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Author(s): Axel Leijonhufvud

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KEYNES AND THE KEYNESIANS: A SUGGESTED INTERPRETATION

By AXEL LEIJONHUFVUD
University of California, Los Angeles

I

One must be careful in applying the epithet "Keynesian" nowadays. I propose to use it in the broadest possible sense and let "Keynesian economics" be synonymous with the "majority school" macroeconomics which has evolved out of the debates triggered by Keynes's *General Theory (GT)*. Keynesian economics, in this popular sense, is far from being a homogenous doctrine. The common denominator, which lends some justification to the identification of a majority school, is the class of models generally used. The prototype of these models dates back to the famous paper by Hicks [6] the title of which I have taken the liberty of paraphrasing. This standard model appears to me a singularly inadequate vehicle for the interpretation of Keynes's ideas. The juxtaposition of Keynes and the Keynesians in my title is based on this contention.

Within the majority school, at least two major factions live in recently peaceful but nonetheless uneasy coexistence. With more brevity than accuracy, they may be labeled the "Revolutionary Orthodoxy" and the "Neoclassical Resurgence." Both employ the standard model but with different specifications of the various elasticities and adjustment velocities. In its more extreme orthodox form, the model is supplied with wage rigidity, liquidity trap, and a constant capital-output ratio, and manifests a more or less universal "elasticity pessimism," particularly with regard to the interest-elasticities of "real" variables. The orthodoxy tends to slight monetary in favor of fiscal stabilization policies. The neoclassical faction may be sufficiently characterized by negating these statements. As described, the orthodoxy is hardly a very reputable position at the present time. Its influence in the currently most fashionable fields has been steadily diminishing, but it seems to have found a refuge in business cycle theory—and, of course, in the teaching of undergraduate macroeconomics.

The terms of the truce between the two factions comprise two propositions: (1) the model which Keynes called his "general theory" is but a special case of the classical theory, obtained by imposing certain restrictive assumptions on the latter; and (2) the Keynesian special case is nonetheless important because, as it happens, it is more rele-

vant to the real world than the general (equilibrium) theory. Together the two propositions make a compromise acceptable to both parties, permitting a decent burial of the major issues which almost everyone has grown tired of debating—namely, the roles of relative values and of money—and, between them, the role of the interest rate—in the “Keynesian system.” Keynes thought he had made a major contribution towards a synthesis of the theory of money and “our fundamental theory of value” (*GT*, pp. vi-vii). But the truce between the orthodox and the neoclassicists is based on the common understanding that his system was *sui generis*—a theory in which neither relative values nor monetary phenomena are “important.”

This compromise defines, as briefly as seems possible, the result of what Clower aptly calls the “Keynesian Counterrevolution” [4].

II

That a model with wage rigidity as its main distinguishing feature should become widely accepted as crystallizing the experience of the unprecedented wage deflation of the Great Depression is one of the more curious aspects of the development of Keynesianism, comparable in this regard to the orthodox view that “money is unimportant”—a conclusion presumably prompted by the worst banking debacle in U.S. history. The emphasis on the “rigidity” of wages, which one finds in the New Economics, reveals the judgment that wages did not fall enough in the early 1930’s. Keynes, in contrast, judged that they declined too much by far. It has been noted before that, to Keynes, wage rigidity was a policy recommendation and not a behavioral assumption (e.g., [11]).

Keynes’s theory was dynamic. His model was static. The method of trying to analyze dynamic processes with a comparative static apparatus Keynes borrowed from Marshall. The crucial difference lies in Keynes’s inversion of the ranking of price- and quantity-adjustment velocities underlying Marshall’s distinction between the “market day” and the “short run.” The initial response to a decline in demand is a quantity adjustment. Clower’s investigation of a system, which responds to deflationary disturbances in the first instance by quantity adjustments, shows that the characteristic Keynesian income-constrained, or “multiplier,” process can be explicated in terms of a general equilibrium framework [4]. Such a model departs from the traditional Walrasian full employment model only in one, eminently reasonable, respect: trading at “false prices”—i.e., prices which do not allow the realization of all desired transactions—may take place. Transactors who fail to realize their desired sales, e.g., in the labor market,

will curtail their effective demands in other markets. This implies the amplification of the initial disturbance typical of Keynes's multiplier analysis.

