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Ahiakpor, James C W
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Full Employment: A Classical Assumption or Keynes's Rhetorical Device?*

JAMES C. W. AHIAKPOR
California State University
Hayward, California

I. Introduction

Following Keynes's attribution of the assumption of full employment to the classics in the *General Theory* (1936), it has become standard practice particularly in macroeconomics textbooks to identify classical economics[1] with that assumption. Among the intermediate-level texts that repeat the attribution are Abel and Bernanke [1, 426], Baily and Friedman [6, 443–44], Dornbusch and Fischer [14, 200–201], Froyen [17, 55], Galbraith and Darity [18, 44–45], Gordon [19, 165], McElroy [45, 41–51], and Sachs and Larrain [62, 55].[2] Case and Fair [10, 349–50], Colander [12, 211], Samuelson and Nordhaus [63, 277], and Slavin [65, 219–20] are among introductory-level texts that state the same claim. However, devising appropriate policies to raise the standard of living, especially for the poor, and also increase employment opportunities for a growing population were the principal focus of the classical economists. See, for example, Smith [66, 1:359–60, 372, 2:208], Ricardo [58, 1:386–97], Malthus [40, 231–40, 351–60], and Mill [46, 2:356–58].

Writing in the tradition of the classics, Alfred Marshall also was equally concerned about the fate of the poor and the need to identify policies that would promote economic growth and their welfare.[3] Indeed, Keynes recalls Marshall's own explanation of his transition from mathematics to economics as being influenced by his visits to "the poorest quarters of several cities and [having] walked one street after another, looking at the faces of the poorest people" on his vacations.[4] Pigou [53] also firmly denies having employed the full employment assumption as Keynes alleges. Indeed such an assumption would also be inconsistent with the title of Pigou's 1933 book, *The Theory of Unemployment.*

On the other hand, Keynes's efforts to contrast classical arguments with his own charac-

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1. Keynes [31, 3n] lists among the classical economists both the predecessors of David Ricardo and writers who followed in his tradition, including "J.S. Mill, Marshall, Edgeworth and Prof. Pigou."

2. Besides Keynes's own work, others such as Hansen [20, 20–21] and Patinkin [47, esp. 313–15] provide a basis for this characterization of classical economics.

3. See, e.g., Marshall's 1901, 1903 and other essays in Pigou [57].

4. See Keynes's "Alfred Marshall, 1842–1924," in Pigou [57, 10]. Hicks [24, 337] also uses this evidence to cast Marshall differently from the classics, arguing that Marshall's economics "was to be an economics of the shopfloor, not like that of the classics, an economics of the counting-house."

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terization of "the economy in which we live," seem to have been instrumental in undermining classical arguments, much to the advantage his own views [31, 13]. Even as other competing theories have weakened the influence of Keynes's or Keynesian economics,[5] the persistent attribution of the full-employment assumption to classical economics continues to undermine appreciation of its relevance to real-world economies.

In this article, I restate from Keynes's *General Theory* the specific contexts in which he claims to have found the assumption of full employment made or implied by the classics. I also restate the core of classical economics as background for showing the inaccuracy of Keynes's claims. I draw heavily on texts of the classics themselves, given the long-standing misrepresentations of their work in the secondary literature. Besides, previous attempts to show Keynes's misrepresentations of classical arguments by his contemporaries, but without direct references to the classical literature, proved to have been ineffective.[6] I conclude that there is no validity to Keynes's attributions of the full-employment assumption to the classics, although the attributions may have served a useful rhetorical device. The classics did argue that all income is always spent in one form or another, but not that all available labor is always employed. Even in the case of Pigou's *Theory of Unemployment* (1933), which Keynes targets as representative of the classical model of employment, the evidence shows that Keynes misrepresents his argument.

II. Keynes and the Full-Employment Assumption

Keynes defines full employment as a condition in the labor market in which only "frictional" and "voluntary" unemployment exists, defining involuntary unemployment thus:

> *Men are involuntarily unemployed if, in the event of a small rise in the price of wage-goods relatively to the money-wage, both the aggregate supply of labour willing to work for the current money-wage and the aggregate demand for it at that wage would be greater than the existing volume of employment.* [31, 16, emphasis original]

This means if only a fall in the real wage would lead to a greater number of people being employed would existing unemployment be involuntary. Thus an increase in the money supply which causes the real wage to fall through an increase in the price level and causes increased employment would indicate the existence of involuntary unemployment.

Keynes [31, 15] justifies this definition of involuntary unemployment by invoking classical value theory applied to a labor market. According to that argument, the real wage at which one accepts employment must be at least equal to the marginal disutility of work to be done, a microeconomic concept which Keynes generalizes for aggregate employment. Thus, according to his argument, there is voluntary unemployment if only a rise in the real wage would induce more people to accept employment.

Following the standard classical argument relating to wage determination in different occupations and problems of adjustment of labor between industries as capital (fund) moves from one to the other, e.g., Pigou [53], Keynes [31, 16] lists types of unemployment which are consistent with "frictional" and "voluntary" unemployment. They include "either temporary loss of work

5. Keynes's economics can be distinguished from Keynesian economics, as Leijonhufvud [36], for example, has done. A distinguishing feature of Keynesian economics is a recognition of an equilibrating mechanism which links the money and goods markets, but whose existence Keynes denies. See, for example, Hicks [23].

6. They include Pigou [54], Hawtrey [21], and Robertson [60; 61]. Ahiakpor [4] elaborates.

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of the 'between jobs' type or of intermittent demand for highly specialised resources or of the effect of a trade union 'closed shop' on the employment of free labour."

Keynes also associates full employment with a condition under which "the supply of output as a whole ceases to be elastic, i.e. . . . a further increase in the value of the effective demand will no longer be accompanied by any increase in output" [31, 26].[7] This is how the vertical aggregate supply curve of output has come to be associated with classical macroeconomics. Authors who follow Keynes's narrative [31, 191, 209] suggesting that the "classics" assumed the existence *always* of full employment because the "labor market" always clears, thus hardly distinguish between the short- and long-run in classical analysis while attributing the vertical aggregate supply curve to them, e.g., Abel and Bernanke [1, 426] and Dornbusch and Fischer [14, 200–201].

