ANTONIO CARLOS MACEDO E SILVA

Missing details and conspicuous absences: from the *Treatise* to the *General Theory*

Abstract: *This paper aims at interpreting some of the many simplifying assumptions adopted by Keynes to explain, in the* General Theory, *liquidity preference, interest rate, portfolio decisions, and volume of investment. It is suggested that Keynes emphasized a* partial and particular *model that should be understood as part of a wider theory and a much wider view.*

Key words: *liquidity preference, money, portfolio composition.*

I

Rhetoric scholars know as *capitatio benevolentiae* the expedient a speaker uses to gain his or her listeners' goodwill by expressing (or feigning) modesty. In the preface to the *Treatise on Money,* however, the rigor of self-criticism goes far beyond a mere artifice (see Skidelsky, 1992, p. 314). Surprisingly frankly, Keynes declares he is "acutely conscious" of the faults in his book, described as a badly finished, barely harmonious, and somewhat verbose compound (1971b, p. xvii).[1] In the original preface to the *General Theory,* there is practically no trace of this expedient. It is almost visible the effort Keynes makes to hold back his tremendous (and justified) satisfaction with his new work and not to declare that it had come to "largely revolutionise . . . the way the world thinks about economic problems" (1973e, p. 492). His high expectations concerning the book are stressed by additional self-criticism of the *Treatise:*

Antonio Carlos Macedo e Silva is an assistant professor of economics, Institute of Economics, University of Campinas, São Paulo, Brazil. He thanks Adriana N. Ferreira, André L.C. de Lourenço, Claudio H. dos Santos, and an anonymous referee for their comments, as well as Mônica S. Martins for the translation of a previous version of this paper.

[1] See also the letter Keynes wrote to his parents (1971b, p. xv).

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> When I began to write my *Treatise on Money* I was still moving along the traditional lines of regarding the influence of money as something so to speak separate from the general theory of supply and demand. . . . This book, on the other hand, has evolved into what is primarily a study of the forces which determine changes in the scale of output and employment as a whole; and, whilst it is found that money enters into the economic scheme in an essential and peculiar manner, technical monetary detail falls into the background. (1973b, pp. vi–vii)

Both prefaces have possibly contributed to relegate the *Treatise* to an almost complete oblivion, until the rescue carried out by Davidson (1978) and Shackle (1967). According to Skidelsky (1992, p. 318), this oblivion, although undeserved, was encouraged by Keynes's own attitude.

However, in the excerpt mentioned above, the preface to the *General Theory* hints at the possibility of a different connection between the two works—that of continuity. The "monetary details" that are missing in the *General Theory* are presumably the same analyzed in the *Treatise.* But now his tone is rather cryptic than self-critical. Keynes does not explain which details are those nor the paradox (simply apparent?) of leaving aside precisely such details in a book centered on the monetary nature of the capitalist economy.

In fact, self-criticism and ratification alternate—and sometimes combine—in more than two scores of references to the *Treatise* found in the *General Theory.*[2] Keynes regrets the idiosyncratic nature of the concepts of income and savings adopted in the *Treatise* (1973b, pp. 60, 74, 77–79), as well as the inexplicable (but see Kregel, 1997) *imbroglio* concerning capital assets and financial asset prices (ibid., pp. 151, 173). The *mea culpa* culminates in the abjuration of the Wicksellian natural interest rate (ibid., p. 242).

But there are references that show only a smooth continuity. More than once, Keynes refers the reader to the theory of short-period prices and to the treatment of cyclical fluctuations exposed in the *Treatise* (ibid., pp. 49, 70, 287, 319).[3] He also links the speculative demand for money

[2] No other book is mentioned so many times, not even Pigou's *Theory of Unemployment* (1933). Furthermore, there are several passages in which the dialogue with the *Treatise* happens implicitly.

[3] Davidson (1978) was the first to reinitiate this discussion on short-period prices. Later on, Kregel (for example, 1987; 1993; 1997) contributed largely to clarify the links between the *Tract* (interest parity theory), the *Treatise* (short-period prices theory), and the *General Theory* (assets pricing theory in chapter 17). As for the business cycle, Keynes (in chapter 22 of the *General Theory*), warns the reader of the fact that the reasons for the cyclical nature of capitalism he is about to present will be "by no

to the previous discussion about the "bull–bear position" (ibid., p. 169) and draws two parallels between the treatment of demand for money in both books (ibid., pp. 167, 194–195). Curiously enough, in this dialogue between the two works, the theme of money supply and credit is a conspicuous absence, and one that would persist until the publication of the articles on the finance motive (Keynes, 1973a; 1973c; 1973f; 1973g).[4]