The strong assumption of "rigid" wages is not necessary to the explanation of such system behavior. It is sufficient only to give up the equally strong assumption of instantaneous price adjustments. Systems with finite price velocities will show Keynesian multiplier responses to initial changes in the rate of money expenditures. It is not necessary, moreover, to rely on "monopolies," labor unions, minimum wage laws, or other institutional constraints on the utility maximizing behavior of individual transactors in order to explain finite price velocities. Keynes, in contrast to many New Economists, was adamantly opposed to theories which "blamed" depressions on such obstacles to price adjustments. The implied proposition that, if "competition" could only be restored, "automatic forces" would take care of the employment problem was one of his pet hates. Atomistic markets do not mean instantaneous price adjustments. A system of atomistic markets would also show Keynesian adjustment behavior.

In Walrasian general equilibrium theory, all transactors are regarded as price takers. As noted by Arrow, "there is no one left over whose job it is to make a decision on price" [2, p. 43]. The job, in fact, is entrusted to a *deus ex machina*: Walras' auctioneer is assumed to inform all traders of the prices at which all markets are going to clear. This always trustworthy information is supplied at zero cost. Traders never have to wrestle with situations in which demands and supplies do not mesh; all can plan on facing perfectly elastic demand and supply schedules without fear of ever having their trading plans disappointed. All goods are perfectly "liquid," their full market values being at any time instantaneously realizable. Money can be added to such models only by artifice.

Alchian has shown that the emergence of unemployed resources is a predictable consequence of a decline in demand when traders do not have perfect information on what the new market clearing price would be [1, Chap. 31]. The price obtainable for the services of a resource which has become "unemployed" will depend upon the costs expended in searching for the highest bidder. In this sense, the resource is "illiquid." The seller's reservation price will be conditioned by past experiences as well as by observation of the prices at which comparable services are currently traded (*GT*, p. 264). Reservation price will be adjusted gradually as search continues. Meanwhile the resource remains unemployed. To this analysis one need only add that the loss of receipts from its services will constrain the owner's effective demand

for other products—a feedback effect which provides the rationale of the multiplier-analysis of a system of atomistic (“competitive”) markets.

To make the transition from Walras’ world to Keynes’s world, it is thus sufficient to dispense with the assumed tatonnement mechanism. The removal of the auctioneer simply means that the generation of the information needed to coordinate economic activities in a large system where decision making is decentralized will take time and will involve economic costs. No other “classical” assumptions need be relinquished. Apart from the absence of the auctioneer, the system remains as before: (1) individual traders still “maximize utility” (or profit)—one need not assume that they are constrained from bargaining on their own, nor that they are “money illusioned” or otherwise irrational; (2) price incentives are still effective—there is no inconsistency between Keynes’s general “elasticity optimism” and his theory of unemployment. When price elasticities are assumed to be generally significant, one admits the potentiality of controlling the activities of individual traders by means of prices so as to coordinate them in an efficient manner. It is not necessary to deny the existence of a vector of nonnegative prices and interest rates consistent with the full utilization of resources. To be a Keynesian, one need only realize the difficulties of finding the market clearing vector.

III

It is a widely held view that the main weaknesses of Keynesian theory derive from Keynes’s neglect of the influence of capital and real asset values on behavior (e.g., [8, pp. 9, 11, 17]; [12, p. 636]). It is above all on this crucial point that the standard model has proved to be a most seriously misleading framework for the interpretation of Keynes’s theory. This is readily perceived if we compare the “aggregative structures” of the standard model and the *General Theory* model. In either case, we are usually dealing with but three price relations, so that the relevant level of aggregation is that of four-good models:

<i>Standard Model</i>	<i>General Theory</i>
Commodities	Consumer goods
Bonds	Nonmoney assets
Money	Money
Labor services	Labor services

The aggregate production function makes the standard model a “one-commodity model.” The price of capital goods in terms of consumer goods is fixed. The money wage is “rigid,” and the current value of physical assets is tied down within the presumably narrow range of short-run fluctuations in the “real” wage rate. Relative prices are, in-

deed, allowed little play in this construction. "Money" includes only means of payment, while all claims to cash come under the heading of "bonds."

The four-good structure of the *General Theory* is a condensed version of the model of the *Treatise on Money* (*TM*) with its richer menu of short-term assets. All titles to prospective income streams are lumped together in "nonmoney assets." Bond streams and equity streams are treated as perfect substitutes, a simplification which Keynes achieved through some quite mechanical manipulations of risk and liquidity premia (*GT*, Chap. 17). The fundamental property which distinguishes nonmoney assets both from consumables and from money is that the former are "long" while the latter two are "short"—attributes which, in Keynes's usage, were consistently equated with "fixed" (or "illiquid") and "liquid," respectively (cf. *TM*, V:I, p. 248). The typical nonmoney assets are bonds with long term to maturity and titles to physical assets with a very long "duration of use or consumption." Basically, Keynes's method of aggregation differentiates between goods with a relatively high and a relatively low interest elasticity of present value. Thus the two distinctions are questions of degree. As a matter of course, the definition of money includes all types of deposits, since their interest elasticity of present value is zero, but "such instruments as treasury bills" can also be included when convenient (*GT*, p. 167 n.).

