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Raising Keynes: A *General Theory* for the 21st century

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Abstract

Keynes's *General Theory* argues there is no self-regulating mechanism that guarantees full employment. Keynes's vision has been distorted by mainstream Keynesians to mean that it is the warts on the body of capitalism, not capitalism itself, that are the problem: frictions and imperfections and rigidities may interfere with the mechanism for self-regulation that inheres in the perfectly competitive model. This distortion has two supposed corollaries, first, that the more the economy resembles the textbook model of perfect competition, the less likely are lapses from full employment; second, that since imperfections are limited to the short run, so are lapses from full employment.

Keynes was unable to convince the economics profession that the problem is capitalism; that the warts, real though they are, obscure a more fundamental problem. The reason is that Keynes lacked the mathematical tools to substantiate his vision. This paper deploys tools that were unavailable to Keynes, in order to lay the foundations of a Keynesian macroeconomics for the 21st century.

Keywords: Keynes; Dynamic vs static models; Flexprice adjustment; Fixprice adjustment

JEL codes: B22; B41; E12

> 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 (John Maynard Keynes to George Bernard Shaw, January 1, 1935, in Keynes, 1973, p. 492).
>
> Very likely Keynes chose the wrong battleground. Equilibrium analysis and comparative statics were the tools to which he naturally turned to express his ideas, but they were probably not the best tools for his purpose... Keynes's comparative statics were an awkward analytical language unequal to the shrewd observations and intuitions he was trying to embody (James Tobin, 1975).

Keynes wrote the *General Theory* (1936) with three goals in mind: to transform policy, theory, and economic method. My book, *Raising Keynes*, scheduled for publication in 2019, argues that he failed in his quest for a new method, and this failure undermined the theoretical novelty of the *General Theory*, so that it relatively quickly was assimilated to the economic canon as a more sophisticated argument about sand in the wheels. That is to say, the *General Theory* was transformed into an argument that there is nothing wrong with capitalism that a good dose of competition would not cure. This distortion of the theory in turn compromised the policy message, so that it took a financial crisis and recession, one that in its early stages rivaled the Great Depression, to bring Keynes back from oblivion.

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My intention in writing *Raising Keynes* is not antiquarian. My goal is to contribute to a macroeconomics for the 21st century, not one for the 20th century. I firmly believe that Keynes's vision provides the best starting point for a 21st century macro.

A necessary step is to correct the misunderstanding that mainstream economics has created and perpetuated: namely, that if only the economy were perfectly competitive—no monopoly power, no oligopolies, no trade unions, no frictions, no rigidities—then all would be well. Economic outcomes would be efficient; in layman's language we would have the biggest economic pie available from the available resources. In particular, there would be a job for every willing worker; we would always have full employment. Or at least would never stray far from full employment or be away very long. In this view a competitive economy is self-regulating.

Why should anyone care about how a perfectly competitive economy functions, whether or not it produces full employment? We all know that the world is full of monopoly and oligopoly; that trade unions make the labor market less than perfectly competitive; that the government intervenes in myriad ways, beginning with the safety net it provides, porous as that net is. The world is indeed full of rigidities—prices, and especially wages that do not adjust promptly to imbalances of demand and supply. The world is also replete with frictions. If an economy with frictions and imperfections does not lead to full employment, is not that enough to justify government intervention to accomplish this all important goal? Why do we bother with the competitive model at all?

In part, we study the perfectly competitive model to understand basic forces at work in the economy, just as physicists study a falling body in a vacuum to understand the basic force of gravity. But there is more to it than that: we have another objective. Physicists, so far as I know, have no ambition to remove the air we breathe in order to make the world more like the model. By contrast, economists not only study and diagnose, we prescribe. And, for the mainstream at least, the benchmark model of a well-functioning economy is perfect competition. Case in point: the push to deregulate the economy, especially the financial sector, in the last decades of the 20th century was founded on the idea that a competitive economy is self-regulating. Alan Greenspan was shocked! shocked! shocked! when he discovered that bankers did not put aside enough capital to cushion themselves against the risks they took on in the run-up to the financial crisis of 2008.

The heart of Keynes's vision is that there is no automatic mechanism whereby the mainstream view of a self-regulating economy is realized. He wrote the *General Theory of Employment, Interest and Money* to substantiate this vision. This vision had, as I have indicated, three components: method, theory, and policy. Practical man that he was, the first two components were in the service of the third, namely, the need to maintain aggregate demand either by aggressive monetary policy (to keep interest rates low in order to stimulate private investment), or—if and when monetary policy reached its limits—for aggressive fiscal policy to provide the requisite stimulus.