Keynes [31, 18–22] attributes the above concept of full employment to the "classics", including David Ricardo, J. B. Say, J. S. Mill, Marshall, and Pigou in various contexts. One is Say's Law of Markets or the classical explanation that aggregate supply (or income from output) is the source of aggregate demand, which Keynes [31, 18] restates as "supply creates it own demand."[8] Through this restatement of an otherwise valid classical argument, Keynes [31, xxxv] feels justified to accuse J. B. Say of a "fallacy that demand is created by supply." To substantiate the same charge of fallacy against Marshall, Keynes quotes Alfred and Mary Marshall's argument in the *Economics of Industry* that "It is not good for trade to have dresses made of material which wears out quickly. For if people did not spend their means on buying new dresses they would spend them on giving employment to labour in some other way" [31, 20, n. 1].[9]

Keynes also associates the assumption of full employment with the classical capital (or savings), rather than money (cash), theory of interest. Thus, for example, Keynes [31, 190] cites Ricardo's explanation in the *Principles of Political Economy* that a central bank cannot lower permanently the rate of interest by its money creation, but "would alter only the value of the money which they thus issued." He accords more credence to Ricardo's statement of the theory of interest over those of later writers, including Marshall and Pigou, but suggests that Ricardo's version is valid only under the assumption of full employment. Argues Keynes [31, 191]:

> Once again the assumption required [for its validity] is the usual classical assumption, that there is *always* full employment; so that, assuming no change in the supply curve of labour in terms of product, there is only one possible level of employment in long-period equilibrium. (My emphasis; note that Keynes uses "short-" or "long-period" in the *General Theory* in place of "short-" or "long-run" as we now do.)

Continuing with his criticism of Ricardo's statement of the classical theory of interest, Keynes (ibid.) also argues that "even in the long period the volume of employment is not necessarily

7. Keynes [31, 303] repeats this argument: "We have full employment when output has risen to a level at which the marginal return from a representative unit of the factors of production has fallen to the minimum figure at which a quantity of the factors sufficient to produce this output is available."

8. Keynes [32, 223] also repeats this version. But this statement of Say's Law of Markets by Keynes is a distortion because it presumes an absence of the demand for cash or hoarding, as I explain below. It can also be misleading if it suggests that sellers constitute buyers of goods they themselves sell, or the "supply of plums [creates] the demand for plums," as Hutt [26, 3] notes. "What the law really asserts," Hutt elaborates, "is that the supply of plums *constitutes* demand for whatever the supplier is destined to acquire in exchange for the plums under barter, or with the money proceeds in a money economy. (The supplier may of course hold on to the money, i.e., demand *it* instead of other non-money [items])" [ibid.; original emphasis].

9. Keynes [31, 19] earlier quotes Marshall's argument in the *Pure Theory of Domestic Value* explaining that all income must be spent either on "present enjoyment" or on means devoted to the production of future income, i.e., savings. I explain below Keynes's confusion in this regard.

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full but is capable of varying." (In fact, this is an argument to which the classics would not object, as I explain below. It is also noteworthy that Keynes here attributes a long-period analysis to the classics in which we are all not dead![10]) Keynes advances the above criticism against the classical theory of interest in support of his claim that "the quantity of money as such is, indeed, nugatory in the long period [and where money-wages are flexible]; but the terms on which the monetary authority will change the quantity of money enters as a real determinant into the economic scheme" [31, 191].

It is not readily clear how relevant Keynes's statement is to his criticism of Ricardo, given that Ricardo himself argued that variations in the quantity of money are not necessarily neutral in their effect on relative prices or the composition of output in the long run.[11] On the other hand, Ricardo and other classics also argued real consequences, including changes in output, from variations in the quantity of central bank money in the short run, an argument that underlies the "forced-saving" doctrine.

Another significant context in which Keynes claims the classics assumed full employment is their explanation of price-level determination by the supply and demand for money (cash) or the Quantity Theory of Money. Rather, Keynes [31, xxxiv] claims that "the price level as a whole [is] determined precisely the same way as individual prices; that is under the influence of supply and demand" in production. The role of money supply is first to determine "the supply of liquid resources, hence the rate of interest, and in conjunction with other factors (particularly that of confidence) the inducement to invest" [31, xxxv]. Only after investment has determined the level of incomes, output and employment is the price level determined. Thus, Keynes [31, xxii] claims to have turned monetary theory into a "theory of output as a whole" instead of determining the general price level. Also see Keynes [31, ch. 21].

Believing that the classics did not recognize the possibility or existence of hoarding in their application of the quantity theory, Keynes [31, 209] also criticizes the classics thus:

> For the purposes of the real world it is a great fault in the quantity theory that it does not distinguish between changes in prices which are a function of changes in output, and those which are a function of changes in the wage-unit. The explanation of this omission is, perhaps, to be found in the assumptions that there is *no propensity to hoard* and that *there is always full employment.* [emphasis added]

Keynes [31, 209, n. 1] thus argues that the quantity theory of money would have been valid, "though without significance," if velocity had been defined as being determined both by transactions and liquidity demands for money, instead of only the former.[12]

Keynes also attributes the full-employment assumption to the classical forced saving doctrine which argues that increases in the money supply may increase real output in the short run while lowering the rate of interest and raising the price level. Keynes first asserts that for the concept to be meaningful, the condition of full employment must exist. Thus, he defines forced saving as "the excess of actual saving over what would be saved if there were full employment in a position of long-period equilibrium" [31, 80]. He cites Bentham's discussion of the phenomenon in circumstances of "all hands being employed and employed in the most advantageous manner" and in which increases in the supply of money raise only the price level, quoted in Hayek [22],

10. In *Monetary Reform,* Keynes [29, 88] argues that "*in the long run* we are all dead" [original emphasis].
11. Ahiakpor [2] draws on Ricardo's *Works* [58, 1: 89–90, 3: 93, 5: 107–8, 6:16] to elaborate the point.
12. In fact, Keynes [31, 201] is not sure whether the classics defined the demand for money to include hoarding, and only asserts that income velocity ($V = Y/M$) relates only to the transactions demand for money.

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and attributes the same analysis to all "the nineteenth-century writers who dealt with this matter" [31, 80–81]. Keynes then rejects attempts to "apply this perfectly clear notion to conditions of less than full employment" [31, 81].[13]

But none of these attributions of the assumption of full employment of labor to the classics, including Bentham, is valid. The attributions appear rather to be the result of Keynes's efforts to make meaning of classical arguments with which he had difficulty. The following restatement of the core of classical analysis helps to provide a background against which to contrast Keynes's claims.

III. The Core of Classical Analysis

The core of classical analysis, it may yet appear trivial to state, is value theory, an explanation of the "principles which regulate the exchangeable value of commodities" [66, 1:33].[14] The classics called the exchangeable value of a commodity in terms of another the real price, and the exchangeable value of a commodity in terms of money the market price, e.g., Smith [66, 1: ch. 5], Ricardo [58, 4:60], and Mill [46, 3:457].[15] According to the classics, values in exchange are determined by supply and demand or the relative abundance of commodities. Thus commodities that are in greater demand than supplied have higher values while those in greater supply than demanded have lower values. The classics applied this fundamental argument to all manner of exchange, including goods, services, and money to explain the determination of prices, the wages of different types of labor services, rent on land in different uses, and interest on borrowed funds or capital (savings).

