Studies in Contemporary Economics

Dieter Suhr

The Capitalistic Cost-Benefit Structure of Money

An Analysis of Money's Structural Nonneutrality and its Effects on the Economy

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An Analysis of Money's Structural Non-neutrality and its Effects on the Economy

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PREFACE

This study is concerned with the time–honored problem of the change that is induced when money enters into the economy. As far back as Aristotle (Politics, pp. 1135–1143) the still–unanswered question regarding the dichotomy of the real–exchange and the monetary economy was raised. He contrasted *Oeconomic*, where people strive to obtain real utilities (household management), to *Chrematistic*, where they use money to make more money (art of wealth–acquisition):

> The true wealth consists of such values in use; for the quantity of possession of this kind, capable of making life pleasant, is not unlimited. There is, however, a second mode of acquiring things, to which we may by preference and with correctness give the name of *Chrematistic*, and in this case there appear to be no limits to riches and possessions. Trade does not in its nature belong to Chrematistic, for here the exchange has reference only to what is necessary to themselves. (...) In the case of Chrematistic, circulation is the source of riches. And it appears to revolve about money, for money is the beginning and end of this kind of exchange. Therefore also riches, such as Chrematistic strives for, are unlimited. (...) Oeconomic, not Chrematistic, has a limit (...;) the object of the former is something different from money, of the latter the augmentation of money (...) By confounding these two forms, which overlap each other, some people have been led to look upon the preservation and increase of money *ad infinitum* as the end and aim of Oeconomic. (Aristotle, Politics; as quoted in Marx, 1890a, p. 167)

Still many economists are tempted to look upon the increase of money *ad infinitum* as an economic end in itself: though seemingly arguing in terms of real welfare, in effect their theories deal not with the *real benefits* to the members of the economic community but with the highest *pecuniary return* to capital, that is, to invested money or even to money held. This *chrematistic* view is reflected in the micro–economic ideal of unlimited accumulation of riches and the macro–economic ideal of unlimited growth of the national product.

Today's advanced economic and monetary theory operates on the very sophisticated framework of theory–building and mathematical models. My concepts, I am afraid, are relatively crude in comparison to the conventional standards of elaboration. But they are intended to be instructive and revealing as regards the basic understanding of money, interest, finance, and capital. It has been observed that although monetary theory has been steadily refined, monetary policy has been less and less able to implement these refinements (Ott, 1988, p. 57). The fundamental problems remain unsolved (Schelbert–Syfrig, 1988, 323–324). To the extent that these observations are correct, I might, after all, be able to make a small contribution to the theoretical illumination and practical overcoming of problems of the money economy with my relatively simple yet fundamental efforts. What I need most now is candid criticism and the aid of economists who, better than I, can go into detail and transform into appropriate formulae my laborious reflections, either disproving or confirming them.

Another reservation to be made right at the beginning is that although this is a study in *monetary* economics, the point of departure in the argument is not money but the capitalistic structure of western market economies. “Money”, as it is dealt with in the first chapters, indicates only the direction of my analysis. This procedure makes allowance for the fact that we are used to thinking in terms of capital’s efficiency or productivity, and of returns to physical or financial capital. By the end of our investigation, however, terms and language will have changed. The phenomena referred to as matters of capital will be described and treated in terms of money, or, more generally, in terms of the market economy’s transaction technology.

Thus many of the statements in the first chapters must be taken as provisional, and they will be questioned and reformulated in the course of the argument. This amounts to what might be considered a gradual translation from a language centered around capital into a language centered around money, with money proving to be the more fundamental category. Friedman (1956, p. 4), for instance, treats the demand *for money* as a special topic in the theory of capital. By the end of this book, I hope the reader will agree with this the other way round: the return *to capital* must be looked at mainly as a special subject of *monetary* economics.

This book also contains a section on the stamp scrip movement from the pen of Hans R. L. Cohrssen (Chapter 13.4). Mr. Cohrssen is well–known to those knowledgeable in the field of monetary science as coauthor of Professor Irving Fisher’s books *Stamp Scrip* (1933) and *Stable Money* (1934). I am extremely pleased that Mr. Cohrssen has unhesitatingly contributed his authentic report, a historical retrospective on cost–bearing money, since he himself so energetically supported Professor Fisher more than 50 years ago in the U.S.A. in the attempt to realize a concept of money the theoretical foundations of which are dealt with in this book.

I would never have undertaken these efforts without the initial impetus from Jobst von Heynitz, who put me on the right track. And I would not have continued them without the very early encouragement which I received from Professor Wolfgang Stützel. I deeply regret that he can no longer observe the outcome of his guarded support of my first cautious doubts and ideas. During my work I depended on the instructive criticism and advice of Dr. Hugo Godschalk, my private tutor in monetary economics and co–author of *Optimale Liquidität*. I am indebted to him for many ideas and insights. Professor Wilhelm Hankel urged me on by insisting on further clarification of the phenomenon of money as the “link between the present and the future” (Chapter 8.2). He and Professor Hans Christoph Binswanger and Professor Hans G. Monissen also pointed out studies that I had overlooked.

I could not have devoted so much time to monetary affairs had not others given me so much support and relief from a variety of other time–consuming activities. So I should like to express my gratitude to Mrs. Christina Tomasak and her successor, Mrs. Gisa Hofmann, for their diligence and care in the office and at the typewriter and computer, and especially to Mr. Peter Lawson of the University of Augsburg Language Center, who transformed my school English into readable and understandable text, while at the same time spurring me on by his precise questions concerning crucial points of my argument. Mr. Hubert Angstenberger, Mr. Armin Trautmann, and Mr. Wolfgang Tzschaschel took over a large share of troublesome work and helped ease my way to and through the relevant literature.

I also gratefully acknowledge the support I received from the Albert–Leimer–Foundation for the publication of this study in English.

Marianne untiringly endured her husband’s spending nearly all of his time in the monetary world. She had to substitute for him in relation to Gesche, Katharina and Helen: all of them have contributed to my monetary studies at the very least by doing without immaterial goods of substantial marginal value to them.

D.S.

CONTENTS

Part 1

SECOND–BEST CAPITALISM

Chapter 1

THE ACTUAL STANDARD OF WELFARE IN CAPITALISM

1.1 Freedom, Responsibility and Efficiency

Capitalism, an economic system based on free enterprise and private property relationships, is also characterized by adequate rewards for economic risk and performance as well as individual responsibility for losses and damages.

Free enterprise and private property, performance and economic responsibility constitute the main advantages of a free market economy. It is because of these fundamental principles that western industrial economies have proved to be so highly productive and efficient.

Rewarding economic performance and holding people responsible for what they do is not only economically sound, it is also ethically fair and just. Otherwise, only laziness would be privileged, and the rest of us would have to pay for the faults, mistakes and leisure of those who would be able to live and advance at our expense. Hence as far as its principles are concerned, capitalism seems to outperform other systems economically as well as with regard to the ethical standards of fairness and justice.

1.2 Suboptimal Results

But capitalism brings forth some symptoms of suboptimal economic performance too. It has been empirically demonstrated that in the long run it generates chronic unemployment. It has failed to establish a satisfying welfare structure for the distribution of wealth amongst the members of the economic community. And at the present time we can observe the realm of money and finance overshadowing the realm of real economic production, exchange and consumption. Capitalism seems to be condemned to economic disparity, crisis and disequilibrium.

Though its *principles* of free enterprise and private property, of rewarding economic performance and of responsibility should lead to efficiency, substantial fairness and justice, in practice capitalism has not, over the years, been able to live up to these expectations. This leads to the assumption that there is some hidden defect in the capitalistic system curbing its output, obstructing the economic process in spite of the system’s seemingly sound foundation.

Because of its counterproductive effects on economic output this defect is incompatible with capitalism’s own fundamental principle of efficiency. Hence it should be possible to eliminate the hidden defect of capitalism without harming its

sound principles, thereby increasing its performance with regard to efficiency, welfare and fairness.

1.3 Returns on Mere Capital

In fact, capitalism also allows for income which results neither from performance nor from risk, but from the simple, passive ownership of capital alone. And this specifically capitalistic income from mere capital as such may even grow at an accelerated rate, as in the case of compound interest or other kinds of re–invested returns.

Of course, a return on mere capital appears to be a natural, commonplace event in the real world of capitalism. Money interest and other capital revenue are characteristic elements that form part of man's economic second nature in western economies. Being a matter of course in our economy, these returns are taken as legitimate beyond any doubt. Hence it has been nearly unthinkable to question whether this revenue and interest is suboptimal with respect to the economic performance of the capitalistic systems.

The stream of income which is transferred to mere owners of capital springs from other members of the capitalistic community. A young entrepreneur, for instance, who starts his enterprise using outside funds has to share his profit with the lender of the money even if the lender does not share the effort or the risk.

Thus capitalism also includes some kind of negative reward for the entrepreneur who does not abstain from business, but engages in present economic risk and performance. These negative rewards for present economic efforts are transferred to the owners of capital who do not participate in the enterprises but, by abstaining from their own present businesses, release their present capital to be used by others. The amounts of capital they release are funds which they do not need at that moment, but which are greatly needed by others.

1.4 Returns from High to Low Levels of Marginal Utility

Returns on mere capital actually flow from somebody who obviously has *substantial need* of capital at the present time to somebody else who obviously has *dispensable capital* at his disposal. Thus interest and revenue transfer funds from where their real marginal utility is substantial to where their real marginal utility is so low that the funds become dispensable to the owner, at least for a period of time. This is a stream of funds which is significant with respect to adequate allocation of resources as well as with respect to the economy's welfare optimum: The resource "financial capital" is being automatically transferred from a place where its marginal utility is substantial to a place where its marginal utility becomes dispensable.

Of course borrowing money for production purposes directs *nominal financial capital itself* to where it is actually needed. Money lent for economic activities is transferred from the lender's low level of marginal utility to the borrower's higher level of marginal utility. To that extent lending and borrowing money improves allocation of financial resources. But the *stream of interest* is a countertransfer of capital in the opposite direction, that is from a level of higher real marginal utility to a level of lower real marginal utility. This indeed casts substantial doubt on the ability of capitalism as it exists to be capitalism at its best.

Returns on idle capital might of course seem to be best for present owners of capital, at least in the short run. But the system is apparently only second best for all the others who are engaged in economic effort and risk. And it is probably also only second best for the whole economic community, which is striving to attain its welfare optimum.

In order to approximate its optimum an economic community should aim to approximate *equal marginal utility* of all its commodities and of money instead of increasing the disparities of marginal utilities by counterstreams of returns on capital from high to low levels of utility. Of course, it is difficult to compare the marginal utility of commodities or money used by different individuals. However, in our case a very rough yet reliable measure applies and is sufficient. No doubts can arise that the marginal utility of a good to an individual is *relatively high* if he is ready to pay a price for holding it, that is if he burdens himself with real disutility in order to obtain the use of the good in question. And there can also be no doubt that the marginal utility of a good to an individual is *relatively small* if he only prefers the use of this good to holding other goods, that is, if he would not hold it if it burdened him with real disutility. Hence, transferring money or commodities from individuals who are ready to pay a price for holding them to others who would not pay for them at all means transferring goods to the latter from a level of high to a level of low real marginal utility.

In order to approximate its optimum, an economic community should also aim to *equalize marginal cost and benefit* of all its commodities and of money. This means that in each case (real) marginal efforts and expenditures on the one hand and (real) marginal utilities and earnings on the other hand should balance each other. Their difference should tend to zero.

However, in the capitalistic economy neither holds true. If one applies the readiness to accept real cost in order to obtain the utility of a good as the measure, neither do commodities and money tend to render equal marginal utilities to individuals, nor do marginal cost and benefit of capital tend to compensate each other.

1.5 The Standard of Marginal Efficiency of Capital

The standard of expectations regarding returns on capital in today’s capitalistic economic systems is set by the *marginal efficiency or productivity* of capital. This marginal efficiency is closely related to the money–rate of interest: investors expect their investments to grow at a rate of capitalization that will at least match the *money–rate of interest.* And the money–rate of interest, though itself influenced by the efficiency of production capital, definitely exceeds zero. Hence the standard of capitalistic welfare is not to achieve equal (real) marginal costs and benefits, their difference tending to zero, but to match at least the positive money–rate of interest.

The actual welfare standard of capitalism is *unequal* (real) marginal costs and benefits according to the paradigm of interest on financial capital. This standard means: capital of *low (real) marginal utility* to its owner will continue to render *high (nominal) pecuniary returns* at a certain rate to him, constant instead of declining marginal return to stock. Simultaneously these returns draw off capital from where its real marginal utility is substantial. Such a standard of welfare functions like a structural barrier preventing the economic community from attaining its welfare optimum.

To adjust the *actual* standard – which guarantees the failure of capitalism's welfare optimum – to the *optimum* welfare standards – which enable the approximation of the welfare optimum – would mean: Capitalism is best if (real and nominal) expenditures and returns on capital in the long run tend to balance at zero.

In other words: Capitalism is optimal if the marginal rate of return on mere capital approximates zero. Then fresh capital would yield negligible returns. The share of national income from labour and entrepreneurship would tend to 100%, while the share of mere capital income would fall to zero. Theoretically this might sound self–evident; practically it sounds absurd. At the very least it seems to be somewhat contradictory.

A rate of return on mere capital approximating zero sounds absurd and bewildering to all people who have grown up in a capitalistic society and are accustomed to normal returns on capital. Everybody expects the return on the last dollar invested to be comparable to the returns on all the other dollars previously invested in bonds or capital assets. Nobody, except for some theoretical economists relying on their abstract models, really expects the money–rate of interest to decline to zero in the long run. Hence nobody expects the rate of return on other capital to fall below the threshold erected by the money–rate of interest.

A zero rate of marginal return does not fit into capitalistic reality as we know it. It also seems to contradict the principles of capitalism in operation. But at the same time it appears quite reasonable that the basic standards of welfare should apply generally. They should apply to the most fundamental case of costs and benefits in a capitalistic economy, that is to *capital itself*. This would conform to the thesis that real productivity is optimal at a zero rate of interest (Allais, 1947, pp. 184–191).

As we are accustomed to having marginal net returns to capital above zero, it is quite difficult to imagine an economy in which the optimum standard of welfare is applied to productive and to financial capital too. Firstly, as a practical matter, nobody yet knows how to reorganize the acquisition of financial or production capital according to the principles of a free market economy in a way which will approximately equalize the marginal costs and benefits of capital. Secondly, one cannot envisage the practical functioning of such a reconstructed capitalism at this stage of theoretical anamnesis and diagnosis of actual capitalism.

But in spite of these intellectual difficulties, the validity of the idea that actual capitalism is suboptimal has to be examined thoroughly.

1.6 Escaping Habitual Modes of Thought

We believe in three capitalistic dogmas:

- First, the productivity dogma: we believe that the efficiency or technological productivity of physical capital as such justifies a rate of return to capital above zero instead of a declining one.
- Second, the time–preference dogma: we believe that a preference for present over deferred consumption justifies a money–rate of interest above zero.
- Third, the return–to–property dogma: we believe that the returns on capital must flow back not to the active producer, nor to the active user, but to the idle owner of the capital.

The dogmas conform to what may be called the capitalistic manna–from–heaven dream of getting something for nothing. The *perpetuum mobile* has proved to be

impossible in the physical world, but the magic of money (Marx, 1890, p. 107; Binswanger, 1985) and of capital realize the principle of passive self–multiplication in the socioeconomic realm of the human being. The most precise expression of this dream can be found in Perlman's model which deals with a society that introduces a money asset instead of a money good: one "can acquire insurance services jointly with future consumption at zero cost" (Perlman, 1971, p. 250).

These three capitalistic dogmas are not at all self–evident.

Dogma 1, the productivity dogma, has already been fundamentally questioned by Keynes' well–known statement:

> It is much preferable to speak of capital as having a yield over the course of its life in excess of its original cost, than as being productive. (1936, p. 213)

And why, for instance, are the returns of "productive" capital, according to the return–to–property dogma, expected to flow back to the owner: would it not be much more justifiable economically to reward the producer, who creates the productive instruments, or the user, who brings to life their productivity? Would it not be a better allocation of resources to pay higher prices directly to the skilled and industrious producers or users instead of rewarding idle owners?

And, with regard to the time–preference dogma, why do individuals have to pay interest at a *common* rate for present over deferred investment or consumption even when at present specific real goods demanded are *relatively* plentiful? Why, in the latter case, does the price of *money* and hence the price of present over deferred transaction cash balances set up rigid individual budget constraints that prevent individuals from attaining access to the currently plentiful *commodities* in question? Must not the cost of the medium of exchange, erecting artificial barriers between present wants and present supply, be suspected of playing an obstructive role in our economic system? Should not the *relative* present or future scarcity or abundance of present or future goods show up directly in correspondingly different spot prices? What is the economic sense of an interest charge on the medium of exchange if it chokes off demand for goods without respect to their real relative abundance and scarcity?

Must not such money be expected to produce an *artificial shortage* of present demand for *real* production or consumption goods? And must it not equally be expected to produce an *artificial excess of demand* for *nominal* returns on deferred spending, called "capital"? And if, in the long run, individuals, instead of only demanding the (present or future) *real* goods needed for their production or consumption purposes, increasingly demand *pecuniary* returns on deferred spending, who then is going to *spend* money and buy all the real goods that must be produced and sold in order to earn the desired pecuniary returns?

All of these questions attacking the capitalistic dogmas that captivate us lead to a certain idea or concept, namely to what no less a man than Keynes (1937a, p. 101) called his "points of departure" from the orthodox theory of interest.

> Put shortly, the orthodox theory maintains that the forces which determine the common value of the marginal efficiency of various assets are independent of money, which has, so to speak, no autonomous influence, and that prices move until the marginal efficiency of money, i.e. the rate of interest, falls into line with the common value of the marginal efficiency of

> the other assets as determined by other forces. My theory, on the other hand, maintains that this is a special case and that over a wide range of possible cases almost the opposite is true, namely, that the marginal efficiency of money is determined by forces partly appropriate to itself, and that prices move until the marginal efficiency of the other assets falls into line with the rate of interest. (Keynes, 1937a, p. 103; see also Riese, 1983, p. 106)
>
> Instead of the marginal efficiency of capital determining the rate of interest, it is truer (though not a full statement of the case) to say that it is the rate of interest which determines the marginal efficiency of capital. (Keynes, 1937c, p. 123; see also Barens, 1987, p. 156)

Judged by these statements nearly all modern economic theorizing, with the exception of that done by heretics like Riese (1983, 1985, 1987), still operates on the basis of the orthodox theory of money, interest, finance and capital.

Of course, modern monetary concepts have long overcome the "simple money–capital model" that dealt mainly with a very small set of yield differentials, namely the differences between the pecuniary zero yield of money, "the" money–rate of interest, and the rate of productivity of the capital stock (see Tobin, 1961). But the fundamental Keynesian question of where to anchor the floor or average level of all the rates of return (see Barens, 1987, pp. 150–157) is still open. And the time–honored question concerning the capital surplus is also discussed in terms such as the "golden–rule efficiency in production" or the "biological theory of interest" (see Starret, 1972a).