With an argument grounded in imperfections, frictions and rigidities, he feared that he would be dismissed like other brave souls who ventured policy recommendations that contradicted the competitive model. Take Jacob Viner, the great Chicago (and later Princeton) economist, who had written in 1933 (Viner, 1933, p. 130)

> If the government were to employ men to dig ditches and fill them up again, there would be nothing to show afterwards. But, nevertheless, even these expenditures would be an indirect contribution to business recovery. Their major importance would not be in the public works or the unemployment relief which immediately resulted, but in the possibility of hope that a substantial expenditure would act as a priming of the business pump, would encourage business men by increased sales, make them more optimistic, lead them to increase the number of their employees, and so on.

Compare this with what Keynes wrote in the *General Theory*:

> If the Treasury were to fill old bottles with banknotes, bury them at suitable depths in disused coal mines which are then filled up to the surface with town rubbish, and leave it private enterprise on well tried principles of laissez-faire to dig the notes up again (the right to do so being obtained, of course, by tendering for leases of the note-bearing territory), there need be no more unemployment and, with the help of the repercussions, the real income of the community, and its capital wealth also, would probably become a good deal greater than it actually is (*General Theory*, p. 129).

The difference is not in the policy itself, but in the fact that for Viner the policy relies on the imperfections and rigidities that characterized the American economy in 1933, whereas for Keynes, the policy is the logical extension of his theory of employment.

The *General Theory* thus had to do more than show how unemployment might persist in the workings of the actual economy, 1930s capitalism-warts-and-all. As long as no one could be sure whether the problem was capitalism or the warts, it was impossible to counter the reigning orthodoxy, which held that it would be enough for the government to remove the warts. In short, to convince the economics profession, Keynes needed to ground the idea that the government should steer the economic ship in a convincing argument as to why the ship could not steer itself—even if it were reconstructed along the lines of perfect competition.

To some extent Keynes succeeded. The *General Theory* created a whole new field—macroeconomics—and dominated the field for a generation. But the triumph of Keynes was already being undermined in its heyday, and by the time Keynes died in 1946 his insight was on its way to being merged with the view that imperfections, frictions, and rigidities were the problem. And with this merger came a logical non-sequitur: that imperfections and the rest were necessarily short-run in nature, so the perfectly competitive model, though problematic in the short run, is the appropriate model for the longer period. Hence the surprise at the length of the recession that ensued after the crash of Lehman Brothers in September, 2008, which the mainstream of the economics profession is still struggling to explain.

By 1970, Milton Friedman, who was to become the arch anti-Keynesian, could confidently assert (pp. 206,207).

> [Keynes's theory] can be treated summarily because it has been demonstrated to be false. . . All sorts of frictions and rigidities may interfere with the attainment of a hypothetical long-run equilibrium position at full employment; dynamic changes in technology, resources, and social and economic institutions may continually change the characteristics of that equilibrium position; but there is no fundamental "flaw in the price system" that makes unemployment the natural outcome of a fully operative market mechanism.

Keynes would have had none of this. He was hardly unaware of the warts on the body of capitalism, but for him there was a deeper problem, and it was this deeper problem that the *General Theory* was meant to lay bare.

The fact is that Friedman's judgment has prevailed. So we must ask ourselves: where did Keynes go wrong? Remember that Keynes's vision consisted of three parts, method, theory, and policy. If new policy required new theory, new theory required a new method. Keynes understood this: at the very outset of the *General Theory*, in the preface, he writes

> My so-called "fundamental equations" [in Keynes's earlier book, *A Treatise on Money*] 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. (p vii)

Keynes had the right intuition, but lacked the tools to carry through the methodological revolution his vision required. Mainstream economics, as it has evolved over the 80+ years since the publication of the *General Theory*, has long since come to possess the tools, but has never developed the intuition.

Methodologically, mainstream economics makes two mistakes. First it uncritically identifies market clearing with equilibrium, when market clearing is just one of many possible ways in which opposing forces might be in balance so that a system will have no tendency to move—which is after all the fundamental notion of equilibrium. Second, the profession emphasizes equilibrium and treats the price mechanism, the adjustment process, as simply an adjunct to equilibrium. Elementary texts dismiss the price mechanism with a paragraph of hand-waving, with a just-so story of how excess demand or excess supply are eliminated. Graduate texts are hardly any better. A leading text devotes fewer than 10 pages (out of 1000) to the price mechanism, justifying this imbalance with a frank admission:

> We have, so far, carried out an extensive analysis of equilibrium equations. A characteristic feature that distinguishes economics from other scientific fields is that, for us, the equations of equilibrium constitute the center of our discipline. Other sciences, such as physics or even ecology, put comparatively more emphasis on the determination of dynamic laws of change. In contrast, up to now, we have hardly mentioned dynamics. The reason, informally speaking, is that economists are good (or so we hope) at recognizing a state of equilibrium but are poor at predicting precisely how an economy in disequilibrium will evolve. (Mas-Colell et al., 1995, p. 620.)