Stressing the continuity between the two works, Moore points out the fact that Keynes, in the self-criticism expressed in the preface to the *General Theory,* refers explicitly to books III and IV of the *Treatise:* "it would seem that Keynes remained willing to stand by the technical monetary details of other sections of the *Treatise*" (Moore, 1988, p. 178). I would like to go further. I believe that *also* in these books there are "monetary details" essential to draw a minimally complete picture of the functioning of a capitalist economy. Indeed, Keynes introduces the liquidity preference (likewise, Bibow, 2005)—*avant la letter*—in some aspects, more strongly than in the *General Theory.*[5] In the absence of the "monetary details" provided by the *Treatise,* the scenario outlined in the *General Theory* became more than simple, simplistic—even taking into account the sophistication of chapter 17.[6] I suggest that this scenario should be interpreted not as representing "the" Keynes's theory (and even less his *vision,* in a Schumpeterian sense), but only a partial and particular *model.*

II

In the "complex psychological drama" of the *General Theory,* the "social landscape" (Skidelsky, 1992, pp. 541–543) is unfortunately

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means unfamiliar either in themselves or as explanations of the trade cycle" (1973b, p. 314). Next, he repeats many arguments offered previously in the *Treatise,* especially regarding the role of redundant stocks and of the working capital.

[4] As Davidson writes, those articles provide "the Rosetta stone which makes possible the deciphering of the ancient *Treatise* hieroglyphics into modern post-Keynesian terminology" (1978, p. 30).

[5] Incidentally, it seems difficult to me, in this sense, to accept the idea that in the *General Theory,* Keynes presents a "*new* liquidity preference theory of interest" (Moore, 1988, p. 197, emphasis added).

[6] From this point of view, the articles following the *General Theory,* which reintroduce credit and banks, should be deemed an attempt at completion (and not a "diversion," as in Wray, 2005); however, one may question whether they really are an adequate "coping-stone" (Keynes, 1973c, p. 220) to the liquidity preference theory of the rate of interest.

incomplete. Essential actors in a capitalist economy—the whole of financial intermediaries—are only superficially mentioned. As is clearly shown by Davidson (e.g., 1978), without commercial banks, investment banks, and broker dealers, neither bank credit nor the issue of debts and shares can be appropriately represented. Without an adequate description of the relations between, on one hand, the central bank and private financial institutions and, on the other, the private financial institutions and private nonfinancial agents (all mentioned in the *Treatise,* together with nonresidents and foreign central banks), it is not possible to obtain more than a provisional and precarious picture of the functioning of a monetary economy. Furthermore, with "the suppression of monetary detail, there concomitantly followed the playing down of uncertainty and incomplete information in *The General Theory* compared to the *Treatise,* for money enormously enlarges the deleterious power of uncertainty" (ibid., p. 30).[7]

It is not easy to understand why Keynes chose to draw such a minimalist picture. Minimalist—absolutely minimalist—is, for instance, his description of how supply and demand for money determine "the" interest rate.

Generation after generation of Keynesian macroeconomics professors experienced the pain and the pleasure of explaining to their students how the effective demand principle surpassed Say's law. The pleasure is in demonstrating that a theory in which, ultimately, products are exchanged by products cannot be considered suitable to the study of a capitalist economy.[8] The income flows generated by production *may not be spent,* as chapter 3 of the *General Theory* suggests; money owners may refrain from putting it in circulation again. Now, this *possibility* had already been mentioned by many economists, including Karl Marx and John Stuart Mill (see Sowell, 1972). Why would the agents' desire for hoarding generate unemployment as a probable *normal* state of the economy? Would we, in capitalism, be facing the socially unexpected and unwanted consequences of despicable misers' actions? "Be patient," begs the professor. "Wait for the chapters on interest rate, where the matter is completely explained." However, that is exactly there where the real trouble begins.

[7] According to Davidson, the "Keynesian Revolution was aborted by those who claimed to be Keynesians but who disregarded Keynes's *Treatise on Money* and his finance motive revision that requires a nonneutral monetary view" (2002, p. 88). Davidson (ibid., ch. 7) shows that a more complete view of financial institutions has important implications for Harrod's growth theory.

[8] Possas (1987) argues that, in fact, it would not be suitable, not even to a simple commodity production economy.

The novelty of Keynes's approach would be in the "two-step" process of chapter 13 (see figure 4.1 in Davidson, 2002, p. 81). This process distinguishes two types of "time-preference" (Keynes, 1973b, p. 166). Keynes refers generically to "an individual" who, "first," defines which fraction of his or her current income he or she will consume and which he or she will reserve in some form of "command over future consumption." The "second" decision shows a preference for holding wealth in "cash" or "debts." Given the money supply, "the" interest rate results from the aggregation of individual decisions (or, more precisely, from the interaction among wealth owners).

Here comes the deathblow to Say's law: beyond the need for "active balances" (for the transactions motive), holding "inactive balances" (Keynes, 1973f, p. 230) is rational when (for the precautionary motive) agents have little confidence in their expectations[9] (especially concerning the future price of debts; Keynes, 1973b, p. 170n) or when they feel confident of the impending depreciation of such titles (speculative-motive). "Propensity to hoard" (ibid., p. 174) "rules the roost" (ibid., p. 223): given the money supply, a stronger liquidity preference implies not bigger hoards[10] but a higher interest rate, which causes a reduction in investment and, consequently, in consumption, income, and employment; liquidity preference and multiplier are essential and inseparable parts of Keynes's version of the effective demand principle (Kregel, 1988).