One instructive version of our problem is given by Tobin (1961) in terms of portfolio theory:

> The structure of rates may be pictured as strung between two poles, anchored at one end by the zero own–rate conventionally borne by currency (and by the central bank discount rate) and at the other end by the marginal productivity of the capital stock. Among assets that are not perfect substitutes, the structure of rates will depend upon relative supplies. (pp. 225–226; see also Barro and Fisher, 1976, p. 150)

But the *zero* own–rate borne by currency holds true only for the nominal *pecuniary* return, not for the nonpecuniary money services, that is for money's liquidity–premium, Tobin's (p. 218) "imputed return". Hence the anchoring question, as far as the money pole is concerned, focusses on money's imputed nonpecuniary yield, which is competing with the other returns, and on money's storage costs (Allais, 1947).

The nonpecuniary utility of money has long been considered in relation to, among other things, the *transaction needs* of individuals (Tobin, 1961, p. 218, referring to Lavington, 1941, and Pigou, 1917–18). If this is a valid concept, the height above zero at which the rates of return are strung on the anchoring pole on the money side might be predominantly determined by the demand for transaction cash balances. Indeed, the need for money is most pressing among transactors. Thus their demand for transaction money is the most urgent one in the spectrum of different demands for money. Hence their demand sets the pace in the race of

individuals for money, thereby ensuring that the level at which the rates of return are strung on the anchoring pole on the money side always towers substantially above zero.

One can look at the anchoring problem from a different point of view. When money has a rate of return that determines roughly the minimum floor of returns to other assets then this might appear *as if* money itself were "dominated" in that it has a lower rate of return than the other assets. In addition, then, the question of why this asset of lowest return does not disappear but survives arises, and the reason for its survival can be seen in that it saves costs:

> Under certain informational restrictions, the circulating medium will be a dominated asset, in the specific sense that it has lower physical return than other assets. Thus, an outside observer who ignored information costs would mistakenly conclude that commodity money would vanish, as it would appear dominated in rate of return. But, in fact, the institution of commodity money has survival value in our setting because it permits individuals and society to economize on information production. (King and Plosser, 1986, p. 94)

All these insights concerning the link between the rate of *return to capital* on the one hand and the *transaction requirements* of individuals on the other are incompatible with the exclusive reign of the productivity dogma. They also question the time preference dogma, and they induce doubts regarding the return–to–property dogma. Hence, as long as we are unwilling, or unable, to free ourselves from the neoclassical capitalistic dogmas, at least for the purpose of hypothesizing alternative models, we will not even have a chance to prove whether the foundations of classical and current economic theory have been and still are valid with regard to their assumptions concerning money and its effects on the economy.

When Keynes changed his views on money, interest and capital from the classical concepts to his liquidity approach, he had similar problems freeing himself and his readers from what he later identified as "the outstanding fault of the theoretical parts" (1936, p. vi) of his own earlier work (1936, pp. 175–193, and – expressly relating to the *Treatise* – p. 242). And since I am dealing with very similar changes in the conceptual framework as Keynes had in mind, I should like to quote him here as follows:

> The composition of this book has been for the author a long struggle of escape, and so must the reading of it be for most readers if the author's assault upon them is to be successful, – a struggle of escape from habitual modes of thought and expression. The ideas which are here expressed so laboriously are extremely simple and should be obvious. The difficulty lies, not in the new ideas, but in escaping from the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds. (1936, p. vi and viii; see also 1936a)

Keynes tried in vain to correct misunderstandings of his theory of interest. In his essay on "Alternative Theories of the Rate of Interest" (1937b) he pointed to the "concealed difference of opinion" of a group of economists, such as Ohlin, Robertson, and Hicks, who expressed their agreement with him in abandoning the

concept of a rate of interest that equalizes saving and investment, although their theories were “radically opposed” to his and although their conclusions were exactly the same as the classical doctrine. Again and again, he emphasized that his theory had next to nothing to do with current saving or new investment.

> But I have only a limited hope of success. There is a deep–seated obsession associating idle balances, not with the attitude of the public towards the comparative attractions of cash and of other assets, but with some aspect of current savings. (Keynes, 1937b, p. 251)

Keynes tried to guide the reader carefully and vividly, starting from the problem and passing through the stages of current thinking:

> If the rate of interest is not determined by saving and investment in the same way in which price is determined by supply and demand, how is it determined? One naturally began by supposing that the rate of interest must be determined in some sense by productivity – that it was, perhaps, simply the monetary equivalent of the marginal efficiency of capital, the latter being independently fixed by physical and technical considerations in conjunction with the expected demand. It was only when this line of approach led repeatedly to what seemed to be circular reasoning, that I hit on what I now think to be the true explanation. The resulting theory, whether right or wrong, is exceedingly simple – namely, that the rate of interest on a loan of given quality and maturity has to be established at the level which, in the opinion of those who have the opportunity of choice – *i.e.* of wealth–holders – equalizes the attractions of holding idle cash and of holding the loan. (1937b, p. 250)

One has to swim with one’s mind against the current of deep–rooted conventional associations and assumptions. Traditional understanding makes new ideas appear absurd or wrong, but thinking unusual thoughts is not as big a problem as it seems to be. With the exception that capital does not seem to meet the welfare criterion of equal marginal costs and benefits, nearly no other generally accepted and reliable economic principle is questioned.

On the contrary, investigating the problem of marginal costs and benefits of capital forces one to rely on other acknowledged economic theorems. The change derives from a change in the assumptions, not from ignoring or altering basic principles of economic theory. The first of these reliable principles that underlie this study are the welfare criteria themselves. Thus this intellectual project simply amounts to applying well–known insights to unwonted questions and hence to unusual findings.

To swim against the current is wearisome, forward progress is slow, and the setbacks are frustrating. But to swim against the current of traditional understanding *intellectually*, promises to be a challenging adventure. And wouldn’t it be exciting to prove that competitive capitalism as it exists is only second best?

Chapter 2

SYMPTOMS OF SUBOPTIMAL CAPITALISM

If actual capitalism theoretically falls short of its welfare optimum due to its asymmetric structure of capital cost and benefit, then one should be able to find symptoms of this pathological condition in the capitalistic system as it exists. Thus the first step on the way to verifying or refuting our assumption is to be on the lookout for significant symptoms which might support its plausibility empirically.

2.1 Misallocations

Since returns on capital theoretically transfer resources from a higher to a lower level of marginal utility, misallocations of capital are to be expected. Agents who need capital will probably suffer from a systematic shortage unless they can turn the tide of the permanent drain of capital from where it is really needed to where it is hardly needed at all.

This also means that increasing amounts of money pass through the hands of well–to–do agents and that less well–to–do agents permanently lack money. Hence by backing the needs of the wrong people the asymmetric streams of capitalistic income automatically lead to *inadequate demand*. Simultaneously adequate demand from others is being choked off because of the lack of money. The result is that in practice capitalistic economies tend to produce goods for the well–to–do and in the long run increasingly fail to serve the needs of less well–to–do members of the economic community. “Goods for the well–to–do” include all kinds of financial and productive *capital* the predominant aim of which is not to serve the real needs of people but to increase the wealth of those who already have more than enough.

2.2 Disparities of Wealth

Every financial asset, an item in the portfolio or inventory of a creditor that yields to him positive returns, corresponds to a negative financial asset, an item in the portfolio or inventory of a debtor that yields to him negative returns. Thus returns on financial capital automatically tend to increase disparities between initial endowments whenever agents have to start their economic activities with outside funds, that is with a negative endowment of money. This flow structure aggravates disadvantages and enlarges advantages resulting from the asymmetric structure of endowments. Correspondingly this also applies to returns on other than financial capital.

Thus, in reality, capitalism can be expected to be counterproductive in that it produces its own characteristic disparity between well–to–do owners of self–growing capital and those stricken by some kind of correspondingly self–growing poverty: a poverty which contrasts bewilderingly to the performance of the rest of the capitalistic economic system. Therefore, if capitalism as it exists can be empirically demonstrated to result in:

– pathological structures and processes causing disparity between rich and poor,
– misallocations of funds to such an extent that agents, private or public, increasingly lack capital and pay increasing amounts of interest,
– a system of generally unbalanced streams of capital,

then of course our hypothesis of capitalism being suboptimal in the way described above sounds quite plausible.

Indeed capitalistic economies have failed to produce either a balanced allocation of resources or a balanced distribution of income. From the very beginning, capitalistic economic structures have created socio–economic disparities. There has been and still is a need for social policies and social insurance systems to help compensate for the disparities and misallocations that are brought forth by the capitalistic market economies as they exist.

2.3 Unemployment

Symptoms of suboptimal capitalism are to be expected not only in the realm of social disparities, but also in the sphere of employment.

Suppose that there is a permanent transfer of financial resources from where they are really needed to where they are dispensable. Then there will be consumption needs and production projects which will remain unfinanced due to the shortage of money. At the same time dispensable money in the hands of well–to–do agents fails to meet consumption needs or production projects unless it is recycled to the others. But it will be recycled only if the others, who have needs and projects, can afford to pay interest. And this interest further worsens the misallocation, which ought to be alleviated by the recycling. So in the end the disparity between real consumption needs and real production projects on the one hand and ownership of funds on the other, far from being eliminated, tends to continue and even to increase.

If there is a shortage of money to meet the needs of consumption as well as investment, then, of course, these needs cannot be transformed into demand. Artificial *involuntary unemployment* must be expected. This unemployment is due to the fact that people who have needs (consumers) and people who are willing to work or to invest (producers) can no longer afford their own real production, exchange and consumption because the monetary funds they need are too expensive for them.

The real production, exchange and consumption of goods that does not yield pecuniary returns on capital matching the money rate of interest is simply being throttled. To this extent producers and merchants remain involuntarily unemployed and consumers are left involuntarily undersupplied: feasible markets cannot work because of the costs of the financial transaction technology.

The condition for the recycling of financial capital from its level of present uselessness or unproductivity (in the hands of passive owners) to the level of substantial present utility or productivity (in the hands of active producers, merchants and consumers) is that the use of capital by the latter not only results in *equal* marginal cost and benefit but also in conventional returns to the owners of the capital. Deficiencies in connection with this recycling condition of capital can be overcome in different ways. For instance, government can step into the breach either through direct public investments or public investment assistance. Expansionary measures also facilitate profitable investments, which can recycle

capital from the non–utility level of owners to the utility level of active economic users.

However, not only involuntary unemployment and undersupply are to be expected. As income from mere capital is not a quid–pro–quo reward for economic performance, a share of national income is transferred to someone who has not really contributed to its production. His only “contribution” has been to release for a certain period his capital, whose real marginal utility for him during that period approximated zero anyway. This automatically leads to an oversupply of capital owners with claims on the national product. And since capital can be accumulated without limit, streams of income are generated that vastly exceed those available to labour or entrepreneurship. Accordingly there is an oversupply resulting from these streams of income far in excess of the usual supply, which is limited by a person’s economic performance. This again amounts to an extremely suboptimal allocation of resources in the capitalistic economy in its present form.

As soon as the capital income streams are big enough to live on, the owners of that capital can share in the national product without really contributing to it any more. Hence they have the chance to stay *voluntarily unemployed*, even if they are young, healthy and fully capable of contributing to the national product. If these owners of capital accept this situation and decide to live without working, then they have a share in the utilities of the national product without sharing its disutilities. Manpower resources remain unemployed. Furthermore, this unemployed manpower is probably engaged only in the consumption of goods and not in their production. This means that the effect, as regards its contribution to the national product, is not only zero, but negative and counterproductive.

Of course, the above approach to the assumption of unemployment and undersupply is only a very rough one. But the evidence is clear enough. No sophisticated investigation is required here to arrive at plausible conclusions justifying closer analysis.

2.4 Equilibrium Problems

If an asymmetric structure of the cost and benefit of capital is characteristic of today’s capitalistic economies, then there are asymmetric streams of funds which create imbalances in the distribution of stocks as well as the structure of flows. The capitalistic *rate of imbalance* in this case is approximately equal to the money–rate of interest or to the rate of marginal efficiency of capital. Hence it is quite evident that *real* economic equilibrium can never be reached, unless some other *inverse asymmetric measures* compensate for the effects of the initial asymmetric structure of the cost and benefit of capital.

Inverse measures or structures to counterbalance the effects of the primary capitalistic asymmetries in income streams can be implemented by public authorities as has been mentioned above: social policy transfer payments, public investments and public investment assistance. In addition, remission of debts or bankruptcies on a large scale and, of course, countervailing powers like labour unions, can have similar offsetting effects.

But there are other *systematic* counterbalancing necessities too: for instance, most economists agree that economic equilibrium presupposes steady growth. Consequently this means that equilibrium is an exceptional state in capitalism:

there will be no equilibrium except under the condition of growth *at the rate of marginal efficiency of capital*.

Here we explicitly have the very same standard of asymmetry as we have in the primary asymmetric streams of capital income. Hence the recommended rate of growth must be understood as the rate of counterbalancing that complementarily suits the primary capitalistic rate of imbalance as described above. And if economists are right in this case, capitalistic economies in fact equilibrate artificially in the long run if they grow steadily.

In other words, a capitalistic economy will reach equilibrium only if it explodes exponentially. And, in fact, this is a characteristic problem of current capitalism.

Another equilibrium problem, which is closely connected to the first one, regards the limitation of personal income by the increase of marginal disutility of personal labour and performance. As long as income is derived from personal performance, this income is subject to constraints, inasmuch as a person's capacity to work is limited. A marginal increment in income requires a marginal increase in effort the disutility of which grows faster than the income, while at the same time the utility of the additional income decreases. Hence those who live on incomes that are earned by personal performance sooner or later reach their point of equilibrium between the diminishing marginal utility of their income and the increasing marginal disutility of their strain and endeavour (Jevons, 1871, pp. 162–174).

If, however, income no longer arises from personal efforts but from idle ownership of capital, then the brake of increasing marginal disutiliy of strain and endeavour does not work anymore (Suhr and Godschalk, 1986, pp. 60–61). On the contrary, such capitalistic income is not at all equivalent to *disutilities* such as labour or other burdens but rather a substitute for the other *benefits* rendered by money or by assets that have been turned into capital yielding pecuniary returns.

Income from mere capital thus starts from a basis of given benefit above zero. Capitalistic income is the *pecuniary* benefit that is preferred to other possible nonpecuniary benefits from the goods at hand (as, for instance, money services of cash or the utilization of an additional car). Hence such capitalistic income is not connected with any increasing disutility, but with just the opposite, with a gain in marginal utility.

And if the returns are re–invested, then income can be increased again by substituting the services from the new money held by the pecuniary returns on financial capital.

Not only does the investor not engage in any personal effort worth mentioning, he replaces pleasure–bringing goods by goods providing greater marginal pleasure to him. Although the marginal utility of such income will also decrease, the pure fun derived from additional income is motive enough for continuing to make income from income. Individuals engaged in such business no longer behave 100% rationally. They become more or less addicted to making money.

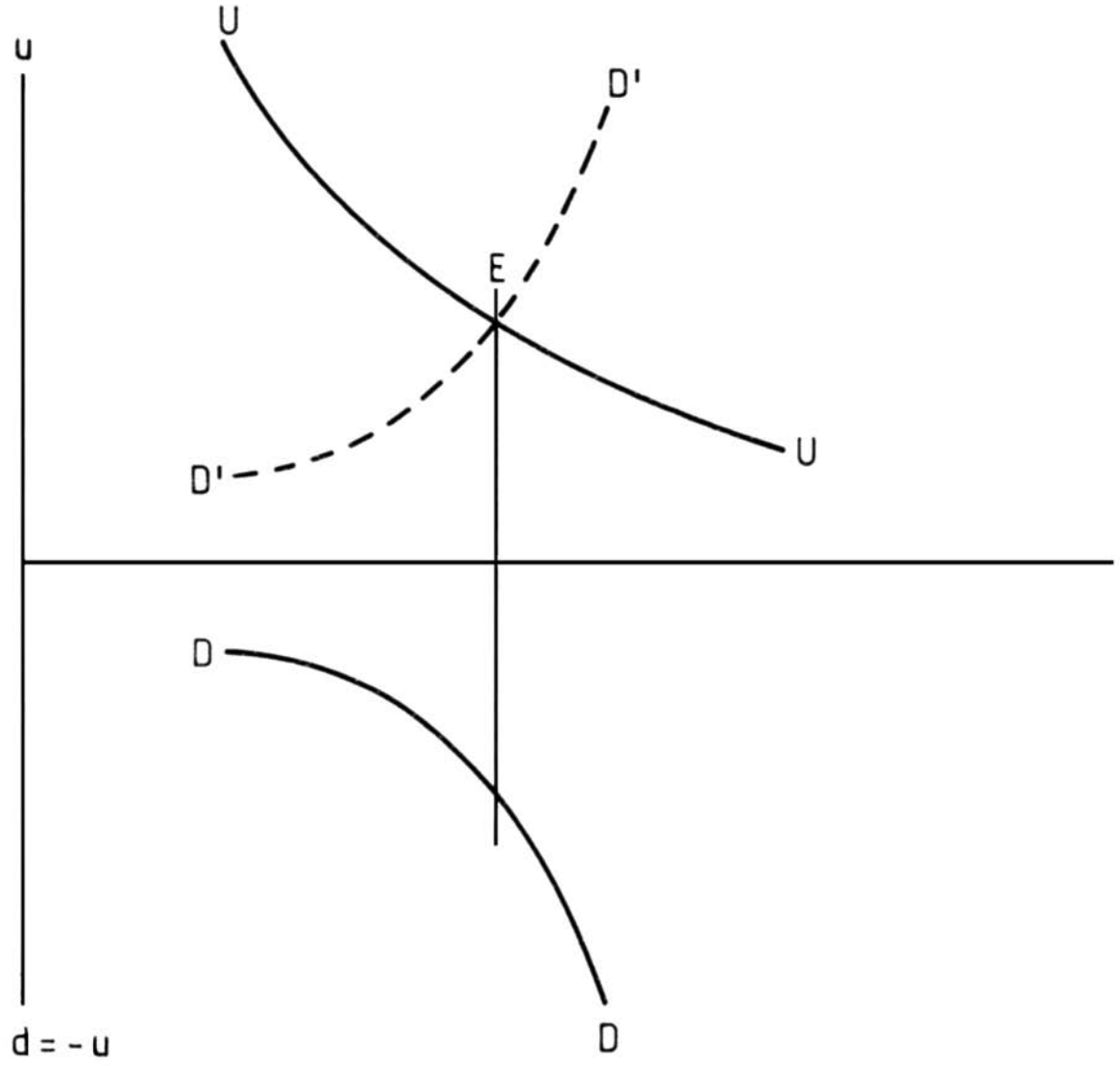

Figure 1
Marginal utility derived from marginal income (UU), and marginal disutility of labour required for marginal income (DD); equilibrating of $u = -d$ at E (Jevons, 1871, pp. 168–169).

Figure (1) represents the utility and disutility curves of an individual earning his income from personal efforts. Equilibrium at E is obvious. Consider now Figure (2) showing the well–known curve of declining marginal utility derived from income and the curve of marginal nonpecuniary utility of this income utilized as financial capital to create more income. As the curve of marginal utility of income approaches zero, it cuts the curve of marginal utility of financial capital at B. Now B, unlike E, is not a point of equilibrium between marginal utility and disutility, but the point from which the benefits from all other utilizations of income are less than the benefits from financial capital.