Why has the mainstream has paid so little attention to dynamics? As Mas-Colell, Whinston, and Green argue, dynamics is much harder, but economists do not always shy away from difficult problems.

One reason for avoiding these issues is that such theorizing as has been done tends to undercut rather than reinforce the basic arguments of mainstream theory. All theory is by its very nature unrealistic if for no other reason than that it must be a map which simplifies the territory. Suspension of disbelief is necessary for theorizing. But the theoretical assumptions about dynamics that make static equilibrium a plausible way of characterizing an economy up the ante of disbelief considerably. It is no wonder that the study that has addressed the problem most comprehensively (Fisher, 1983) has sunk like a stone in the sea of economic theory.

A second reason is the nature of the difficulties that economists would encounter were they to take dynamics seriously. The very multiplicity of plausible adjustment mechanisms would make it necessary for economists to dirty their hands in the messy complexities of how agents actually behave in real life, an investigation of distinctly lower status that blurs the line between economics, a discipline that aspires to the status of science, and anthropology, forever tainted in the eyes of most economists by its reliance on interpretation. Indeed, you can count on one hand the serious studies during my conscious lifetime of how agents actually set wages and prices. (Examples: Bewley, 1999; Blinder, 1998.)

A third reason for the neglect of dynamics, and I must be more tentative here, is the comfort that economists may have drawn from Paul Samuelson's "correspondence principle." As developed by Samuelson in the 1940s, the correspondence principle establishes a relationship between static properties of equilibrium and the dynamics of adjustment if equilibrium is disturbed. Specifically, the correspondence principle relates these static properties to the question of whether the equilibrium is stable or unstable, stability characterizing the situation where disequilibrium adjustment will lead back to the original equilibrium and instability the situation in which the trajectory leads ever further away. The analysis provides legitimacy, at least under certain circumstances, for analyzing change without ever addressing the adjustment process, instead simply comparing static equilibria as if they were a set of observations from parallel universes (Samuelson, 1947, part II).

How do we proceed if we take dynamics seriously and start with the adjustment process? To answer this question I shall lay out a model that situates the *General Theory* in a perfectly competitive economy, one characterized by three assumptions:

1. aggregate demand matters,
2. goods supply is determined by profit maximization,
3. the money wage varies in response to the level of unemployment.

There is an obvious problem: if we relate aggregate demand (AD), goods supply (GS), and labor supply (LS), all measured in terms of (real) income and output, Y, to the (real) price level, P/W, we have an overdetermined system, as in Fig. 1. The three schedules of Fig. 1 are

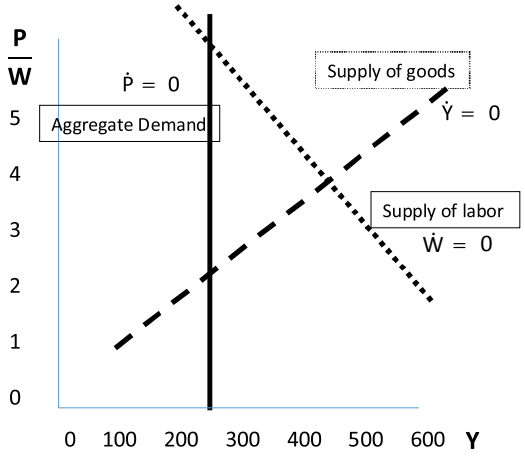

Fig. 1. Aggregate demand, goods supply, and labor supply.

(1) the AD schedule, given by equality of expenditure and income, which is to say equality of desired investment and desired saving

$$I(\rho_{\mathrm{h}}) = sY \quad \text{(aggregate demand)}$$

where ρ_{h} is the hurdle rate of interest—the rate to which the rate of return on prospective investment projects is compared—assumed for the moment to be given, and s is a uniform marginal propensity to save;

(2) the GS schedule, given by profit maximization, which dictates equality of real price and marginal cost

$$\frac{P}{W} = (MP_{\mathrm{L}})^{-1} \quad \text{(goods supply)}$$

where MP_{L} is the marginal productivity of labor[1];

(3) the LS schedule, given by utility-maximizing choices of individual workers, as transmitted through the production function (which, in the short run—with the capital stock fixed—depends only on labor supply)

$$Y = F\left(K, L\left(\frac{P}{W}\right)\right) \quad \text{(labor supply)}$$

where $L\left(\frac{P}{W}\right)$ is the utility-maximizing level of employment at the real wage $\frac{W}{P}$, so that any level of output for which $L = L\left(\frac{P}{W}\right)$ is a full-employment level of output.