At this point of the explanation, the professor declares the *quod erat demonstrandum,* while trying to hide his or her embarrassment before the students. There are several odd links in this reasoning. Is there a particular reason for a discussion about the allocation of *wealth* to be introduced as a discussion about the management of income *flow?* Why, in a book that describes an "entrepreneur economy" that moves according to wealth owners' decisions, select as a general representation of the agent who chooses his or her financial investments a *household* whose first decision is how much of his or her income to *consume?* Why not make explicit here the presence of financial and nonfinancial firms? By the way, why does the agent at issue examine (Kahn, 1984, p. 140) only a limited set of financial investments (money and debts, but not equities

[9] Or when, in Kahn's words, are more strongly affected by the "feeling of capital risk" (1972, p. 82).

[10] And it does not imply higher employment, given the "essential properties" of money and of other liquid assets, as disclosed by Keynes in chapter 17. Of course, nobody has done more than Davidson (see, for instance, 1978; 1980; 1984) to hammer this point into economists' minds. Interestingly enough, one can find a similar approach in Hahn (1977, p. 31).

or other assets)? Why reduce demand for liquidity to demand for money? Why is the money supply at this point taken as given? What is the relation between demand for money and demand for credit?

It is interesting to point out that, concerning the two-step process, the *General Theory* adds little to the discussion Keynes starts in chapter 10 of the *Treatise.* Indeed, the oldest description is even more general (Hicks, 1985, p. 60), in spite of also being centered in the individual, who chooses between consumption and ownership of *wealth,* and between keeping his or her wealth

> in the form of money *(or the liquid equivalent of money)* or in other forms of loan or *real capital.* This second decision might be conveniently described as the choice between "hoarding" and "investing," or, alternatively, as the choice between "bank deposits" and "securities." (Keynes, 1971b, p. 127, emphasis added)[11]

Keynes explains next that the choice between "hoarding" and "investing"

> relates, not only to the current increment to the wealth of individuals, but also to the whole block of their existing capital. Indeed, since the current increment is but a trifling proportion of the block of existing wealth, it is but a minor element in the matter. (ibid., p. 127)

In chapters 13 and 15 of the *General Theory,* there are brief mentions to the prevalence of stock overflows (1973b, pp. 166, 194). Such passages of the *Treatise* and of the *General Theory* make clear that the focus on income results from a simplification; the decision to hoard or to "invest" concerns the administration of *stocks* of wealth (an idea that is taken to its extreme only in chapter 17 of the *General Theory*).[12] But what explains this provisional simplification? More than that, why emphasize income flows received *by families?*

As for the exclusion of nonfinancial firms, it is not possible to go beyond a mere conjecture: without them, the comparison with orthodox models for determining interest rates becomes clear-cut. In the most simple representations of these models, *families* save and companies invest; saving means buying debts, which implies that the interest rate is seen

[11] In the *Treatise,* the individual's choice is basically made between bank deposits and financial assets whose market value can fluctuate, such as debts *and* equities. In the *General Theory,* the desire to stress the fact that the value of equities is not affected only (or fundamentally) by the interest rate is *one* of the possible explanations for the omission of equities as one of the assets whose acquisition is considered by the household.

[12] And which was forcefully restated by Townshend (1937).

as a "return to saving or waiting as such" (ibid., p. 167). The interest rate is such that it equals savings to investments.

"Know your enemy, destroy your enemy." Keynes's tactics goes beyond this maxim of the art of war. Keynes's attack is based on the conceptual experiment employed characteristically by the loanable funds theory, using its own terms to show that the interest rate and the marginal efficiency of capital are determined by different processes. The rhetorical refinement has an additional dividend, which is to pass at a distance from the confusion found in the *Treatise* between the price of "assets" and "debts."[13]

However, the cost is obvious: the theory of "the" interest rate is introduced in an extremely restricted conceptual environment. Only families save; only the price of a generic debt is at issue. It is true that nonfinancial firms are perfunctorily reintroduced in chapter 15 of the *General Theory*, when the transactions motive unfolds in income motive and business motive. However, for a more general theory of asset choice, it is necessary to wait for chapter 17.

Doubts become a little more serious when we think about the relation between liquidity preference and demand for "money." Would it mean that, both for the cautious and the restless investor, as well as for the speculative bear, there is no alternative to preserve liquid balances except "money"?[14] In many passages, this is what Keynes writes literally.

[13] Both in the *Treatise* and in the *General Theory,* there is a difference between the pricing of consumer goods and capital goods. The latter are assets whose present value is calculated by its potential demanders structure (from this difference derives, of course, Minsky's "two-price" theory, 1975). However, in the *General Theory,* it is clear that this feature does not suppress the fact that the market price of new capital assets is determined by the producers (as it is regarding consumer goods), according to costs and market structure. The *General Theory* distinguishes more clearly the price of financial assets and the price of instrumental capital assets. However, when Keynes makes this distinction, he exposes the reader to another confusion (1973b, pp. 151 note, 316, 320), now between the demand price for equipment, such as calculated by potentially investing firms, and the price of equities, which is the value the stock market attributes to publicly traded companies (which implicitly is, therefore, an evaluation of their assets, among which are the instrumental capital assets). On this, see Davidson (2002, ch. 6), Erturk (2006), and Kahn (1984, pp. 150–157, 164).