In the special case of determining the value of money (rather than its price, which is always unity), the classics explained this in terms of the exchange of all commodities against the quantity of money in circulation—a macroeconomics framework. Thus, for example, Hume [25, 172–73] argues:[16]

> It seems a maxim almost self-evident, that the prices of everything depend on the proportion between commodities and money, and that any considerable alteration on either has the same effect, either of heightening or lowering the price. Increase the commodities, they become cheaper; increase the money, they rise in their value. As, on the other hand, a diminution of the former, and that of the latter, have contrary tendencies . . . the prices do not so much depend on the absolute quantity of commodities and that of money which are in a nation, as on that of the commodities which come or may come to market, and of the money which circulates.

Ricardo [58, 3:104] makes the same point when he explains: "Commodities measure the value of money in the same manner as money measures the value of commodities," also adding that

13. See Blaug [9, 164–65] for a history of the forced saving doctrine, which includes contributions from Richard Cantillon. See Ahiakpor [2, esp. 22–25] for a restatement of Ricardo's contribution, which conflicts with Blaug's [9, 164] view that the "only major writer who was reluctant to accept the thesis was Ricardo." Also see note 32 below.

14. As Adam Smith [66, 1:33] notes, a statement of the determinants of value in exchange may appear "unnecessarily tedious," which required him to "entreat both the patience and attention of the reader." It may be even more so two centuries after the publication of the *Wealth of Nations.* But the value of its restatement becomes clear when we address Keynes's misreading of the classics.

15. Following De Quincey's criticism of Smith for using the term "exchangeable value," Mill [46, 3:457] suggests using "exchange value."

16. Keynes [31, 343 n. 3] cites Hume's "Essay on Money" but seems not to have recognized it as an application of classical value theory to money as Mill argues below.

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"commodities would rise or fall in price, in proportion to the increase or diminution of money" [58, 3:193]. That is, using Marshall's [44, 43–48] summary of the Quantity Theory, i.e., $H = kPy$, the value of money, V_m, equals $1/P = ky/H$, where P = the price level, k = proportion of income held as cash, y = real income or output, and H = quantity of money (cash).[17] Alternatively, the price level, $P = H/ky$.

Thus, the (flow) supply of goods and services constitutes the demand for money in circulation. And so does the hoarding of money (cash), which tends to raise the value of money or lower prices. As Hume [25, 173] observes: "If the coin is locked up in chests, it is the same thing with regard to prices, as if it were annihilated . . . As the money and commodities . . . never meet, they cannot affect each other." This version of the Quantity Theory is in line with Fisher's restatement as $HV = PT$, where T = number of transactions, and V = velocity of money or "rapidity of circulation" in the classical language; also see Marshall [44; 43]. Keynes [31, ch. 15] also employs this version of the quantity theory in discussing the income velocity of money.

The flow and stock statements of the Quantity Theory may be reconciled by noting that $V = 1/k$, so that while $P = H/ky$, P is also equal to HV/y, having substituted y for T in the Fisher equation.[18] Thus an increase in the desire to hoard translates into a decline in velocity (V), hence a fall in the price level, $P = HV/y$. Surprisingly, Keynes [32, 216] disputes the direct link between changes in velocity and the price level, insisting that changes in velocity "primarily affect . . . the rate of interest." Keynes [33] also maintains this position, elaborating instead his (cash) "liquidity-preference" theory of interest.

There is no market for money (cash) on which its value is directly determined as there are markets for credit on which interest rates are determined, labor on which wages are determined, and land on which rents are determined.[19] And while the money values (prices) of goods and services are directly determined in their respective markets, the value of money is measured as the weighted average of the prices of all goods and services. It is this process of the determination of money's value that creates its uniqueness, and perhaps renders application of the supply and demand principle to it difficult for some.

Several of the classics also emphasized this point as Mill [46, 3:507], for example, observes:

> [Determining the exchange value of money] is not a question of any difficulty, when the illusion is dispelled, which caused money to be looked upon as a peculiar thing, not governed by the same laws as other things. Money is a commodity, and its value is determined like that of other commodities, temporarily by demand and supply, permanently and on the average by cost of production. The illustration of these principles [of value], considered in their application to money, must be given in some detail, on account of the confusion which, in minds not scientifically

17. Keynes [29, 81–88] and Pigou [52, 120–21] also state the Quantity Theory this way. I have substituted H for M in the restatement to preserve the classical distinction between money and credit, but which has become fused in the modern definition of money as $M = C + D$, i.e., currency held by the general public and the public's deposits with banks. Deposits must balance with bank reserves (R) and credit (BC), thus $M = C + R + BC = H + BC$, since $C + R = H$.

18. Pigou also draws a similar connection between the Cambridge and Fisherian versions of the quantity theory, arguing that "the pictures that [they] both paint are of the same thing" [51, 39]. However, Pigou also notes that the Cambridge version "is a somewhat more effective engine of analysis. It focusses attention on the proportion of their resources that people choose to keep in the form of [money] instead of focussing it on 'velocity of circulation'. This fact gives [the Cambridge version] . . . a real advantage, because it brings us at once into relation with volition—an ultimate cause of demand—instead of with something that seems at first sight accidental and arbitrary" [51, 54].

19. Of course, modern macroeconomics refers to short-term credit markets as the money market, and long-term credit markets as the capital market. But surely, credit and money are two different things, which the classics did not confuse. See, e.g., Smith [66, 1:458] who also explains that "Money, like wine, must always be scarce with those who have neither the wherewithal to buy it, nor credit to borrow it."

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> instructed on the subject, envelopes the whole matter; partly from a lingering remnant of the old misleading associations, and partly from the mass of vapoury and baseless speculation with which this, more than any other topic of political economy, has in latter times become surrounded.

Note that the cost of fiat money being minuscule, as compared with that of commodity money, does not change application of the supply and demand argument to the determination of the price level (or the value of money). Instead of costs of production controlling the supply of commodity money, which is also thus endogenous, a central bank controls the supply of fiat money (currency), which could make the supply exogenous, unless targeted at some other economic variable.

Thus, a fundamental point that needs repeating is that the classics and early neoclassicals such as Marshall, Pigou, and Fisher did not invoke the assumption of full employment to explain variations in the price level, using the quantity theory, and neither is that assumption required for their argument to be valid. Indeed, if such an assumption were required, few economies would experience variations in their rates of inflation while also experiencing various degrees of unemployment.

Determination of interest rates by the supply and demand for "capital" also has been plagued with considerable confusion in the literature, especially since Keynes's re-introduction of pre-nineteenth century money (cash) supply and demand theory of interest, e.g., [31, 167–68, ch. 15]. According to the classics, the rate of interest is determined primarily by the supply and demand for "capital," where "capital" is defined as savings employed to earn interest or profits. See, e.g., Smith [66, 1 Bk 2, ch. 1] and Marshall [43, 66]. Where financial intermediation exits, the supply of "capital" takes the form of purchasing financial assets while its demand takes the form of issuing financial assets (loan-notes, bonds or stocks), i.e., in equilibrium, $S_c = Y - C - \Delta pY = \Delta FA = D_c$, where Y = nominal income, C = consumption, and p = proportion of income households desire to hold as cash, and FA = financial assets.[20] The greater the demand for "capital," the higher the rate of interest, given the schedule of its supply. And the greater the supply of "capital" or savings (increased demand for financial assets) given its demand, the lower the rate of interest (high price of financial assets).

