monetary contraction. Later Fed policy, in their account, actively stifled the recovery. In 1936 and 1937

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the Fed, observing commercial banks’ large excess reserves (which banks chose to hold so as to be prepared to meet runs and other deposit outflows), imposed higher required reserve ratios on bank deposits to “mop up liquidity.” To reestablish their desired free reserves (required reserves being largely useless for meeting deposit outflows), banks reduced the amount of deposits they created per dollar of reserves. At about the same time, in 1936–8, the U.S. Treasury and Fed together were “sterilizing” gold inflows from abroad, that is, offsetting the expansionary effect the inflows would normally have on bank reserves. Together these policies shrank the U.S. money supply again, causing the recovery to go into reverse.10

KEYNES’S DIAGNOSIS

These retrospective accounts by economic historians emphasize government policy mistakes that deepened the initial decline and hindered recovery. Keynes offered a very different account: The market economy had collapsed on its own, had become trapped in a vicious circle, and could not free itself. It needed government help. Keynes's biographer Robert Skidelsky has commented: “It was the collapse of America which started him thinking that perhaps there was a fundamental flaw in the capitalist system, which meant that even very successful economies could suddenly collapse.”11

Keynes sketched out a “vicious circle” argument in his December 1930 essay “The Great Slump of 1930.” If a nervous public saves its income by hoarding money, rather than spending it on consumption goods or saving it in a form that finances capital investment, he argued, then both consumer-goods industries and capital-goods industries (factory and housing construction, machine-making, mineral extraction) will suffer losses. Banks will become reluctant to lend and businesses will become reluctant to invest. The problem will snowball:

If the public are reluctant to buy [consumption goods, or to finance investment] . . ., then . . . all classes of producers will tend to make a loss; and general unemployment will ensue. By this time a vicious circle will be set up, and, as a result of actions and reactions, matters will get worse and worse until something happens to turn the tide. . . . If, then, I am right, the fundamental cause of the trouble is the lack of new enterprise due to an unsatisfactory market for

capital investment... [T]he reluctant attitude of lenders has become matched by a hardly less reluctant attitude on the part of borrowers.\(^{12}\)

Keynes went on to advise that a change in monetary policy could jump-start the world economy, although instead of “jump-start” he used a different automotive metaphor. He suggested that the capitalist economy was having “magneto” (alternator) trouble, as against the socialist idea that the entire automobile should be replaced.\(^{13}\) He proposed that the Federal Reserve, the Bank of England, and the Bank of France “should join together in a bold scheme to restore confidence to the international long-term loan market; which would serve to revive enterprise and activity everywhere, and to restore prices and profits, so that in due course the wheels of the world’s commerce would go round again.”\(^{14}\)

In an essay published a month later, Keynes omitted the distinction between troublesome hoarding and the helpful kind of saving that finances capital investment. Now saving as such was a problem:

There are to-day many well-wishers of their country who believe that the most useful thing which they and their neighbors can do to mend the situation is to save more than usual. . . . Now, in certain circumstances all this would be quite right, but in the present circumstances, unluckily, it is quite wrong. It is utterly harmful and misguided – the very opposite of the truth. For the object of saving is to release labour for employment on producing capital-goods such as houses, factories, roads, machines, and the like. But if there is a large unemployed surplus already available for such purposes, then the effect of saving is merely to add to this surplus and therefore to increase the number of the unemployed. Moreover, when a man is thrown out of work in this way or any other way, his diminished spending power causes further unemployment amongst those who would have produced what he can no longer afford to buy. And so the position gets worse and worse in a vicious circle.

To underscore his argument about how saving would reduce employment, Keynes put a number on the size of the effect:

The best guess I can make is that whenever you save five shillings, you put a man out of work for a day. . . . After all, this is only the plainest common sense. For if you buy goods, someone will have to make them. And if you do not buy goods, the shops will not clear their stocks, they will not give repeat orders, and some one will be thrown out of work.\(^{15}\)

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\(^{13}\) Keynes, “Great Slump,” p. 139.

\(^{14}\) Ibid., p. 146.

\(^{15}\) Keynes, “Economy: (i) Saving and Spending [January 1931],” in Keynes, Essays in Persuasion, pp. 151–2. Nowhere in the essay did Keynes spell out any statistical estimates or calculations to support the “five shillings” number.
As he had before, Keynes recommended public works spending to boost demand for labor and goods.\footnote{Ibid., p. 153. Keynes likewise advocated public works, financed by deficit spending, in a series of four newspaper essays reprinted as John Maynard Keynes, *The Means to Prosperity* (London: Macmillan, 1933).} Note that, in Keynes’s account here, additional saving does nothing to promote additional investment spending by reducing the interest rate facing investment borrowers.

Paul Krugman, in his Introduction to a recent edition of *The General Theory*, has usefully summarized its diagnosis of depression and policy message in four bullet points. To quote them:

- 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.


Keynes’s views that the collapse and nonrecovery reflected a flaw in the market economy, and that government spending to boost demand was needed for recovery, stood in sharp contrast to F. A. Hayek’s contemporaneous views that the collapse reflected a flaw in previous (overly expansive) monetary policy, and that the economy would best recover left alone (given a monetary policy framework to prevent excessive shrinkage of the money stream). In Hayek’s theory the crisis was the result of credit expansion.
having allowed investment to outrun voluntary saving, so government policies to augment consumption demand at the expense of saving would only deepen the crisis. Friedman and Schwartz later offered a third diagnosis, namely that the recession would have been routine except for the collapse of the money stock after 1929. Their retrospective recovery prescription focused on restoring the level of the money stock.

