

Did the Keynesian Revolution Retard the Development of Portfolio Theory? *

“Simplifying” as a Prefiguration of Tobin’s Portfolio Theory

1. - In 1981 James Tobin was awarded the Nobel Prize in Economic Science for “his analysis of financial markets and their relation to expenditure decisions, employment, production and prices”. It may be interesting to quote more extensively from the official announcement of the Nobel Prize as it gives a beautiful overview of Tobin’s principal achievements which can then be compared with Hicks’ Simplifying article. It is also an excellent illustration of the recognition of Tobin’s work by the scientific community.

“Portfolio selection theory is used to study households’ and firms’ decisions to hold different real and financial assets and simultaneously incur debts. Tobin shows how these decisions are governed by weighing risk and expected rate of return.....

By examining a broad spectrum of assets and debts, Tobin’s analysis of the transmission mechanism extends the channels of contact between financial markets and real expenditure decisions as compared to the studies of other researchers, who have dealt with similar questions... One of the most important aspects, neglected by earlier researchers, is the condition whereby the financial system is not comprised mainly of banks, but of numerous and diverse institutions with varying portfolio selection policies” (Royal Swedish Academy of Sciences, 1981, pp. 57-58).

With this background it is interesting to have a closer look at Hicks’ paper “A Suggestion for Simplifying the Theory of Money”.

Hicks starts with explaining his background in value theory and expressing his astonishment that monetary theorists are only concerned with one equation.¹

* I wish to thank Professor V. Van Rompuy for comments on an earlier draft. Responsibility for the views expressed and for any errors or omissions is, of course, mine.

¹ As is well known, Hicks is, with Allen, the author of “A Reconsideration of the Theory of Value” (HICKS & ALLEN, 1934), which is of fundamental importance in the development of the theory of ordinal utility. For an overview of Hicks’ background and earlier work, cfr. HICKS,

"To anyone who comes over from the theory of value to the theory of money, there are a number of things which are rather startling. Chief of these is the preoccupation of monetary theorists with a certain equation, which states that the price of goods multiplied by the quantity of goods equals the amount of money which is spent on them. This equation crops up again and again, and it has all sorts of ingenious little arithmetical tricks performed on it" (Hicks, 1935, pp. 61-62).

Hicks compares this situation with the situation in value theory in the middle of the nineteenth century, when economists used to talk about value being a ratio between demand and supply. Progress was made in value theory when economists abandoned their ratio-approach and replaced it by the marginal utility approach. Hicks' plea is now for a not so marginal "marginal revolution" in monetary theory: the introduction of choice-analysis in monetary theory.

He has found such an approach in Keynes' *Treatise on Money*: when Keynes analyses the price-level of investment goods he shows that it depends on the relative preference of the investor; whether he prefers to hold bank-deposits or securities: "Here at last we have something which to a value theorist looks sensible and interesting! Here at last we have a choice at the margin!... But in saying this, I am being more Keynesian than Keynes" (Hicks, 1935, p. 64).

It is obvious that in this approach the decision to hold money is part of a decision concerning a portfolio. Hicks uses a sort of generalized balance-sheet, where he lists all the assets and liabilities.² This was already quite common for banking theory. What Hicks proposes is to build up monetary theory as a generalization of banking theory.

"My suggestion can be expressed by saying that we ought to regard every individual in the community as being, on a small scale, a bank", (Hicks, 1935, p. 74).

The questions which then have to be resolved are: how will people allocate their wealth, and what are the determinants of this allocation. For most assets it is obvious why people like to have them: they give a certain return. But money yields no return or profit: it is barren.

1979c, or MAES, 1984, Ch. 2. Simplifying is really a very beautiful example of progress through cross-fertilization, as claimed by HICKS, 1935, p. 61.