[14] "The possession of actual money lulls our disquietude; and the premium which we require to make us part with money is the measure of the degree of our disquietude" (Keynes, 1973d, p. 116). It is worth noticing that, in this well-known passage, Keynes once again seems to identify demand for liquidity to demand for "actual money" or "actual cash" (Keynes, 1973a, p. 206).

The question has always been particularly embarrassing for professors working in countries submitted to significant inflationary processes, in which the hegemony of "state money" (Keynes, 1971a, ch. I) is rapidly corroded by the competition of other

In Keynes (1973h), the contrast is between "cash," whose "efficiency" seems to derive only from its liquidity, and financial assets, which pay interests. In Keynes (1973d), the money demanded as store of value is *defined* as "barren":

> For it is a recognised characteristic of money as a store of wealth that it is *barren;* whereas practically every other form of storing wealth yields *some interest or profit.* (ibid., p. 115, emphasis added)

However, it is clear that a careful reading of the *Treatise*—as well as of the *General Theory*—shows that this is basically a false question. For some reason, Keynes seems to exercise a preference for hiding in deep waters an approach that is, in fact, more general. Clues to this approach are found on the first pages of chapters 13 and 15 of the *General Theory*. In the former, a well-known footnote states that, "without disturbance" to the definition of interest rate as the margin between money and debts,

> we can draw the line between "money" and "debts" at whatever point is most convenient for handling a particular problem. . . . It is often convenient in practice to include in money time-deposits with banks and, occasionally, even such instruments as (e.g.) treasury bills. As a rule, I shall, as in my *Treatise on Money,* assume that money is co-extensive with bank deposits. (1973b, p. 167)

Therefore, both in the *General Theory* and in the *Treatise* (1971b, p. 27), money corresponds to bank deposits. But, *what kind of* bank deposits? In the beginning of chapter 15 (1973b, pp. 194–195), Keynes refers the reader, again (and impenitently), to the *Treatise,* this time to suggest an analogy between the tripod of liquidity motives of the *General Theory* and the classification of bank liabilities found in the previous book.

In chapter 3 of the *Treatise,* it is clear that the (obvious) association between cash deposits (or demand deposits) and transactions balances (which tend, according to Keynes, to become less and less relevant; see 1971b, p. 37). Nevertheless, banks offer to agents two other types of liabilities—interest-bearing savings deposits and overdrafts (described precisely as off-balance liabilities; ibid., p. 37). The definition of savings deposits encompasses clearly the precautionary and speculative motives, while apparently being able to satisfy what would become the finance motive (rescued from oblivion by Davidson, 1965) as well:

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stores of value and other units of account, while demand deposits are replaced for other types of bank liabilities that reconcile liquidity, indexation, and remuneration (as Keynes had already remarked in his *Tract;* see ibid., p. 42).

> But a bank deposit may also be held, not for the purpose of making payments, but as a means of employing savings, i.e., as an investment. The holder may be attracted by the rate of interest which his banker allows him; or he may anticipate that other investments are likely to depreciate in money value; or he may attach importance to the stability of the money value of his savings and to being able to turn them into cash at short notice; or he may find this the most convenient way of holding small increments of savings with the intention of transforming them into a specific investment when they have accumulated to a sufficient sum [and, hence, financing/funding this operation]; or he may be awaiting an opportunity of employing them in his own business; or other such reasons may influence him. We shall call deposits of this type *savings deposits.* It is the criterion of a savings deposit that it is not required for the purpose of current payments and could, without inconvenience, be dispensed with if, for any reason, some other form of investment were to seem to the depositor to be preferable. (Keynes, 1971b, pp. 31–32, emphasis in original)

Savings deposits *are* "money" or, at least, something almost identical to it: they are liquidity "certainly realisable at short notice without loss" (Keynes, 1971c, p. 59), retained by agents who prize the stability of the face value of such assets (for the precautionary motive), by agents who fear the depreciation of other assets (speculative motive), and, finally, by agents who accumulate the finance (and maybe even the funding) necessary for a future operation.[15] Such deposits may not be *cash,* but they are equivalent to money in its function as a store of value:

> A savings deposit also correspond to what used to be called in theories of money, which were stated with primary reference to a commodity money, the use of money as a "Store of Value." (Keynes, 1971b, p. 32)[16]

[15] This stability derives from the special relationship between commercial banks and the central bank, which "acts as a market maker who guarantees an unchanging exchange rate between banks' demand deposit liabilities and legal tender" (Davidson, 2002, pp. 119, note 28).

It is worth remembering that to obtain the desired finance an agent does not necessarily have to borrow from banks or issue new titles. The agent can use his or her own resources (Keynes, 1973c, p. 217), liberating purchasing power that was previously kept in assets such as (for instance) savings deposits; these assets must be converted into cash through an operation that can involve the *dehoarding* (Keynes, 1973f; 1973g) on the part of other agents.