DID KEYNES “INVENT MACROECONOMICS”?

Keynes’s approach to explaining the Depression introduced novel concepts to the study of the aggregate economy. But it is an exaggeration to say, as Skidelsky has said, that “Keynes was the real inventor of macroeconomics. Concepts we take for granted today, like gross domestic product, the level of unemployment, the rate of inflation, all to do with general features of the economy, were invented by him.” In fact Irving Fisher at the turn of the century had developed the Quantity Theory of Money, based on work by Simon Newcomb and earlier economists.\(^\text{19}\) Fisher’s theory included a broad concept of the economy’s aggregate real transactions, for which real gross domestic product is a more readily measured proxy. Fisher sought to explain the rate of inflation and the effect of inflation on nominal interest rates. Keynes did not invent these concepts. Later in his interview Skidelsky acknowledged the point: “Before Keynes, there was a theory of money, the quantity theory of money, which maybe you could say is the start of macroeconomics.”\(^\text{20}\) Years before Fisher, as we noted in Chapter 3, there were the British theorists of the mid-nineteenth century – the Banking, Currency, and Free Banking schools – who sought to account for fluctuations in the levels of aggregate output and unemployment. Still earlier there were discussions of output as a whole by Malthus, Ricardo, and Say, considered later in the present chapter.

Skidelsky continued: “Keynes’s was a monetary theory of production. He incorporated the theory of money into a theory of production and showed how what people did with their money could affect the level of production.” There was in the General Theory, however, no theory of production in the usual sense of an analysis of how the economy transforms raw materials and labor into final goods and services. That monetary disturbances – shocks to money supply or demand – could cause fluctuations in the level of production was not a new idea. Fisher emphasized it, as did Hayek and Mises,

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\(^{19}\) We discuss Newcomb, Fisher, and the quantity theory in Chapter 12.

\(^{20}\) Commanding Heights, Skidelsky interview.
as did other monetary theorists in the 1920s and early 1930s like Dennis Robertson and Ralph Hawtrey, as did the mid-nineteenth-century writers.

WHAT WAS NEW IN KEYNES

What was new in The General Theory was the disappearance of inherited past investment (working through multiperiod production as analyzed by Jevons, Böhm-Bawerk, and Wicksell) from the theory of what determines the volume of consumable output. All focus was now on current-period investment and other current expenditures (consumption, government spending, net purchases by the rest of the world) as determinants of current output. As Keynes summarized his new conception in the preface to the 1939 French edition:

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.\(^{21}\)

In place of the intertemporal Hayekian triangle, the textbook rendering of Keynes’s view of the determination of current income in a closed national economy is a “circular flow” as in Figure 5.1.

In the textbook Keynesian income-expenditure model based on the circular flow concept, current expenditure \(E\) (the sum of household purchases \(C\) + business investment purchases \(I\) + government purchases \(G\)) determines the equilibrium current output of goods and services \(Y\). The level of expenditure (and thus equilibrium income) depends on the share of income that goes to consumption spending, what Keynes called the “propensity to consume.” In Keynes’s own summary:

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; \(\ldots\)\(^{22}\)

Graphically, as seen in Figure 5.2 (familiar to generations of undergraduate economics students), equilibrium obtains where the aggregate


\(^{22}\) Ibid.
expenditure line crosses the 45˚ line (the set of points meeting the equilibrium condition $Y = E$). The expenditure line is drawn to reflect the assumption that $C$ is a linear function of $Y – T$ (after-tax income), while $I$ and $G$ are “given” or independent of $Y$ or $C$).

23 According to Paul Krugman, “Introduction,” this diagram was introduced by Paul Samuelson’s textbook *Economics* (1948).
THE PARADOX OF THRIFT

Keynes treated saving as a leakage from the circular flow. An attempt by the public to save more will diminish total current expenditure, thereby reducing the level of current output, finally leaving unchanged the amount successfully saved out of shrunken incomes. This result – in Keynes’s words, “an increased propensity to save will ceteris paribus contract incomes and output” – has become known as the “paradox of thrift.”

The channel through which savings go to fund investment spending had completely disappeared, so there was no possibility of the interest rate equilibrating saving with investment, as it did in the interest theory of Böhm-Bawerk, Wicksell, Fisher, or Hayek.

Keynes’s implicit assumption is that saved funds leave the circular flow, as if they all go under the saver’s mattress. Saved funds do not go into the banks or mutual funds, and thereby back into the circular flow via loans that fund investment or consumption spending, nor into direct securities purchases that fund investment. In analyzing equilibrium “with a given level of new investment,” Keynes treated the level of investment as independent of the level of saving. In Keynes’s analysis, if the propensity to save out of income increases, with the level of investment given, it is not the interest rate but income that must adjust downward, bringing the quantity saved back down to where it started, to reequate savings to the given level of investment. In Figure 5.3 income begins at \( Y_1 \) but declines to \( Y_2 \) when the consumption schedule shifts downward from \( C_1 \) to \( C_2 \). That the change in equilibrium \( Y \) is even larger than the initial shift in expenditure (here a shift in \( C \), but it works equivalently for a shift in \( I \) or \( G \)) is known as the “multiplier effect.”

We discuss the multiplier further in Chapter 15 in connection with fiscal policy debates.

In The General Theory Keynes suggested that, at anything less than full employment, saving is even bad for economic growth. Investment depends positively on anticipated consumption spending and therefore “up to the point where full employment prevails, the growth of capital depends not at all on a low propensity to consume [high propensity to save] but is, on the contrary, held back by it.”