² Among his assets Hicks also lists consumption goods. In his analysis Hicks allows for the effect of changes in yields on the decision to consume. Other writers, for example Keynes, make a strategic distinction between two decisions: the decision to consume or save and decisions about wealth allocation, cfr. KEYNES, 1936, p. 115. Also Tobin followed this procedure, cfr. TOBIN, 1961, p. 110 and 1969, p. 322. In his Nobel Lecture he returns on his earlier decision and integrates saving and portfolio decisions, cfr. TOBIN, 1982, p. 987. It may also be interesting to point out that Hicks had already identified the liquidity-spectrum in an earlier article. In 'Equilibrium and the Trade Cycle', he offers a classification of assets, from low to high risk and return, cfr. HICKS, 1933, p. 529.

"So long as rates of interest are positive the decision to hold money rather than lend it, or use it to pay off old debts, is apparently an unprofitable one. This, as I see it, is really the central issue in the pure theory of money" (Hicks, 1935, p. 66).³

Usually economists, when confronted with this question, start talking about "frictions". Hicks then proposes "to look the frictions in the face, and see if they are really so refractory after all" (Hicks, 1935, p. 67).

Hicks notes that the costs of transferring assets from one form to another are the most obvious sort of friction. These transactions costs comprise both objective elements, for example brokerage charges, as more subjective elements. When calculating the net advantage from an investment, these costs should be subtracted from the yield of the investment. This yield of an investment will become larger for larger amounts of money invested and also for longer time periods.

"Thus, so far as we can see at present, the amount of money a person will desire to hold depends upon three factors: the dates at which he expects to make payments in the future; the cost of investment, and the expected rate of return on investment. The further ahead the future payments, the lower the cost of investment, and the higher the expected rate of return on invested capital — the lower will be the demand for money" (Hicks, 1935, p. 68).⁴

But Hicks is not yet satisfied with his analysis. Until now he has been assuming that people had precise expectations. But this is not true as the expectations of the economic agents "are always, in fact, surrounded by a certain penumbra of doubt; and the density of that penumbra is of immense importance for the problem we are considering" (Hicks, 1935, p. 69).

Hicks introduces the risk factor. This risk factor influences two variables in the situation: the expected period of investment and the expected net yield of the investment. An increase in one of these risks will make people less willing to undertake the investment. If so, this will increase the demand for money.⁵

³ Also Keynes identified this as the crucial issue in monetary theory, cfr. KEYNES, 1937, p. 115.

⁴ Elements which are of crucial importance in the inventory theoretic approach to the demand for money, as developed by BAUMOL, 1952, and as he later acknowledges, cfr. BAUMOL, 1972, p. 510. See also TOBIN, 1956.

⁵ Hicks clearly assumes that people are normally risk-averse.

Considering the treatment of risk Hicks proposes to represent the expected yield by the mean and the risk factor by a measure of dispersion of a probability distribution.

"Where risk is present, the *particular* expectation of a riskless situation is replaced by a band of possibilities, each of which is considered more or less probable. It is convenient to represent these probabilities to oneself, in statistical fashion, by a mean value, and some appropriate measure of dispersion. (No single measure will be wholly satisfactory, but here this difficulty may be overlooked.) Roughly speaking, we may assume that a change in the mean value with constant dispersion has much the same sort of effect as a change in the particular expectations we have been discussing before. The peculiar problem of risk therefore reduces to an examination of the consequences of a change in dispersion. Increased dispersion means increased uncertainty" (Hicks, 1935, p. 69).⁶

Hicks also notes that there is a difference between the risk of one particular investment and the risk incurred by undertaking a number of separate risky investments, due to the law of large numbers. "Those persons who have command of large quantities of capital, and are able to spread their risks, are not only able to reduce the risk on their own capital fairly low — they are also able to offer very good security for the investment of an extra unit along with the rest" (Hicks, 1935, p. 72). This has given rise to the development of institutions as banks, insurance companies and investment trusts, who create several kind of money substitutes. They make the monetary system more elastic.

Hicks has identified risk and transactions costs as elements in the determination of the allocation of wealth as being similar to price stimuli in value theory. He then observes that one should also investigate how the demand for money would change under the influence of a change in total wealth. This question also has a counterpart in value theory. "Total wealth, in our present problem, plays just the same part as total expenditure in the theory of value" (Hicks, 1935, p. 77). In a footnote he identifies expected income as the relevant variable.