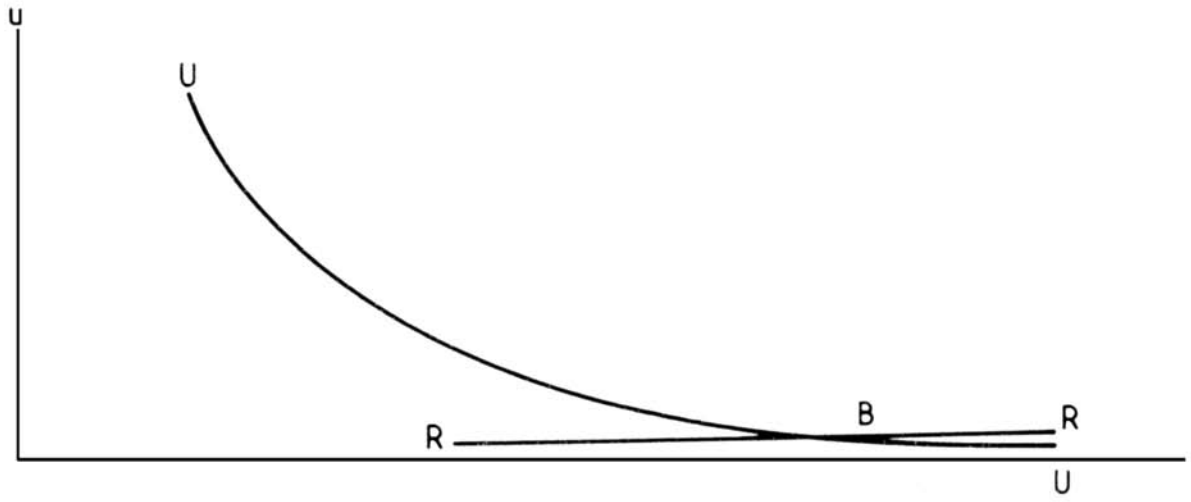

Figure 2
Marginal utility derived from marginal income (UU), and the marginal nonpecuniary benefits from financial capital (RR); the latter matching the former, $r = u$, at B.

Figure (1) represents the case of equal marginal cost and benefit, in which positive *and negative* utilities balance at zero. Figure (2) shows the case where the positive benefits from financial capital compete with the *other positive benefits* from income and where benefits from financial capital prevail. There is no equal negative utility to compensate the positive one in Figure (2); the only problem is to choose the highest possible positive utility.

While the income stream in Figure (1) reaches its maximum at E, where it is *choked off* by the steeply rising disutility of additional endeavours, B in Figure (2) indicates the point from which capitalistic income *begins* to become interesting to the individual. E is the point where strain and endeavour stop the rise of income; B is the point where the fun of effortless income starts, – the fun of creating and enjoying an income without endeavours and without the constraint of disutility limiting its growth.

The figures are also instructive with respect to the angle of intersection of the curves. Note that the curves in Figure (1) intersect forming approximately right angles, which represents a very stable state of equilibrium, while the curves in Figure (2) intersect at a very obtuse angle, which indicates instability in the case of even small changes in prospective utilities.

One might object that the individual does not burden himself with disutilities but merely sacrifices “leisure”, a utility good, in order to get income, thus doing the same as the investor who substitutes one beneficial good by another. However, for an individual who does not live in the theoretical world of asset portfolios yielding positive returns and who has no autonomous income from capital, leisure is quite ambiguous: enjoying pure leisure means simultaneously being unable to buy food and housing. Hence individuals lacking capitalistic income must put an end to the ambiguity of leisure and engage in disutilities like labour for the sake of acquiring

utilities. “We must remember (...) that there is a disutility in work” (Keynes, 1932, p. 51). Thus the mere leisure of an individual who has no capitalistic income would crudely be represented in our Figures 1 and 2 by a curve near the zero line of utility and disutility (near the line of “inutility” in the sense of Jevons, 1911, p. 115) with a tendency to go under zero as the disutility of being hungry increases with the lapse of leisure time.

The fact that capitalistic income is not paid for dearly by personal effort, but springs from the enjoyment of the best of the attainable or prospective utilities only, threatens to unbalance the personal equilibrium between the disutility of additional labour and the utility of additional income. And the more of these microeconomic state–of–equilibrium positions of individuals that are unbalanced by the seduction of creating capitalistic income, the less likely is the attainment of a macroeconomic equilibrium between the incessantly growing streams of addictive income to the owners of mere capital and the efflux of funds from the others.

Thus the capitalistic economy is disequilibrated by both conditions: firstly by the structural necessity to grow steadily, and secondly by the unrestrained capability and addictive desire to obtain and increase capitalistic income from mere capital.

2.5 Financial Hydrocephaly

Since financial capital renders returns that increase the initial capital sum exponentially, today’s capitalism appears to be programmed to generate an ever–increasing sphere of positive and negative financial assets and transactions. Friedman (1969), introducing lending and borrowing into his model, described such processes without sufficiently tracing the consequences:

> The lenders accumulate wealth and hence have higher and higher incomes available for consumption (...), while borrowers decumulate and hence have lower and lower incomes available for consumption. (p. 28)

The financial and monetary sphere will outgrow and overwhelm the realm of real production and consumption. The economy will develop a financial hydrocephaly of positive and corresponding negative assets, and the massive pool of financial claims and debts that accumulate in, and the money that streams through this monetary hydrocephaly must be expected to unbalance and destabilize the rest of the economy.

Indeed the instability of the stock exchanges and, even more, of international finance are significant indicators of the plausibility of our assumptions.

Chapter 3

THE SIGNIFICANCE OF MONEY

This book deals with capitalism's monetary conditions and structures as the cause of the system's characteristic deficiencies. This is, at least, the main thrust of our investigation. But there are numerous facts and substantial theoretical work that have pointed to the significance of money in capitalistic market economies right from the very beginning.

3.1 Money, a Prerequisite for a Modern Economy

Money enters into practically every economic transaction carried out by the members of an economic community. Money is necessary for the advanced division of labour. Although bartering is experiencing a revival today, both nationally and internationally, opportunities to engage in production, trade and consumption are still insignificant without money.

But the same money which is an absolute necessity for a modern industrial economy is, at the same time, suspected of generating income from the mere ownership of financial capital as described above. And this income in turn is suspected of causing misallocations and unbalancing the economic system. This means that modern capitalism is based on very questionable monetary foundations.

Nearly anyone who wants to acquire goods has to obtain money first. Money is not only the macroeconomic precondition for a modern economy, it is also the microeconomic precondition for each individual's participation in the economy and his sharing in the national income. Money is like a gateway that has to be passed each time an individual wants to sell his own goods or buy goods from others for the purpose of consumption or production.

Money is "unique" in having the lowest transaction costs (Yeager, 1968, p. 67). Cash is "universally acceptable for any transaction at any time" (Hartley, 1988, p. 23). It endows its owner with a "wide range of freedom" (Simmons, 1951, p. 34) because it improves "transformation conditions" and widens the "opportunity range" of transactors (Brunner and Meltzer, 1964, pp. 261–262).

Money has an additional utility that is different from the well–known use value and exchange value of commodities. The form of money's exchange value is more suitable for exchange than that of other commodities. Carver (1907) described this additional utility of money instructively as follows:

> Some exchanges could scarcely be made at all without the use of money. In these cases the utility of money is very high, and would equal the utility of the exchanges themselves; that is, the advantage of being able to exchange, over the disadvantage of not being able to make the exchange at all. (pp. 443–444)

In Clower's (1967) sharply stylized model of a pure money economy with nontransitive exchange relations, money even appears as the only medium of transaction:

> A commodity is regarded as money for our purpose if and only if it can be traded directly for all other commodities in the economy. (...) One might express this thought more elliptically by saying that money is traded in all markets in a money economy, or, alternatively, by saying that transaction costs are infinite for any market exchange that does not involve the offer of money as a means of payment. (...) Some commodities (in the present context, all but one) are denied a role as potential or actual means of payment. To state the idea as an aphorism: *Money buys goods and goods buy money; but goods do not buy goods*. This restriction is – or ought to be – the central theme of the theory of a money economy. (p. 5)

3.2 Money as an Unfair Competitor

Individuals do not usually have money at their disposal unless they borrow it or they succeed in selling their labour or goods to others. In either case they have to persuade their partners to part with their money.

If individuals *borrow* the money they need, or if they sell bonds, which would make no difference in this connection, then they have considerable interest costs. So in this case their starting conditions are unfavourable. As they have begun their transaction activities with outside funds, they have to pay interest for the whole period of the loan.

If they *try to sell their labour or goods*, they face the unique salability of money. This ultimate salability of money is superior to the salability of other assets (e.g. Yeager, 1968; White, 1987, p. 452). “Institutionalized money has the advantage of a far wider usefulness in exchange than such goods” (Parsons, 1967, p. 365).

Clower, in his model of a pure money economy, clearly distinguished between goods demanded for purchase – offers to sell money – and goods offered for sale – offers to buy money (1967, p. 6). If, then, transaction costs can be modelled as being infinite for market exchanges that do not involve the *offer* of money, the *nontransitivity* of exchange relations also implies an additional *asymmetry* in that individuals who merely offer non–monetary commodities must find partners who offer the only commodity that enables transactions, namely money. Hence it is more difficult to sell other commodities than to sell money. To complete Clower’s aphorism: Money buys goods conveniently, but goods do not buy money conveniently (see also Simmel, 1930, p. 208; Herr, 1986b, p. 2). Others long ago observed the asymmetry or nontransitivity of selling and buying:

> I am ready to admit that gold is a commodity in such general demand that it may always command a market, that it can always buy all other commodities; whereas, other commodities cannot always buy gold. (Tooke, 1844, p. 10; quoted together with similar statements from other authors in Marx, 1859, p. 79. See also Marx, 1890, p. 127, and for a discussion of this: Visser, 1977, pp. 273–274; Suhr, 1988, pp. 34–42.)

The inequity in transactions of money and other commodities also appears tacitly in general statements about the convenience of money such as that of Lavington (1921):

> In a modern community each person with resources at his disposal needs some means by which he can employ these resources in order to obtain goods from other parties. (...) The resources at his disposal are not usually in a form in which they can effectively be employed for these purposes. (...) Each therefore will find it convenient to hold a part of his resources in the form of a stock of something which, being generally acceptable and easily transferable, serves as general purchasing power and may be readily passed from hand to hand as a means of making payments. (p. 29)

This general nontransitivity of selling and buying, with the more efficient purchasing *power* on the buyer's side, holds true for all objects of exchange. This is also true for *money* on the one hand and mere *claims* to future money and income on the other. Thus it is easier to offer present cash and demand for claims to future money than it is to offer claims to future money and demand for present cash. The bargaining position of the offerer of present money is systematically superior to that of the offerer of claims to future money. Hence, other things being equal, the seller of a claim to future money can be expected to pay a surplus price for the other's present cash.

Due to money's "maximum exchangeability" (Parsons, 1967, p. 368) sellers of labour or goods in particular are involved in a severe problem of *systematic inequity*. Money is an unfair competitor (Steiner, 1922, p. 174; see Chapter 11.5).

The imparity of money and other objects of exchange with respect to the chances of transactors will be discussed more generally using an economic game–model in Chapters 8 and 10.5. Meanwhile it is sufficient to consider the following: the seller has to persuade the buyer to part with his money. This means that the seller has to offer the buyer an object the utility of which is more interesting to him than the utility of his money. His money renders to him the utility of liquidity (money services) and the economic power to create capitalistic income. And because money has this miraculous power to render its services without expenditures and to create more money for its owner when lent to others, the seller must offer a good whose benefits to the buyer outweigh the buyer's propensity either to retain his money services or to create a net income stream.

The richer the potential buyer is, the smaller the marginal utility of *real* goods to him is and the more interesting the chance of income from ownership of capital becomes. Hence the goods to be sold have to compete with the magic capability of money to attract more money to its owner, while at the same time the marginal net utility of additional real goods to well–to–do owners of money approximates zero, or, in case of storage costs or other carrying costs, even becomes negative. Thus the real, concrete utilities ("use values") of all the goods that normal sellers have to offer become uninteresting to rich owners of money, unless these goods can serve as instruments to make more money, as money itself does. This means that money is an unfair competitor.

In the end, the only goods that can compete with money's power to make more money are assets whose pecuniary or nonpecuniary yield at least matches the money–rate of interest. Thus both money, with its ultimate salability, and the money–rate of interest are quite significant for economic decision–making in capitalism. And as the salability of money is superior to the salability of other economic objects of exchange, money must be suspected of not being the neutral

medium of exchange that most economists (e.g. Niehans, 1987, p. 418 f.) still think it to be.

3.3 The Significance of the Money–Rate of Interest

Both classical and current economic theories assume that the sphere of real goods, labour and production dominates the monetary sphere. There are, of course, tendencies in this direction, but Keynes, Allais (1947, p. 306) and more recently others (e.g. Riese, 1983, p. 106; 1987, p. 158 f.; Spahn, 1986, p. 170 ff.; Stadermann, 1987, pp. 281–363) claim that with regard to essential economic parameters there is also a reverse hierarchy with financial markets dominating real markets and money's interest dominating the profit of real capital. According to Keynes the significance of the money–rate of interest lies in the combination of characteristic properties of money. In particular, he finds that money has elasticities both of production and of substitution that are zero or negligible and that there is no factor which is capable of "doing money's duty equally well". (1936, p. 234)

In fact, the significant role of money among other goods in determining the standard of return to stock derives from its being the key to passing through the *exchange bottle–neck*, the triple requirement of double coincidence of supply, demand (Jevons, 1875, p. 3), and timing (Perlman, 1971, p. 235; Clower and Howitt, 1978, p. 464). The requirement of double coincidence of demand, supply, and timing is a severe trade restriction (Starr, 1972, p. 291) that can be released by employing money.

Not exchangeable objects in general but liquid money in particular enables agents to pass through the *transaction defile* that leads efficiently to the desired goods, without the multiple double coincidence impediments of simple exchange markets. Money alone endows transactors with the capability to "command goods and services" in exchange "through the market channels" (Parsons, 1967, p. 276). Thus transactors must virtually always acquire and spend money in order to attain desired objects.

Money, however, the "medium" in the literal sense of the word, is beneficial to those who possess it and expensive for those who lack it. Hence possessors will not spend it, other than for assets that are at least as beneficial to them as their money; and others will not acquire money for spending, other than for goods the (pecuniary or nonpecuniary) utility of which compensates for the costs.

Keynes then states that the money–rate of interest, by setting the pace for the rate of capitalization of all other commodities, holds back investment in the production of these other commodities (p. 235). "When there is *no* asset of which the marginal efficiency reaches the rate of interest, the further production of capital–assets will come to a stand–still" (p. 228). As a consequence unemployment is to be expected: "Unemployment develops, that is to say, because people want the moon; – men, cannot be employed when the object of desire (*i.e.* money) is something which cannot be produced and the demand for which cannot be readily choked off" (p. 235).

In this connection it should be remembered that here Keynes changed his mind on what he had written about money interest in his *Treatise on Money* (1930). He no longer maintained his view of the "natural rate of interest", which was defined by him as being the rate that preserves equality between the rate of saving and the

rate of investment. As a consequence Keynes disagreed with the assumption that the accumulation of wealth is held in check and the rate of interest sustained by the preference of people for present over deferred gratifications. And he rejected the unwillingness to wait as the essential reason why rates of interest remain at high levels (1936, p. 242). Instead of these classical theoretical concepts he introduced his liquidity approach and was led to opposite conclusions:

> It should be obvious that the rate of interest cannot be a return to saving as such. For if a man hoards his savings in cash, he earns no interest (...) On the contrary, the mere definition of the rate of interest tells us in so many words that the rate of interest is the reward for parting with liquidity for a specified period (...) The rate of interest is not the 'price' which brings into equilibrium the demand for resources to invest with the readiness to abstain from present consumption. (pp. 166–167)

> Interest (...) is simply the premium obtainable on current cash over deferred cash, so that it measures the marginal preference (for the community as a whole) for holding cash in hand over cash for deferred delivery. No one would pay this premium unless the possession of cash served some purpose, i.e. had some efficiency. Thus we can conveniently say that interest on money measures the marginal efficiency of money measured in terms of itself as a unit. (Keynes, 1937a, p. 101)

This also means that the money–rate of interest has its own autonomous *monetary foundation*. The level of the money–rate of interest should be taken as an independent variable in the theory of value and distribution (Sraffa, 1960, p. 33; see also Panico, 1988, pp. 23–24). Hence the money–rate of interest does not bring saving and investment into equilibrium, but, on the contrary, *hinders* them from finding their equilibrium: the cost of the medium of transaction (interest) also prevents the relative prospective abundance or scarcity of commodities from being completely reflected in adequate spot prices, because the margin between spot and forward prices is itself modified by the rate of interest. Although money interest is mainly the price paid for parting with *monetary liquidity* alone, it also substantially affects the cost of *real capital* and the whole structure of *time preferences* simply by punishing present consumption or production activities and by rewarding individuals who abstain from these activities.

According to Lucas (1980) money is only a second–rate asset:

> It serves a role and commands resources only insofar as it enables the economy to economize on some sort of record keeping or other transaction cost. At best, then, money is viewed as a means of approximating some idealized real resource allocation. (p. 144)

This is, at least, what money *should* be. But in reality money prevents the monetary economy from approximating its idealized optimum of resource allocation by triggering interest costs for present over deferred transactions.

Hence interest must not be regarded positively, i.e. as a premium for abstaining from consumption, but negatively, i.e. as a premium for passiveness on the one hand and as a punishment for economic activity on the other. Therefore it appears

quite plausible to conclude that there is a defect in capitalism which counteracts its very own *principles of efficiency*.

It may be objected that loan money is usually *credited* to the borrower. This means that the lender parts not only with his monetary liquidity (transaction options), but also with the security of his money's exchange value (security service). To Vogt (1983), Riese (1983), and others (Spahn, 1986, p. 159; Herr, 1986b, pp. 3–5, 128–130) this credit characteristic of loan money is the predominant property of money as a means of exacting interest from borrowers. If, however, systematic interest were the price solely for the individual risk, then interest would have to be expected to decline to zero in cases where the default risk is negligible. And again, if systematic interest were the price for a real default risk, then losses would on the average nullify interest earnings. Hence the default risk cannot be seen as the characteristic property of money that causes systematic interest. Monetary economic models must also explain interest on default–free assets (Kareken and Wallace, 1980, p. 9). But, in spite of these objections, I agree with the conclusion that, interest having its own monetary foundation, financial capital functions as a budget restriction for commodity markets (Riese, 1983, p. 115; 1987, p. 158).

The most all–encompassing concept of the monetary economy in general and of the significant effects of money on the economy in particular has been designed by Maurice Allais (1947). Allais shows precisely why the rate of interest in economies as we know them cannot be negative: as money renders valuable services and can be stored without costs one always prefers holding the money at hand to lending it to others and earning negative returns (p. 234).