Paul Samuelson soon formalized the dynamic effect as the “principle of acceleration,” according to which investment falls in...
response to a decline in consumption spending, and consequently amplifies the decline via the multiplier effect. With the right assumed response functions, a regular oscillation of $Y$ – a sine-wave business cycle – is the result.\[27\]

**THE LIQUIDITY-PREFERENCE THEORY OF INTEREST**

If the interest rate does not clear the market for loanable funds, what role does it play? In Keynes’s *General Theory*, it clears the market for money balances:

> [I]t 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.\[28\]

In Keynes’s theory interest is not the price of intertemporal exchange, not a reward for waiting or deferring consumption, but a reward for parting with

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liquidity. In standard monetary theory, equilibrium between the demand and supply of money is ultimately maintained by adjustment in the purchasing power of the monetary unit (or measured inversely, in the price level) in a closed economy, or by gold flows that alter the money stock for a small open economy within an international gold standard (see Chapters 11 and 12). Keynes left it unclear how he thought the price level was determined. Keynesian economics eventually adopted the Phillips Curve in its search for a model of price-level determination.

HAYEK VERSUS KEYNES’S GENERAL THEORY

Roger Garrison’s restatement of Hayek’s theory usefully emphasizes three major contrasts between Keynes’s *General Theory* and Hayek’s *Prices and Production*. The first involves the relationship of consumption to investment. In Hayek’s approach, the fundamental relationship is a trade-off. In Garrison’s words, “consumption and investment represent alternative uses of the economy’s resources.” A community that grows corn can either eat a given bushel of its current crop or plant that bushel to produce future crops. Full employment of resources implies a trade-off, a “production possibilities frontier,” along which more consumption means less investment and vice-versa. Accordingly an increase in saving (reduction in consumption spending) frees resources for an increase in investment. As Keynes had once aptly put it, saving serves “to release labour [from employment in consumer-goods industries] for employment on producing capital-goods such as houses, factories, roads, machines, and the like.” The economy moves southeast along the frontier shown in Figure 5.4. An increase in credit unwarranted by voluntary saving, however, drives the economy temporarily beyond the frontier, where it cannot stay.

In Keynes’s theory, by contrast, consumption C and investment I are (again in Garrison’s words) “additive components of private-sector spending” \((C + I + G = Y)\) with no reliable tendency toward a position on the full-employment frontier. The economy typically moves along a path at a right angle to the frontier, as between the “recession” and “overheated economy” points in Figure 5.4. An increase in savings (reduction in consumption) causes a reduction in aggregate expenditure, pulling the economy inside (or further inside) the frontier, where it can linger indefinitely with below-full employment of resources. To economists taught by *The General Theory* to think of consumption and investment normally moving in the

The Clash of Economic Ideas

same direction, Hayek’s statement of a trade-off – that “an increase in the demand for consumption goods will tend to decrease rather than increase the demand for investment goods” – became a puzzling and even “seemingly paradoxical thesis.”

The second major contrast involves the role of the interest rate. In Hayek’s theory, the interest rate clears the market for loanable funds, equating the quantity supplied (savings including the earnings retained by business firms) with the quantity demanded (principally for investment). Loanable funds theory was standard in pre-Keynesian macroeconomics, especially as developed by Keynes’s contemporary and critic Dennis H. Robertson (1890–1963). A loanable funds diagram does appear in The General Theory – it is in fact the only diagram in the book – but only to indicate explicitly what Keynes was discarding from the standard toolbox. Keynes instead offered the “liquidity preference” theory in which the interest rate does not serve to coordinate saving and investment.

Hayek naturally objected to the absence of any market mechanism for coordinating saving and investment, a feature already present in Keynes’s Treatise on Money. In reply to Hayek’s criticism of the Treatise, Keynes

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Figure 5.4. The Production Possibilities Frontier between Consumption and Investment. Source: Garrison (2001).

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acknowledged that his theory was not the standard loanable funds theory in which the interest rate adjusts to clear the market between saving and investment:

My analysis is quite different from this; as it necessarily must be, since, in my view, saving and investment (as I define them) can get out of gear without any change on the part of the banking system from “neutrality” as defined by Dr. Hayek, merely as a result of the public changing their rate of saving or the entrepreneurs changing their rate of investment, there being no automatic mechanism in the economic system (as Dr. Hayek’s view would imply there must be) to keep the two rates equal, provided [Hayek’s condition for banking system neutrality] that the effective quantity of money \([MV]\) is unchanged.31

Hayek, responding in the same issue of the journal *Economica*, charged Keynes with failing to appreciate the most basic economic role of the interest rate:

Mr. Keynes’ assertion that there is no automatic mechanism in the economic system to keep the rate of saving and the rate of investing equal … might with equal justification be extended to the more general contention that there is no automatic mechanism in the economic system to adapt production to any shift in demand. I begin to wonder whether Mr. Keynes has ever reflected upon the function of the rate of interest in a society where there is no banking system.32

The third major contrast is between Hayek’s focus on the changing structure of capitalistic production during the business cycle, and Keynes’s focus instead on labor markets. Hayek’s was a capital-based macroeconomics. Keynes’s dispensed with attention to capital or time-consuming multistage production, implicitly believing that little of importance would be lost by treating production as instantaneous.