Keynes's provisional solution to the overdetermination in Fig. 1 is to suppress the labor-supply function, $L\left(\frac{P}{W}\right)$, leaving equilibrium to be determined by the aggregate-demand and goods-supply schedules. The mainstream—then and now—suppresses the aggregate-demand schedule, at least in the long run; a short-run role for aggregate demand is explained by market imperfections of one sort or another.

At the level of comparative statics, Modigliani (1944) showed that Keynes's provisional solution does not work once we drop the rigid money wage. Here the dynamic methodology that Keynes prescribed in the preface to the *General Theory* becomes essential if one is to go beyond listing the many factors that complicate price and wage adjustment. We can make sense of Fig. 1 only if we shift the focus to the dynamics of adjustment.

With flexprice dynamics (John Hicks's term, 1974), an imbalance between expenditure and output drives (nominal) price changes. The aggregate-demand schedule becomes a locus of stationary prices. The labor-supply schedule is a locus of stationary money wages, and the distance the economy is from this schedule drives (nominal) wage changes. Between these two loci lies a stationary real-price locus along which the ratio of nominal price to nominal wage does not change, that is, $\left(\frac{P}{W}\right)^{\bullet} = 0$.

The dynamics are given by the equations

$$\dot{P} = \theta_1(I - sY)P$$

$$\dot{Y} = \theta_2\left(\frac{P}{W} - {MP_{\mathrm{L}}}^{-1}\right)Y$$

$$\dot{W} = \theta_3\left[Y - F\left(K, L\left(\frac{P}{W}\right)\right)\right]W$$

[1] If we invert the left- and right-hand sides of the goods-supply equation, we have the equality of the real wage and the marginal productivity of labor. This condition defines a labor-demand schedule, but this schedule is conceptually different from the aggregate-demand schedule: it implicitly assumes Say's Law, namely, that whatever is produced will be sold, and provides the condition for maximizing profit for a producer operating in competitive goods and labor markets.

$$\frac{(P/W)^{\bullet}}{P/W} \equiv \left[\frac{\dot{P}}{P} - \frac{\dot{W}}{W}\right] = \theta_1(I - sY) - \theta_3\left[Y - F\left(K, L\left(\frac{P}{W}\right)\right)\right]$$

In a flexprice regime the goods-supply schedule is a locus of stationary output. The picture is given in Fig. 2. As Fig. 2 is drawn, the flexprice equilibrium at E, where both output and the real price are stationary ($\dot{Y} = 0$ and $\left(\frac{P}{W}\right)^{\bullet} = 0$), is one with chronic excess capacity and underemployment, the result of which is price and wage deflation. Aggregate expenditure falls short of aggregate output, so prices fall. And because there is unemployment, there is constant downward pressure on wages. At E wages and prices fall at the same percentage rate, and the real price remains stationary over time.

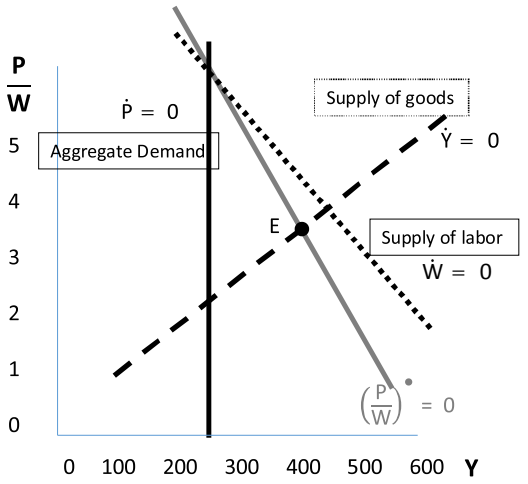

Fig. 2. Equilibrium with flexprice dynamics.

The alternative to flexprice adjustment is what Hicks called fixprice adjustment. This terminology is misleading since prices are not fixed; rather the *direct* impact of an excess or shortfall of expenditure relative to income is on output and employment; output falls when it is in excess of desired expenditure and rises when expenditure exceeds output. Prices (and wages) are affected indirectly. Prices are driven by the relationship between actual output and the profit-maximizing level of output, that is, by the horizontal distance between today's level of output and the goods-supply schedule. Money wages continue to be driven by the gap between the current level of output and the level of output workers would like to produce at the going real wage, which is to say the horizontal distance between today's output and the level of output corresponding to the labor-supply schedule.

The dynamic equations are

$$\dot{Y} = \theta_1(I - sY)Y$$

$$\dot{P} = \theta_2\left(Y - GS\left(\frac{P}{W}\right)\right)P$$

$$\dot{W} = \theta_3\left[Y - F\left(K, L\left(\frac{P}{W}\right)\right)\right]W$$

$$\frac{(P/W)^{\bullet}}{P/W} \equiv \left[\frac{\dot{P}}{P} - \frac{\dot{W}}{W}\right] = \theta_2\left[Y - GS\left(\frac{P}{W}\right)\right] - \theta_3\left[Y - F\left(K, L\left(\frac{P}{W}\right)\right)\right]$$

This process defines the equilibrium in Fig. 3. Since the GS schedule is now a locus of stationary prices and the LS schedule is the locus of stationary money wages, the stationary real price locus, $\left(\frac{P}{W}\right)^{\bullet} = 0$, lies between them.