Part 2

MONEY'S COSTS AND BENEFITS

Chapter 4

THE TRANSACTION COST APPROACH

4.1 Economizing Economic Communication through Money

Money is used as a standard of measurement, as a means of liquidity as well as of deferment, and as an instrument for payment. These services provided by money facilitate transactions in a free market economy. Money economizes exchange of goods by lowering the information, synchronization and transaction costs. Thus the monetarized economy has apparently proven to be superior to the simple barter economy in practice as well as in economic theory. The advantages of money can be seen in the microeconomic benefits to economic agents and in the macroeconomic gain in welfare. Modern monetary economic theory has elaborated the benefits derived from money in detail.

First there is the well–known superior salability of money referred to in Chapter 3.2. This property of money was already treated by Marx (1859, p. 78; 1890, pp. 127–128; Suhr 1988, pp. 34–38).

Pigou (1917, p. 45) and Lavington (1921, pp. 29–35), as referred to by Tobin (1961, p. 218), have described the "utility", "services" or "yield" of money. Because of this utility each person will find it convenient to hold a stock of money:

> He will of course have to forego interest upon the resources which he invests in this particular form of a stock of money, but he will obtain instead facilities for making payments, which may be expressed as a return of convenience and security. His stock yields him an income of convenience, for it reduces the cost and trouble of effecting his current payments; and it yields him an income of security, for it reduces his risks of not being able readily to make payments arising from contingencies which he cannot fully foresee. (Lavington, 1921, p. 29)

Keynes in his *General Theory* (1936) then distinguished three categories of liquidity–preference, thereby implicitly indicating certain utilities or functions or services of money: the transaction–motive, the precautionary–motive and the speculative–motive.

Since Keynes' *General Theory*, there has been a discussion about money's "utility", and in the meantime, the "yield from money held" (e.g. Hutt, 1956) has definitely become a matter of course to many economists. Friedman (1956, p. 5; 1969, pp. 24, 40, 119), for instance, deals with "nonpecuniary" or "productive"

services or returns. Most monetary economists acknowledge that today's money is service–rendering or benefit–bearing money.

The classical function of "storing value", for instance, now appears as the "deferral service" of money (e.g. Maling, 1987, pp. 474, 482). And this deferral service of currency or bank money (of money as an instrument for representation and transfer of value) must be clearly distinguished from the monetary unit serving as a standard of deferred payment (money not as a means of representation and transfer, but as a standard to measure the exchange–value of economic objects). One can use money itself as a means of transforming a claim to a share in today's national product into a claim to a share in a future date's national product by holding the money for the interval. Or one can use money today to buy claims to future money (bonds). In the latter case today's money is used as a means of payment, while the monetary unit functions as the measure to determine the amount of liquid purchasing power that has to be returned at the date of maturity.

The utility of *holding* money, which is the predominant concern of current monetary theory, must be distinguished from the utility of *spending* money (Patinkin, 1965, p. 79), but the former derives from the latter. For money will lose its utility as a means of holding wealth and as a reserve asset if it loses its salability and acceptability, which constitute its suitability as a medium of exchange.

However, the concept of money services is still not generally accepted, and above all it has not yet become a tacit presuppositon of theory–building in monetary economics (e.g. Wallace 1983, as criticized by White, 1987).

In social systems theory, money's advantages have also been described in terms of degrees of freedom:

> In exchange for its lack of direct utility money gives the recipient four important degrees of freedom in his participation in the total exchange system. (1) He is free to spend his money for any item or combination of items available on the market which he can afford, (2) he is free to shop around among alternative sources of supply for desired items, (3) he can choose his own time to purchase, and (4) he is free to consider terms which, because of freedom of time and source he can accept or reject or attempt to influence in the particular case. (Parsons, 1967, p. 307)

Because of its *freedoms* (see also Simmel, 1930, pp. 208–209) money has legitimately become a subject dealt with in constitutional law (Suhr, 1982; 1984, p. 539; 1988b, pp. 67–94; Vogel, 1987, pp. 1153, 1156–1161).

Money is also a kind of economic language (Tobin, 1980, p. 86) which enables agents to communicate efficiently. In terms of the social systems theory:

> It does not seem to be stretching matters too far to say that money is a highly specialized language, in which things 'said' are not merely informative but also imperative. Money is a generalized symbolic medium of inducement, in that its offer in specific amounts is the offer of a conditional improvement of the advantageousness of alter's situation: The more money he has, the greater is his command of the immense range of utilities purchasable in the market system. (Parsons, 1967, pp. 273–274; see also Luhmann, 1972, 1983)

This includes money's functions as a standard of measurement (code) as well as its functions as a means of readiness, precaution, speculation, deferment, and, of course, value transfer (message transmission, see Parsons, 1967, p. 357, footnote).

Economic communication without money is cumbersome and costly. It is like conversation without a language, only gesturing and pointing. To supply individuals with money is like fitting them out with an adequate language. If they lack money, then it is as if they lacked the language without which there can be no efficient economic communication. "Men who are unable to pay and objects that cannot be paid for are forgotten" (Luhmann 1983, p. 156, my translation). A person who has no money is excluded from the economic community (Herr, 1986b, p. 2). Or, as has already been quoted from Clower's (1967, p. 5) idealized model: transaction costs are infinite for any market exchange that does not involve the offer of money.

Especially in a modern economy with its highly advanced division of labour, everybody is accustomed to economic communication on the basis of money. In today's capitalistic economic environment it is nearly impossible to communicate economically without money. Hence individuals are forced to use money to serve their needs and to achieve their economic goals. Money has become an essential part of an individual's communicative equipment in a monetarized economy. Therefore the *acquisition* of money for the purpose of economic communication, and, of course, the cost of this acquisition, have become the most important practical problems for individuals in modern economies.

However, regardless of all the various general aspects of monetary liquidity (for definitions and measurement problems see Lippman and McCall, 1986), and regardless of all its various services, which constitute its Keynesian "liquidity–premium", no doubts exist about the thesis that money saves information, synchronization and transaction costs in an economy. And with respect to this generally accepted function of money, i.e. the facilitation of economic transactions by saving costs, there is one very simple fact which has been given too little attention up to now: Money does not only *save* costs, it *burdens* its agents with costs too.

The transaction costs of real goods and of money itself, of course, have long since become the subject matter of monetary economics (e.g. Hicks, 1935, p. 67; Brunner and Meltzer, 1964, p. 261; Yeager, 1968, p. 68; Alchian, 1977; Niehans, 1978, p. 117; J.A. Gray, 1984). These concepts, however, have not yet led to a general questioning of the cost of financial *capital* as a probable hidden *monetary transaction* cost.

4.2 Acquisition Cost of Issued Money

Money inflicts costs on economic agents in different ways. For instance, money is not usually issued by dropping it from a helicopter as in one of Milton Friedman's monetaristic models (For criticism see Hahn, 1971a, pp. 72–74; Riese, 1983a, p. 251; 1985, p. 17; Stadermann, 1987, p. 302). Nor do agents usually get their money by any other method that puts it into their hands *for free* (Riese 1983, p. 109). On the contrary, money customarily enters the economy as some form of loan, which, of course, generates *interest costs.* Hence, for instance, it is inadmissable to treat cash holding as a function solely of income (Riese, 1983, p. 109).

The central banking system and the other banks act together in the process of issuing money. They can be treated as the “money issuing system” or as the “money supply system” of the free enterprise economy. Of course the system has different techniques for issuing money, but lending money to agents, and conversely borrowing money from the banking system, is the most paradigmatic form of the initial acquisition of money by economic agents. This is why the costs of this method of acquiring money serve as the introductory example in the following argument. (The other methods of acquiring money will be discussed later: the acquisition by simple credit in Chapter 8.3; the acquisition by selling goods in Chapter 10.6.)

Agents who initially acquire money from the money supply system incur *money acquisition costs* in the form of interest. This interest is an expenditure directly connected to the acquisition of monetary liquidity. Before money can render its services to agents, and before it can save them information and transaction costs, it gives rise to expenditures to agents in the course of their preparing for value transfer.

4.3 Transaction Needs and Demand for Money

Money is needed by economic agents for the purpose of carrying out transactions at low transaction cost. Money is also needed by agents for the purpose of being ready to make value transfers by holding cash. Thus it is mainly agents who have transaction needs that demand money from the money issuing system: *producers* cannot sell their products, *dealers* cannot buy and sell them, and *consumers* cannot purchase the products of the others unless agents dispose of money. Producers, dealers and consumers are unable to communicate with each other efficiently without the monetary language of economic “discussion”. It is due to their *communication and transaction needs* that agents demand monetary liquidity and *are ready to pay* for it.

Only after money has been issued and only after the acquirers have incurred money acquisition costs, does it begin to render its transaction benefits to them (and to others) and function, as described above, as the most useful instrument of economic communication.

Only then does it render its monetary services to its owner. Only then can other agents acquire possession of money without incurring similar initial money acquisition costs. Only then, for instance, are the other economic agents capable of obtaining this money by selling goods, as gifts or through inheritance. Only then, of course, can *others* use this money to create capitalistic income by merchandising its money services and transforming them into pecuniary returns.

In today’s environment of monetary economics, the claim that money has something to do with the activity of exchange must be taken seriously (Hahn 1973, p. 234). *Exchange* means money in action, *i.e.* money being spent (salability) and accepted (acceptability), while monetary economics mainly deals with money *out of action:*

> Our concern is with the utility of *holding* money, not with that of *spending* it. This is the concept implicit in all cash–balance approaches to the quantity theory of money. (Patinkin, 1965, p. 79)

Or, even more vividly:

> Friedman has a lazy man's theory of demand for money in that he explains it by unanalysed utility and productive services. (Hahn, 1971a, p. 69)

Against such a lazy man's theory of a lazy man's money Hicks stressed the "primacy of the Means of Payment function" of money (1967b, p. x) and pointed out the difference between a title to ownership that is desired because it is to be exercised and a title that is desired solely because it is to be passed on (1967, pp. 7–8).

Clower (1967) also noted critically that the use of real balances in the utility functions provides no conceptual foundation for the special role played by money in transactions. If money is to be integrated into a general system of economic equilibrium, one must, according to Binswanger (1969, p. 46), realize "that every commodity supply is *simultaneously* money demand and that every commodity demand is *simultaneously* money supply" (my translation). All (net) sale offers involve a demand for just one other commodity in exchange, namely money (Clower, 1967, p. 6).

The first and foremost monetary problem for individuals in the real economy, individuals who are forced by their needs to engage in production, exchange and consumption, is not how much of the artificial object called "money" ought to be held as a means of wealth and how to handle their portfolios or inventories, but how to get the money they require to buy the goods that they need for living and producing.

> Where, then, is the demand for money?
>
> Evidently wherever there is need of a medium of exchange; wherever the division of labor throws upon the market wares which, for their exchange, require a medium of exchange, that is, money.
>
> And who demands money? Evidently the farmer bringing his produce to market, the merchant selling his wares across the counter, the workman offering his services and asking money for the product of his labour. Where the supply of wares is largest, the demand for the medium of exchange is largest; where the supply of wares increases, the demand for money, the medium of exchange, increases. If there are no wares to be exchanged, the demand for money disappears. Primitive production and barter mean absence of demand for money. (Gesell, 1929, p. 156)

Money is the *transient* abode of purchasing power (Tobin, 1980, p. 88). Simple barter differs from sale and purchase

> in which one of the articles exchanged is intended to be held only for a short time, until it is parted with in a second act of exchange. The object which thus temporarily intervenes in sale and purchase is money. (Jevons, 1875, p. 3; see also Jones 1976, p. 758)

One consequence is that a clear separation between purchase and sale must be introduced, dichotomizing the budget constraint into two branches, namely constraint on money expenditure and constraint on money income (Clower, 1967;

Abele, 1972, p. 28). Once again this comes out very clearly in the framework of a model:

> The expenditure constraint asserts that all (net) purchase offers must be backed by a readiness to supply money in exchange. (...) It follows that the total value of goods demanded cannot in any circumstances exceed the amount of money held by the transactor at the outset of the period. Our definition of choice alternatives thereby captures the essential meaning of the traditional (but curiously nonmodern) contention that demand in a money economy is effective only if it involves a combination of desire with money purchasing power. (Clower, 1967, p. 6)

Individuals need money to back their desires with purchasing power. They demand money by offering for sale their labour or other objects of exchange. They demand money because of money's property as a liquid equivalent for the less liquid objects that they offer. Not to be able to sell one's labour possibly results in being subjected to a complete income budget constraint which can simultaneously mean a complete expenditure and transaction constraint. The same applies to the businessman:

> A merchant could hardly do business at all without some cash in his drawer. Here is a real need of a real man conducting a real business. (Carver, 1907, p. 444)

If individuals, pressed by their needs, cannot sell their labour or goods, *i.e.* if nobody reacts to their seller's demand for money, and if nobody supplies them with money in exchange for their labour or goods, then such individuals will even be willing to liquidize their personal obligation to pay back at a future date, *i.e.* to take negative items into their inventory, or, in other words, to borrow money and pay interest just for the temporal use of money's liquidity.

This should be the primary point of departure for all monetary theory building, nevertheless, the following analysis seems more typical of the theorizing about the transaction demand for cash:

> The transaction demand for money is closely connected with the concept of the income period. (...) Each individual begins the income period with a certain income arising out of direct services rendered or out of property and with assets (physical or nonphysical) having a certain market value. In his endeavor to reach the highest level of satisfaction he is confronted with two sets of decisions: (a) he must decide what part of his income he will spend on consumption and what part he will save, (b) he must determine how to dispose of his assets. (...) On the basis of his tastes, his income, and market prices he will make a certain plan of expenditure (...) The amount of money that is necessary for individuals to carry out their expenditure plans is the *transaction demand for money* (...) (Modigliani, 1944, p. 191)

The phase of the seller's demand for money–in–transaction is omitted here, and theorizing starts off with the money at hand.

However, such a starting point can also be quite instructive regarding interest as a component not of capital cost, but of transaction cost:

> Suppose that in the course of a given period an individual will pay out *T* dollars in a steady stream. He obtains cash either by borrowing it, or by withdrawing it from an investment, and in either case his interest cost (or interest opportunity cost) is *i* dollars per dollar per period. (Baumol, 1952, p. 545)

In this model the costs *i* enter into the total amount that the individual in question must pay for the use of cash needed to carry out his transactions (p. 546). Nevertheless, in the rest of his argument, Baumol does not follow through with the distinction between real and opportunity costs. But there is quite a difference in cash holding if individuals are ready to burden themselves with real expenditure (outflow of funds) or if they only prefer the utility of cash to the benefits of the sacrificed asset (only a marginal change in inflow). A dividing line should be drawn between the *"i"* representing real efflux and the other *"i"* indicating solely a marginal shift of preference from one stream of benefits to the other.

This dividing line will be picked up implicitly in Chapter 5.1. It conforms, at least to some extent, with Hicks' distinction between the involuntary and voluntary demand for money:

> I think that Keynes was absolutely right in the distinction which he drew between *M1* and *M2* (...) The important thing about *M2* is that it is a voluntary demand for money; because it is voluntary it responds to incentive. The important thing about *M1* is that it is not voluntary, save in a very indirect manner. It is the indirect consequence of decisions taken for quite other reasons (...) It is the money that is needed to *circulate* a certain volume of goods, at a particular level of prices. The old Fisher *MV = PT* gives a better *picture* of it than over–voluntarized 'Cambridge Quantity Equation'. In relation to this part of the money stock, 'Velocity of Circulation' is perfectly appropriate. (Hicks, 1967, pp. 15–16)

And with respect to Marshall, Pigou, Hawtrey, the early Robertson, and, above all, Friedman and Patinkin:

> Because they so rightly perceived that there is some voluntary demand, they tried to match the whole stock with that voluntary demand, and so to interpret the whole requirement for money in voluntary terms. This, I feel now, was confusing; it has sent many of us (myself included) chasing what I now feel to be will–o'–the–wisps. (Hicks, 1967, p. 16)

The distinction between "voluntary" and "involuntary" demand for cash has been criticized by Johnson and others (Johnson, 1970, p. 37). However, the distinction between money as a store of value and as a means of transaction, emphasizing *differences* in voluntariness, does not exclude the possibility that a transactor who lends money for transaction purposes and pays interest is also acting "voluntarily", according to Hicks, "in a very indirect manner": once he has, pressured by his needs of "real" consumption or by his plans of "real" production, "voluntarily"

decided to embark on transactions, his acquisition of cash *to be passed on* differs significantly from the other's transformation of assets into money *to be held* (see also Stützel, 1958, p. 238; Abele, 1972, p. 28; Niehans, 1978, p. 14).

The seller's, producer's, dealer's, and consumer's *transaction needs* and hence their demand for transaction money are much more urgent than the wealth–holder's problems of optimizing yield by exchanging assets. The former demand money for their real necessities and are willing to pay real expenditure interest, while the latter demand money for their conveniences, calculating their profit merely by the margin between the actual yield and the hypothetical alternative yields. It is to the latter that money predominantly renders its services as a means of holding wealth:

> A person holding money (...) is endowed with a wide range of freedom as to time and kind of outlays. He may spend now or later or never. (Simmons, 1951, p. 34)

> Exceedingly important, he is not bound to any particular time, since money, unlike virtually all commodities, does not intrinsically deteriorate through time and has minimal, if any, costs of storage. Finally, he has much greater freedom to accept or reject terms, and negotiate them. (Parsons, 1967, p. 359)

Though the active transactor, spending his money, also profits from these liberties, namely at the moments of choice and transaction, it is the cash holder who benefits much more by utilizing money's nonpecuniary services during the full period of his holding cash or by earning pecuniary returns to financial assets. Above all, the money holder's options are the transactor's uncertainties!

The cash holder's opportunities and benefits are the transactor's risks and costs. Our current money endows cash holders with the capability of creating costs in the form of uncertainty to sellers, producers, dealers and consumers (Suhr, 1982, p. 114). The money holder makes spending decisions according to his personal view of the future changes in the economy. By doing so, he transforms his subjective estimation of future contingencies into real, objective, present uncertainties for the others. This is how the monetarized economy with its intrinsic sequential structure "allows the future to play a dangerous game with the present" (Hahn, 1973, pp. 233–234).

Hence the practical question is not only how to manage portfolios or inventories under the condition of uncertainty, but also how to prevent future contingencies from harming the present economy unnecessarily via the money holder's options. Simmons (1951) suggests not the reconstruction of money but the reduction of the uncertainties themselves by managing their causes:

> The nature of the uncertainty elements which lead to piling up of liquid assets cannot be explored. However, the general observation may be made that the liquidity problem must be attacked along the lines of these causes of uncertainty rather than by destroying somehow the parity of money. (p. 35)

With the reconstruction of money, which Simmons finds neither desirable nor attainable, he means "making money more like other things" by, for instance,

applying carrying costs to it. But if the remedy of money is rejected, how can the causes of uncertainty, which “cannot be explored”, be attacked when one is dealing with the unpredictability of the future and when liquid money itself is one predominant self–inducing cause of the uncertainties in question? And what kind of “parity” is Simmon‘s “parity of money”, if money, according to him, endows its owner with a range of freedoms and options that is wider than that of other objects of exchange? Should not the cash holder himself bear the personal uncertainties instead of externalizing them?