**KEYNES VERSUS “CLASSICAL” ECONOMICS**

Keynes saw his own innovation as having provided a theory of the overall size of output and employment, by contrast to the standard microeconomic focus on explaining the allocation of resources within a fully employed economy of given size. In the preface to the 1936 German edition of *The

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General Theory he framed this as break from the “classical” approach of Alfred Marshall:

[Marshall’s] 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…. [H]is immediate successors and followers have certainly dispensed with it and have not, apparently, felt the lack of it…. 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.\textsuperscript{33}

As we saw in our discussion of pre-Keynesian schools of thought in Chapter 3, Marshallian microeconomic theory did not exhaust English economics. There was an English tradition of business cycle theorizing going back to the 1830s, and before that to Henry Thornton in 1802.\textsuperscript{34} The business cycle theorists tried to explain how monetary or real disturbances would cause variations in output as a whole, that is, tried to explain why the economy alternated between periods of prosperity (with full or overfull employment of workers and machines) and periods of depression (with widespread unemployment). Keynes himself recognized that earlier economists had offered theories of depression. In The General Theory, he took note of the “underconsumption” theories of the eighteenth-century writers William Petty and Bernard Mandeville, of Thomas Malthus in the early nineteenth century, and of J. A. Hobson in the late nineteenth to early twentieth centuries. (On Hobson’s theory see the previous chapter.) Late in Hobson’s career, Keynes wrote a note to Hobson assuring him that he would be “remembered as a pathbreaker in economic theory,” while his critics would be forgotten.\textsuperscript{35} Underconsumption theories contained the equivalent of the paradox of thrift, derived from their similar treatment of saving as a leakage.

Given these two long-standing theoretical traditions, it is inaccurate to say, as Skidelsky has said, repeating Keynes’s own caricature of the history of economics, that before Keynes

\textsuperscript{33} John Maynard Keynes, \textit{General Theory} (1973 ed.), p. xxv.
\textsuperscript{34} Henry Thornton, \textit{An Enquiry into the Nature and Effects of the Paper Credit of Great Britain} [1802], ed. with an introduction by F. A. Hayek (London: George Allen and Unwin, 1939).
\textsuperscript{35} Fiona Maclachlan, “J. A. Hobson and the Economists,” \textit{Journal of Post Keynesian Economics} 25 (Winter 2002–3), p. 298. Maclachlan notes that Keynes also “wrote a scathing review of one of Hobson’s books and … was responsible for the rejection of a least one submission [by Hobson] to the \textit{Economic Journal}.”
the question of the quantity of output was never discussed. It was always assumed that economies were at full employment. Keynes was the first person to show that it was possible for the output of an economy to be below its potential, and the classical economists had never seen how this could be possible.\(^{36}\)

Keynes differed from the underconsumptionists in that his own theory worried about too little aggregate demand \((C + I + G)\) rather than specifically about too little consumption \((C)\). And unlike Hobson’s theory, Keynes’s theory was not tied to the proposition that workers were being systematically underpaid.

**MALTHUS AND SISMONDI VERSUS RICARDO AND SAY ON UNDERCONSUMPTION**

One of the earliest economists to formulate an underconsumption theory was Thomas Robert Malthus (1766–1834). Malthus was trying to explain the unemployment and depression in Britain that followed the inflationary years of the Napoleonic wars. Malthus began from the accounting identity that the value of output = the value of total factor payments = wages + rents + profits. Here “rents” were payments to landowners, while “profits” included both returns to the use of capital equipment and residual returns to capitalist-entrepreneurs. He worried that even if workers spend all their wages, and capitalists reinvest all their profits, landowners may not spend all their rents (which, according to classical theory, were destined to grow ever larger with rising population density). Underconsumption due to underspending of rents would result in an excess supply or “general glut” of produced commodities. Not all output could be sold at cost-recovering prices. Malthus thought it obvious that general gluts could be observed in the short run, even if market forces eventually eliminate them:

[The] tendency, in the natural course of things, to cure a glut or scarcity, is no more a proof that such evils have never existed, than the tendency of the healing processes of nature to cure some disorders without assistance from man, is a proof that such disorders never existed.\(^{37}\)

A contemporary French-Swiss critic of classical economics, Jean-Charles-Léonard Simonde de Sismondi (1773–1842), argued a similar position. Beginning from the assumption that sale of last year’s revenue provides the

\(^{36}\) Robert Skidelsky, *Commanding Heights* interview.  
income that purchases this year’s output, Sismondi found any increase in this year’s output over last year’s problematic: the predetermined income will be too small to purchase the additional output. Workers and capitalists in industries with unsold goods will be ruined, and finding new employments will be a painful process. Sismondi accordingly denied the classical doctrine that increased production was always beneficial, particularly citing the case where the introduction of productive new machinery displaces workers:

Let us take some account of the obstacles and the friction of the social mechanism. And what do we see? … Far from being always beneficial, machinery produces useful results only when its introduction is preceded by an increased revenue, and consequently the possibility of giving new work to those displaced…. Let us beware of this dangerous theory of equilibrium which is supposed to reestablish itself automatically…. It is true a certain kind of equilibrium is reestablished in the long run, but only after a frightful amount of suffering.38

The classic theorist David Ricardo (1772–1823) answered Malthus. Beginning with the same accounting identity that the value of total output = the value of total factor payments, Ricardo combined it with the proposition that market forces insure that saving = investment, because the financial system channels saving into business loans. Ricardo (1820) thereby concluded that the demand for consumer goods (which equals total factor payments – saving) = the supply of consumer goods (which equals total output – investment). Unsold goods cannot then reflect a general glut, but only the wrong mix of goods:

Mistakes may be made, and commodities not suited to the demand may be produced – of these there may be a glut; they may not sell at their usual price; but then this is owing to the mistake, and not to the want of demand for productions…. Whoever is possessed of a commodity is necessarily a demander, either he wishes to consume the commodity himself, and then no purchaser is wanted; or he wishes to sell it, and purchase some other thing with the money, which shall either be consumed by him, or be made instrumental to future production. The commodity he possesses will obtain him this or it will not. If it will, the object is accomplished, and his commodity

has found a market. If it will not what does it prove? that he has not adapted his means well to his end, he has miscalculated. . . . What I wish to impress on the readers mind is that it is at all times the bad adaptation of the commodities produced to the wants of mankind which is the specific evil, and not the abundance of commodities. Demand is only limited by the will and power to purchase. Whoever has commodities has the power to consume, and as it suits mankind to divide their employments, individuals will produce one commodity with a view to purchase another; . . .