As Fig. 3 is drawn, the equilibrium, like the equilibrium in Fig. 2, is characterized by deflation: producers reduce prices because they are making money at the margin and wish to increase output and sales. Unemployment, as it does

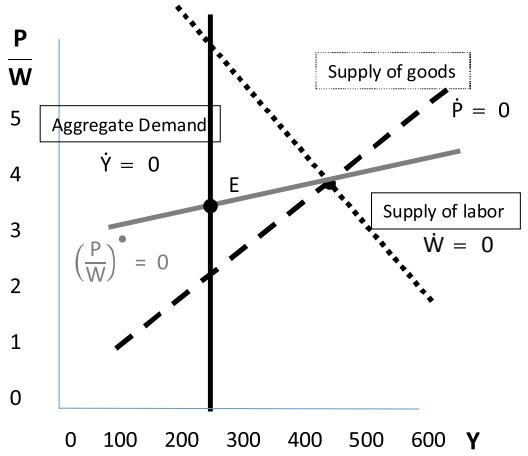

Fig. 3. Equilibrium with fixprice dynamics.

under a flexprice regime, puts downward pressure on money wages. At E the pressure on prices and pressure on wages just balance, so that, while both are falling, the real price remains stationary.[2]

Observe that the equilibrium in Fig. 3 is different from the equilibrium in Fig. 2. In my representation of the *General Theory* the equilibrium is determined by the adjustment process, and in consequence flex- and fixprice dynamics lead to different equilibria!

There is an important difference between the two adjustment processes: with fixprice adjustment, producers attempt to maximize profits, but—unlike flexprice producers—they are now frustrated by the market. Instead of simply expanding output in response to differences between price and marginal cost, producers now respond to supply conditions by changing prices. They attempt to sell more goods by reducing prices, expecting larger quantities of goods to be demanded at lower prices. But they do not succeed for the same reason that Keynes argues that workers cannot fix real wages: attempts to lower the real price of goods are frustrated because slack labor markets counter price reductions with wage reductions. Another important difference between the two models is that the fixprice equilibrium is conceptually closer to the vision captured in Keynes's most elementary (and provisional) model, in which output is determined solely by the AD schedule, and real price by the adjustment of the nominal price.

By comparing limiting cases, we gain a new perspective on the role of assumptions about the relative speed of adjustment of money wages and prices. With the relative speed of wage adjustment going to zero, depicted below in Fig. 4, we are, not surprisingly, back to Keynes's provisional model, in which money wages as well as the interest rate are fixed—a fixed money wage is the limiting case of rapid price adjustment. In this limiting case it turns out not to matter for equilibrium whether the rest of the model is determined by flexprice or fixprice dynamics; we have the same equilibrium in both cases. The LS schedule becomes irrelevant, as in the provisional static model, and we can ignore dynamics: the equilibrium does not depend on the dynamic specification.

The two limiting cases of rapid wage adjustment are also revealing. In the first panel of Fig. 5 the mainstream model comes into its own. With prices responding relatively slowly to aggregate demand, money-wage adjustment becomes, in the limit, real-wage adjustment, which obviates Keynes's stricture that because the wage bargain is made in money terms "there may exist no expedient by which labor as a whole can reduce its real wage to a given figure by making revised money bargains with the entrepreneurs" (*General Theory*, p. 13). In the second panel, rapid wage adjustment makes the goods-supply schedule irrelevant. Both producers and workers respond to the imbalance between the actual levels of output and employment and the desired levels by reducing prices and wages, and producers' price reductions can keep pace with workers' wage reductions only if there is no daylight between the actual level of employment and the desired level. Thus the equilibrium in both panels is a full-employment equilibrium.

[2] Equilibrium inflation is also possible; indeed most of the history of capitalism has been characterized by rising output and inflation. The Great Depression, the case that concerned Keynes, and the Great Recession are exceptional in historical perspective.