[16] In chapter 3 of the *Treatise,* there is some ambiguity concerning the monetary status of savings deposits: on page 38 (1971b), Keynes writes that the statistics of bank deposits are precarious, because they do not include cash facilities, such as overdrafts, but include "an important proportion of something which is scarcely money at all (not much more than, for example, a treasury bill is), namely the savings deposits." The fact is that, in spite of this, in other passages of chapters 3, 10, and 15 of the *Treatise,* savings deposits are referred to as money.

In chapter 10 of the *Treatise,* Keynes resumes the subject. While describing the two-step process for choosing assets, he makes clear that the option for liquidity consists of keeping "money (or the liquid equivalent of money)," and that those who hoard choose bank deposits, especially savings deposits. Therefore, as Keynesians, we are fully authorized to say, and "without a smile on the face," that the demand for money as a store of value *does not imply necessarily* the acquisition of a barren asset. This does not jeopardize in any way Keynes's proposition regarding the centrality of liquidity preference. Those agents whose liquidity preference increases and who try to convert (for instance) debts (or equities) into savings deposits are demanding money as a store of value. To produce negative effects on the economy, it is enough that this change in liquidity preference determines a depreciation of longer assets (provided the bearishness is not compensated by the purchases by the financial agents; see ibid., p. 128, and Davidson, 2002, ch. 6).

Table 1 suggests a correspondence between the liquidity motives of the *General Theory* and the bank liabilities of the *Treatise.* Overdrafts are shown as a potentially adequate source of liquidity for the three liquidity motives and, therefore, as possible substitutes for the other financial instruments. It is true that in the only mention to overdrafts in the *General Theory* (1973b, p. 196), Keynes affirms that they are an alternative to cash and savings deposits; but there is no reason for them not to be considered as a suitable resource to finance speculative operations as well. The use of overdrafts facilities is, of course, a credit operation (which produces on the bank system an effect similar to other types of loan), motivated by temporary needs for liquidity that may well be convenient to distinguish from the other possible meanings of the concept of liquidity preference.[17]

Taking Keynes's propositions about the correspondences between bank liabilities and liquidity motives seriously, one should say that, at the margin, the agent is indifferent between (1) the liquidity premium of his or her demand deposits (and, occasionally, of his or her occasional currency balances); (2) the sum of the interest rate and the liquidity premium associated with savings deposits (whose value in the unit of account is invariable);[18] and (3) the sum of the expected appreciation, the interest

[17] In my opinion, Wray (1990; 2005), to whom it is essential to distinguish liquidity preference from the "demand for money," offers a solution for one of the oldest conundrums of the Keynesian debate.

[18] In the minimalist version presented in chapters 13 and 15 of the *General Theory,* the liquidity preference collapses in demand for money, and the existence of credit and

Table 1
Liquidity motives and bank liabilities

Liquidity motives/ bank liabilities	Transactions	Precaution	Speculation
Cash deposits			
Income	X		
Business	X		
Savings deposits		X	X
Overdrafts	X	X	X

rate, and the liquidity premium of some generic bond, representing the longest end of this type of instrument.[19]

This result derives, of course, from merely applying to the choice of a *slightly* larger set of assets the idea introduced by Keynes in chapter 17 of the *General Theory,* according to which there is, in fact, not an "absolute standard," but "a scale of liquidity" (1973b, p. 240).

However, the approach in chapter 17 is still significantly minimalist, given the conspicuous absence of financial institutions and credit. In later papers, Keynes (e.g., 1973d; 1973h) seems to show some "attachment" to "the particular forms" (1973d, p. 111) in which he had originally embodied the idea of liquidity preference.

What could explain such an attachment? I can imagine two nonexcluding possibilities. When Keynes identifies demand for liquidity to demand for money, he rescues from oblivion and gives theoretical consistency to old arguments about hoarding, polemicized by the "long line of heretics" and "cranks" (1973e, p. 488); at the same time, he gives new vigor to his old and incisive criticism of the eulogy of abstinence (Keynes, 1971a, 1971b; see Skidelsky, 1992). In other words, once again, it is a matter of *épater les bourgeois* and the "classical" economists, obsessed with the virtues of abstinence. However, maybe there is more than consistency, obstinacy, and rhetorical bravery in this. Maybe there are

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of a plurality of interest rates is not considered: "the quantities of money and assets are taken as fixed. . . . This would be consistent with a period so short that quantities are fixed so that all adjustments are through price changes" (Wray, 1992, p. 80). In this case, the "*naive* Keynesian model" about which Wray writes is, in fact, *Keynes's naive* model (although it is not the *only* "model" in the *General Theory*).

[19] One is then entitled to say that a (less naive) "Keynes's model" employs a vector of financial assets at the liquidity end that is more complete than Wray (ibid.) suggests (i.e., the relevant equation is the equation number 11, and not number 5 in Wray's text).

methodological reasons of a higher order. This is what I try to suggest in the next section.