Attacking the causes of the problem of uncertainty leads rather to the task of *diminishing* money’s *over*–parity as a medium of exchange. But before considering this problem, let us return to our line of thought concerning the initial acquisition of money and the acquisition costs.

4.4 Money Interest as Transaction Cost

Usually the acquisition of money from the banking system is not understood as an activity whose goal is the acquisition of *monetary liquidity* but one that aims at the acquisiton of *financial capital*. However, in the case of initial acquisition of money from the money issuing system it is quite obvious that the procedure does not provide for financial *capital* but for monetary *liquidity*. The money issuing system does not “save” capital and allow borrowers to utilize this. It contributes to the “creation” of monetary liquidity by “issuing” money: it exchanges assets of different types (Niehans, 1987, p. 419, referring to Thornton, 1802; Neumann, 1988a, p. 51), namely of different salability and liquidity.

The money supply system thus *liquidizes* assets that are *held* by economic agents thereby enabling them to *transfer* economic objects from one holder to another. For instance (though from a different context):

> In order that the entrepreneur may feel himself sufficiently liquid to be able to embark on the transaction, some one else has to agree to become, for the time being at least, more unliquid than before. (Keynes, 1937, p. 218)

In this case the money acquisitition costs are apparently costs of *becoming liquid* and have to be taken as expenditures connected with preparing for value transfer activities. This conforms to the insight that the payment of interest involves a real resource cost “because of its distorting effect on the pattern of transaction between money and goods” (Perlman, 1971, p. 251).

Thus at this stage of the investigation, money acquisition costs can be characterized as a kind of *anticipated transaction cost*. And later, when the agent who borrowed the money from the money issuing system has spent the money in the course of his transaction activities, his money acquisition costs then have to be characterized as some kind of *protracted transaction costs* borne by the agent who initially acquired the money to serve his transaction needs.

If interest is thought of as a transaction cost, it sounds inconsistent to speak of the “capital cost of transacting in commodity markets” and of the “capital cost of inventory management” (Feige and Parkin, 1971, p. 349) when these “capital” costs themselves are costs concerning the transactions to be performed on the basis of the managed inventory.

4.5 Similar Approaches and Adjacent Problems

In general, this transaction cost approach is still, of course, related to the Baumol (1952, 1967)–Tobin (1956, 1961) concept of transaction demand for cash, to Clower's (1967) use of "cash–in–advance" trading constraints, to the buffer stock (Laidler, 1984) and costly communication approach (Starr, 1972; Ostroy, 1973; Feldman 1973; Kareken and Wallace 1980, p. 9), to Stützel's (1958, pp. 229–255) "Saldenmechanik", and even more closely to Feenstra's (1986) model of *liquidity costs* appearing in the budget constraint (see also Orr, 1970; Lucas, 1980; Svenson, 1985; McCallum and Goodfriend, 1987, pp. 21–23; Allais, 1947, pp. 235–249).

Effective demand is restricted by the agent's transaction cash, hence also by his chances of obtaining credit and by his ability to bear the cost of borrowed money (Jarchow, 1966, pp. 25–26, 46). Such money acquisition costs can even be seen as one form of the "impediments to exchange" discussed by Jevons (1871):

> We have hitherto treated the theory as if the action of exchange could be carried on without any trouble or cost. In reality, the cost of conveyance is nearly always of importance, and is sometimes the principal element in the question. To the cost of mere transport must be added a variety of charges (...) All these charges, whether necessary or arbitrary, are so many impediments to commerce, and tend to reduce its advantages. The effect of any such charge, or of the aggregate of the costs of exchange, can be represented in our formulae in a very simple manner (...). (pp. 103–104)

Such money interest must enter the theoretical models as money acquisition costs, a special kind of monetary transaction cost. The inventories discussed must include negative assets and the negative returns to these assets. Only then can the models master the problem, hypothesized by Hahn (1966, pp. 131–134), of individuals that have initial endowments including debts to be repaid and interest to be paid fixed in terms of money. In many cases transactors have to hold a certain stock of negative financial assets (money debts) in order to initiate and maintain the scheduled cash flow (see, for example, Miller and Orr, 1966), which itself is only the monetary counterstream that enables the scheduled transfer activities in real goods. As early as 1917, Pigou already vividly depicted this transaction constraint that constitutes the buffer problem (see Chapter 9.3) of transaction cash balances:

> In the ordinary course of life, people are continually needing to make payments in discharge of obligations contracted in terms of legal–tender money. (...) Besides the flow of obligations that are thus continually maturing against them, most people have also a flow of claims that are similarly maturing in their favour. But the obligations and the claims that become due at any moment seldom exactly cancel one another, and this difference has to be met by the transfer of *titles to legal tender*. (...) If a person is unable to meet his obligations from these sources when they fall due, he will certainly be inconvenienced and will possibly be rendered bankrupt. Hence everybody is anxious to hold enough of his resources in the form of titles to legal tender both to enable him to effect the ordinary transactions of life without trouble, and to secure him against unexpected

> demands, due to sudden need, or to a rise in the price of something he cannot easily dispense with. (pp. 40–41)

As has been said in Chapter 2.2, every financial asset, every item in the portfolio or inventory of a creditor (wealth holder), corresponds to a negative financial asset, an item in the portfolio or inventory of a debtor (transactor). Hence, the greater the financial wealth is, the greater the debts and their costs are. Interest, the premium paid to savers for abstaining from transactions, is the punishment endured by the transactors, who keep the economy running. Thus the framework of current transaction–cash models must be extended to include all money acquisition costs such as interest paid for money borrowed or bonds issued.

It is possible that the general incorporation of money acquisition costs in the models of monetary economics will also help to integrate monetary and financial theory and to solve some of the remaining discrepancies such as those discussed by Lucas (1984) and Plosser (1984).

And finally in this connection, attention must be directed not merely to negative *financial* stocks and *money* acquisition costs but also to all of the capital acquisition costs paid by the *users* of *physical* capital to the *owners*. And again, the incorporation of these acquisition costs in general might lead to a clarification of some of the remaining asset–return anomalies (see Townsend, 1987; King and Plosser, 1986) in a monetary economy.

Chapter 5

THE CONCEPT OF INTEREST–BEARING MONEY

Milton Friedman and other monetary economists do, of course, pay attention to the money issuing procedure in other ways than by describing it imaginatively as helicopters dropping money from the sky. They also look at the actual *money production costs* that arise within the money issuing system. And they compare these production costs of money with the costs of money which are borne by its holders.

5.1 Equalization of Cash Holder’s Opportunity Cost

According to monetarists and others, the holding of cash includes the cost of sacrificed or foregone interest: the cash holder has *opportunity costs* because he is not receiving the income which he would have if, instead of preferring the money services of cash, he had purchased profitable assets. However, the money production costs generated within the money issuing system are far less than the opportunity costs of cash holders. Thus there is a disparity between the cash holder’s *high* opportunity costs on the one hand and the *low* money production costs on the other. To equalize this disparity it is recommended either to pay subsidies on cash, “big enough to counterbalance interest cost” (Samuelson, 1969, p. 307), or to let money be deflated slightly (Samuelson, 1969; Friedman, 1969). The cash holder is expected to extend cash holding to the optimum indicated by the low or negligible

production cost of money. It is not enough that money, perfectly conforming to the capitalistic manna–from–heaven dream, renders its nonpecuniary liquidity services to the cash holder for free, that is without the use of his own resources, but in addition, Samuelson (1969, p. 307), ironic in tone but serious in content, even believes that the poor cash holder ought to be lavished with even more welfare by being relieved of the task of cobbling shoes the leather of which is being used up in walking from his home to the bank.

Samuelson and Friedman do not ask whether such subsidy–bearing money will continue to function as a means of exchange equally as well as conventional non–interest–bearing money. This is quite questionable, because cash money, in addition to its liquidity–premium, would then be earning pecuniary returns, even though it was being held back and prevented from doing its communication job in the realm of exchange and circulation.

The same concept leads to the proposal to pay interest on minimum reserves that banks have to maintain in connection with bank–money accounts (Friedman, 1959, p. 71 ff.; for discussion and references: Sargent and Wallace, 1985). The costs of these reserves also appear to be unjustified in comparison with the low production cost of money within the central banking system.

Hall (1986) has summarized what seemingly is the main deficiency of the current monetary regime:

> A monetary policy should avoid deadweight loss. Two major sources of loss in the current system are requirements that banks hold non–interest–bearing reserves and the prohibition of bearer securities in small denominations that would compete with Federal Reserve Currency. (p. 224)

In this connection money appears as a production factor like labour or capital. It is included in the production function and it is assumed that extended cash holding frees recources for production or consumption purposes. This might be true with respect to the microeconomic view of the cash holder, but it does not take into account the negative externalities that cash holding burdens transactors with. In addition, Schöler (1988) has shown theoretically and empirically that the assumption of cash as a production factor cannot be verified.

The idea of interest on reserves and money is to let banks and cash holding agents participate in money services whose production costs are thought to be nearly negligible. It is also assumed that the use of money increases the welfare of each money user by reducing uncertainty and that “what is true for individuals is in this case true for society” (Brunner and Meltzer, 1971, p. 799). Although these ideas sound quite reasonable, they are not totally convincing: there is at least the danger that interest–bearing money will be, as has been observed by Johannsen (1913, p. 209 f.; see below Chapter 11.5), withdrawn from circulation to an extent that disturbs the purchase and sale of real commodities. This external negative effect probably outweighs the cash holder’s questionable internal gain in welfare. In addition, interest paid on reserves tends to produce an indeterminate demand for reserves, that is for the money base (Sargent and Wallace, 1985).

As the concept proposes that cash holders be rewarded for what they do, it will be more difficult than today for transactors to exact money from them for real transaction purposes. Perhaps Friedman does not fear this withdrawal of money because he generally underestimates the effects of the liquidity–trap. Since with

interest–bearing money agents are expected to hold cash abundantly to satisfy their propensity to liquidity (“satiated with liquidity”, Samuelson, 1969; Niehans, 1978, pp. 36–37), slight psychological changes in economic expectations would probably cause extraordinary reactions in the sphere of cash holding, money supply and money demand. Nevertheless the economic system is expected to be more stable with subsidy–bearing money (Hall, 1986, p. 235).

Empirical evidence seems to confirm the concept of interest–bearing money: financial innovations have been developed that are leading to techniques of interest–bearing money balances. And recently U.S. banking laws have changed to allow interest to be paid on some demand deposits. This also conforms to the assumptions and conclusions of the “legal restrictions theory” of money of Wallace and others (Wallace, 1983). This theory, which presupposes a barren money without genuine nonpecuniary services (White, 1987), says that under *laissez faire* the difference between the rates of return on money on the one hand and the rates of return on bearer bonds on the other would approach zero. Last but not least, there are even more concepts of how to optimize money by reconstructing it according to the paradigm of capital and its yield: Engels (1981; 1988), for instance, conceived a witty optimal monetary unit, denominated in terms of the stock market portfolio, and combined it with the competitive issuance of bank notes. And Eugene Fama (1983) hypothesized a similar scheme. In general, some kind of interest–bearing money has been quite fashionable in recent monetary economic theory and in financial practice. (A hypothesis as to the reason for the practical trend to interest bearing money balances will be given in Chapter 8.5.)

But what is, or would be, the effect of interest–bearing money *on the real economy* in the long run? It is very enlightening to trace these consequences thoroughly: the only agents who would bear the substantial real net costs generated by the monetary system would be those who acquired money on credit to be made use of in genuine transactions. All the other agents, benefiting from the deferral service, the liquidity service or, of course, the net–income–service of capital–money, would profit from interest–bearing money even more than they do from our premium–bearing money today. Money holders would no longer have to part with their liquidity in order to obtain not only money–services but also income from financial capital. They would enjoy additional income just from using money’s services. Money would be transformed into financial capital yielding returns according to the paradigm of capital: “As a *store of value* money is all the more suitable, the higher its real rate of interest, i.e. the smaller the margin between the yield on cash (bank notes) and that on other assets.” (Engels, 1981, p. 30) These, again, are theories of a lazy man’s money!

Producers, dealers and consumers, however, who need the money for their economic transaction activities, would face a *new problem*. If they had to borrow money, then the owner of the new interest–bearing loan–money in his role as the potential lender would expect the borrowers to pay him a *double price* for the *double benefits* of the new money: under interest–bearing money the lenders would expect the borrowers to pay,

– first, for the regular liquidity and transaction services of money and,
– second, for the interest which is already incorporated in the new interest–bearing money.

Otherwise lenders would not part with their double–premium–bearing money.

Niehans (1978, pp. 36–37) expects the holder of interest–bearing money to behave "*as if* he had no time preference and *as if* money did not matter." But, actually, the holder of such money would behave *as if* his preference for deferred over present spending were even larger than today. He would then be seduced into deferring spending

– not only by money's current liquidity services
– but also by its additional influx of interest.

Thus the propensity to defer spending, that is the propensity to cash, and, as a consequence, the rate of external interest demanded by the lenders from the borrowers of interest–bearing money for parting with their cash would probably be approximately twice as high as it is today.

After all, under the condition of interest–bearing money, agents who prefer to hold their money instead of buying profit–yielding assets or lending their money to others would sacrifice even higher alternative yields than they do today. And the higher these opportunity–costs of cash holding are, the more these "costs" exceed the money production costs generated within the money issuing system.

Hence the final question is whether monetarists and other economists that argue in favour of interest–bearing money will *once again* propose to equalize the cash holders' sacrificed yield by paying them *interest on interest–bearing money*. If they are consistent, they should!

This, of course, is an absurd circle: it is recommended that interest be incorporated into a money that already incorporates interest and, before all that, already included a liquidity–premium. And finally the argument regarding the opportunity–costs of cash holding would apply a third time ... This circle best illustrates the contradictions within the concept of interest–bearing money. The authors of this concept transform liquid money into stationary capital, and they seem to have completely forgotten the original transaction function of money.

Whereas opportunity "costs" enter into the welfare argument of neoclassical monetary economics, some additional aspects have to be taken into account: every foregone interest *yield* of a cash holder corresponds to an interest *cost* being saved by somebody else. The cash holder's sacrificed yield is the transactor's saved cost.

Hence economists who include foregone hypothetical income, called "opportunity cost", in their welfare equations should also include the transactor's hypothetically saved expenditures, which might correspondingly be called "opportunity yield". Then, on the macro–level, all hypothetical opportunity cost and all hypothetical opportunity yield would sum up to a hypothetical zero, and it seems as if the welfare argument is eliminated by this mutual compensation of hypothetical income and expenditure. But this is not so.

Whenever there is a cash holder who prefers the nonpecuniary yield from money held to the pecuniary returns from (financial) capital, then there is also another agent who prefers to abstain from liquidizing an illiquid asset because he prefers saving costs to acquiring cash for whatever purpose. Let us assume that this agent is an entrepreneur without funds, or an unemployed person who saves costs by abstaining from acquiring money by credit and who thus abstains from scheduled transactions. Then this potential transactor "enjoys" a hypothetical income which is the direct inverse of the opportunity costs "burdening" the cash holder. This, of course, is an ironical way of picturing the plight of the transactor who abstains from feasible transactions because the money acquisition costs are too

high. But this irony highlights the fallacy created in the minds of economists like Samuelson and Friedman when they label and think of hypothetical alternative yield as opportunity cost, as if the cash holder had foregone anything by choosing the very best of the wide range of options, freedoms, chances, utilities, services, benefits, or pecuniary returns granted to him for free by the current monetary system.

Actually, the "opportunity cost" of cash holding at the margin reflects nominally, in monetary units, the *real nonpecuniary yield* earned by the cash holder. The opportunity costs are a kind of pecuniary measure of the real benefits derived from cash. And correspondingly the "opportunity yield" of the potential transactor is a kind of pecuniary measure of the *real disutility* he endures in the nonpecuniary form of real transaction impediments. The "opportunity costs" thus indicate the *real profit* of idle cash holders, and the "opportunity yield" indicates the *real losses* of potential transactors.

If the potential transactor, in spite of the costs, takes out a loan because he is forced by his needs to engage in transactions, then the creditor substitutes pecuniary income for the nonpecuniary liquidity services of his money and the transactor substitutes pecuniary expenditures for the nonpecuniary transaction impediments, the former preferring pecuniary income to liquidity services, the latter preferring pecuniary expenditures to not transacting at all.

This line of thought is much more instructive than the abstract and misleading welfare argument of Samuelson (1969), who writes:

> There is no mystery about it. No something–for–nothing elixir is involved; we simply reduce the deadweight inefficiency that is entailed under *laissez–faire* by everyone's thinking myopically that more money truly costs society more resources *as measured by the interest rate*. (p. 306)

With regard to this thesis Clower (1969) rightly pointed out that Samuelson's argument, which leads to an increase in human happiness at no cost in physical or psycological resources,

> is almost as if, in an otherwise serious discussion on nonconservative physical systems, we were suddenly asked to contemplate the wonders of perpetual motion – achievable by the 'simple device' of eliminating all friction. (pp. 300–301)

Thus, in the end, I do agree with neoclassical monetary economists in that the opportunity costs of cash reflect the monetary non–optimality of the current market economy. But my interpretation is quite different. The opportunity costs of cash do not indicate how much additional benefit must be (artificially or by the market price mechanism) transferred to the cash holder, but how much of the real benefit derived from cash must be counterbalanced by real cash holding costs. Hence there is, indeed, a deadweight inefficiency in our monetary economy. The rate of inefficiency is determined by the rate of interest, which is the rate of endowing idle owners with nonpecuniary or pecuniary returns by creating cost impediments to the industrious transactors, who keep the economic system going.

5.2 The Real Equalization Problem

Monetarists and their congenial advocates of interest–bearing or quasi–capital money do worry about the alternative *hypothetical yield* sacrificed by cash holders or banks (opportunity costs). But they do not worry about the *real expenditures* for the initial acquisition of money by transactors persuing their own real transaction purposes (real costs). They do not ask the most obvious questions in this connection:

– Why do agents who initially acquire money from the money issuing system not only for cash holding but also for spending, that is *for transaction purposes*, have to pay so high a price for money, whose production cost is so low?
– Why do these agents have to pay so high a price for *so long a time* – that is for the whole credit period – although they usually use this money for a very short phase of cash holding and then only for the transfer of value?
– What about equalizing real marginal cost and benefit in this case?

Concentrating on the normal cash holder's sacrificed interest in general and dealing with the problem of letting him and the banks participate in the low production cost of money, economists skip or overlook the most instructive phase of money on its way into the realm of the free enterprise market economy. Hence they fail to notice the actual money expenditures, which are caused by the money issuing procedure and borne by those agents who have their own real transaction needs and thus demand for monetary liquidity in order to save transaction costs.

Roughly speaking, the purpose of interest–bearing money is to overcome the discrepancy between returns to money and to bonds (Perlman, 1973, p. 435) or other assets. But if one takes into account the nonpecuniary yield of money, there is no such discrepancy in real utilities. And if only the *pecuniary* returns to money or other assets are to be equalized, why make money more like assets instead of making assets more like money? Why raise pecuniary returns to money instead of lowering returns to other assets?