Keynes thought that Malthus had made “powerful and unanswerable attacks on the great Ricardo,” and saluted his “brilliant intuitions” regarding the “insufficiency of effective demand.” But he noted in reference to the Malthus-Ricardo debate:

For, since 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.

Ricardo’s proposition that the aggregate demand for goods must equal the aggregate supply of goods had already been enunciated by the French economist Jean-Baptiste Say (1762–1832). It became known as “Say’s Law of Markets” or simply “Say’s Law.” Say was a follower of Adam Smith and an advocate of laissez-faire and free trade. His key work was the Treatise on Political Economy, first published in 1803. In 1804, the French emperor Napoleon Bonaparte – whose trade policies were protectionist – demanded that Say retract the antiprotectionist parts of the Treatise. Say refused, and Bonaparte had the book banned. A second edition appeared only in 1814 after Bonaparte had fallen from power. Say went on to write Letters to Malthus (1821) to answer the underconsumptionist case. In 1831 he was granted the first chair of economics in France. Keynes listed Say, along with Say’s Law’s later exponents Ricardo and John Stuart Mill, among his targets when criticizing “orthodox” economists in the second and third chapters of The General Theory.


41 Keynes, General Theory (1973 ed.), p. 32.
SAY’S LAW OF MARKETS

Say founded his Law on the two-sidedness of trade. Consider international trade in a two-country world, personifying the two countries as traders. If Brazil’s only use for British currency or sterling-denominated credits is to buy British goods, then Britain buys Brazilian goods only by selling British goods to Brazil. British purchases of Brazilian goods are matched by Brazilian purchases of British goods. Or as Say put it: “Products are paid for with products.” In a multicountry world Britain may pay any single trading partner in gold or silver money, which the partner uses to buy from a third country. But for Britain the gold or silver it pays is either a domestic product itself (if Britain has gold or silver mines) or is acquired by sales of domestic goods. Wrote Say:

Should it be objected; that this foreign produce may have been bought with specie, I answer, specie is not always a native product, but must have been bought itself with the products of native industry; so that, whether the foreign articles be paid for in specie or in home products, the vent for national industry is the same in both cases.42

By “vent for national industry” Say meant that, no matter how the British pay, the rest of the world’s purchases of British goods will match Britain’s purchases of foreign goods (including specie).

Likewise, within a domestic economy, supply of X implies an equal-valued demand for goods other than X. If a shoemaker wants to buy hats, he makes shoes and trades them for hats (whether directly using barter or indirectly via money). His production and sale of shoes finances or “creates” his demand for hats. If he produces few shoes, then he can demand few hats (or other goods). Thus Say wrote: “It is production which opens a demand for products…. [T]he general demand for products is brisk in proportion to the activity of production.” Say invited his reader to consider a merchant “in a remote corner of Poland”: even if he had no competitors, such a merchant “could sell but little, because little was produced” in that corner to provide potential local customers with the means to purchase his goods.43

The common capsule summary of Say’s Law, invoked by Keynes, is that “supply creates its own demand.” But this does not mean that supply of shoes

43 Ibid., pp. 133, 139, 137.
creates demand for shoes. It means that supply of shoes creates demand for everything other than shoes. Supply of hats likewise creates demand for everything other than hats. It follows that, summing over all goods, supply of goods creates demand for goods: “society in the aggregate is a larger purchaser, in proportion to its means of purchasing.” Say accordingly denied that there could be a general glut: “I do not see how the products of a nation in general can ever be too abundant, for each such product provides the means for purchasing another.”

Say’s Law implies that production (not demand) is the limit to prosperity:

The success of one branch of commerce supplies more ample means of purchase, and consequently opens a market for the products of all the other branches; on the other hand, the stagnation of one channel of manufacture, or of commerce, is felt in all the rest.

If this were not true, Say reasoned, all-round economic growth would not be conceivable:

Otherwise, how could it be possible that there should now be bought and sold in France five or six times as many commodities, as in the miserable reign of Charles VI? Is it not obvious, that five or six times as many commodities must have been produced, and that they must have served to purchase one or the other?

Accordingly, a government that wishes to promote prosperity should promote the supplying of goods, not the demanding of goods:

The same principle leads to the conclusion, that the encouragement of mere consumption is no benefit to commerce; for the difficulty lies in supplying the means, not in stimulating the desire of consumption; and we have seen that production alone, furnishes those means. Thus, it is the aim of good government to stimulate production, of bad government to encourage consumption.

It is obvious why Keynes, who after 1930 saw the encouragement of consumption (discouragement of saving) as necessary for the restoration of prosperity, could not let Say’s Law go unchallenged.