The quantity of money plays no substantive role in the determination of interest rates, as Hume [25, 177] states:

> High interest arises from *three* circumstances: a great demand for borrowing; little riches to supply that demand; and great profits arising from commerce: and the circumstances are a clear proof of the small advance of commerce, and industry, not of the scarcity of gold and silver [i.e. money]. [emphasis original]

This view has been restated by other classics, including e.g., Smith [66, 1:376], Ricardo [58, 363–64, 3:91–92], and J. S. Mill [46, 3:655–56]. Marshall [43, esp. Bk 6, ch. 6] also reaffirms the argument in his clarification of the theory of interest, adding: "These truths are familiar; and they are the basis of the theory of capital and interest" [43, 483].

Money (cash) may be the medium through which borrowing and lending take place, but it does not constitute the substance of the transaction since money is not "capital." Thus Smith [66, 1:374], explains that when loans of money are made:

> . . . money, is as it were, but the deed of assignment, which conveys from one hand to another those capitals which the owners do not care to employ themselves. Those capitals may be greater

20. In the case of the saving equation, $p < k$ in the money demand equation, where $H = kPy$. The latter includes non-households' demand for cash, i.e., reserves of financial institutions and other non-households.

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> in almost any proportion, than the amount of the money which serves as the instrument of their conveyance; the same pieces of money successively serving for many different loans, as well as for many different purchases.

This is saying that the volume of loans made over a period of time, say a year, is typically several times the quantity of cash in an economy.

To make the same point, Mill [46, 2:55] argues:

> Capital, by persons wholly unused to reflect on the subject, is supposed to be synonymous with money . . . Money is no more synonymous with capital than it is with wealth. Money cannot in itself perform any part of the office of capital, since it can afford no assistance to production. To do so, it must be exchanged for other things.

The argument is not that clearly made in Marshall's *Principles,* but it can be inferred, e.g., [43, 430–33, 482–94, 567, 592]. But Pigou [52, 121] makes the same point when he argues that, in the act of granting loans, "money acts . . . as a mere ticket conveying a right to things."

However, variations in the supply of money (cash) may affect the rate of interest, but only in the short run until all prices have reacted to the changed quantity, as e.g., Ricardo [58, 1:297–98] and Marshall [44, 257], explain. Thus, in a commodity money system, an increase in the supply of money may arise from an increase in net exports. In the short run, the increased supply is consistent with an increase of real income. The rate of interest will fall if recipients of the new money make new loans (buy financial assets) in order to earn interest income, rather than hold their additional income in cash. The same effect on the rate of interest would result from an increased supply of money which is due to the increased productivity of gold mines.

In a fiat money system, additional money (cash) enters the economy through a central bank's creation of credit through open-market purchases. The additional money also increases the willingness of its recipients (especially banks) to lend, and thus decreases the equilibrium nominal rate of interest (liquidity effect). (Using the familiar Fisher equation, $i = r + \pi$, where π is the rate of inflation, a reduction in the nominal rate while the rate of inflation stays the same also must lower the real rate of interest, $r = i - \pi$.) But when prices of goods and services also rise, increased demand for additional credit ensues, driving up both nominal and real interest rates again.[21] This is why the classics emphasized the fact that variations in the quantity of money do not permanently change the level of interest rates but only the price level or the value of money itself. (Note that in the absence of inflation both the nominal and real interest rates are the same.)

The classics did not argue an explicit theory of employment in the aggregate which could be represented by a single equation as Keynes [31, esp. ch. 20] attempts, and has become a practice in modern macroeconomics. Rather, they explained that the growth of employment in different industries follows after investments of capital (savings) in pursuit of profits, e.g., Smith [66, 1:111–60]. Thus the level of total employment in an economy has to be explained by a theory of aggregate income determination in which the flow of savings or capital accumulation plays a dominant role. In other words, the level of aggregate income or output is principally a function of the annual flow of savings or $y = f(\Delta FA)$, where savings, $S_c = \Delta FA^d$, and the level of employment is a function of output, $N = h\{y = f(\Delta FA)\}$, as well as variations in the composition of total output, since techniques of production tend to differ among industries. There is thus no necessary connection between maximum production and "full employment," as Keynes's argu-

21. In terms of the Wicksellian terminology, the increased supply of money lowers the market rate of interest below the natural rate, where the natural rate is one consistent with the supply and demand for "capital" or savings (and the excess demand for cash is zero). See Wicksell [69, 81–83].

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ments suggest, a point Marget [42, 2: 759–61] also makes very well. These arguments also show that there is no unique relationship between the rate of interest and the volume of employment in the long run as Keynes believes the classics argued. The rate of interest in the long run depends on the flow of savings (not money) relative to its demand.

The classics also advocated several policies they believed would contribute to the greatest efficiency of an economy, including freedom of enterprise in both domestic and foreign trade, especially to lower the cost of food and increase the amount of income devoted to savings, limited taxation by government because of the belief that government is less efficient in employing resources than private individuals, and increased competition and mobility of labor among industries. They based these policies partly on their value theory, as applied to different factors of production. Thus, Ricardo especially was concerned to discover the laws that govern the distribution of total income, net of rent, between wages and profits in order to devise those policies which would assure that the share of profits is not so reduced as to eliminate the incentives for investment and future output growth.[22] But in making such recommendations, the classics did not assume away their goal of promoting a rising standard of living for the population as a whole as well as increasing employment opportunities by claiming that the economy already operates at "full employment," as Keynes insists they did.

IV. Keynes's Mistaken Attributions of the Full-Employment Assumption

Keynes was very keen to find policies that would reduce unemployment and promote or maintain economic growth but he was not careful in applying classical value theory in the determination of wage rates and employment in particular industries to the problem of determining the aggregate level of employment. Classical value theory applied to a particular labor market leads to the conclusion that the real wage in each occupation must be at least equal to the marginal disutility for labor. Thus those who are unemployed in a particular industry must be unwilling to accept a lower nominal wage which, given the cost of living, would translate into a lower real wage. Alternatively, the value of their marginal product to the prospective employer must be lower than the wage they demand.