⁶ In the thirties Hicks was an adherent to an objective approach to probability, cf. HICKS, 1931, p. 171. This contrasts sharply with Keynes who, with his *Treatise on Probability* (KEYNES, 1921) was known as "the principal exponent of the logico-subjective theory of probability" (POPPER, 1934, p. 149). Later, Hicks has revised his opinion and thinks that an objective approach to probability is "not wide enough for economics" (HICKS, 1979, p. 105).

2. - It is clear that Hicks' Simplifying paper foreshadows many of the main elements of Tobin's analysis: portfolio theory applied to the balance sheet of the community; risk as a choice among probability distributions (represented by a mean value and a measure of dispersion); financial intermediation by banks and other intermediaries; a general equilibrium framework with attention to the wealth constraint, multi-market interactions and substitution effects.⁷ Tobin has no difficulty in acknowledging this debt: "John R. Hicks's 1935 article has been an inspiration and challenge to me and many other monetary economists" (Tobin, 1982, p. 173).⁸

The similarity between Tobin's and Hicks' ideas is already clearly visible in Tobin's articles on the demand for money in the mid 1950's, although Tobin does not mention Hicks in these articles. In "The Interest-Elasticity of Transactions Demand for Cash" (Tobin, 1956), Tobin introduces transactions costs to explain why investors keep part of their transactions balances in cash and why these holdings are inversely related to the rate of interest. Next, Tobin turned to the speculative demand for money with his seminal article "Liquidity Preference as Behavior Towards Risk" (Tobin, 1958). He there specifies interest rate expectations in terms of a probability distribution, whereby the expected return and risk are measured by the mean and the standard deviation.⁹

When analysing the influence of Hicks' Simplifying article on the development of Tobin's thinking "Money, Capital and other Stores of Value" (Tobin, 1961) is of fundamental importance, as Tobin clearly acknowledges the importance of Hicks' Simplifying paper. It is worthwhile to quote the first sentences:

"The intellectual gulf between economists' theory of the values of goods and services and their theories of the value of money is well known and periodically deplored. Twenty-five years after Hicks' eloquent call for a marginal revolution in monetary theory our students still detect that their mastery of the presumed fundamental, theoretical apparatus is put to very little test in their studies of monetary economics and aggregative models" (Tobin, 1961, p. 108).

⁷ There are also several similarities with the monetarist approach to the money demand function, as exemplified in FRIEDMAN, 1956. For an appraisal, see MAES, 1984, pp. 162-166.

⁸ See also TOBIN, 1961, p. 108 and 1972, p. 77. A full review and appraisal of Tobin's contributions is outside the scope of this paper, but one can consult HESTER, 1977, MYHRMANN, 1982 or PURVIS, 1982.

⁹ Also at Yale, Markowitz was involved with the development of mean-variance analysis in the framework of portfolio theory. Although Markowitz' point of view was different as he was mainly interested in the prescription of rules of rational behaviour for investors. See for instance MARKOWITZ' 1959.

Tobin also expresses his faith in the future of the Hicksian research programme:

"Recent developments in economic theory have greatly improved the prospects of carrying out Hicks' Simplifying suggestions... In the past decade theory has begun a systematic penetration of the murky jungle of frictions, market imperfections, and uncertainties. The theory of optimal inventory holdings, for example, ... the theory of choices involving risk... The new tools are constructing a bridge between general economic theory and monetary economics. More than that, they give promise at last of a general equilibrium theory of the capital account. Such a theory would explain both the balance-sheet choices of economic units as constrained by their net worths and the determination of yields in markets where asset supplies and demands are balanced" (Tobin, 1961, pp. 109-110).

James Tobin himself has immensely contributed to the growth of this research programme. In "An Essay on the Principles of Debt Management" (Tobin, 1963), he develops in great detail the portfolio choice of individuals and banks in the economy. He also turned to the nature of financial intermediation and the differences between banks and other financial intermediaries.¹⁰ In 1969 Tobin took the opportunity of the launching of the *Journal of Money, Credit and Banking* to present "A General Equilibrium Approach to Monetary Theory" (Tobin, 1969), which constitutes a beautiful and elegant synthesis of his earlier work.