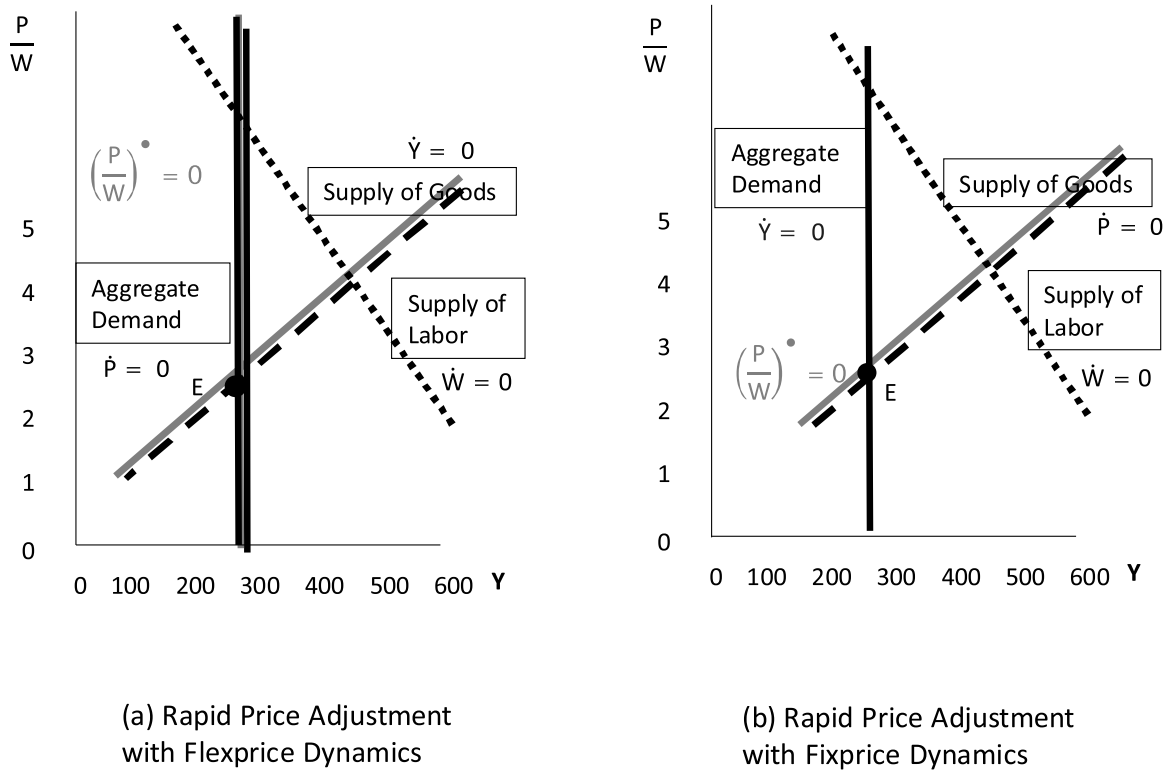

Fig. 4. Limiting cases of rapid price adjustment.

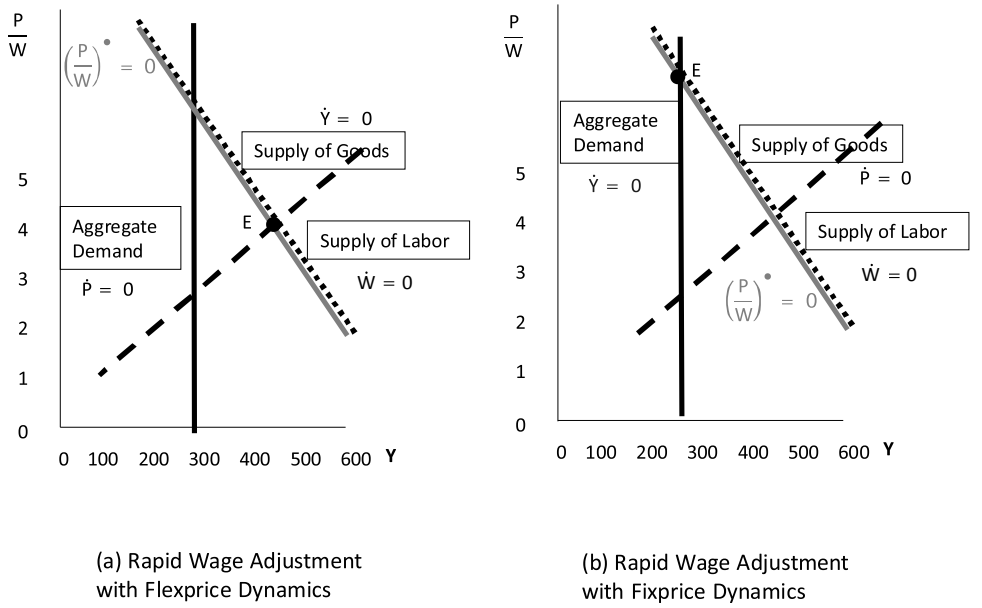

Fig. 5. Limiting cases of rapid wage adjustment.

In the first, flexprice, case, aggregate demand plays no role in determining the real variables of the economy, output and the real price, its influence being limited to the absolute price level. In the second panel, aggregate demand and labor supply jointly determine equilibrium. In this case aggregate demand matters for the real side of the economy; it is the goods-supply equation which becomes ineffectual except for determining the absolute price level. Because

Table 1
Typology of limiting case equilibria.