44 Ibid., p. 144.
47 Ibid., p. 133.
48 Ibid., p. 139.
AN IMPORTANT CAVEAT

The validity of Say’s Law is subject to an important limitation: If money is not categorized as one of the set of “goods,” then the impossibility of a general glut of goods requires that the public is not trying to accumulate (or decumulate) money. Say argues that when you trade goods for money, you accept the money only for the sake of buying goods:

For what, in point of fact, do you want the money? Is it not for the purchase of raw materials or stock for your trade, or victuals for your support? Wherefore, it is products that you want, and not money…. Sales cannot be said to be dull because money is scarce, but because other products are so.49

But this is an overstatement: sales in general can be dull in the short run if there is an excess demand for money. If your money balances are below the level you desire to hold, you will not want to spend all the money you receive from sales but instead want to put some of it aside to build your money balances back up the desired level. If such behavior is widespread (and it will be when, as in the early Great Depression in the United States for example, the overall money supply has unexpectedly and sizably dropped), the efforts to sell more goods and buy fewer goods will put downward pressure on prices in general. In the long run, the problem is resolved by price adjustments. A fall in the general level of prices allows an unchanged stock of dollars to satisfy the previously unmet demand to hold purchasing power in the form of dollar balances by making each dollar purchase more. But in the short run, before prices have adjusted, sales are dull.

Say thought that the price level wouldn’t need to adjust because any excess demand for money would be satisfied (in an economy on an international gold or silver standard) by the local creation of money-substitutes and by an inflow of money:

In such cases, merchants know well enough how to find substitutes for the product serving as the medium of exchange or money: and money itself soon pours in, for this reason, that all produce naturally gravitates to that place where it is most in demand.50

Say here seemed to take for granted that a sufficient increase in the real stock of money is nearly immediate, but it need not be so. Prices may be “sticky.” In the short run sales of goods can suffer. An inflow of money is ruled out for a country that is not on an international monetary standard,

49 Ibid., p. 133. The same argument appears in the long quote from Ricardo earlier.
50 Ibid., p. 134.
for example a country using its own national fiat money. In that case the price level must bear the burden of downward adjustment to an excess demand for money and any large adjustment may take substantial time.

KEYNES’S CRITIQUE OF SAY

Keynes rejected Say’s Law not on the grounds that a temporarily unsatisfied demand for money is possible but on the more sweeping grounds that nothing matches producers’ and consumers’ plans. That is, he rejected Ricardo’s claim that market forces equate savings with investment. He wrote:

From the time of Say and Ricardo the classical economists have taught that supply creates its own demand; … Contemporary thought is still deeply steeped in the notion that if people do not spend their money in one way they will spend it in another … Those who think in this way are deceived …. They are fallaciously supposing that there is a nexus which unites decisions to abstain from present consumption with decisions to provide for future consumption; whereas the motives which determine the latter are not linked in any simple way with the motives which determine the former.\(^{51}\)

Here again Keynes denied that the interest rate works to coordinate production over time with planned consumption, or investment with savings.

Keynes further argued that Say’s Law must be invalid because it is inconsistent with what Keynes believed to be the observable fact of “involuntary” unemployment. He distinguished such unemployment from “frictional” unemployment (a temporary spell between being laid off, or entering the labor force, and accepting a new job) and “voluntary” unemployment (due to quitting). According to Keynes the “classical” theory, as represented by Pigou, recognized only frictional and voluntary unemployment, overlooking involuntary unemployment. Keynes defined “involuntary” unemployment as existing when “there are men unemployed who would be willing to work at less than the existing real wage.”\(^{52}\) He considered the situation common, referring to what he considered “the fact that the population generally is seldom doing as much work as it would like to do on the basis of the current wage.”\(^{53}\) In other words, there is chronically an excess supply of workers at the going market wage, but for some reason the unemployed workers are not bidding down the going wage so that the market may clear at a lower wage. The wage is “sticky” in the downward direction. Keynes advised that


\(^{52}\) Ibid., p. 289.

\(^{53}\) Ibid., p. 7.
such workers typically would, however, accept a lower real wage, via a rise in consumer prices:

[I]t may be the case that within a certain range the demand of labour is for a minimum money-wage and not for a minimum real wage . . . Whilst workers will usually resist a reduction of money-wages, it is not their practice to withdraw their labour whenever there is a rise in the price of wage-goods [i.e. a rise in the consumer price index].

Keynes believed that American workers in 1932 were involuntarily unemployed in his sense, that is, that they would have accepted lower real wages in the form of the same dollar wages with a higher consumer price level. His remedy for such unemployment was to raise consumer prices by pumping up nominal aggregate demand.

Hayek later commented that such a remedy would work only when higher consumer prices were unexpected. Once workers came to anticipate rising consumer prices they would hold out for higher money-wages. To Hayek, Keynes’s short-run policy focus was irresponsible:

It is not surprising that Mr. Keynes finds his views anticipated by the mercantilist writers and gifted amateurs: concern with the surface phenomena has always marked the first stage of the scientific approach to our subject. But it is alarming to see that after we have once gone through the process of developing a systematic account of those forces which in the long run determine prices and production, we are now called upon to scrap it, in order to replace it by the short-sighted philosophy of the business man raised to the dignity of a science. Are we not even told that, “since in the long run we are all dead,” policy should be guided entirely by short-run considerations?

WHAT THE GENERAL THEORY OFFERED

In summary, the depression theory of The General Theory offered:

- An income-expenditure theory of current output, with Y determined by C + I + G
- A “liquidity preference” theory of the interest rate
- A sticky-wage theory of unemployment.