Keynes's alleged neglect of capital is attributed to his preoccupation with the short run in which the stock of physical capital is fixed. The critique presumes that Keynes worked with the standard model in which the value of such assets in terms of consumables is a constant. But in Keynes's two-commodity model, this price is, in principle, a short-run variable and, as a consequence, so is the potential command over current consumables which the existing stock of assets represents. The current price of nonmoney assets is determined by expectations with regard to the "stream of annuities" in prospect and by the rate at which these anticipated future receipts are discounted. The relevant rate is always the long rate of interest. In the analysis of short-run "equilibrium," the state of expectation (alias the marginal efficiency of capital) is assumed to be given, and the price of assets then varies with "the" interest rate.

In Keynes's short run, "a decline in the interest rate" and "a rise in the market prices of capital goods, equities, and bonds" are interchangeable descriptions of the same event. Since the representative non-money asset is very long-lived, its interest elasticity of present value is quite high. The price elasticity of the output of augmentable income sources is very high. The aggregative structure of this model leaves no

room for elasticity pessimism with regard to the relationship between investment and the (long) rate of interest. It does not even seem to have occurred to Keynes that investment might be exceedingly interest inelastic, as later Keynesians would have it. Instead, he was concerned to convince the reader that it is reasonable to assume that "a moderate change in the prospective yield of capital-assets or in the rate of interest will not involve an indefinitely great change in the rate of investment" (*GT*, p. 252).

The relationship between saving and the interest rate is of less quantitative significance, but Keynes's ideas on the subject are of considerable interest and give some clues to his theory of liquidity preference. The criticisms of his supposed neglect of wealth as a variable influencing behavior have been directed in particular against the *ad hoc* "psychological law" on which he based the consumption-income relation. This line of criticism ignores the "windfall effect" which "should be classified amongst the major factors capable of causing short-period changes in the propensity to consume" (*GT*, pp. 92-94). This second psychological law of consumption states simply that the propensity to consume out of current income will be higher the higher the value of household net worth in terms of consumer goods. A decline in the propensity to consume may, therefore, be caused either by a decline in the marginal efficiency of capital (*GT*, p. 319) or by a rise in the long rate (*GT*, p. 94; *TM*, V:I, pp. 196-97). In the short run the marginal efficiency is taken as given and, so, it is the interest rate which concerns us.

The usual interpretation focuses on the passages in which Keynes argued that "changes in the rate of time-discount" will not significantly influence saving. In my opinion, these well-known passages express the assumption that household preferences exhibit a high degree of intertemporal complementarity, so that the intertemporal substitution effects of interest movements may be ignored. Consequently, the windfall effect of such changes must be interpreted as a wealth effect.

Hicks has shown that the wealth effect of a decline in interest will be positive if the average period of the income-stream anticipated by the representative household exceeds the average period of its planned "standard stream" [7, especially pp. 184-88]. Households who anticipate the receipt of streams which are, roughly speaking, "longer" than their planned consumption streams are made wealthier by a decline in the interest rate. The present value of net worth increases in greater proportion than the present cost of the old consumption plan, and the consumption plan can thus be raised throughout.

This brings our discussion of the *General Theory* into pretty unfamiliar territory. But Keynes's "vision" was of a world in which the in-

icated conditions generally hold. In this world, currently active households must, directly or indirectly, hold their net worth in the form of titles to streams which run beyond their consumption horizon. The duration of the relevant consumption plan is sadly constrained by the fact that "in the long run, we are all dead." But the great bulk of the "fixed capital of the modern world" is of a very long-term nature (e.g., *TM*, V:II, pp. 98, 364), and is thus destined to survive the generation which now owns it. This is the basis for the wealth effect of changes in asset values.

Keynes's *Gestalt*-conception of the world resembles Cassel's. Cassel used the wealth effect to argue the "necessity of interest" [3], an argument which Keynes paraphrased (*GT*, p. 94). The same conception underlies Keynes's liquidity preference theory of the term structure of interest. Mortal beings cannot hold land, buildings, corporate equities, British consols, or other permanent income sources "to maturity." Induced by the productivity of roundabout processes to invest his savings in such income sources, the representative, risk-averting transactor must suffer "capital uncertainty." Forward markets, therefore, will generally show a "constitutional weakness" on the demand side [7, p. 146]. The relevance of the duration structure of the system's physical capital has been missed by the modern critics of the Keynes-Hicks theory of the term structure of interest rates [10, pp. 14-16] [9, pp. 347-48].