But, as already emphasized, Tobin's work on portfolio theory dates from the 1950's onwards. So there is a twenty year gap during which Hicks' suggestion has not been taken up.¹¹ A study of the development of Hicks' thinking on monetary theory after his Simplifying article may help us find an explanation for this gap.

Hicks and the Keynesian Revolution¹²

3. - When reviewing his career, and reconsidering the path of his intellectual development, Hicks is well aware of the outstanding

¹⁰ See, for instance, TOBIN and BRAINARD, 1963.

¹¹ With some exceptions, like MAKOWER and MARSCHAK, 1938.

¹² Of course, the questions whether the rise of Keynesianism constituted a "Revolution", and whether Keynes (or Hicks) are "Keynesians" are hotly debated, see for instance LEIJONHUFVUD, 1968 or MAES and SCHOKKAERT, 1986. See also MAHLOUJJI, 1985. But a full review is rather outside the scope of this paper. Also a full appraisal of Hicks' many contributions is not presented. The focus here is on Hicks' contributions to macroeconomics between 1936 and 1950.

character of his Simplifying paper. "I sometimes feel, looking back, that it ought to have been my duty, after writing "Simplifying", to have abandoned all other interests, and to have devoted myself entirely to pushing forward along the road on which I had taken first steps" (Hicks, 1982, p. 9). In fact, it was only in the early 1960's that he returned to it. "I allowed myself to be distracted, first by the writing of *Value and Capital* (on which I had already begun to work when I wrote the 'Simplifying' paper) and then by the *General Theory* of Keynes" (Hicks, 1982, p. 9). One of the (minor) reasons for Hicks' involvement with the "Keynesian revolution" is the fact that he was asked to review Keynes' *General Theory* for the *Economic Journal*. A digression here may be interesting to show some differences and similarities between Keynes and Hicks.

In his *Economic Journal* review of Keynes' *General Theory* Hicks first addresses himself to a characterisation of Keynes' *General Theory*. He characterises it as at the same time being: a theory of employment, a theory of output as a whole, a theory of shifting equilibrium and a theory of money. He also explains the interrelationships between these different aspects.

"It may be suggested that the relation between these different aspects is as follows. The new theory is a theory of employment, in so far as the problem of employment and unemployment is the most urgent and practical problem to which this sort of theoretical improvement is relevant. It is a theory of output in general vis-à-vis Marshall, who took into account many of the sort of complications which concern Mr. Keynes, but took them into account only with reference to a single industry. It is a theory of shifting equilibrium vis-à-vis the static or stationary theories of general equilibrium, such as those of Ricardo, Böhm-Bawerk or Pareto. It is a theory of money, in so far as it includes monetary theory, bringing money out of its isolated position as a separate subject into an integral relation with general economics" (Hicks, 1936, p. 238).

Hicks continues that there is an important difference between the *General Theory* and Keynes' earlier *Treatise on Money*. The *Treatise* was still concerned with booms and slumps. These booms and slumps are only deviations from a normal situation, due to some disturbing cause. But the *General Theory* "breaks away from the whole of this range of ideas. It is no longer allowed that ordinary economic theory can give a correct analysis of even normal conditions; the things it leaves out of account are too important. But if there is no norm which we have understood, it is useless to discuss deviations from it. The changing, progressing, fluctuating economy has to be studied on its own" (Hicks, 1936, p. 239).

The most important point of disagreement between Keynes and Hicks concerns the determination of the rate of interest. Keynes holds the view that the rate of interest is a money rate of interest, which equilibrates the demand and supply of money. Hicks has no problem in accepting Keynes' view on the determination of the rate of interest, but he thinks there are also other methods to determine the rate of interest, for example by the demand and supply for loans. "It (the method of Mr. Keynes) is a perfectly legitimate method, but it does not prove other methods to be wrong. The choice between them is purely a question of convenience" (Hicks, 1936, p. 246). Hicks' argument is based on his background in general equilibrium theory, which he had already earlier developed in "Wages and Interest: the Dynamic Problem" (Hicks, 1935 b), his "bread paper" which is a prefiguration of *Value and Capital* (Hicks, 1939).