	Flexprice dynamics	Fixprice dynamics
Limiting case: Rapid price adjustment	"Keynesian" (AD and GS determine real equilibrium)	"Keynesian" (AD and GS determine real equilibrium)
Limiting case: Rapid wage adjustment	Mainstream (GS and LS determine real equilibrium)	Real wage resistance (AD and LS determine real equilibrium)

wage adjustment is (by assumption) so rapid, producers' attempts to affect real prices by changing money prices are completely offset by wage adjustments. Real-wage adjustment effectively resists any attempt to dislodge employment from the labor-supply schedule.

Table 1 summarizes the four limiting cases, two "Keynesian" cases of rapid price adjustment (Keynesian is in quotes because these two cases are Keynes *simpliciter*, that is, Keynes's provisional model), and two cases of rapid wage adjustment, one corresponding to Modigliani's 1944 version of the model and one a hybrid of Keynes and the mainstream, in which "real wage resistance" (Joan Robinson's term, 1962) makes the goods-supply schedule irrelevant to the determination of the real side of the model.

The mainstream may see vindication in the above table: both the "Keynesian" formulation (ignoring the LS schedule) and the mainstream formulation (ignoring the AD schedule) turn out to be limiting cases of a more general model. But there is really not much comfort for orthodoxy. Between the limiting cases is a vast middle ground, in which equilibrium is determined jointly by the adjustment of prices, wages, and output. *And this middle ground belongs to Keynes.* Every equilibrium, apart from the two limiting cases of rapid wage adjustment, is an equilibrium with unemployment, the main critical point of the *General Theory.*

The limiting cases reveal that Keynes's rejection of the classical dichotomy—the separation between "real" and "nominal" parts of the economy—takes place at two levels. Besides the liquidity-preference argument that the rate of interest is determined in markets for financial assets, there is a simpler and more direct argument: the classical dichotomy is belied by the very fact that wage bargains are struck in money terms, with real wages emerging only as the price level is determined along with the level of output. Only in the limiting case in which money wages adjust infinitely faster than prices, is revising the money-wage bargain tantamount to revising the real-wage bargain. In this limiting case the classical dichotomy holds its own; in all other cases, wage bargains are nominal variables with real consequences.

I am not the only reader of the *General Theory* to take note of an equilibrium at which prices and wages are falling at the same rate. Although I was ignorant of earlier models when I developed my argument, the process of research and writing *Raising Keynes* led me to three models that resemble my own: an unpublished paper by Clower (1958), a paper by Solow and Stiglitz (1968), and James Tobin's 1975 paper, from which I have excerpted a paragraph for the epigraph to this paper.

The possibility of an equilibrium with falling wages and prices was observed even earlier. Gottfried Haberler seems to have been the first, at least the first to take notice in print:

> A logical possibility would, of course, be that all money expressions (prices, wages, money values) fall continuously, while the real magnitudes including employment remain the same. That would be the implication of the assumption that the Keynesian relations remain unchanged in real terms in the face of such a situation. But this case is surely too unrealistic to be seriously contemplated. (Haberler, 1946, pp. 190–191)

Falling wages and prices *in equilibrium* are indeed a prediction of my model—and the numbers for the Great Depression bear this prediction out. Table 2 provides data on wages, prices, and real wages over the period 1929 to 1933. Prices and wages declining at the same percentage rate was indeed the reality of the Great Depression.

Keynes and any other practically minded observer would have expected a fundamental change in the economic regime at some point, since the alternative was to allow falling prices to destroy the fabric of credit and the livelihoods

Table 2
Money and real wages.

	Avg annual earnings of full time employees (series D 722, p. 164)	Avg hourly earnings, all manufacturing (series D 802, pp. 169–170)	Avg annual earnings of full time employees, 1929 = 100 (series D 722, p. 164)	Avg hourly earnings, all manufacturing, 1929 = 100 (series D 802, pp. 169–170)	Consumer Price Index, 1929 = 100 (series D 727, p. 164)	Avg real annual earnings of full time employees, 1929 = 100 (series D 722 and D 727, p. 164)	Avg real hourly earnings, all manufacturing, 1929 = 100 (series D 802, pp. 169–170, and D 727, p. 164)
1929	$1405	$0.56	100.00	100.00	100.00	100.00	100.00
1930	$1368	$0.55	97.37	98.21	97.37	100.00	100.87
1931	$1275	$0.51	90.75	91.07	88.65	102.37	102.73
1932	$1120	$0.44	79.72	78.57	79.64	100.10	98.66
1933	$1048	$0.44	74.59	78.57	75.37	98.97	104.25

Source: Historical Statistics of the United States, Colonial Times to 1970, Part 1.

of a large and growing percentage of households. The point is that—contrary to the mainstream view—there are no *endogenous* forces in either the fixprice or the flexprice model that will bring about this fundamental change.[3] Establishing this is an important part of the argument of *Raising Keynes.*

In the US the face of regime change was Franklin Roosevelt, whose New Deal, particularly the departure from the gold standard (one of the first acts of Roosevelt's presidency), arrested the catastrophic fall in prices and wages that had taken place since 1929 (Temin and Wigmore, 1990). The New Deal set the stage for the gradual recovery of output and employment.