However, the equality between the value of marginal product or marginal revenue product and the marginal disutility of labor in each particular labor market (Pigou's condition of "market equilibrium") does not necessarily translate into a flow equilibrium for the aggregate supply and demand for labor, as Keynes suggests the classics argued.[23] Clearly a physician who is unemployed at the going real wage in a particular location may be unwilling to accept a job as a truck driver in the same locality. The same physician may also decline an offer in a different location, even though the real wage there may be the same or a little higher than what he or she seeks in the

22. See Ricardo [58, 1:5–7]. Ricardo then goes on to discuss value theory and apply it in different contexts, much along the lines of Smith. This is the context in which Ricardo's comments to Malthus, quoted in Keynes [31, 4n] properly must be understood: "[Political Economy] should be called an enquiry into the laws which determine the division of the produce of industry among the classes who concur in its formation. No law can be laid down respecting quantity, but a tolerably correct one can be laid down respecting proportions." But Keynes's interpretations of classical arguments in the *General Theory* seem not to give sufficient weight to classical value theory as applied to the determination of in interest rates and the value of money or the price level.

23. Pigou [55, 29–37] elaborates. The point is that a prevailing market wage rate does not necessarily indicate an intersection of an upward-sloping aggregate supply curve with a downward-sloping aggregate demand curve for all labor.

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present location. This is the sense in which aggregation of labor supply and demand functions in different labor markets is both analytically hazardous and practically not meaningful.[24]

In fact, Pigou [53], which Keynes holds up as the best illustration of the classical model of employment, warns against attempting such an aggregation of labor markets, arguing for example, that "a general demand function for all labour cannot be obtained by adding together the demand functions for different sets of centres" [53, 63] of employment or industries. Furthermore, an increase in the wage-fund, which Pigou [53, 143–53] does not consider to be completely inelastic, could lead to more workers being hired in some "employment centres" without an increase in the average (nominal) wage. Another complication Pigou observes in his analysis of unemployment in the aggregate is the co-existence of "unfilled vacancies" alongside unemployment. Thus Pigou [53, 10] argues:

> if the number of would-be wage-earners and the quantity of labour demanded are both constant, the quantity of unemployment may still fluctuate, provided that the quantity of unfilled vacancies also fluctuates in the same direction and to an equal extent.

Thus, there is hardly any validity to Keynes's ascription to the classics the proposition that only an increase in the real wage would cause an increase in the level of aggregate employment.

Pigou [50, 12–29] also restricts his definition of unemployment to "only *that part of* [the idleness of prospective wage-earners] *which is, from their point of view and in their existing condition at the time, involuntary*" [50, 14; original emphasis][25] or what Marshall [43, 572] calls "enforced idleness." In other words, it is those who are willing to work at the existing wage rate in their respective industries, but do not have job offers or those "attached to the industry in question and [are] prepared for full work there *if they can get it*" [43, 21; emphasis added] that Pigou has in mind. Pigou [53, 3–4] also restates the same conditions. Thus, before Keynes defined his involuntary unemployment, Pigou had a meaningful one, and his claim that the "classics", including Pigou, assumed the existence of continuous full employment is invalid.

Classical economics also explains shifts in the demand for labor in a particular occupation as being determined by movements of capital (or loaned-out savings) between industries in response to changing profit rates. Unemployed labor either needs time to re-train in order to meet changing skill requirements or follow after relocated capital, an option which is also hampered by the cost of gathering information. These and other explanations of the "causation of unemployment and its fluctuations" [53, vii], which Marshall [43, 572] also describes as "a great evil," and their remedies were among the concerns of the classics, but to which Keynes appears to have paid inadequate attention.

Pigou [53, 252] also elaborates the above argument regarding the problem of adjusting aggregate supply of labor to its demand in the real world, which Keynes [31, 277–78] also quotes, thus:[26]

24. Lucas [39, 242] makes almost the same point when he argues that "there is an involuntary element in *all* unemployment, in the sense that no one chooses bad luck over good; there is also a voluntary element in all unemployment, in the sense that however miserable one's current work options, one can always choose to accept them" (emphasis in original). But Lucas [39, 243] is incorrect in claiming that Keynes was the one who introduced "involuntary unemployment . . . [as] a theoretical construct," as I illustrate below.

25. It is noteworthy that Keynes [31] does not cite Pigou [50]. On a practical level, it is also difficult to imagine in what sense most unemployment could be anything but involuntary, especially arising from lay-offs. Even among those classified as frictionally unemployed, many would first have anticipated new job offers before quitting their current employment, and thus would quickly find new jobs.

26. Keynes's quotation leaves out Pigou's reference to "a long-period point of view," which I insert as "in the long run."

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> With *perfectly free competition* among workpeople and labour *perfectly mobile,* the nature of the relation [between the wage-rates and labours' demand function in the long run] will be very simple. There will always be at work *a strong tendency* for wage-rates to be so related to demand that everybody is employed. Hence, *in stable conditions* every one will actually be employed. This implication is that such unemployment as exists at any time is due wholly to the fact that *changes in demand conditions* are continually taking place and that frictional resistances prevent the *appropriate wage adjustments* from *being made instantaneously.* [emphasis added]

Keynes [31, 275] may be correct in interpreting Pigou's explanation above as one indicating "how much employment there will be, given the supply function of labor, when the *conditions of full employment are satisfied*" [emphasis added.] But it hardly serves as proof that Pigou argued that full employment always exists. Also contrast Pigou's reference to "changes in demand conditions . . . continually taking place" as a factor determining the rate of unemployment with Keynes's [32, 222] claim that "orthodox theory assumes that we have a knowledge of the future of a kind quite different from that which we actually possess."[27] In the *Principles,* Marshall [43, 480] also states: "As it is, the economic conditions of the country are constantly changing, and the point of adjustment of normal demand and supply in relation to labour is constantly being shifted." This is hardly a claim of knowledge about future market conditions which Keynes alleges the "classics" assumed.

In fact, in the very next sentence but which Keynes omits to cite, Pigou also argues that "In the absence of perfectly free competition among workpeople the functional relation, if such exists, between the wage-rate stipulated for and the state of demand *need not be of the above simple sort*" [emphasis added.] Furthermore, Pigou [53, vi–vii] prefaces his discussion in the text by noting that he was adopting "a simplified model of the economic world rather than that world itself in its full completeness . . . In particular many complications of the detail associated with the imperfections of markets are left aside," partly because he had already discussed them "at length in [his] *Industrial Fluctuations.*" Pigou (ibid.) also adds that both books "are complementary to one another" in some degree.

Thus Pigou's [55, 78] reaction to Keynes's misrepresentation of his argument includes this important statement: "*The classical view is not one which either asserts or implies that full employment always exists*" [emphasis added.] He also argues that the passage Keynes [31, 277–78] cites "does not imply that the percentage of unemployment among would-be wage earners over the average of good and bad times is necessarily the same" [55, 80]. Thus, Pigou [55, 91] correctly points to Keynes's misrepresentations of classical arguments by defending the "classical view as it really is—*to be carefully distinguished from current caricatures of it*" [emphasis added].[28]

Keynes's definition of involuntary unemployment, for which he advocates increases in the money supply as a cure, also serves a strategic but misleading purpose. He argues that a heightened liquidity preference or propensity to hoard cash on the part of the public was a key determinant of unemployment which the classics over-looked. Indeed the experience of the Great Depression during which currency-deposit ratios of the public and banks rose to historic levels would seem to confirm his belief in the significance of this factor, see, e.g., Bernanke [7]. Furthermore, the inability of workers to find work for a protracted period of time during the depression

27. Indeed, Pigou's argument is consistent with Marshall's [43, Bk 6, ch. 5] discussion of variations in wages and the "difficulty of forecasting the future."