Hicks starts from the budget identity "If, therefore, the demand for every commodity and factor equals the supply, and if the demand for money equals the supply of money, it follows by mere arithmetic that the demand for loans must equal the supply of loans (when these latter are interpreted in a properly inclusive way). Similarly, if the equations of supply and demand hold for commodities, factors and loans, it will follow automatically that the demand for money equals the supply of money" (Hicks, 1936, p. 246).

Hicks argues that in such a general equilibrium system all supply and demand equations have a role to play in the determination of any price. But one can construct several theories for approaching the situation, depending on which equation one prefers to drop.

"The ordinary method of economic theory would be to regard each price as determined by the demand and supply equation for the corresponding commodity or factor; the rate of interest as determined by the demand and supply for loans. If we work in this way, the equation for the demand and supply of money is otiose — it follows from the rest; and fortunately, too, it is not wanted, because we have determined the whole price system without it. But we could equally well work in another way. We could allot to each commodity or factor the demand and supply equation for that commodity or factor, as before; but we could allot to the rate of interest the equation for the demand and supply of money. If we do this, the equation for loans becomes otiose, automatically following from the rest" (Hicks, 1936, p. 246).

J.M. Keynes did not understand Hicks' argument and in his letters to Hicks he asks repeatedly for more explanation (cfr. Keynes, 1973, p. 72, 75, 81). Hicks tries to clear things up and goes over the argument again.

"Over a short period (short enough to neglect interest changes) a person's receipts minus expenditure must equal net lending plus increment in the demand for money. (I mean this no more than a reflection of the twosidedness of transactions.) It is thus an identity, and it remains an identity when it is aggregated for all persons and firms. Consequently, if we are seeking to determine (a) prices, supposed for simplicity to move together, (b) the rate of interest, we have three demand and supply equations to determine them (those for 'goods and services', loans, money) one of which follows from the other two. Thus two of the equations, as you would say, are operative equations, one is a check equation. But it is possible to select any one of the three equations as a check equation, and distribute the operative equations among prices and interest as we choose. Thus there are six possible alternative 'theories'; but if they are correctly stated, they all mean the same thing, and are all equally right.

- I. Prices determined by effective demand and supply for goods and services; interest by the demand for money; saving and investment a check equation.
- II. Prices determined by the quantity of money; interest by saving and investment; effective demand the check equation" (letter from J.R. Hicks to J.M. Keynes, 9 april 1937, as reprinted in Keynes, 1973, p. 82).

Hicks concludes his letter by expressing his support for Keynes' basic theoretical position, although insisting on his own freedom and independence. "I am a convinced liquidity preference man, but I do covet some freedom of choice about the way (or ways) the doctrine shall be expressed". (Letter from J.R. Hicks to J.M. Keynes, 9 april 1937, as reprinted in Keynes, 1973, p. 83.)

Keynes could not see Hicks' point of view, as is shown in his reply: "I do not really understand how you mean interest to be determined by saving and investment under II" (letter from J.M. Keynes to J.R. Hicks, 11 april 1937, as reprinted in Keynes, 1973, p. 83). Can one explain Keynes' lack of understanding in another way than by saying that he had no grasp of a general equilibrium framework? That it was not his attitude to think of interrelated markets, but that he directed the scope of his analysis of price determination to the market in which a good is traded.¹³ It shows the difference between Keynes' partial equilibrium approach and Hicks' general equilibrium approach, which forms a crucial building stone for portfolio theory.¹⁴

¹³ Patinkin is not so convincing in attributing a general equilibrium analysis to Keynes, cfr. MAES, 1983, p. 102. For an interesting appraisal of the development of general equilibrium theory in the 1930's, see WEINTRAUB, 1985.

¹⁴ It is interesting to note that Hicks agreed on this point with D.H. Robertson, one of Keynes' most important opponents. But despite this theoretical agreement with Robertson, Hicks was in broad sympathy with Keynes, cfr. CODDINGTON, 1979. For some recent appraisals of the loanable funds versus liquidity preference debate, cfr. LAIDLER, 1984, p. 24 or SNIPPE, 1985.