III

In economics, the quest for precision can be dangerous (as Keynes knew so well). In an attempt to understand the nature of wealth and employment creation, to tame the course of time, segmenting it in accounting periods, is an inescapable procedure, although extremely delicate (as Hicks, e.g., 1982c, knew so well). Propositions about the determinants of the main economic decisions (investing, producing, consuming, etc.) and about the main processes can be employed to explain the aggregate value of income and employment during an arbitrary period of time (for example, the calendar year of national accounts). However, the quest for precision (and sometimes the worry about the dynamic connection of accounting periods) have often led economists to *theoretical* definitions of the macroeconomic period (Macedo e Silva, 2002) in which *some* equilibrium norm prevails. "Equilibrism" is introduced—not always in an explicitly or sufficiently justified way—in the theoretical discourse.[20]

In the *General Theory,* Keynes makes an effort to obtain a *precise* answer to the determination of product level in a certain period. In his approach, in order to determine income precisely, it is necessary to determine precisely both investment and its effects on income. The accounting period is *theoretically defined* as the one that is necessary to exhaust the multiplier (Carvalho, 1996).[21] From the point of view of the themes discussed here, the central issue concerns the first aspect. Aggregate investment is just the sum of decentralized decisions taken during a certain period by a subset of wealth owners. To determine it *precisely,* it is likely necessary to adopt simplifying and equilibristic procedures. Keynes simplifies the theory when he excludes from the scenario the whole of financial institutions. He adopts equilibristic procedures when determining the *aggregate* investment as one of the side effects of a "process"[22] at the end of which, for the marginal investor, the value attributed

[20] I borrow the word from Hicks (1982c), but defining it as the *assumption* that the economy (or part of it) is in equilibrium or necessarily tends to it. Macedo e Silva (1995) suggests that, in the *General Theory,* Keynes's use of equilibrist procedures may have contributed to catch the macroeconomic theory in an "equilibrium trap," of which naturally emerged the IS-LM model and the neoclassical synthesis.

[21] For a discussion about the dynamic problems of the multiplier, see Possas (1987).

[22] In quotation marks, because it is not a matter of describing a process "in time" (in Hicks's words, 1982c) through which the whole set of investors reach this state of temporary satisfaction.

to the several assets is such that the expected rates of return (marginal efficiencies) are equivalent (considering risk differentials).

Among the many exegetes of the *General Theory,* few seem to realize the existence of a second two-step process, this time within the scope of the broader theory of asset choice presented in chapter 17.[23] This is, in fact, a new conceptual experiment, which Keynes explains and explores in an excessively informal and vague way.

The starting point is the existence, at a certain moment, of a *given* stock of assets, inherited from the past. Part of such assets is distributed in some way among *nonfinancial* agents. This old wealth must be priced (though not all assets have an organized spot market where their price is readily determined) and, occasionally, transacted (at *spot* prices) to produce the equivalence between the marginal efficiencies of existing assets.[24] A temporary equilibrium must be achieved in which each agent's portfolio is composed strictly of assets the agent wants (or agrees) to carry. End of the first step.[25] Thus far, there has been no production or issue of new assets (or liabilities). The financial system, prudently and prudishly, keeps its distance.

In chapter 17 of the *General Theory* (1973b, pp. 227–228), Keynes specifies the conditions for this initial equilibrium. In Keynes, the nature of this first step is explained even more clearly:

> The effort to obtain the best advantage from the possession of wealth will set up a tendency for capital assets to *exchange,* in equilibrium, at values proportionate to their marginal efficiencies in terms of a common unit. (1973h, p. 102, emphasis added)

[23] One of the most important references is, of course, Davidson's (1978; 1994), which, however, focuses (as Keynes does) on the determination of investment. Wray (1992) suggests an extremely interesting framework that includes the financial and nonfinancial agents' set of assets (and liabilities) and allows one to visualize the effects of individual decisions of capital investment and of the interaction among agents concerning the price *and quantity* of (financial and nonfinancial) assets. In other words, it is a matter of deepening Townshend's proposition (1937), according to which liquidity preference is *one of the* necessary elements to build a Keynesian theory of value.

[24] If owners of assets for which there is an organized secondary market decide that carrying such assets is no longer desirable, they will try to sell them. This will cause a drop in their spot prices, necessary to foster their redistribution (or to convince these owners that selling them is no longer advantageous). For assets such as fixed capital equipment, market operations will tend to be negligible; the "adjustment" will occur basically through spot (though notional and subjective) prices.

[25] This first step, in fact, presumes a previous "step" that consists of a subjective evaluation of assets on the part of *each* investor. An attempt to explain this ex ante dimension of Keynes's portfolio theory may be found in Possas (1987). The subject was resumed in Dequech (2000) and Macedo e Silva (1995).