28. For more on Keynes's misrepresentation of Pigou's arguments on the determinants of unemployment, see Aslanbeigui [5]. She also points out that Pigou's [50] definition of "involuntary unemployment" is consistent with Keynes's [31, 26] view that unemployment is involuntary if aggregate employment is not "inelastic in response to an increase in the effective demand for [labor's] output" [5, 430].

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convinced him and many of his readers that classical explanations of unemployment as being "frictional" and "voluntary" are inadequate. The failure of the classics to recognize his "involuntary" type of unemployment, according to Keynes, means that they believed full employment exists always because both "frictional" and "voluntary" unemployment were "consistent with full employment thus defined" [31, 16]. Thus, Keynes (ibid.) concludes: "Obviously, . . . , if the classical theory is only applicable to the case of full employment, it is fallacious to apply it to the problems of involuntary unemployment."

But Keynes misrepresents classical economics on this point too. The classics recognized the existence of the demand for money or "hoarding," except that they did not include hoarding in their definition of saving as Keynes [31, 81, 167] does. According to the classics, income is spent in three principal forms: (a) consumption for immediate gratification; (b) purchasing interest- or profit-earning assets or saving; and (c) buying the security services of money (cash), i.e., $Y = C + \Delta FA + \Delta pY$. See, e.g., Smith [66, 1:359, 458], Ricardo [58, 3:172, 6:289, 300–1, 6:167], Mill [46, 2:70], and also Marshall [44, 46]. Malthus, for whom Keynes has a great regard among the classical economists, also distinguishes hoarding from saving, arguing that "No political economist of the present day can by saving mean mere hoarding;" quoted in Blaug [9, 166]. Thus, whereas Keynes considers a heightened liquidity preference as reflecting increased saving, and which he regards as bad for an economy except under conditions of full employment, the classics would consider hoarding as a reduction in saving, which is bad for economic growth and increased employment.[29]

Keynes also bases his presumption that Say's Law of Markets must be founded on the assumption of full employment partly on the same belief that the classics did not recognize the existence of hoarding or demand for cash. According to Keynes's reasoning, the classics could not confidently claim that supply (income) is the source of demand, if they recognized the incidence of hoarding since not all income would be spent. Thus, Keynes [31, 19n] finds it perplexing that both Mill and Marshall recognized that "though men have the power to purchase, they may not choose to use it" and yet accepted Say's Law of Markets as being valid.

But in fact, both writers were alluding to the existence of hoarding income in cash, whose effect is to lower the price level. However, having failed to distinguish income from money, Keynes [31, 20] criticizes followers of the classical tradition, arguing that "Contemporary thought is still deeply steeped in the notion that if people did not spend their money in one way, they would spend it in another."[30] Furthermore, Keynes considers the criticism to be important because he does not recognize the classical definition of saving such that it is spending by someone else other than the income earner, as explained in the quote he cites from Marshall's *Pure Theory of Domestic Values* [31, 19].[31]

29. Ahiakpor [4] explains that this misrepresentation of the classical definition of saving by Keynes forms the basis of his paradox of thrift proposition. Pigou [54], Viner [68], Hawtrey [21], and Robertson [60] also correctly criticize Keynes for his misrepresentation of the classical argument and for having made too much of the incidence of hoarding. But they are not explicit in pointing out Keynes's error of defining saving to include hoarding. Perhaps as a result, Keynes [32], in response to Pigou and Viner, could not recognize the point of their criticism.

30. Keynes [31, n. 1] cites Alfred and Mary Marshall's statement that "If people do not spend their means on buying new dresses they would spend them on giving employment to labour in some other way" as an illustration of his charge. To him there is no need to talk about substitution of employment between industries unless there is full employment. Keynes [32, 223] repeats the argument, but doubts "if many contemporary economists really do believe it."

31. For example, Smith [66, 1:359] explains: "What is annually saved is regularly consumed as what is annually spent, and nearly in the same time too; but it is consumed by a different type of people." Ricardo [58, 2:449] and Mill [46, 2:70] also make the same point. But according to Keynes [31, 210], saving is not spending, because "An act of individual saving means—so to speak—a decision not to have dinner to-day . . . It is [also] not a substitution of future consumption-

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Having linked his involuntary unemployment to the incidence of hoarding or a high liquidity preference on the part of households, Keynes naturally seeks the solution to this type of unemployment in a policy of increased central bank money (cash) creation. But classical monetary theory argues that increases in the money supply may increase real output and employment in the short run but would raise only the price level in the long run, an argument that underlies the "forced saving" doctrine.[32] The classics explained that continued production is made possible by the willingness of people to save (not hoarding of cash) or lend so that a part of their current income could be devoted to the purchase of currently produced goods and the hiring of labor, land and the services of capital goods as well as the purchase of materials for further processing.

Even with the existing production capacity, the unwillingness of income earners to save and lend to producers would frustrate future production. Smith [66, 1:359–60] makes the point thus:

> Every increase or diminution of capital [i.e., savings] . . . naturally tends to increase or diminish the real quantity of industry, the number of productive hands, and consequently the exchangeable value of the annual produce of the land and labour of the country, the real wealth and revenue of all its inhabitants . . . By what a frugal man annually saves, he not only affords maintenance to an additional number of productive hands, for that or the ensuing year, but like the founder of a public workhouse, he establishes as it were a perpetual fund for the maintenance of an equal number in all times to come.

However, in the absence of increased saving or lending by banks, through a reduction in their economic or excess reserves, an increase in the supply of money (currency) by a central bank would impose an inflationary tax on all fixed income earners, especially labor, to the advantage of residual income earners (i.e., profits). The rising price of final goods enables producers to hire more factors of production, including additional labor, from their increased profits. But the process ends when contracts, including wage rates, are revised and direct or variable costs rise, while profit rates fall again.[33] Thus, instead of saving more in return for interest income, fixed income earners find a reduction in their real income for which there is no reward. And this is the sense in which the increased real savings of the community is forced. It is also this redistributive aspect of the process in its initial stages, when prices are rising, which the classics considered unjust about forced saving.