5.3 Real Costs and Opportunity Costs of Money

No doubt, to hold cash includes foregoing the benefits from potential alternative utilizations of that money. But the cash holder still benefits from the cash alternative he has chosen. Thus he actually enjoys the conveniences of monetary liquidity (liquidity–premium). The money service stream flows to him for free. "For free" – that means that he does not have any *real costs* worth mentioning while really benefiting from the money's liquidity: there are no real pecuniary expenditures and no nonpecuniary efforts.

To find his best choice the owner of money has to imagine all the possible uses of his money. Acting economically, he chooses to hold just as much cash as is optimal for him. Thus his (nonpecuniary) yield from cash holding is equal to or greater than the yield of any other alternative utilization of his money. He must hypothesize all the alternative utilizations (his opportunity costs) to find out his best choice in reality.

Thus the cash holder does not have any real costs at all. He does not "pay" any interest. He only foregoes alternative benefits which he cannot realize simultaneously with – and in addition to! – the benefits from the money services (i.e. the liquidity–premium) he has actually chosen. Here we have the very same

situational structure as is illustrated by Figures (1) and (2) in Chapter 2.4: one agent needs money to the extent that he is willing to burden himself with real disutilities (labour in Chapter 2.4, expenditures here), while the other has at his disposal cash needed so little that he substitutes pecuniary returns from the financial investment for the benefits from the money held.

As has been mentioned already, economists dealing with the monetary foundations of the economy do not distinguish rigidly enough between money's cost and its opportunity cost (Riese, 1983a, pp. 250–251). When, for instance, Hahn (1971a, p. 64) takes into account the "maximum interest rate an agent would be willing to pay (!) for being able to hold an extra unit of cash balances", then it seems to be clear that he means real expenditures. However, in the end he does not mean interest "paid" but that "foregone" in the sense of opportunity cost (e.g. p. 69). There are, however, methods to avoid the confusion, for instance, by speaking of money that transforms the purchasing power of today into that of tomorrow "by storage without the use of resources" (Hahn, 1971, p. 435).

5.4 Doubling of Liquidity–Premium

Instead of diminishing the disparity between money's costs and benefits, Friedman, Samuelson and others in fact propose to increase it. As has been said above, their proposal means that:

– first, cash holders would continue to benefit from money's service stream (i.e., the liquidity–premium is still granted to them for free);
– second, cash holders would once again receive as a gift the pecuniary equivalent of the very same liquidity–premium already transferred to them by the monetary system.

So if economists suggest granting some kind of interest on cash to cash holders, this does not lead to equalizing any cash holding costs. The marginal opportunity costs of holding cash are not reduced to zero. On the contrary, the concept amounts to *doubling the liquidity–premium* and hence to approximately *doubling* the money holder's opportunity costs. This paradoxical outcome is due to the fact that, in this case, economists are confusing real resource *costs* (actual expenditures or efforts) on the one hand and hypothetical *yields* (opportunity costs) on the other. This is especially astounding because John Maynard Keynes dealt with a very similar monetary problem years ago hypothesizing real carrying costs for money without including foregone interest as a real cost. Keynes considered money as an asset the liquidity–premium of which is substantial, but the real carrying costs of which are negligible (1936, p. 226).

One reason for not recognizing the fundamental difference between real cost and hypothetical alternative benefit in this connection might be that we are accustomed to what has been called the "actual standard of welfare in capitalism" (Chapter 1.5), that we believe in the three capitalistic dogmas (Chapter 1.6), and that we still suffer from what will be called the "capitalistic delusion" (Chapter 8.6). It appears quite normal to economic agents and to academics as well for capital to have a marginal efficiency substantially above zero. Thus capital is also expected to grow by itself without any real efforts added. Hence it also seems to be quite normal for money to render its liquidity service stream for free, and nobody really questions the asymmetric cost–benefit structure of (financial) capital growing "by itself". This actual growth of capital sets some kind of *standard of normality*, as if

everything were balanced and equalized at the level of regular growth of capital. With this standard of capitalization in mind, it might at first glance seem suboptimal when cash holders have less net benefit than appears justified by the low production cost of money. And this might be the origin of the confusion of real cost and hypothetical alternative yield in the welfare argument.

Chapter 6

THE EQUALIZATION OF MONEY'S COST AND BENEFIT

Obviously the idea of equalizing marginal cost and benefit does not apply to normal cash holding in the way Friedman, Samuelson and others think it does. Nevertheless, the principle of equalization sounds quite reasonable, but it should apply to money in a way that makes sense.

6.1 Cost of Initial Acquisition of Money

As mentioned in Chapters 4.2 and 5.2, there is a kind of money which not only renders money's service stream (real benefits) but also carries with it substantial expenditures (real costs): money which is initially acquired from the money issuing system imposes on its owner money acquisition costs which exceed the money production cost.

The interest which is paid for this money is not a price for the production efforts connected with the issue of money, but a price paid for the monetary liquidity. Hence the (marginal) money acquisition costs in this case are approximately equal to the (marginal) price of money's liquidity–premium. And that means that these real *costs* are approximately equal to the real economic *benefits* connected with monetary liquidity as such, both measured by the market price of monetary liquidity.

6.2 A Paradigmatic Equalization of Money's Cost and Benefit

If, on the one hand, money initially acquired and held as cash renders benefits and, on the other hand, carries costs that approximately equal its benefits, then this money is a paradigm for the "equalization of money's costs and benefits". In this case the acquisition costs of money neutralize money's liquidity–premium resulting in a symmetric cost–benefit structure of such money.

In other contexts the equalization of money's cost and benefit would require a refined investigation of optimal micro–economic cash holding, taking into account the needs, expectations, propensities and costs of cash holders in detail. This applies especially to the problems of measuring money services (e.g. Lippman and McCall, 1986; Maling, 1987). But here, in the first attempt to approach the phenomenon of money's costs and benefits in general, it is quite sufficient to assume that interest is the price paid for the bundle of money's services and that interest thus approximates its value. Hence it is crudely correct to speak of a

symmetric structure of costs and benefits in the case of cash holding involving money freshly acquired from the money issuing system.

6.3 Separating Money's Costs from its Benefits

But, of course, the symmetry of money's costs and benefits as just described does not last for long: as soon as the money borrowed from the money issuing system is spent by its owner, the situation changes dramatically. The borrower, who initially acquired the money for transaction purposes, continues to pay interest for the whole period of his loan (Chapter 4.4: "protracted transaction costs"). However, at the same time, other agents are making use of the money the acquisition costs of which are still being paid by the first in the series of agents. While he is bearing the costs – in the sense of Allais' (1947, pp. 234–272) "price for the use of money" – the others are enjoying the benefits of that money.

When the money initially acquired is spent, then that money's benefits are separated from its acquisition costs. This splitting off of money's benefits from its costs continues until the first in the series of agents pays back the loan. A very similar procedure of money acquisition and of separating benefits from costs starts anew each time the same money, on its way through the economy during the whole loan period, is "saved" by one person and "lent" to someone else. And meanwhile the money issuing system is charging the first agent in the series a price that substantially exceeds production costs. So there are a lot of unsolved equalization problems.

Concerning the disparity between low production cost and high interest one might think of reducing the price which is charged by the money issuing system to the level of the production cost of money. This would be similar to the idea of paying interest on minimum reserves. But then money acquisition cost would not even equal the liquidity–premium in the paradigmatic case of the first agent in the series holding cash. Nor would a price falling short of the exchange value of liquidity harmonize with free market principles. And, above all, the cost of money would still be separated from its benefits as soon as the acquired money was disbursed by the first agent in the series.

6.4 Generalizing the Paradigm of Equalization

Sometimes it is easier to solve a cluster of problems at the same time than to solve each problem individually. And this is the case here. To find the key to the solution one has to *generalize the paradigm* of equalized cost and benefit identified in section 6.2 above (Suhr and Godschalk, 1986, pp. 130–131).

In the case of money initially acquired from the money supply system, the acquisition costs are approximately equal to money's liquidity–premium. Generalizing this paradigm we could say: not only freshly–acquired money but also money *in general* carries with it *equalization costs* that neutralize its liquidity–premium.

In the monetary model to be considered now it is assumed that equalization costs are attached to money, regardless of whether it is acquired by borrowing, by selling goods, by gift or by inheritance. Thus obtaining cash always means assuming costs too, and disposing of money always means getting rid of costs as well. Then every agent in the money circulation series would bear his share of money

equalization costs. These costs would no longer remain with the first agent in the series. Since costs would migrate synchronically with the money and its benefits from one agent to the next, the separating of money's costs from its benefits would come to an end.

As the equalization costs connected with money are conceived to be genuine monetary costs, which are required to balance money's liquidity–premium, they have to be clearly distinguished from conventional money interest. The conventional money interest and the new liquidity costs only coincide during the phase in which an agent holds cash he acquired by credit, which was the model or paradigm for the equalization of money's costs and benefits.

Equalization costs attached to money correspond perfectly to the insight that agents who acquire money from the money issuing system do not acquire the exchange *value* of the money (financial capital) but money's *liquidity*. For acquiring money by borrowing just means exchanging an illiquid good (the promise to repay the loan) for money, which is the most liquid form of capital.

And now of course the difference between *borrowing money* and *selling goods* nearly disappears. To sell a good means to exchange this rather illiquid object for the liquid object "money". This insight resembles the observation that the issue of money does not consist in a one–way transfer of money from the banking system to the agent but in an exchange of assets with different liquidity characteristics (see Chapter 4.4 and Thornton, 1802). And to buy a good also means to exchange the liquid value "money" for a less liquid value, a good. And to borrow money equals selling rather illiquid forward claims to a part of the future national product (e.g. bonds) and receiving liquid money for it now. And paying back the borrowed money then equals buying the claims (or bonds) back again. Borrowing and paying back thus mean changing an illiquid good into liquid money today and exchanging the liquid money for the illiquid good tomorrow. Hence borrowing and lending money mean a transtemporal exchange not of the purchasing power of money but only of the state of liquidity of the objects in question. (In the foregoing argument it has not been mentioned that the objects of exchange do not only differ in their state of liquidity but also with regard to their security, and that the security again influences the acceptability, salability and liquidity of bonds, claims and money.)

With conventional money, lending it *additionally* includes parting with the free money services (liquidity–premium), and this is what interest is paid for. If, however, we had neutral money, then this money would carry with it not only its liquidity–premium but also its equalization costs. Then lending money would not only mean parting with the benefits of liquidity, which up to that time had resulted in money interest, it would also mean parting with the equalization costs – with the equalization costs which indirectly neutralize money's interest as they directly neutralize its liquidity–premium.

While conventional money interest has been interpreted as anticipated and as protracted transaction costs in Chapter 4.4, it can be identified even more precisely now: conventional interest functions as a cost of readiness for transaction until the borrowed money is spent; then it has to be seen not only as protracted transaction costs (from the point of view of the borrower) but also as luckily dislocated costs of readiness (from the point of view of the other agents in the series who can enjoy money's liquidity–premium without being charged any fee for it).

In either case the borrower anticipates his whole transaction costs before taking out the loan, and to this extent he takes into account the *hypothetically*

anticipated transaction costs, which, of course, appear to him camouflaged as capital costs. This changes under the condition of neutral money. The new equalization costs function as *costs of readiness for transactions* (liquidity costs) only in each cash holding phase.

6.5 Low Production Cost and High Liquidity–Premium

Consequently, the idea of equal costs and benefits of money can be applied to a monetary system in which agents have to pay equalization costs (or liquidity costs) instead of conventional money interest. Then the costs of money and its benefits will no longer be split in a way such that the borrower continues to pay for the monetary liquidity long since used by others.

But the disparity would still be left between money's liquidity–premium and money's equalization costs, both being *noticeably high*, and money's production costs, being *negligibly low*. This disparity problem changes its character a bit in the light of the new interpretation of money's costs and benefits, but it is still unsolved.

One might try to explain the disparity as being an inevitable consequence of the fact that monetary liquidity has to be kept scarce in order to prevent inflation. Or one might ask what would happen under the condition of equalization costs attached to money: would market price mechanisms ensure additional equalization?

All of these considerations are insufficient because they still start from inadequate premises. The production of money is more complicated than has been tacitly assumed in the above argument, and so are the problems of money's production costs and benefits.

6.6 Storage Costs of Money and Storage Costs of Commodities

It needs to be stressed that the equalization discussed in this chapter is with regard to money services, which constitute money's over–parity in comparison to other objects of exchange. It does not concern the average storage costs of physical goods in comparison to that of money (though the lack of storage costs of money plays an essential role with respect to the capability of holding large stock of real goods). The idea of adapting the storage cost of money to that of other goods underlay the original concept of Gesell (1891), before he began to think in terms of competing methods of transaction (1929, pp. 302–317). The grain giro system of ancient Egypt (see Chapter 13.1 below) also may be looked upon as an example of the storage cost of goods being attached to money.

Perlman (1971) hypothesized a model involving storage costs for money according to the paradigm of storage costs of real goods:

> Consider an economy in which a money commodity exists but in which the storage costs of the money commodity are 'identical' to the storage costs of goods. In this case money still plays a role in reducing search costs – it eliminates the necessity for a double coincidence of wants; but money holdings will be zero. (p. 238)

Though Perlman argues under special presuppositions and hence reaches non–general conclusions, the effect of the storage cost of money as a component of an inventory of assets is instructive. But Perlman himself is aware of the problem of

regarding the storage costs of money as “identical” to the storage costs of the other goods. Indeed, the crucial factor in connection with equalization is not the average storage cost of physical goods but the net yield from money held.

6.7 Uncertainty and the Equalization Problem

With respect to money as a secure means of storing value and as a reserve asset, the uncertainty of the future rates of return to capital plays a significant role. Thus it is instructive to focus our attention on this aspect of the equalization problem. As has been described in Chapter 4.3, cash holding allows agents to transform future contingencies and personal doubts into present uncertainties for transactors. In order to reduce his personal uncertainty the agent extends his cash holding and thereby imposes on the transactors uncertainties as to the date, amount and purpose of his spending. If, however, all of the agents react in the same way to a real or imagined increase in future uncertainty we have the situation discussed by Hahn (1971a):

> This means that while each agent believes himself to have made greater provision for the future, collectively they have not done so at all. That is, should the event occur against which they have desired increased insurance, the insurance will turn out to be illusory. There is here a case where a choice taken collectively would be different from the outcome of individual choices. (p. 70)

The result of a collective seeking of insurance would be even worse. It would result in a general decrease in the total number of real transactions. Economic activities would cease. Hence by way of a self–fulfilling prophecy the fear of uncertainty would itself produce or amplify the uncertainty which was to be prevented.

Hahn then suggests what could be done to reduce or eliminate the problem. He considers the proposal of interest–bearing money, but he rejects this idea and comes to an almost opposite conclusion that aims not at improving but at diminishing money’s utility or yield. The passage continues:

> The proper remedy here would not be to pay interest on money but to reduce the ‘marginal utility’ of money by making the prospective return on money as uncertain as in fact it is. (p. 70)

The question, however, is: why does Hahn propose to reduce the marginal utility of money solely by making its prospective returns *uncertain* too? (For a lottery technique to make money services uncertain see Chapter 14.1 below.) Why does he not propose to attach *other* disutilities to money? This would reduce money’s net service stream, which seduces agents into fleeing into cash. However, the idea of improving the performance of money not by paying interest on it but by reducing its utility contrasts with both the objections of Simmons (1951, p. 35) concerning money’s parity and with the concepts of an interest–bearing means of payment, and it leads to the Keynesian (and Gesellian) concept of attaching artificial disutilities (carrying costs) to money and to Allais’ (1947, pp. 418–419, 581–582) proposal to depreciate continuously the monetary means of circulation relative to the stable monetary unit of account.

Part 3

THE PRODUCTION AND DESTRUCTION OF MONETARY LIQUIDITY

Chapter 7

PRODUCTION COSTS AND BENEFITS OF MONETARY LIQUIDITY

With regard to the wealth effect of money it has been stated that the really relevant distinction between types of money is not between the "outside" and "inside" varieties,

> but between money which has no costs of production – or, more generally, whose marginal cost of production is less than its marginal value (and this has implicitly been assumed to be the case for government flat paper money) – and money whose marginal cost of production equals its marginal value. (Patinkin, 1972, p. 184)

This means that the production and, of course, the destruction of money, *i.e.* of the monetary instruments as well as of money's economic liquidity, now needs to be analysed in detail. In this connection we deliberately speak of "production of liquidity" instead of "creation of money" because money is a complex phenomenon consisting of its technical substratum (coins, notes, bank–money accounts, credit cards, etc.) and its economic fluidity called "liquidity". Neither of these components can be "created" out of nowhere. They have to be produced, and their production can be expected to generate production costs.

7.1 Issue of Money and Production of Liquidity

Money is not produced by the money issuing system alone. *Issuing* money does not yet *produce* money.

Currency notes and bank–money facilities as such are not yet money in the economic sense of the word. They are only the technical equipment which is necessary for the production of economic monetary liquidity by agents using it as money. To "create *money*", that is, to produce money's economic liquidity, additional economic effort is necessary.

The economic "moneyness" of money, that is its monetary liquidity, does not come into existence unless economic agents make use of the currency notes and of the bank–money facilities as a means of value transfer (Suhr and Godschalk 1986, pp. 92–95). According to traditional German and Austrian economics, money is a product of social consent and habit (Streißler, 1988, p. 13). Agents contribute to the production of money each time they dispose of and accept money as money. As they

alienate and accept the technical instruments which are supplied by the money issuing system, agents function as workers doing their job along the production line of monetary liquidity.

> The use of a particular language or a particular money by one individual increases its value to other actual or potential users. (Tobin, 1980, p. 86)

Handling the money according to its transfer function, agents simultaneously endow it with its liquidity.

By disposing of and accepting monetary instruments as money, agents create the *confident expectation* that everybody will dispose of and accept the money as money.

> The acceptance of this 'valueless' money rests on a certain institutionalized confidence in the monetary system. (Parsons, 1967, p. 307)

> The rational ground for confidence in money is that others have confidence in money and that the confidence is generally shared. (p. 275)

Such confidence in the monetary system includes what has been called "public consensus" or "social agreement" creating generally useful knowledge and predictability (see Vaubel, 1984, p. 30). The institutionalized *mutual confidence* (Parsons, 1967, p. 275), of course, also assumes, in current market economies, that the central bank will handle or control the issue of coins, bank notes and bank money in a way that ensures that the amount of money in circulation is stable enough to prevent the inflation as well as the deflation of money. But in any case economic agents, disposing of and accepting money, evidence faith that the system continues to function and thus contribute to the production of monetary liquidity as described.

The above argument is similar to that made by Riese (1983, p. 111) in so far as the production activities of private agents are stressed, but Riese is concerned with the procedure of *crediting* funds, that is parting with secure money at hand, while here we are looking at money being *circulated*, that is money being alienated and accepted in the course of current business.

7.2 The Equalization Problem Restated

The money issuing system does not then produce monetary liquidity, it only provides agents with the *technical instruments* of money.