Once this initial equilibrium is established, one can take a second step, which consists of checking the advantage of acquiring *new* instrumental assets (at their *forward* prices):

> If the demand price of our *capital asset* A thus determined is not less than its *replacement cost,* new investment in A will take place, the scale of such investment depending on the capacity available for the production of A, i.e., on its elasticity of supply, and on the rate at which y, its marginal efficiency, declines as the amount of investment in A increases. At a scale of new investment at which the marginal cost of producing A is equal to its demand price as above, we have a position of equilibrium. Thus the *price system* resulting from the relationships between the marginal efficiencies of different capital assets including money, measured in terms of a common unit, determines the aggregate rate of investment. (ibid., p. 102, emphasis added; for the *General Theory's* similar rendition, see Keynes 1973b, p. 228)[26]

Not even here is the *issue* of *new* financial assets examined. Because Keynes's purpose, after all, is to determine investment and not to provide a general theory of the capital, he limits himself to analyzing decisions of investing in reproducible assets. The stage is held by producers of instrumental assets, whose prices are essentially determined by production costs (1973b, p. 294) and by the market structure within which they operate (ibid., p. 245).[27] The necessary condition for a new investment is the existence of instrumental assets (or "consumption capital" assets, if we wish to include real estate investment; see ibid., p. 226) whose spot prices are higher than the price of new equipment.[28] Leaving risk differentials aside, the aggregate investment will be such that the demand price of new assets equals their supply price (which is the same as saying

[26] The reference to a "price system" makes one think of Townshend (1937) and of Keynes's proposition that the "theory of shifting equilibrium" is a "theory of value and distribution" (1973b, p. 294).

[27] These (forward) prices are flow-supply prices (as Davidson, 1978, writes), from the point of view of the producer, and replacement costs, from the point of view of the demander.

[28] Davidson's contribution (e.g., 1978, ch. 4) allows us to realize that the pricing of old wealth is only a basis for the pricing of *new* wealth on the part of potential investors. These should take into account both the time lag—whose importance Kalecki (1954) emphasizes—between order and delivery of assets (a time that depends on the production period and during which potential yields are not reaped) and the possible differences (potentially important in the case of fixed capital equipment) derived from technical progress.

that the marginal efficiency of capital equals "the" interest rate).[29] The expository method employed by Keynes allows him to determine precisely the aggregate investment and "the" interest rate in a certain period (and, together with them, the aggregated product and employment).

The model is based on a perfectly reasonable proposition. A value must be attributed to each item of the old wealth. Without this, it is logically impossible to begin the process of capital investment in an economy in which capital assets are durable and, therefore, represent a link between present and future (ibid., p. 146). On designing such a model, it seems sensible to distinguish the moment of pricing the old wealth from the moment at which decisions related to the creation of new wealth are taken. However, there is no *logical or theoretical* need for excluding credit and financial institutions from any one of these moments. On the contrary, as Keynes shows in the *Treatise,* financial agents intervene at every moment in the determination of financial assets prices (with implications that have been analyzed by Davidson in many places; see, for instance, Davidson, 1978, pp. 251–253; 2002, chs. 6 and 7). Consequently, the supply of means of payment will be constant only fortuitously. Or, alternatively, *ex hypothesi,* in order to make *viable* a simple and precise exposition of the determination of aggregate investment and income.[30]

As I tried to show in the beginning, Keynes scrutinizes carefully the convergences and divergences of his new work in relation to the *Treatise.* Curiously enough, the theme of the supply of money is never submitted to the same procedure. In the *Treatise,* the elasticity of the supply of money is seen as an object of which one cannot say much at a more abstract theoretical level. It depends on the instruments of monetary policy and its use by central banks, as well as on the conventions and strategies ruling the performance of financial institutions (see 1971b, p. 271, among many other passages). One can discuss whether this more "casual" approach

[29] In a more dynamic approach, as the one suggested by Townshend, "there is in the real world no 'long run' in which, e.g., perfect competition, where it may be supposed to exist in production, actually equates cost and supply-price at the margin: for the forces of competition are perpetually chasing the shifting relevant price-levels" (1937, p. 169).

[30] My interpretation is at variance with that by Chase (1994). According to him, in the *Treatise,* there is a *micro*economic liquidity preference analysis, which stresses transactional flows, whereas in the *General Theory* there is a *macro*economic analysis that finally incorporates money as a store of value. Chase actually seems to imply that the plurality of interest rates and the presence of financial institutions in the first book are somehow intrinsically tied to the hypothesis of a natural rate of interest determined by productivity and thrift (ibid., pp. 857–858).

is compatible with the centrality of the subject of money exogeneity/endogeneity. (I tend to believe so, following Carvalho, 1992, and Wray, 1990.) What I want to emphasize is the absence of conclusive evidence that Keynes may have abandoned this approach in the *General Theory.*

If such is the case, why assume in this last work a quantity of money that is given or is under the control of monetary authorities? In the *Treatise,* Keynes did not have the instruments that could make possible for him to state *precisely* how investment and product would evolve in cases in which the interest rate strayed from its "natural" value. In the *General Theory,* maybe Keynes did not have the instruments that could make it possible for him to state *precisely* how investment and product would be determined in an environment in which, at any moment, the interaction among central bank, financial institutions, and nonfinancial agents can cause important changes in prices and in the quantity of financial assets.[31] (This might require, incidentally, a more developed stock-flow consistent model of asset choice and capital accumulation.)[32] His wish to provide a precise model may well explain the omission of "monetary details" that determine credit elasticity. Moreover, the possibility of facing orthodoxy using its own instruments may again have exerted some influence on him, this time in the analysis of the effects of an exogenous change in the quantity of money. This is what Keynes does when, in chapter 21 of the *General Theory,* he suggests a "generalised statement of the Quantity Theory of Money" and discards the thesis that "*any* increase in the quantity of money is inflationary" (1973b, pp. 304–305, emphasis in original).