Timely intervention—"Well I guess everyone is a Keynesian in a foxhole," said Robert Lucas in October 2008 (http://www.time.com/time/magazine/article/0,9171,1853302,00.html, accessed January 10, 2011)[4]—prevented the financial crisis of 2008 from ushering in another Great Depression. But the intervention—particularly the Obama stimulus package—was too timid to produce a rapid recovery, and this timidity has had lasting negative repercussions all over the world.

The story of the rise, fall, and—I hope resurrection—of the *General Theory* is a complex one involving politics, the economy, and economics. Some of my book is taken up with telling this story, especially the economics. In particular I focus on how Keynes's failure to provide a dynamic method allowed the economics profession to assimilate Keynes to the mainstream view, the view that the problem of capitalism was insufficient competition, and by extension insufficient faith in the competitive model. I spend considerable time on Keynes's failures, even though I come to a very different conclusion from Milton Friedman about the significance of these failures. Keynes was trying to map uncharted territory, and he lacked the tools to do so. His vision was clear, even though, like Moses, he could only glimpse the promised land. Alas, like God (and Adam Smith) Keynes had disciples who went off the deep end, in his case, disciples that stretched a correct idea—that aggregate demand matters—into an incorrect dictum that *only* aggregate demand matters.

However, I must reiterate that my purpose in writing *Raising Keynes* is not antiquarian—I am interested in a macroeconomics for the 21st century, not the 20th. In the end this is why it is important to provide a new method and, building on that method, to develop the theory that eluded Keynes.

I sometimes like to say that I am channeling Keynes in the pursuit of this goal. This is of course absurd. While it is an interesting question on which to speculate, in the end it does not matter what Keynes meant. I may be a pygmy standing on the shoulders of a giant, but the giant is dead, and I have tools he lacked as well as the benefit of 80 years of critique and counter-critique. I may indulge the thought that Keynes would have come to the same argument I do,

[3] Output and employment hit bottom in 1933, but it is not clear whether the bottom was an equilibrium, or whether both would have fallen further without regime change.

[4] Lucas quickly added, "But I don't think we are there yet." (http://curiouscapitalist.blogs.time.com/2008/10/28/bob-lucas-on-the-comeback-of-keynesianism/#ixzz1AfQ4lkta, accessed January 10, 2011).

but what matters is whether the theory I put forward allows us not only to understand the vision that animated Keynes, but, more importantly, whether it helps us to understand how the economy works and what policies will make it work better. That is the real purpose of *Raising Keynes*.

Of course I wish this book had been ready for publication in the early aftermath of the financial crisis and the Great Recession, when the market for Keynes peaked, but truth to tell I had some years earlier put aside a long-standing interest in the *General Theory*. It just did not seem like anybody else was interested.

Then a funny thing happened. On September 15, 2008, the day that Lehman Brothers crashed, I was returning to my office from teaching an alternative to my department's standard introductory course when I overheard a group of young faculty members earnestly discussing the news. Their focus was on the likely effect of the emerging financial crisis on the real economy, so-called—the economy of output, consumption, investment, and employment. Opinions were divided, but the consensus was clear: the financial mess would have at most a modest impact. After all, the productive capacity of the economy was unaffected by the fall of Lehman Brothers; why should production, and hence income take a hit? And if production and income remained unaffected, why should employment and consumption or investment be affected? I did not need to be clairvoyant to realize that Keynes's moment had come—again.

Almost a decade after the crash, with the US unemployment rate at its lowest point in 17 years, interest in Keynes has once again diminished. But macroeconomics remains in disarray. Just as the stagflation of the 1970s undid the Keynesian consensus, the financial crisis of 2008 and the ensuing recession have undone the neoclassical revival in its many incarnations, from Milton Friedman's monetarism to Robert Lucas's New Classical economics to Finn Kydland and Edward Prescott's Real Business-Cycle theory. New Keynesian economics limps along, based on a distorted understanding of the *General Theory* as a more sophisticated version of sand in the wheels, limited to a short run in which one or more frictions or imperfections interferes with the efficient allocation of resources. New Keynesian economics is more a catalog than a theory.

The times are still propitious for a new theory, and Keynes remains the obvious source. Keynes may be dead, but long live *The General Theory*.

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