Unlike earlier monetary and business-cycle theories, the General Theory did not offer:

54 Ibid., pp. 8–9.
A theory of the price level
A theory of how the business cycle unfolds over time
A theory of the long-run path of output or employment
A theory of investment, production, or growth.

Unlike later “New Keynesian” theories, it did not offer:

A microeconomic rationale for wage stickiness.

DEPRESSION THEORY VERSUS BUSINESS CYCLE THEORY

Underconsumption theories offer at most only half of a cycle: a theory of depression, or a persistent underemployment state, but not of the boom or the boom-bust dynamics. Not much is heard about underconsumption theories when the economy is doing well. Paul Krugman, choosing the Austrian economist Gottfried Haberler’s survey *Prosperity and Depression* (1936) to represent pre-Keynesian business cycle theory, has argued that Keynes made a wise choice in offering a theory of depression instead of a cycle theory:

Like most macroeconomic 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 that with the mechanics of the bust… Instead, Keynes saw it as his job to explain why the economy sometimes operates far below full employment.

… 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?27

Hayek, by contrast, objected exactly to the “never mind why” approach. He considered it an irresponsible search for a superficial fix:

I cannot help regarding the increasing concentration on short-run effects … not only as a serious and dangerous intellectual error, but as a betrayal of the main duty of the economist and a grave menace to our civilisation.58

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56 We will discuss in Chapter 12 Milton Friedman’s view that empirically this focus is appropriate, that recession and recovery is all that can be historically observed – there are no booms above trend – and hence all that needs to be explained.

57 Krugman, “Introduction.”

58 Hayek, *Pure Theory of Capital.*
WHY KEYNES’S THEORY CAUGHT ON

Despite the reservations and objections of orthodox (often older) economists, Keynes’s theory quickly caught on among younger economists and completely eclipsed Hayek’s theory.\(^{59}\) Only eight years after the publication of *The General Theory*, one economist marveled at its success:

The rapid and widespread adoption of the Keynesian theory by contemporary economists, particularly by those who at first were highly critical, will probably be recorded in the future history of economic thought as an extraordinary happening. The fact that the new theory seems to be opposed to the traditional doctrine in almost every respect makes its great success all the more astonishing.\(^{60}\)

Many observers have credited the professional success of the new Keynesian doctrine to the optimism it offered, the promise that something could be done to speed recovery from the Great Depression. Skidelsky has commented that Keynes “gave people hope that unemployment could be cured” without abandoning a free society (in contrast to the path taken by Russia, Italy, or Germany), “and that was the great appeal of *The General Theory* for many people, including many of the young economists.” John Kenneth Galbraith reminisced that, returning to Harvard after studying under Keynes in England, “There was this breath of hope and optimism, and I came back from Cambridge to find a whole group of people here who had also read *The General Theory.*”\(^{61}\)

Hayek’s and Robbins’s contrasting policy recommendation, to let output and employment recover on their own as bankruptcies and layoffs released workers and machines to find more sustainable employments, was regarded by many as a counsel of despair. One commentator in 1933 put the contrast between Hayek and Keynes this way:

The deflationists, anxiously looking to a more distant future, warn us of terrors to come from an expansive policy. Must we choose between this

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depression and the next, resigning ourselves to the thought that we start
dying the moment we are born? Mr. Keynes ... plumps firmly for doing
something now.62

Milton Friedman, looking back in a 1996 interview, essentially agreed.
Academic economists had flocked to Keynes because he offered a faster way
out of the depression, as contrasted to the “gloomy” prescription of Hayek
and Robbins that we must wait for the economy to self-correct:

At the London School of Economics the dominant view in 1932 and 1933 ... 
was that the Depression was a necessary cure for the ills that had been built
up before and should be allowed to run its course and correct itself. So it
was a very gloomy view. When Keynes came along and said here is a simple
explanation of the Depression and a way to cure it, he attracted converts.63

In a recent working paper, economists Matthew N. Luzzetti and Lee E.
Ohanian of UCLA have similarly attributed the initial success of The General
Theory to the fact that it “was published during the Great Depression, when
there was a search for alternative frameworks for understanding economic
crises.” They attribute its subsequent growth as a research program during
the 1940s and 1950s to “econometric developments in the area of simulta-
nous equations” that made Keynesian macroeconomics into “a quanti-
tative enterprise,” and to its apparent fit with the postwar economic data:
“macroeconomic time series through the 1960s seemed to conform quali-
tatively to patterns discussed in the General Theory.”64

KEYNESIAN ECONOMICS AFTER KEYNES:
THE IS–LM MODEL

The intellectual victory of The General Theory was promoted by energetic
young economists who formalized its message for a professional audience
and popularized it for students and laymen. Among the most influential
of the student-oriented works was Alvin H. Hansen’s A Guide to Keynes.65
Especially noteworthy among the formalizations was John Hicks’s 1937 arti-
cle “Mr. Keynes and the Classics: A Suggested Interpretation,” which offered

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62 A. T. K. Grant, review of The Means to Prosperity by J. M. Keynes and End the Crisis! by
63 Quoted by Robert Hetzel, “The Contributions of Milton Friedman to Economics,” Federal
64 Matthew N. Luzzetti and Lee E. Ohanian, “The General Theory of Employment, Interest,
and Money after 75 Years: The Importance of Being in the Right Place at the Right Time,”
NBER Working Paper 16631 (December 2010).
a tractable diagrammatic version of Keynes’s General Theory. Together the Hansen and Hicks contributions brought forth the version of Keynesian macroeconomics that continues to be taught today as the IS-LM model. The IS-LM model simultaneously determines output and the interest rate. The IS curve (for Investment-Saving equilibria) shows the set of points consistent with the income = expenditure condition, or \( Y = C + I + G \), with \( C \) and \( I \) depending on both the interest rate and real income. The LM curve (for Liquidity preference – Money supply equilibria) shows the set of points at which demand for money, which depends on both the interest rate and income, equals the given supply of money. The intersection of the curves shows the unique (output, interest rate) pair consistent with both equilibrium conditions.