Now if Keynes could find that the forced saving doctrine applies only to conditions of full employment, he could then suggest increases in the money supply as a cure for unemployment. And this is what Keynes does in the *General Theory* when he claims to have pushed "monetary theory back to becoming a theory of output as a whole" [31, xxii]. Yet the closest to which Keynes comes in producing direct evidence of the assumption of full employment being made by a classical writer is his citation of Bentham's discussion of the forced saving doctrine, or "forced frugality" in Bentham's own words, as quoted in Hayek [22, 125].

But contrary to Keynes's representation, Bentham there discusses two circumstances, one in

demand for present consumption-demand,—it is a net diminution of such demand." Ahiakpor [4] clarifies the classical argument and shows the error of Keynes's view of saving.

32. Indeed, Hume's *Essay on Money,* which Keynes [31, 343n] also cites, contains the same idea. Hume [25, 170] argues that "though the high price of commodities be a necessary consequence of the increase of gold and silver, yet it follows not immediately upon that increase; but some time is required before the money circulates through the whole state, and makes its effect be felt on all ranks of people. . . . it is only in this interval . . . between the acquisition of money and rise of prices, that the increasing quantity of gold and silver is favourable to industry . . . [that is] before it increases the price of labour."

33. The modern equivalent of this argument is that only unanticipated increases in the money supply may increase real output in the short run. See, for example, Dornbusch and Fischer [14, 518–21].

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which "All hands [are] employed, and employed in the most advantageous manner," and in which case an infinite increase in the money supply would not increase "real wealth" or output. The second case is one in which "national wealth is *increased* at the *expense* of *national comfort* and *national justice*" from new money having been "employed in the shape of capital" [ibid., emphasis added]. It is not clear from the passage quoted in Hayek whether Bentham relaxes the assumption of "all hands being employed" when he allows for the increase in output. The full text reproduced in Stark [67, 342–51] does not make this clear either, but his argument would lack consistency without it.[34] However, in Ricardo's "Notes on Bentham" [58, 3:310–19], for example, he does argue a temporary increase in employment while dealing with the question of forced saving:

> There is but one way in which an increase of money no matter how it be introduced into the society, can augment riches, viz at the expence of wages of labour; till the wages of labour have found their level with the increased prices which the commodities will have experienced, there will be so much additional revenue to the manufacturer and farmer they will obtain an increased price for their commodities, and can whilst wages do not increase *employ an additional number of hands*, so that the real riches of the country will be somewhat augmented. [emphasis added]

Furthermore, Bentham, just as other classical writers on the subject, e.g. Ricardo [58, 3:120–22, 136–39, 6:16–17], also in the passage cited by Hayek explains that the increase in real output results from inflation reducing the purchasing power of fixed income earners or a tax on "all fixed [sic] incomists."[35] Thus, Keynes's reference to Bentham's argument as his basis for claiming that the classics argued that only the price level rises from increases in the supply of money or in his definition of forced saving as "the excess of actual saving over what would be saved if there were full employment in a position of long-period equilibrium" [31, 80] constitutes either a misrepresentation or a distortion of the quote from Hayek [22]. And Keynes's [31, 80–81] subsequent claim that "All the nineteenth-century writers who dealt with [forced saving] had virtually the same idea in mind," namely, the assumption of full employment, is false.

Keynes's efforts to turn monetary theory into a theory of output as a whole, but which was frustrated by implications of the classical Quantity Theory of Money, appear to account for his attribution of the condition of full employment for that theory to be valid. But the above explanation of the forced saving doctrine shows that full employment is not required for increases in the quantity of money relative to its demand (or the supply of output) to cause the price level to rise in the short or long run. This is in addition to the application of classical value theory to the determination of the value of money, as explained in section III above.[36]

34. A previous anonymous reader is inclined to absolve Keynes of my charge of his misrepresenting the quote from Hayek on the basis of not finding this explicit relaxation of the assumption of "all hands being fully employed" in Stark [67]. But the point is that Bentham in one case allows no increase in real wealth or output from an increase in the supply of money, but does so in another. Keynes on the other hand argues that the classics did not allow any increase in output or employment from an increase in the supply of money because they assumed the existence of full employment.

35. And like Bentham, Ricardo [58, 3:123] also views the phenomenon as unjust: "[The increase in real output from money creation] must be accompanied with a degree of injustice to individuals which requires only to be understood to excite the censure and indignation of all those who are not wholly insensible to every honourable feeling."

36. A previous anonymous reader insists on restating Keynes's argument claiming that "short of full employment . . . we do not have a determinate theory of the price level" while also referring to Laidler [34] as if that work contradicts my argument. But Laidler in numerous places rather states the fundamental proposition of the quantity theory of money as explaining the price level from the demand and supply of money, e.g., [34, 52, 56, 57], and also that "such real variables as output and, in particular, employment" [34, 95] do change in the transmission of monetary shocks to prices. Even when Laidler [35, 47] regrettably invokes the assumption of "an economy that has its only long-run equilibrium at full-employment levels of income" while explaining Fisher's version of the quantity theory, he nevertheless carries on the analysis in terms of the "supply and demand" for money in the short run, connecting it with that of Marshall and Pigou

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Keynes's difficulties with the classical argument that the equilibrium rate of interest cannot be lowered in the long run by increases in the money supply also seems to be driven by his misinterpretation of the classical concept of "capital" as a fund, a meaning with which the word is associated in the marketplace, and which usage Marshall [43, 60, 647] strongly urged. Instead, Keynes consistently equated 'capital' with capital goods, and failed to recognize the classical theory of interest as being determined by the supply and demand for "capital," as explained in Ricardo's or Marshall's *Principles.*[37] Thus, having failed to make meaning of Marshall's restatement of the classical theory of interest, Keynes [31, 189] declares:

> The perplexity which I find in Marshall's account . . . is fundamentally due, I think, to the incursion of the concept of 'interest', which belongs to a monetary economy, into a treatise which takes no account of money. 'Interest' has really no business to turn up in Marshall's *Principles of Economics,*—it belongs to another branch of the subject.

But as Pigou [55, 95] correctly notes, Keynes "simply failed to understand" Marshall. And in the case of Ricardo, Keynes [31, 191] simply asserts that he must be assuming full employment if he doubted that increases in the money supply could keep interest rates permanently low. Yet, as can be verified with real-world evidence, countries in which central bank money creation is high or excessive generally have higher nominal interest rates than those countries in which central bank money creation is low, especially if there are not legal interest ceilings.[38]

Lastly, Keynes's failure to interpret correctly "capital" or savings as defined by the classics also served him poorly in another context. He was unable to connect the notion of investment to the employment of borrowed savings to purchase producer's goods as well as hire the services of land and labor. Rather, he associated investment with the purchase of capital goods only, which has become a tradition in modern macroeconomics. Thus Keynes [31, 275] wrongly accuses Pigou of having "furnish[ed] a theory of unemployment which involves no reference at all to changes in the rate of investment (i.e. to changes in employment in the non-wage-goods industries)." But Pigou's argument applies to employment as a whole depending on the "wage-fund", which is a portion of investment capital or savings. Thus, for example, Pigou [55, 71] talks about the interest rate equating "the quantity of investment demanded [with] the quantity which people wish to supply," or the supply and demand for "capital."