4. - After his first review, Hicks remained concerned with the *General Theory* and the break it marked with prevailing theory, "in some respects Hicks can be said to have been reviewing the *General Theory* (in the sense of placing it in a modern perspective) ever since" (Morgan, 1981, p. 117). The first outcome of this process was his celebrated "Mr. Keynes and the 'Classics': A Suggested Interpretation", first presented at a meeting of the Econometric Society at Oxford in september 1936 and published in *Econometrica*, april 1937. It has become the commonly accepted analytical framework for Keynesian economics. As one shrewd observator puts it:

"Although most economists would probably resist, and many resent being labeled "Keynesians", almost all would agree that there does exist today a recognizable majority view on the theory of income determination and that the term can reasonably be used to refer to the main outlines of this view. Keynesian economics, in this popular sense, is far from being a homogeneous doctrine. The common denominator, which lends some justification to the identification of a majority school, is the class of models generally used. These shortrun, simultaneous equation models have their prototype in the famous, early 'Keynes and the Classics' paper by Hicks" (Leijonhufvud, 1968, p. 4).¹⁵

But, let us return to the original problem: What did Hicks do with his "Suggestion for Simplifying the Theory of Money"? Two elements are important to answer this question.

Firstly, in his Keynes and the 'Classics' article, Hicks pays, more or less, equal attention to the monetary sector and the real sector, the monetary sector being represented by the LM-curve and the real sector by the IS-curve. This is already a shift of emphasis, compared with his Simplifying article where the monetary and financial sector receive most attention.

Secondly, where the monetary sector is beautifully elaborated in the Simplifying article, this is no longer so in the Keynes and the 'Classics' article. Hicks starts from the quantity theory.

"Now let us assume the 'Cambridge Quantity Equation' — that there is some definite relation between income and demand for money" (Hicks, 1937, p. 128).

After this, Hicks discusses some of the difficulties with which the quantity theory is confronted. His background in value theory is once again very useful. "On grounds of pure value theory, it is evident that

¹⁵ See also, CODDINGTON, 1983, p. 12.

the direct sacrifice made by a person who holds a stock of money is a sacrifice of interest; and it is hard to believe that the marginal principle does not operate at all in this field" (Hicks, 1937, p. 132). But contrary to Simplifying, this is not the starting point for an analysis of the balance sheet of the community. The conclusion concerns now a much smaller monetary sector. "The demand for money depends upon the rate of interest! The stage is set for Mr. Keynes It is the liquidity preference doctrine which is vital" (Hicks, 1937, pp. 132-133). The monetary sector in the IS-LM model is restricted to the money demand equation. The perspective of a portfolio analysis of the balance sheet of the community is lost.¹⁶

In these shifts of emphasis, stressing more the real sector and narrowing the monetary sector to the demand for money equation, Hicks is not alone. It corresponds well with the development of Keynes' thinking between the *Treatise on Money* and the *General Theory*, and of course this last book is central to Hicks' paper.¹⁷

5. - "A Contribution to the Theory of the Trade Cycle" is certainly Hicks' most important work in the field of macroeconomic theory in the 1940's and 50's. Like many of Hicks' contributions, it arose from a book review, this time Roy Harrod's *Towards a Dynamic Economics* (Hicks, 1949). Hicks clearly situates his Contribution in the Keynesian tradition and addresses himself to an unresolved question: the cyclical nature of economic fluctuations.

"For Keynes did not show us, and did not attempt to show us, save by a few hints, why it is that in the past the level of economic activity has fluctuated according to so very definite a pattern" (Hicks, 1950, p. 1).

His Contribution is generally regarded as one of the leading expositions of Keynesian trade cycle theory: "Hicks' classic Contribution to the Theory of the Trade Cycle — the most elegant and most carefully elaborated specimen of a great variety of similar systems" (Haberler, 1956, p. 137). Typical is its focus on the real sector. The price-mechanism and the monetary sector play only a very minor role.¹⁸

¹⁶ Naturally, the demand for money equation corresponds to a (very) simplified portfolio model, cfr. HICKS, 1980 or LAIDLER, 1977, p. 10.