Later interpreters of Keynes have doubted that IS-LM truly captured Keynes’s message. Axel Leijonhufvud influentially argued in On Keynesian Economics and the Economics of Keynes (1968) that Keynes had a sophisticated theory of coordination failure that is not captured by IS-LM. Coordination failure, however, is a concept less easily illustrated on a classroom blackboard. Allan H. Meltzer, in Keynes’s Monetary Theory: A Different Interpretation (1988) argued that the IS-LM model failed to communicate Keynes’s view that unless the rate of interest is close to zero, output and employment are too low.

Regardless of how faithful it was to Keynes, the IS-LM model took on a life of its own and became the workhorse Keynesian policy analysis tool. Even Milton Friedman adopted its apparatus in the early 1970s to explain his non-Keynesian views to a Keynesian professional audience. The IS-LM model still populates intermediate macroeconomics textbooks and the economics Graduate Record Exam, though it has been largely supplanted in the doctoral-level curriculum by newer approaches. The readiness with which it yields at least some kind of answer to practical if-then macroeconomic questions has given it enduring influence in policy circles.

INFLATION AND THE PHILLIPS CURVE

Keynes suggested that, in an economy below full employment, increases in demand would reduce unemployment but not bid up wages or prices.
Not until full employment was reached would wage and price inflation result. A later construction called the “Phillips curve” rounded off the corner, proposing a continuous trade-off between inflation and unemployment with diminishing returns in either direction. The curve was named after A. W. Phillips, who in a 1958 article had plotted statistical evidence of negative relationships between the annual unemployment rate and the annual growth rate of money-wages over various subperiods of 1861–1957.69

Keynesian economists of the 1960s, having no better way to explain the inflation rate, built a Phillips-curve trade-off into their models. In their interpretation of the Phillips curve, rising prices were caused by increasing tightness in the labor market (demand for labor exceeding supply), which bid up wages, thereby costs of production, thereby prices. Paul Samuelson and Robert Solow in 1960 viewed the Phillips curve as a menu of policy options: policy makers could achieve a lower unemployment rate by generating a higher inflation rate, or lower inflation by allowing higher unemployment. Wise policy meant choosing the least-bad point on the curve.70

The view of the Phillips curve as a stable and exploitable trade-off between inflation and unemployment seemed to fit U.S. data between 1958 and 1969. But reliance on the curve was shaken in the 1970s when rising inflation occurred in combination with rising unemployment. We will return to this episode in Chapter 12.

“POST KEYNESIAN” AND “NEW KEYNESIAN” ECONOMICS

The mainstream Keynesian economics promoted by Hicks, Samuelson, and many others between 1937 and the 1970s – what Samuelson labeled the “neoclassical synthesis” – sought to meld orthodox neoclassical microeconomics (analysis founded on optimization and equilibrium concepts in the tradition of Walras or Marshall) with the heterodox macroeconomic ideas of Keynes's General Theory. Keynes's followers today have branched in two directions. One group, the “Post Keynesian” economists, prefers the heterodox Keynes unalloyed with neoclassical microeconomics. Post Keynesians are influenced not only by the more radical parts of The General Theory but also in various degrees by institutionalism, Marxism, and the “Neo-Ricardian” economics developed in the 1950s by Hayek’s old critic Piero Sraffa and his followers. Research in the Journal of Post Keynesian Economics

The Clash of Economic Ideas

emphasizes such themes as radical uncertainty, the central bank’s inability to control the stock of money, and the fragility of the financial system.

The “New Keynesian” economists, on the other hand, seek to incorporate Keynesian-type concepts like sticky prices and coordination failure into models having otherwise neoclassical microeconomic foundations. Their research program distinguishes itself from the approach of the “new classical” critics of Keynesian economics, led by Robert Lucas, Thomas Sargent, and Robert J. Barro. The new classicals beginning in the 1970s rejected sticky prices and non-market-clearing as *ad hoc* modeling devices, too loose in their logic, in favor of more disciplined Walrasian models in which markets always clear. Gregory Mankiw explains the New Keynesian outlook by contrast:

New Keynesian economists, however, believe that market-clearing models cannot explain short-run economic fluctuations, and so they advocate models with “sticky” wages and prices. New Keynesian theories rely on this stickiness of wages and prices to explain why involuntary unemployment exists and why monetary policy has such a strong influence on economic activity.71

New Keynesian research attempts to ground sticky prices more rigorously in microeconomic rationales like the costs of adjusting prices. Putting the “Keynesian” label on a recognition of price stickiness can be misleading, however. Sticky wages and prices were also an element of Hayek’s explanation for why recessions do not end instantly, and likewise of the “old monetarist” cycle theories of Clark Warburton and Milton Friedman (see Chapter 12). A New Keynesian can, as Mankiw does, closely resemble a monetarist in emphasizing monetary over fiscal policy and in generally favoring market control of the commanding heights, at least outside of money and macroeconomic policy. Other New Keynesians take a more heterodox approach, building models in which the macroeconomy has multiple equilibria, and may get trapped in an inferior equilibrium (suffer a “coordination failure”), once again requiring an activist government policy to pull it out.

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