The recent discussion has dealt with the term structure problem as if financial markets existed in a vacuum. But the "real forces of productivity and thrift" should be brought in. The above references to the productivity of roundabout processes (*GT*, Chap. 16) and the wealth effect indicates that they are not totally ignored in Keynes's general theory of liquidity preference. The question why short streams should command a premium over long streams is, after all, not so different from the old question why present goods should command a premium over future goods. Keynes is on classical ground when he argues that the essential problem with which a theory of asset prices must deal derives from the postponement of the option to consume, and that other factors influencing asset prices are subsidiary: "we do not devise a productivity theory of smelly or risky processes as such" (*GT*, p. 215).

IV

Having sketched Keynes's treatment of intertemporal prices and intertemporal choices, we can now consider how "changing views about the future are capable of influencing the quantity of employment" (*GT*, p. vii). This was Keynes's central theme.

"It is by reason of the existence of durable equipment that the eco-

conomic future is linked to the present" (*GT*, p. 146). The price of augmentable nonmoney assets in terms of the wage unit determines the rate of investment. The same price in terms of consumables determines the propensity to consume. This price is the focal point of Keynes's analysis of changes in employment.

If the "right" level of asset prices can be maintained, investment will be maintained and employment at the going money wage stabilized. If a decline in the marginal efficiency of capital occurs, maintenance of the prices of long-lived physical assets and equities requires a corresponding drop in the long rate and thus a rise in bond prices. To Keynes, "the sole intelligible explanation" (*GT*, p. 201) of why this will normally not occur is that bear speculators will shift into savings deposits. If financial intermediaries do not "operate in the opposite direction" (*TM*, V:I, pp. 142-43), bond prices will not rise to the full extent required and demand prices for capital goods and equities will fall. This lag of market rate behind the natural or "neutral" rate (*GT*, p. 243) will be associated with the emergence of excess demand for money—which always spells contraction. "The importance of money essentially flows from its being a link between the present and the future" (*GT*, p. 293).

Contraction ensues because nonmoney asset prices are "wrong." As before, "false prices" reveal an information failure. There are two parts to this information failure: (1) Mechanisms are lacking which would ensure that the entrepreneurial expectations guiding current investment mesh with savers' plans for future consumption: "If saving consisted not merely in abstaining from present consumption but in placing simultaneously a specific order for future consumption, the effect might indeed be quite different" (*GT*, p. 210). (2) There is an alternative "circuit" by which the appropriate information could be transmitted, since savers must demand stores of value in the present. But the financial markets cannot be relied upon to perform the information function without fail. Keynes spent an entire chapter in a mournful diatribe on the Casino-activities of the organized exchanges and on the failure of investors, who are not obliged to hold assets to maturity, to even attempt "forecasting the prospective yield of assets over their whole life" (*GT*, Chap. 12).

Whereas Keynes had an exceedingly broad conception of "liquidity preference," in the Keynesian literature the term has acquired the narrow meaning of "demand for money," and this demand is usually discussed in terms of the choice between means of payment and one of the close substitutes which Keynes included in his own definition of money. Modern monetary theorists have come to take an increasingly dim view of his speculative demand, primarily on the grounds that the underlying assumption of inelastic expectations represents a "special

case" which is unseemly in a model aspiring to the status of a "general theory" [5, pp. 145-51] [13] [8, p. 10] [9, p. 344]. But it is only in the hypothetical world of Walrasian tatonnements that all the information required to coordinate the economic activities of a myriad traders is produced *de novo* on each market day. In any other construction, traders must rely heavily on "memory" rather than fresh information. In the orthodox model, with its interest inelasticity of both saving and investment, there is admittedly no "real" reason why traders' past experiences should be of a narrow normal range of long rates. In Keynes's model, there are reasons. In imperfect information models, inelastic expectations are not confined to the bond market. The explanation of the emergence of unemployed resources in atomistic markets also relies on inelastic expectations. To stress "speculative behavior" of this sort does not mean that one reverts to the old notion of a Walrasian system adjusting slowly because of "frictions." The multiplier feedbacks mean that the system tends to respond to parametric disturbances in a "deviation-amplifying" manner—behavior which cannot be analyzed with the pre-Keynesian apparatus.