V. Some Implications and Conclusions

The classical analyses in which Keynes presumes that the full-employment assumption is required for their validity really do not require that assumption. The problem rather was with Keynes's misinterpretation or misrepresentation of some key concepts involved in classical analysis, especially the concepts of 'capital' and saving, and the application of value theory to money.[39] But Keynes's

[35, 47–51]. Indeed, Fisher [16], later republished in the *Journal of Political Economy* as "I Discovered the Phillips Curve," is yet another excellent refutation of the view that variations in the quantity of money affect prices only in long-run, full-employment equilibrium.

37. See Ahiakpor [3] for an extensive documentation of Keynes's misinterpretation of the classical fund concept of "capital."

38. See, for example, World Bank [70, 184–85], particularly the cases of Argentina, Brazil, Israel, Peru, Turkey, and Uruguay. Note that the monetary data also include bank credit rather than reserve money only, but the low M2/GDP ratios of these countries would indicate that most of the change in M2 is currency or H.

39. Some would prefer to argue that Keynes deliberately misrepresented classical economics in order to make his own point. I prefer to think that his errors of interpretation were just that, misinterpretations rather than a deliberate

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repeated appeal to realism or analysis applicable to "the world in which we live," [31, 13, 249, 250] and his misrepresentations of classical arguments as being relevant to an ideal world of full employment made for easy acceptance of his views, particularly among the younger generation of economists at the time and the general public.[40] Besides, Keynes also made frequent references to the fact that "full, or approximately full, employment is of rare and short-lived occurrence" [31, 250], a view few would dispute. Thus Keynes's incorrect attributions of the full-employment assumption served as a very useful rhetorical device.

In modern macroeconomics, Keynes's misrepresentations of classical economics persist both in undergraduate textbooks and in professional writings. All attributions of a vertical aggregate supply curve to the classics are in this tradition. So are virtually all contrasts of less than full-employment equilibrium versions of the IS-LM model, which has become an effective medium for communicating Keynes's ideas,[41] with some full-employment alternative. An example is Leijonhufvud's [37, esp. ch. 7] contrasts of Keynes's analysis with others and his attribution of the full-employment assumption to the classics, although partly siding with some classical arguments by Robertson but which do not require that assumption. Leijonhufvud's [38] attempt to suggest remedies for some deficiencies of the IS-LM model while contrasting it with some full-information model is also in this tradition. And so is Patinkin [47] and his recent defense of the IS-LM model in which he illustrates how full-employment level of output could be reached from positions of (Keynesian) less than full-employment equilibrium [49]. Chick [11] is simply a restatement of Keynes.

Some professional economists serving as referees for some highly regarded economics journals also take very seriously Keynes's incorrect attribution of the full-employment assumption to the classics. Thus in recommending rejection of a manuscript showing that Keynes's paradox of thrift was founded on his misinterpretation of the classical concept of saving, a referee asserts:

> the classical model starts with the assumption of full employment. For growth to occur, saving is an absolute necessity. *Everyone agrees with that.* . . . it must be remembered that [Keynes] was trying desperately to rid himself of his classical training. If one starts at full employment with pure competition, etc., everyone is a classical economist. [emphasis added]

Another referee for a different journal makes a similar observation in recommending rejection of the same manuscript, arguing:

> The Paradox [of Thrift] shows what will happen *if* the interest mechanism totally fails to work. . . . The 'classical theory' to which [the author] refers assumed full employment. *One* (not the only one!) of [Keynes's] problems was to do interest theory without that assumption. [emphasis original]

Clearly the roots of Keynes's misrepresentations of classical economics go very deep among modern economists. Thus, there is need to correct his false attribution of the full-employment

attempt to mislead. Ahiakpor [3, esp. 523–25] elaborates. Also see Patinkin [48] who takes the same position (with regard to Keynes's misinterpretation of Mill) as I do, arguing: "cases of misrepresentation by deliberate design are few and far between in scientific literature in general . . . ; on the other hand, carelessness which expresses itself in yielding to the temptation to interpret texts . . . incorrectly, but in a way which accords with one's preconceptions, is a common failing of which on occasion all of us may in varying degrees be guilty" [48, 342].

40. Prominent among the torch-bearers in propagating Keynes's views among the younger generation of economists were J. R. Hicks, Joan Robinson, Richard Kahn, Nicholas Kaldor, and James Meade. See Young [71] and Darity and Young [13] for an account of the propagation. The adoption of full employment as a goal of the British Fabian Society also helped to generate fervor for Keynes's ideas among the public. See, for example, *Fabian Research Series* [15] of the 1940s and Beveridge [8].

41. Darity and Young [13] gives a good account of this.

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assumption to the classics, more clearly than his contemporaries, especially Pigou [55] and Robertson [61, 28–30] have attempted. Pigou's [56] conciliatory remarks about Keynes's *General Theory* following his death also have been interpreted by some as his willingness to accept Keynes's arguments after all. As Kahn [28, 550] observes, "It would have given Keynes intense pleasure had he lived to hear Pigou, in November 1949, partially renounce his review of the *General Theory* . . . It was a moving occasion."[42] Moreover, many of the contemporaries failed to refer directly to the classical texts to show the errors of Keynes's interpretations. Rather, they attempted to sketch their own versions of classical economics, much to their disadvantage. Keynes [31, 175] could claim to have been "brought up on" classical economics from Marshall himself and that he also "taught [it] for many years to others,"[43] and thus blunt the effectiveness of their criticisms. Besides, Keynes also was editor of the *Economic Journal,* a leading professional journal at the time.

However, using the textual evidence we can show that Keynes indeed misrepresented classical value theory as applied to the determination of factor incomes, including interest rates, as well as the price level from the supply and demand for money (cash), by insisting that they require or imply the assumption of the full employment of labor. Thus the validity of classical economics as well as the relevance of classical economic policies to the real world, including their interest rate, employment, and monetary policies to promote efficient economic growth, may be better appreciated by ending Keynes's misrepresentations of classical arguments.

42. The comments to which Kahn [28, 550–51] refers are: "Whatever imperfections there may be in his working out of the fundamental conception embodied [in the *General Theory*], the conception itself is an extremely fruitful germinal idea. In my original review article on the *General Theory* I failed to grasp its significance and did not assign to Keynes the credit due for it. Nobody before him, so far as I know, had brought all the relevant factors, real and monetary at once, together in a single formal scheme, through which their interplay could be coherently investigated." Quite a concession, even for a memorial.

43. Of course, this was an effective debating tactic but an exaggerated claim. As Skidelsky [64, 166] explains, Keynes's "total professional training [under Marshall] came to little more than eight weeks. All the rest was learnt on the job."

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