IV

As Keynes affirms in chapter 18, the construction and use of what he calls a "schematism" is crucial to offer to our "practical intuition . . . a less intractable material upon which to work" (ibid., p. 249). However, as he points out in another passage,

[31] And, thus, one might say, paraphrasing Hicks (1982b, p. 94), that Keynes was "precluded by his method" (of modeling) from effectively incorporating the financial system actors.

[32] According to Dos Santos, in the 1970s and 1980s, Davidson, Minsky, Tobin and Godley were developing "different "closures" of the same (SFC) [stock-flow consistent] accounting framework" (2006, p. 543). Macedo e Silva and Dos Santos (2008) argue that institutionally rich stock-flow consistent models are perfectly compatible with Keynes's views on the political economy and the macroeconomic dynamics of capitalist economies.

> The object of our analysis is, not to provide a machine, or method of blind manipulation, which will furnish an infallible answer, but to provide ourselves with an organised and orderly method of thinking out particular problems; and, after we have reached a provisional conclusion by isolating the complicating factors one by one, we then have to go back on ourselves and allow, as well as we can, for the probable interactions of the factors amongst themselves. This is the nature of economic thinking. (ibid., p. 297)

The minimalist model included in the *General Theory* (expounded, by and large, in chapters 11–17) and discussed above is a *partial* (it may be better to say *static*) "schematism" (or model), in the sense that it has a restricted objective, that of extracting investment from a (simplified) theory of asset choice, and using it to determine income and employment in a *given* macroeconomic period.[33] In this model, the partial objective is reached by *particular* simplifying assumptions (to use the same meaning Keynes gives to this word when criticizing the "classical theory").

It is necessary to distinguish the spirit from the letter, the "epiphany" from its transmogrification into a model, understandable (and manageable) by neophytes. The minimalist model contains only a fragment of Keynes's *view* on the nature of capitalist society and only parts of a broader and more *general theory.*

Nevertheless, in order not to expose the reader to the risk of losing sight "of the complexities and interdependencies of the real world" (ibid., p. 298), it might have been preferable, first, to explain more clearly the nature of the conceptual experiment, expanding the model afterward to explore at least some of the "probable interactions of the factors amongst themselves" (ibid., p. 298).[34] Although the dynamic exercises in chapters 19 ("on the whole admirable," as Hicks writes, 1982b, p. 94) and 22 of the *General Theory* surpass the model, they do not include financial in-

[33] In Hicks's words, it is a "restricted equilibrium . . . taking [the] period *by itself.*" For him, "[a]s long as the period is taken *by itself,* it cannot be treated as a stage in a process. So the model cannot be used as the 'single-period' theory of a dynamic analysis, to which a theory of continuation, into subsequent periods, is to be joined" (1985, pp. 59–60, emphasis in original).

[34] Without this, the "schematism" becomes excessively similar (though not identical) to descriptions as the one Hicks (1982a) provides. One should remember that not even Hicks understands his own "little apparatus" as a "machine" or a "method of blind manipulation." In addition to admitting the possibility of a partially endogenous money supply, Hicks closes his text explaining the restrictions under which his model was built, among them the omission of "all sorts of questions about the timing of the processes under consideration" (ibid., p. 158).

stitutions adequately. The series of articles on finance and funding brings back on stage the financial institutions, but it lacks dynamics.[35]

Keynes's theory *contains* the simplified model of portfolio composition of the *General Theory,* but it is not identical to it. The *model* is a heuristic component of an even more *general theory.* To retrieve it—and improve it—it is necessary to transcend the model, abolishing the restrictions under which it was built. And, for this, there is no better way to begin than bringing back from the *Treatise* (as Davidson, Minsky, and Kregel propose) some building blocks that can be deemed essential to a monetary economy theory at which financial institutions are really present "in body and soul"—a theory a little closer to the view of an economy whose "natural" state is that of a "shifting *dis*equilibrium."

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[35] In this series of articles, Keynes does not make use of the simplified portfolio model he employed in the *General Theory* and in Keynes (1973d; 1973h). It reinforces my suspicion that, for Keynes, credit simply "does not fit" within the limits of that model. A little more clarity in these articles might have avoided a great number of controversies—or make them more productive—such as those related to the bootstrap nature of interest rate, the opposition between liquidity preference and loanable funds, the horizontalists' criticism of the liquidity preference, the nature of the relations between liquidity preference, credit, finance, and funding.

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