A truly vast literature has grown out of the Pigou-effect idea, despite almost universal agreement on its "practical" irrelevance. The original reason for this strange development was dissatisfaction with Keynes's assertion that the only hope from deflation lies "in the effect of the abundance of money in terms of the wage-unit on the rate of interest" (*GT*, p. 253). This was perceived as a denial of the logic of classical theory. Viewing Keynes's position through the glasses of the standard one-commodity model, it was concluded that it could only be explained on the assumption that he had overlooked the direct effect of an increase in real net worth on the demand for commodities (e.g., [11, pp. 269-70] [12, Note K:1]). The one-commodity interpretation entirely misses Keynes's point: that the trouble arises from inappropriately low prices of augmentable nonmoney assets relative to both wages and consumer goods prices. Relative values are wrong. Absolute prices will "rush violently between zero and infinity" (*GT*, pp. 239, 269-70), if price-level movements do not lead to a "correction" of relative prices through either a fall in long rates or an induced rise in the marginal efficiency of capital (*GT*, p. 263). It is hard to see a denial of "our fundamental theory of value" in this argument.

V

We can now come back to the "terms of the truce" between the neo-classicists and the Keynesian orthodox. I have argued that, in Keynes's theory: (1) transactors do maximize utility and profit in the manner assumed in classical analysis, also in making decisions on saving and investment; (2) price incentives are effective and this includes

intertemporal price incentives—changes in interest rates or expected future spot prices (*GT, loc. cit.*) will significantly affect present behavior; (3) the existence of a hypothetical vector of nonnegative prices and interest rates which, if once established, would bring full resource utilization is not denied.

The only thing which Keynes “removed” from the foundations of classical theory was the *deus ex machina*—the auctioneer which is assumed to furnish, without charge, all the information needed to obtain the perfect coordination of the activities of all traders in the present and through the future.

Which, then, is the more “general theory” and which the “special case”? Must one not grant Keynes his claim to having tackled the more general problem?

Walras’ model, it has often been noted, was patterned on Newtonian mechanics. On the latter, Norbert Wiener once commented: “Here there emerges a very interesting distinction between the physics of our grandfathers and that of the present day. In nineteenth century physics, it seemed to cost nothing to get information” [14, p. 29]. In context, the statement refers to Maxwell’s Demon—not, of course, to Walras’ auctioneer. But, *mutatis mutandis*, it would have served admirably as a motto for Keynes’s work. It has not been the main theme of Keynesian economics.¹

¹ The paper is an attempt to summarize some of the conclusions of a lengthy manuscript, “On Keynesian Economics and the Economics of Keynes: A Study in Monetary Theory,” to be submitted as a doctoral dissertation to Northwestern University.

REFERENCES

- GE*: John Maynard Keynes, *The General Theory of Employment, Interest and Money* (London, 1936).
- TM*: ———, *A Treatise on Money*, Vols. I and II (London, 1930).
1. Armen A. Alchian and William R. Allen, *University Economics* (Belmont, Calif., 1964).
 2. Kenneth J. Arrow, “Towards a Theory of Price Adjustment,” in M. Abramowitz, et. al., *The Allocation of Economic Resources* (Stanford, 1959).
 3. Gustav Cassel, *The Nature and Necessity of Interest* (1903).
 4. Robert W. Clower, “The Keynesian Counterrevolution: A Theoretical Appraisal,” in F. H. Hahn and F. P. R. Brechling, eds., *The Theory of Interest Rates* (London, 1965).
 5. William Fellner, *Monetary Policies and Full Employment* (Berkeley, 1946).
 6. John R. Hicks, “Mr. Keynes and the ‘Classics’: A Suggested Interpretation,” *Econometrica*, 1937.
 7. ———, *Value and Capital*, 2nd ed. (Oxford, 1946).
 8. Harry G. Johnson, “The General Theory After Twenty-Five Years,” *A.E.R.*, May, 1961.
 9. ———, “Monetary Theory and Policy,” *A.E.R.*, June, 1962.
 10. David Meiselman, *The Term Structure of Interest Rates* (Englewood Cliffs, N.J., 1962).
 11. Don Patinkin, “Price Flexibility and Full Employment,” *A.E.R.*, 1948, as reprinted in F. A. Lutz and L. M. Mints, eds., *Readings in Monetary Theory* (Homewood, Ill., 1951).
 12. ———, *Money, Interest, and Prices*, 2nd ed. (New York, 1965).
 13. James Tobin, “Liquidity Preference as Behavior Towards Risk,” *Rev. of Econ. Studies*, 1958.
 14. Norbert Wiener, *The Human Use of Human Beings*, 2nd ed. (New York, 1964).