Thus agents should be charged a price *for this issuing service only*. The liquidity–premium and the cash holder's sacrificed interest have nothing to do with the production cost of the technical equipment of money, but with its economic liquidity and utility. This side of the production of money, that is not the production of the technical equipment of money, but that of monetary liquidity and its costs and benefits, obviously has to be conceived as a problem concerning not the money issuing system, but the economic agents themselves who produce the "moneyness" of money by making use of money as money in the course of their economic communication.

Agents using money should be charged a price for the issuing service by the money issuing system. But the task of establishing an optimal cost and benefit structure of monetary liquidity as such is a problem to be solved *amongst the agents* who create and use money's liquidity.

7.3 Symmetric Contributions to and Benefits from the Production of Liquidity

Agents do indeed contribute to the production of the very same monetary liquidity by means of which they save economic communication costs. Just as they contribute to the production of monetary liquidity, so do they benefit from it. This is due to the fact that money is not a private good nor a public good, but a *social relations good* like a language or the structure of a telephone network (Engels, 1981, p. 124). Participants benefit from the system by making use of it and by thereby simultaneously producing benefits for the other participants, and vice versa (Tobin, 1980, p. 86).

Hence it seems as if production efforts and communication benefits are reciprocally well–balanced in the process of production and utilization of monetary liquidity. Because of this symmetric structure of cost and benefit in the production and use of monetary liquidity, it appears that there is no problem of equalization of cost and benefit in connection with the production of the economic "moneyness" of money. It seems as if there are no Pareto–relevant effects in the mutual production and utilization of money's liquidity (Vaubel, 1984, p. 41; Suhr and Godschalk 1986, p. 96). But this appearance is fallacious.

7.4 Asymmetric Contributions to and Benefits from the Production of Liquidity

Obviously there are people who do benefit from money more than others. Some enjoy the liquidity–premium or earn money interest although they do not dispose of or accept the money involved for real economic transaction purposes. Others lack monetary liquidity and pay interest even if they contribute to the production of liquidity by using the money lent to them as money, and in addition, they go on paying interest after having long since disposed of their money.

Curiously enough, agents who no longer need their monetary liquidity for their own real transaction purposes benefit most by using the medium of exchange as capital. And this premium or income "from mere capital" leads us back to the crucial point of our investigation: capitalism includes transfers of money from levels of high marginal utility to levels of low marginal utility. Now we see that the monetary system in fact grants the best opportunities to profit from money precisely to those agents whose own real transaction needs are the smallest. We are obviously on the right track, approaching the goal of our pathfinding efforts.

Chapter 8

REWARDING THE MARPLOT IN THE GAME OF THE MONETARIZED ECONOMY

8.1 Cash Holders' Liquidity–Premium

Not all the agents who use money and who profit from its money services always make equal contributions to the production of liquidity with regard to the time and to the amount. And here again the cash holder's case attracts special attention: while holding cash he neither disposes of nor does he accept money as money. He refrains from doing so himself, and simultaneously he prevents others from accepting and disbursing the money held as cash by him. Thus the general statement was wrong that all production efforts and all communication benefits in the process of using money by agents are reciprocally well–balanced.

Cash holders do not contribute to the production of monetary liquidity, but they certainly do benefit from it. And this is the origin of cash holders' free of charge liquidity–premium, which, at the same time, is the origin of conventional money interest. The cash holder profits from the other agents who go on producing monetary liquidity while he drops out of the production line. Hence he benefits from the performance of the others in the system of the monetarized economy.

Moreover, the cash holder enjoys the services of monetary liquidity in spite of not only not contributing to the production of liquidity but even hindering others from doing so. This is why it is instructive to describe the cash holders' activities in terms of a *game model*.

8.2 Reciprocity and the Double Coincidence of Timing in the Economic Game

Assume that there are agents who agree to introduce money into their exchange economy in order to economize their economic communications and transactions. Let us look at their economy as an economic game. In this game the agents act having characteristic symmetric expectations. They produce goods expecting others to buy their products and expect the others to expect the same from them.

> All individuals accomplish their ultimate exchange through two–stage trades rather than through direct one–stage trades or through longer, more indirect trading sequences. (Jones, 1976, p. 758)

This reciprocal calculus of expectations only goes into effect fully if nobody abstains from participating in the game after having sold goods.

> Exchange is completed when two producers have exchanged their products. When a producer has sold his product for money, exchange is not yet complete; someone is in the market waiting for him. The purpose of money demands that the sale of a product for money shall be immediately

> followed by the purchase of a product with money, to complete the exchange. Anyone hesitating with his purchase leaves exchange incomplete and interrupts a sale for another producer. This is a misuse of money. (…) Purchase must follow step for step on the heels of sale. (Gesell, 1929, pp. 194–195)

The reciprocal character of human labour has been a central principle of modern political economy from the very beginning (see Griffioen, 1988, pp. 137–140, referring to Mandeville, Quesnay, Adam Smith and Hegel). Parsons (1967), considering the conditions under which a system of monetarized market exchanges can be expected to function, also stresses that rules are required to ensure *reciprocity* of the participants' expectations:

> The most elementary of these rules is the condition of reciprocity in the acceptability of money. This may be formulated as follows: He who urges money on others in exchange for 'real assets' must be willing in turn to accept money from others in exchange for his assets. Only mutual acceptability can make money a functioning medium rather than simply a way of getting something for nothing. From this central point, the network of norms that we ordinarily think of as the institutions of property and contract can be worked out. This is the fourth of the basic components of the complex that constitutes a generalized medium. (p. 360)

The reciprocity postulate, of course, does not merely apply to the acceptance of money but also to that of the "real" objects of exchange. Thus Parsons should have continued:

> And vice versa: He who urges commodities on others in exchange for money must be willing in turn to accept commodities from others in exchange for his money. Only mutual acceptability of commodities *as well as* money can make money a functioning medium rather than simply a way of getting something for nothing, namely earning money's services (or interest) for *not* accepting commodities in exchange for one's money.

As exchange requires the double coincidence of want, supply *and timing* (Perlman, 1971, p. 235), reciprocity must also be realized with respect to the timing of supply and demand: both partners have to decide about the time of their scheduled exchange activities. Otherwise uncertainties about the timing of supply or demand enter into the economic transaction system. In a barter economy there is no danger of agents not deciding and agreeing about the timing of supply and demand. Hence there is also no danger of uncertainties arising from the timing problem. But money makes it possible for agents who sell goods not to decide simultaneously about the time of their own demand for the real goods of the others. Consequently the next seller is burdened with the uncertainty about the first seller's decision to spend his money. Coincidence and reciprocity of timing no longer exist.

The seller, having accomplished his sale and with money at hand, has the *freedom of timing* his demand (Simmel, 1930, pp. 209–210). The freedom to decide about the *timing* of demand, then, currently appears to agents and economists as the "storage of value" function or as the "deferral service" of money, while the

freedom of timing appears as the “liquidity service”. And it is because of this “freedom of timing” that money is seen as a “link between the present and the future” (Keynes, 1936, p. 293).

But rather than *linking* the present and the future, money actually *separates* them, namely by enabling money holders to produce economic uncertainties. In order to connect the present with the future by a more reliable “link” than the money holder’s options, agents who receive money should be induced to decide about the date at which they plan to use the money to demand a present or future need, thereby putting an end to the uncertainty about timing. But this would not be sufficient to reconstruct reciprocity of timing because agents usually cannot decide on exchange *alone*: to ensure reciprocity, *coincidence* of supply, demand and timing is required.

However a problem arises here. One of the advantages of money, which constitutes its suitability as a means of payment, is its ability to bridge the lack of synchronization of obligations and claims maturing against and in favour of economic agents. Once inventories of money are held, payments and receipts need no longer be synchronized (see Brunner and Meltzer, 1971, p. 800; Pigou, 1917, pp. 40–41, as quoted above in Chapter 4.5). This is a result of the superior productivity of indirect exchange effected by money. The problem of an optimal monetary transaction technology then is how to maintain general *reciprocity* of timing without reestablishing the timing transaction constraint, that is the requirement of direct coincidence of timing.

To eliminate the requirement of *immediate* coincidence of timing and replace it by reciprocity in timing *intermediated* by money it is not necessary to grant sellers receiving money *total* freedom of timing. It would be sufficient to give them the freedom to decide about the date of their scheduled real demand without being directly linked to their buyers’ timing problems but still being linked to the other agents in the market.

In the very same way in which the former seller in his next role as a buyer has to find somebody in the market who offers exactly what he demands, that former seller in his alternate role as a buyer can be expected to look for somebody in the market who fits exactly into his *timing* schedule. Then the advantages of indirect methods of exchange are fully utilized *without* one–sided timing freedom for demand producing corresponding unilateral timing uncertainty for supply.

Now let us return to our economic game. Assume that an agent who has sold goods and has at his disposal money does not want to purchase any real commodities at the moment. He decides to “save” his money. He plans to drop out now and purchase commodities only after a certain period of time. Then, because of reciprocity of timing, he is expected to deputize a substitute to step in and close the ranks in the present, this drop–out agreeing with the substitute that the former will be allowed to replace the latter after the period of time. And after that period the former drop–out demands that the substitute make room for him again. This at least is what the expectations would be in a *symmetric* economic game under the rule of reciprocity.

8.3 Rewards for Sabotaging the Game

In the real economic game, agents who drop out are not at all seen as killjoys of the game who are obliged to find substitute agents. On the contrary, agents who drop out holding back their money are given the liquidity–premium for doing so. And, according to the actual conventions of the real game, an agent who is eager to function as a present substitute for the drop out has to pay ransom to free the frozen money.

Money, with its provision of liquidity services, thus modifies the characteristics expected of a symmetric economic game. It is due to money's liquidity–premium that agents who drop out for a period are rewarded and agents who step into the breach are punished.

The killjoy of the game, who deviates from the symmetric expectations and who thereby disturbs the dynamic round of reciprocal fulfilment of expectations, rakes in rewards in the shape of either the liquidity–premium or its pecuniary equivalent. Hence in this monetary game the marplot of the game is rewarded systematically for functioning as a marplot.

Each time the killjoy pockets interest he enlarges his competence to disturb the others' game and profits from doing so. This results in a positive feedback relation in the rules of the game that strengthens the power to sabotage the game through a function that grows exponentially.

8.4 The Self–Destructive Structure of the Game

The rules of the actual capitalistic economic game are such that those who sabotage the game are rewarded with the liquidity–premium or with interest. Therefore this game can be expected to undermine its own playing conditions, resulting in a kind of self–destructive game.

In the course of time the game changes its character: at the beginning agents start the monetarized economy by using their money as a means of value transfer to facilitate transaction activities in order to serve their needs in producing and exchanging real goods. Thus the economy starts with money as a *financial instrument* to serve real economic requirements.

But as the game progresses more and more of its monetary liquidity ends up in the hands of the marplots or killjoys of the game and not in the hands of agents who have needs and who thus have the propensity to produce, exchange and consume. The richer the agents become, the more they appreciate saving and lending money. And this means that money is no longer mainly a means of payment, but that money as an instrument to make more money becomes more interesting than other goods: thus money no longer functions as a means of serving the real economic purposes of the members of the economic community.

On the contrary, real production and real consumption activities turn into a means of serving the goal of the marplots to make more money with their money. In the end, the sector of financial transactions outperforms the sector of real economic activities. Money, which was introduced as a mere financial instrument to economize real communications and transactions, becomes itself the central goal of real economic endeavour. The real economy is transformed into an instrument enabling owners of capital to increase their capital beyond any rational economic need or utility.

As a medium, money *necessarily* shifts some attention from the final goal of economic activities (the real utilities of goods) to the instrument that is needed to reach that goal (money):

> As a symbolic medium, money 'stands for' the economic utility of the real assets for which it is exchangable (...) It thus directs attention away from the more consummatory and, by and large, immediate significance of these objects toward their *instrumental* significance as potential means to further ends. Thus money becomes the great mediator of the instrumental use of goods and services. (Parsons, 1967, p. 508)

Due to the fact, however, that money renders its services and power for free, it does not merely distract as much attention from the real utilities of goods as is required for its functioning as a medium, but it induces and seduces agents to develop a pathological proclivity for the medium of communication services and economic power itself.

8.5 Dictating the Rules of the Game

The game of the real economy is a game in which agents wager real disutility in the hope of raking in rewards in the form of real utility. It is a real–life game. Money facilitates and economizes communication in this real–life game to such an extent that being excluded from the utilization of money virtually means being excluded from the game as such. Hence all agents who have to participate in the economy to live also have a substantial need for money, inasmuch as money is the medium that liquidizes one's given assets.

It is not the exchange–value incorporated in money that agents need, since, for example, they have their own capital in form of their labour–capacity. What they need then is the transformation of the illiquid capital at their disposal into liquid purchasing power. This also means: agents do not need capital because they already have it. They only need the most liquid amongst the capital assets, that is money.

This is why agents who possess money have the power not only to ask for interest, but also to set additional conditions for participants in the game before allowing them to use their money as a means of communication in the game. Money is the most general medium "for the control of fluid resources" (Parsons, 1967, p. 280). Parsons, following his analogy between money in economy and power in polity (pp. 23–24, 228–229) and observing an "exact parallel between money and power" (p. 276), describes the function of money as a key to the channel leading to economic utilities:

> The money held by a social unit is, we may say, the unit's capacity, through the market channels under given rules of procedure, to command goods and services in exchange, which for its own reason it desires. (p. 276) The more money he has, the greater is his command of the immense range of utilities purchasable in the market system. (p. 274)

The owner of money, however, not only has the whole range of goods and services of the market system at his disposal, he also has more bargaining power: "Finally,

he has a much greater freedom to accept or reject terms, and to negotiate them" (Parsons, 1967, p. 359).

Agents, having control over the generalized medium of economic communication, can utilize their monetary bargaining power to determine the micro–rules of the game to the extent that the other participants either stop economic communication (i.e. produce for their own needs only, inasmuch as they can do that), or try to avoid the use of money (i.e. seek money–less by–pass techniques of communication like barter). The power to determine the rules is also limited in that the others are capable of organizing institutions of countervailing power like labour unions (which again, of course, are counterbalanced by associations of economic agents on the side of money and capital).

Taking into account this bargaining power of money, which gives its owner the possibilty to dictate to some extent the micro–rules of economic communication, the sovereignty of capital in economic corporations as well as the institutions of countervailing power just mentioned can probably also be understood as emanating from the power of money in economic communication (Suhr 1983a, pp. 329–330; 1988, p. 62; 1988b, pp. 80–87). If this hypothesis is valid, then Marx was wrong in attributing "capitalism" to private property relations in the field of economic production. Private property, then, does not bear any original guilt regarding capitalism. To the contrary, it must have been the asymmetric structure of money that *deformed* the originally symmetric communication between the private owners of labour and other objects of exchange.

Suppose our hypothesis is valid. Then we can no longer assume that "in a perfectly competitive market it really doesn't matter who hires whom". i.e. capital labour or labour capital (e.g. Samuelson, 1957, p. 894). This prerequisite for the concepts of labour–managed and participatory economics, which has been a subject of general discussion (Dreze, 1974; 1976; Dreze and Hagen, 1978), is also questioned with respect to the monetary foundations by Vogt (1983). Vogt shows that the access conditions for labour and capital to the financial markets are unequal because of the different creditors' default risks. Such unequal risks of refunding, of course, constitute an additional point of superiority of capital over labour but are not the basic and general cause of the asymmetric structure of the monetarized economy. Our hypothesis is that even with equality of the risks in question, money and other objects of exchange endow their owners with unequal options and different bargaining power in economic communication. In a monetarized economy the symmetry of the completely competitive market, between owners of money and owners of other objects of exchange, holds true only under very restrictive conditions, and symmetry does not exist if the parties in question are financial capital on the one hand and labour that wants to earn money on the other.

However, not only the traditional asymmetric structure of industrial corporations but also the new financial development of interest–bearing cash balances can probably be explained by the superior bargaining power of the owners of the very medium of economic communication. Owners of money can threaten to withdraw their bank–money and hold currency–notes as money unless they receive interest on their bank–money balances. Without legal restrictions competition forces banks to give demand deposits valuable services or even interest as substitutes for the benefits of cash (see Yeager, 1962, p. 21; Wallace, 1983). This might very well lead to interest–bearing money balances inasmuch as the banks are

still able to make profits on their financial intermediation. An example of this development is the Negotiable Order of Withdrawal (N.O.W.) account in the U.S.

Concerning the above and in several other connections, Parsons has observed money's over–parity in comparison with other objects of exchange. However, a reservation needs to be made, as Parsons (1967) has done in elaborating a "crucial difference between money and power":

> Of course in competitive bidding the holder of superior financial assets has an advantage in that, as economists say, the 'marginal utility of money' is less to him than to his competitor with smaller assets. But his 'bid' is no more binding on the potential exchange partner than is that of the less affluent bidder, since in 'purchasing power' all dollars are 'created free and equal'."

This, of course, depicts money as being a rather too harmless general symbolic medium of communication. The deficiency of the argument, however, lies not in understanding money merely as a language and symbolic medium instead of in terms of labour and exploitation, as Ganßmann (1986) has criticized, but in that Parsons has completely forgotten the "maximum exchangeability" and the "far wider usefulness in exchange" of money in comparison with other objects of exchange stressed so much in other connections (Parsons, pp. 368, 365). The investor holding money does not want to spend it for the utility of a real good on competitive markets but strives to transform it into pecuniary returns. He has at his disposal the medium without which the others are unable to play their economic game and to participate in the benefits of the generalized medium of exchange. This, without doubt, gives to the money holder "power" over potential money users.

8.6 The Capitalistic Delusion

In the actual economy, agents who save and lend money are not considered economic killjoys at all, but they are treated as benefactors thanks to whom the economy is supplied with capital. And of course agents that lack money do find it beneficial to get it. But this is a delusion: financial investors have the capability to disturb the production of liquidity and to turn their power to do so into a prebend.

Gesell gave a vivid illustration to make clear the function (or dysfunction!) of loan–money in the conventional monetary game. What is the money–lender's service to the borrower? What is his contribution to the national product? Gesell's answer is:

> A king stands beside the barrier; he obstructs the stream of commerce across the frontier and says: 'The tithe is mine!' The money–lender stands beside his safe; he obstructs the exchange of commodities which requires its contents, and says: 'Interest is mine!' King and money–lender render no service, they exact a tribute simply by obstruction. Interest is thus, like import–duties, a tribute, with the difference that the king uses import–duties to pay State–expenses, whereas the capitalist uses money interest on himself. (Gesell, 1929, p. 315)

But everybody still thinks that to lend money means to supply individuals with financial “capital”. This is a *delusion*.

Because of this capitalistic delusion, which makes the saboteur look like the benefactor of the system, economists up to now, with the exception of Keynes, have failed to clarify the crucial defect of actual capitalism. For example, let us take the “savings” of agents who do not invest in their own real economic activities, but lend their money to others. Such savings are usually treated positively because they are thought to be indispensable for investments. Nearly all the economic theory that deals with the conventional “equilibrium between savings and investments” is based upon the very same capitalistic delusion and ignores the fact that holding back monetary *liquidity* of funds is something quite different from economic “saving”. To illustrate this difference it is convenient to look at the “saver” in quite an unconventional manner: the saver acting as a quasi–bank destroys liquidity and reissues money.