¹⁷ It can also be interesting to mention that Keynes did already develop the core of his liquidity-preference theory in his *Treatise on Money*, cfr. KEYNES, 1930, I, p. 127.

¹⁸ Something which was also noted by Hicks later, cfr. HICKS, 1974b, p. 177. Tobin criticizes Hicks for this. Tobin also constructed an accelerator model, but in his model monetary and price adjustments have an important role, cfr. TOBIN, 1955.

"This emphasis on the *real* (non-monetary) character of the cyclical process has of course been entirely deliberate; it has been one of the main objects of this work to show that the main features of the cycle can be adequately explained in real terms" (Hicks, 1950, p. 136).

In this sense Hicks' Trade Cycle can be considered as his most Keynesian work, and a book which is in the hydraulic Keynesian tradition.¹⁹ His real theory of the trade cycle consists basically of a constrained multiplier-accelerator model. Hicks himself acknowledges three sources of inspiration: Keynes, for the idea of the multiplier, the econometricians, mainly J.M. Clark and R. Frisch, for the acceleration principle and R.F. Harrod for his *Dynamic Economics*. One of the things Harrod stresses there is the importance of treating the problem of the trade cycle in the context of a growing economy (J.R. Hicks, 1950, pp. 3-10). It is only in his last chapters, when discussing the ceilings to the trade cycle that Hicks pays attention to the financial system. One of the tools of analysis which he uses is his IS-LM apparatus. But his analysis of the monetary and financial system is much cruder than in his Simplifying article.

So, Hicks did not follow his own "Suggestion for Simplifying Monetary Theory" during the next years and decades. It was only in the nineteen sixties that he returned to monetary theory and he admits that "it was not easy to recover the insights that I had then possessed" (Hicks, 1982, p. 236).²⁰

Conclusion

In his 1935 article "A Suggestion for Simplifying the Theory of Money" Hicks put forward a framework for monetary theory which contained the essence of portfolio theory, as later developed by Tobin. Striking features are: choice theory applied to the balance sheet of the community, risk as a choice among probability distributions and a

¹⁹ Something which Hicks, recognizes, but not very whole-heartedly, see HICKS, 1979b, p. 989.

²⁰ Since then Hicks has made some contributions to portfolio-theory, see HICKS 1967, 1977 and 1982b. But he has also grown more and more critical as, in his view, the portfolio approach misses the essential point of the phenomenon of liquidity: the time-dimension, cfr. HICKS, 1974, p. 131.

general equilibrium approach with attention to multi-market interactions, substitution effects and a wealth constraint. Tobin has no difficulty in acknowledging the paradigmatic nature of Hicks' suggestion. But his work dates only from the mid 1950's onwards, which leaves a 20 year gap between Hicks' original article and further research by Tobin.

To explain this gap the hypothesis is here put forward that, with the Keynesian Revolution, research became concentrated on the real sector of the economy, while the monetary sector was represented by the money demand function. This is beautifully illustrated by the development of Hicks' thinking after his Simplifying article. Hicks focusses more and more on the real sector and even develops a theory of economic fluctuations wherein monetary factors play only a "subsidiary" role.

In this shift of emphasis Hicks was certainly not alone. It was a quite general evolution in the 1930's and 40's. Leijonhufvud even describes the mid-40's as the "period of the Keynesian Revolution's 'Anti-Monetary Terror'" (Leijonhufvud, 1968, p. 13).²¹ Also the development of the ideas of Keynes himself was in the same direction. Patinkin describes them as "The Saga of Man's Struggle for Freedom from the Quantity Theory" (Patinkin, 1976, p. 19). Attention became centered on the real sector, while the monetary sector was narrowed to the demand for money function.

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²¹ Compare also: "It was a theory of output that was needed to replace the old theory of the interest rate. When the latter step was carried out, a new interest theory followed as a residual which had to be accounted for" (KLEIN, 1949, p. 37).

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