Chapter 9

PRIVATE DESTRUCTION AND REISSUE OF MONEY

9.1 Private Quasi–Issue of Money

Cash holders withdraw money from circulation. Lending it to others, they recycle money into circulation. In this way cash holders who lend their money to others act as a kind of quasi–issuer of money. What they do is very similar to what the money issuing system does.

During the time of the withdrawal of money from the real economic communication, cash holders destroy the economic monetary liquidity of the technical money instruments that they have at their disposal. And by lending these monetary instruments to others, they are issuing it just like the money issuing system does, enabling the others to continue creating liquidity. One need not necessarily be a professional academic to recognize the destruction of money by the lender as “holes” in the circulation:

> If the money offered for a loan by the capitalist is drawn from the existing circulation, the capitalists, by lending this money, only fill the holes they dug by withdrawing it. Ten, a hundred or a thousand money–lenders mean ten, a hundred or a thousand holes dug by these money–lenders in the path which money has to pursue. The greater the amount of loan–money offered, the larger are these holes. Thus, other things being equal, a demand for loan money must always arise exactly equal to the amount of money which the capitalists have to lend. (Gesell, 1929, p. 312; see also Johannsen, 1913, p. 323)

Hence the destruction of (nominal) money by private agents in itself creates the (real) need and demand for the money to be reissued by them. And this is probably the best way to identify one of the characteristic differences between the cash

holders “voluntary demand” for idle or inactive money and the other agents’ “not voluntary” (Hicks, 1967, p. 15 f.) demand for active money.

9.2 The Private Money Issue–Premium as a Monetary Prebend

Similar to the money issuing system, cash holders also charge a fee for their reissuing of the money. This fee also exceeds their own costs caused by their activities of destroying liquidity and of re–issuing its technical substratum. In this way private agents are able to exact a private issue–premium from the other agents of the game who need money to be liquid and to perform economic transactions. Thus private cash–holding and private destruction and reissue of money amount to a monetary prebend available to all agents who have dispensable monetary liquidity at their disposal. And as dispensable goods can be transformed into liquid money by their sale, this prebend works in the case of practically all dispensable goods as long as the owner succeeds in selling them and the money from the sale is not needed for his survival but is also dispensable.

9.3 Cash as a Buffer and an Operating Basis

Our monetary system authorizes private agents to withdraw and re–issue money. This private capability as such is not as bad or dangerous as it sounds. Indeed it has positive functions. They have been mentioned above: holding money renders money services, and holding cash functions as a micro–economic buffer stock (Laidler, 1984) and as a convenient operating basis (see also Pigou, 1917, pp. 40–41, as quoted in Chapter 4.5).

But due to money’s asymmetric liqidity–premium, cash holding in the sense of the capability to withdraw and reissue money does not lead to an optimal state of equilibrium between the real benefits and real costs of cash, but to an asymmetric structure of net benefits. First of all, this induces cash holders to hold more cash than is optimal from a macro–economic point of view, and second, to turn into profitable capital the services of the monetary medium of exchange. It is by this prebend that agents who have money, but have no transaction needs, profit from the others who have transaction needs, but have no money.

9.4 Shifting Time Preferences

Money, credit, interest, and capital are, of course, *time phenomena* that are connected with the sequential structure of the economy. “The importance of money essentially flows from its being a link between the present and the future” (Keynes, 1936, p. 293). However, interest theories like that of Böhm–Bawerk, built on the time period needed for the production of goods, or like that of Riese, based on the default risk while bridging the time, or the concept of interest paid for present over deferred cash, – none of these grasp the simple, real systematic cause of returns paid on the means of payment. Though the lapse of time matters in monetary economics, and though in the economy as it exists time preferences influence the agent’s financial decisions and hence also influence prices, including the interest price of financial capital, the way these terms have entered into the foundation of interest theory has led to a confusion of the predominant cause and the main effect. Cash holding must be looked at in a quite different way.

First, we must remember that money loosens rather than tightens the link between the present and the future in that it disturbs reciprocity and coincidence of the timing of real supply and demand by granting the freedom of timing to the sellers who carry out their sales and receive money (Chapter 8.2). Current money hence is *not* an appropriate economic "link" between the present and the future.

Second, time preferences are falsified by the "freedom of timing" granted to cash holders. This freedom is beneficial to cash holders, thus functioning as a reward for not spending the money. Not spending means withdrawing money from circulation, thereby destroying its economic liquidity. Agents who withdraw money from circulation and then reissue it for a certain period by lending it to others are similarly rewarded with interest by those who acquire the reissued money.

Hence money holders develop an *artificial* propensity (not only to liquidity but also) to postpone real demand, that is to "save". Correspondingly agents who are punished by interest for turning their needs into demand now, will develop an *artificial* propensity to abstain from economic activities in the present and to postpone their transactions to a future date too. While cash holders and owners of capital abstain from present demand voluntarily, the others, who are repelled by interest or other capital cost, abstain involuntarily. These time–shifting constraints emerge from the cost–benefit structure of conventional money.

The artificial shift in time preferences appears to academic observers *as if* preference for present goods exceeds preference for future goods. Otherwise, it seems to them, agents would not be willing to pay interest for having their chance now. But this appearance again is fallacious. It is part of the capitalistic delusion (Chapter 8.6). Agents do not pay interest "voluntarily" but under constraint. Once again, the main effect is mistaken for the predominant cause.

If individuals abstain from present consumption or investment because wealth holders are induced to "save" and transactors are handicapped by costs, it is not surprising that the current economic system according to its "golden–rule–efficient" programs puts "heavy weight on future generations at the expence of transition generations" (Starret, 1 972a, p. 284).

With neutral money different preferences and expectations for different goods in the present as well as for different goods in the future would be reflected directly and without falsification by the correspondingly different spot prices of present or future goods or of spot or forward claims on the national product, unaffected by the price of monetary liquidity, which itself influences time preferences. This is due to the fact that the current state of preferences and expectations is reflected in the spot price of commodities.

Today's monetary liquidity is a source of a stream of utility in the course of time: the liquidity–premium, monetary–service stream. This is something to be appreciated as present (and current) gratification. From this originates the *artificial* preference of agents for *present* cash. And since present cash means at the same time *real* deferment of spending, preference for cash appears as if it were *real* preference for *future* goods simultaneously. The same illusion makes the preference for income from deferment appear as if it were preference for future goods and as if interest were a deferral–premium. Of course, both motives play a role in reality. But the argument of confounding cause and effect is more valid the smaller the real marginal utility of goods or money is to the cash holder and "saver", i.e. the richer he is. The richer he is, the smaller are his real marginal deferment needs. They are finally negligible.

If monetary liquidity were a source not only of money's services, but also of costs, the propensity for present cash would decline corresponding to the stream of costs attached to money. This effect of carrying–cost on money was already stressed by Keynes (1936, p. 233). But as long as cash renders present gratifications only, agents will not part with it unless they receive something in return for these gratifications: interest, for instance. So all the others who need monetary liquidity have to pay interest for it until they pay back the borrowed money. As a result of this, their present activities become more expensive than they would have been if they had started later with their own money. And since agents are ready to pay for performance of activities *now,* it seems *as if they prefer present to future goods.*

Under the condition of neutral money agents would be free to liquidize their future labour or income already today without any time–shifting constraints (except, of course, for the credit problem, that is the price to be paid to the creditor to compensate for the default risk). Then agents would no longer be restricted to their primary endowment of goods as in some of the general equilibrium models excluding credit transactions. Ceteris paribus, agents would become able to plan their savings and expenditures within their "life cycle" without regarding time–shifting costs or premia, except, of course, for those costs and benefits that arise from real present, or future, scarcity or plenty.

9.5 Monetary Transaction Constraints

After all, money, which is destined to save transaction costs, not only triggers costs when it is acquired initially, but also generates money acquisition costs *each time* it is withdrawn and reissued by private agents who "save" money and recycle it into circulation by "lending" it to others. The more agents that are engaged in this private money destroying and issuing business, the higher are the average *monetary* costs to the economic community as a whole.

But nobody recognizes these costs as being monetary transaction costs. It seems as if interest is the cost of capital. Thus it seems as if interest, being the cost of financial capital, *deters from real investments* if the expected marginal efficiency of the real investments does not match the money–rate of interest. But in fact the effects are different: interest paid on outside funds does not originally deter agents from real investments, not even from the buying of productive real capital. Interest already deters agents from *liquidizing some illiquid good* for the purpose of purchasing production or consumption goods!

The high artificial fee for using the monetary system for transaction purposes deters agents from ordinary buying and selling. It also induces them to look for alternative substitute transaction techniques. They find such substitutes in barter clubs and bilateral or multilateral barter transactions (Suhr and Godschalk, 1986, pp. 108–115). Silvio Gesell described this effect in detail (1929, pp. 306–308, as quoted below in Chapter 11.2). Thus the very medium of transaction called "money" in the end generates *transaction constraints* in the form of transaction costs so high as to deter and discourage agents from using money. This means that in the end the monetary system hinders their participation in the economic community of production, exchange and consumption.

Not to participate, that means not to be able to sell one's labour, not to be able to earn wages and not to be able to buy goods. Hence one should expect artificial unemployment as well as an artificial under–supply of funds among some, alongside

others who are automatically over–supplied with more than they really need themselves. All of this, the unemployment, the under–supply and the over–supply, is caused by constraints which are induced by the monetary system. And deficiencies connected with monetary transaction constraints increase with the growth of capital, unless there are counter–balancing asymmetric procedures that compensate for the unbalancing process. Such counter–balancing activities have been mentioned in Chapter 2.4: social policy; public investment and investment assistance; etc.

The aforementioned deficiencies much resemble some of the results that Hahn (1973, p. 235 f.) reported about his own and others' work on adjoining a transaction technology with the traditional, pure exchange economy. It proved unexpectedly difficult to show that an equilibrium relative to the transaction technology exists. Among the interesting features that emerged were these:

– feasible transactions are not profitable,
– potential markets are inactive,
– a sequence of budget constraints on agents,
– "efficiency" had to be defined not only relative to the transaction technology but also relative to the endowment matrix.

Indeed, under *conventional* money, transactions that do not yield the money interest are unprofitable. Keynes, more than 50 years ago, had already come very close to these insights:

> It is easy to show that the conditions for a Neutral Economy are not satisfied in practice (...) For in an entrepreneur economy, as we shall see, the volume of employment, the marginal utility of which is equal to the utility of its marginal product, may be 'unprofitable' in terms of money. (Keynes, 1933a, p. 79)

Markets in assets whose "rate of return over cost" (Fisher, 1930; Keynes, 1937a, p. 101) cannot compete with the nonpecuniary money services or their pecuniary equivalent remain or become inactive. Agents using outside funds calculate other prices (including transaction costs) than agents endowed with their own money, with this difference showing up, for instance, in the difference between the real interest cost of transaction money (expenditures using resources) and the foregone yield of money spent for an asset (opportunity cost being merely a hypothetical measure).

If, however, the transaction technology is characterized by carrying costs on the medium of payment such that the disutility of these costs compensates for the utility of money, then the rate of return over cost approximates zero. Then more feasible transactions become profitable, more markets become active, and the original endowment of agents with money becomes negligible. And with reference to what Hahn (1973, p. 236) reports about the studies of Starret (1972) and Kurz (1972): the deferral service of instrumental money will be substituted for by the use of the monetary unit of deferred payment, which means that markets in money as a store of value will be replaced by markets in future money. Contracting and performing intertemporal transactions in money or monetary units, of course, uses resources too, but the use of the monetary unit itself is free. The monetary unit and

its stability, though meeting the non–rivalness test, are not (public) goods but quality characteristics of money (Vaubel, 1984, p. 29) that concern the information code of the monetary language. The unit of account can be utilized by agents independently of whether they hold and use the money itself, which is denominated in terms of the unit (Yeager 1983, p. 321).

9.6 Credit Budget Restrictions

As has been mentioned in Section 9.1, Riese (1983, p. 111) also argues that money's liquidity is produced by the economic agents themselves, but Riese stresses default risk as the cause of interest and hence of budget restrictions. Of course, restricted access to credit means restricted access to monetary liquidity too. Indeed, the risk that a loan will not be refunded may prevent the lender from lending and the borrower from acquiring money. However, this risk is not unique to a monetarized economy. Even in an exchange economy that allows credit business, transactors with different initial endowments have different chances (and different costs) when engaging in credit contracts.

Part 4

OPTIMAL MONETARY LIQUIDITY

Chapter 10

NEUTRAL MONEY

In this Chapter we deal with *neutral money* in a very fundamental sense, namely, in the [sense of] money's *structural* neutrality, that is its neutral cost–benefit structure. However, this has not always been the central question of money's neutrality, and I do not claim that it is the only relevant neutrality problem of the monetary system. Moreover, of course, money in general is not neutral at all in that it saves costs and makes the economy more efficient: the "qualitative" nonneutrality of money (Samuelson 1968, p. 3; see also Neumann, 1988, p. 62) and "qualitative dichotomy" (Schäfer, 1988, pp. 9–10, 278).

10.1 Historical Remarks

The subject of neutral money has been debated by theoretical economists for many years now. It is the old question concerning the "veil of money": Does money influence the structure of preferences, prices and allocation of resources? – And does it, as a consequence, affect the economic equilibrium?

Karl Marx (1859, pp. 78–79), for instance, quoted many authors who described the asymmetric structure of selling and buying, which has been treated here in Chapters 3.2 and 8. Due to the well–known inequality of selling and buying, Marx had some difficulty proving his view of the origin of "surplus value". He was convinced that surplus value did not come from money and its effects on exchange activities. According to his conception, surplus value did not arise as a "surcharge" in the realm of economic *circulation*. Marx repeatedly emphasized that surplus value, as he saw it, originated in the exploitation of labour by private owners of the means of production, and that this was an outcome of the realm of *production* (Suhr, 1988).

It was the problem of money's effects on the economy which formed the point of difference in the controversy between Marx on the one hand and Pierre Joseph Proudhon, John Gray (1831, 1848) and John F. Bray (1839) on the other: Proudhon clearly recognized that money played a biased role in the exchange of labour and goods, and hence he suggested alternative banking techniques (Suhr, 1983, pp. 12–20).

Neutral money is also a subject of study of modern monetary economics (e.g. Koopmans, 1933; Hayek, 1933 and 1935, pp. 31, 129–131; Lutz, 1969; Streißler, 1988, pp. 18–29; Neumann, 1988a). But recent contributions to the problem have concentrated on the short–term and long–term effects of *quantitative* changes in the money supply (quantitative neutrality problem). Though the conditions which must be satisfied if money is to be strictly neutral are impossibly restrictive (Gale, 1982,

p. 52), and though nonneutral effects are conceded in modern monetary economics (e.g. Brunner, 1971a, p. 23; Neumann, 1988a, pp. 51–53), the deviations from the ideal of neutrality discussed in the area of the quantitative neutrality problem are relatively harmless. Besides that, the *structural* neutrality of money is a basic propositon of classical as well as of neo–classical monetary economics.

The concept of neutral money is still accepted as a "perfectly valid construction" with regard to flat money (Niehans, 1987) or as a "durable idea precisely because it is hard to find anything else to put in its place" (Gale, 1982, p. 53).

Neutrality of money can also be discussed with regard to different appearances of the money illusion. As long as the money illusion matters, money is not neutral. Binswanger (1969, p. 51), for instance, has given an instructive example of a systematic money illusion. This example concerning the confidence in the future value of money is closely related to the problems of confidence discussed by Parsons (1967):

> The stability of the monetary system may be said to depend on the participants' continuing willingness to entrust their interests to a system, in the nature of which there can be no immediate, barter–like *quid–pro–quo* of value for every exchange. Indeed, the very meaning of money is that it is intrinsically valueless, so that there is a sense in which the acceptor of money gives up something valued for something worthless. (p. 276) In taking the money wages for his work and relinquishing control of the product the worker evidences 'faith' that by spending the money he will be able to get something he values as much or more than the product of his work. (p. 233)

Keynes also argued in terms of money's nonneutrality. He criticized the current models in that "money, that is to say, is employed, but is treated as being in some sense *neutral*":

> One of the chief causes of confusion lies in the fact that the assumptions of the real–exchange economy have been tacit, and you will search treatises on real–exchange economies in vain for any express statement of the simplifications introduced or for the relationship of its hypothetical conclusions to the facts of the real world. We are not told what conditions have to be fulfilled if money is to be neutral. Nor is it easy to supply the gap. Now the conditions required for the 'neutrality' of money, in the sense in which this is assumed in – again to take this book as a leading example – Marshall's *Principles of Economics*, are, I suspect, precisely the same as those which will insure that crises *do not occur*. (...) I am saying that booms and depressions are phenomena peculiar to an economy in which – in some significant sense which I am not attempting to define precisely in this place – money is not neutral. (Keynes, 1933, pp. 408–411)

Of course, Friedman, who has been criticized by Riese (1983a, p. 251), and others who recommend interest–bearing money also implicitly pose the question of money's *structural neutrality*. The problems of the cash holder's sacrificed interest,

of money's production cost and of interest to be paid on liquid money balances all deal with the *cost–benefit structure of money*.

Niehans (1971) still assumes traditional money to be neutral because he presupposes the absence of the direct utility of money. But there is direct utility in the form of money's nonpecuniary liquidity–premium (transaction opportunities, readiness for payment, security services); this direct utility is indirectly indicated by both the cash holders propensity to liquidity and the interest price paid for parting with the benefits of cash. It is this *direct* utility of money which is measured by the *indirect* utility of money, namely its interest price. Hence the phenomenon of "seignorage" (in a stationary economy) is *not* completely covered by assuming a price for the replacement of money:

> If there is some attrition of the money stock, those who are able to supply the flow of replacement money obtain a steady stream of other goods and services from those who wear out the money, but do not have the power to replace it. (Niehans, 1971, pp. 781–782)

Seignorage is mainly the price for transforming illiquid goods that are unsuitable for transaction activities into money with its high utility as regards advantages in transacting. That is the price for money as far as it is, in comparison with other goods, not neutral in exchange.

Another nonneutrality of money problem shows up indirectly in Townsend's (1987) analysis of pricing in a monetary economy: neither the money asset nor other privately owned capital assets seem to be priced efficiently in monetary equilibria. Returns on both generally violate standard, intertemporal valuation relationships, delivering a rate–of–return dominance.

None of these studies led to a systematic reconsideration of money's economic cost–benefit structure with respect to the transaction functions of money. Nor did they topple the imperturbable conviction that money, except for the nonneutrality of quantitative supply changes, functions as a neutral means of exchange and transfer. Exceptions to this general confidence in the neutrality of our monetary transaction technique are the studies of Hahn and others, referred to in Chapter 9.5, and of Allais (1947), Riese (1983), Herr (1986b), Spahn (1986) and Stadermann (1987).

The very instructive views of the early authors who vividly pictured the inequality of money in the course of selling and buying have been, and still are, forgotten. And whereas the unique salability of money in comparison with all other objects of economic transfer is recognized in modern monetary economics (Yeager 1968; White 1987, p. 452), rigorous conclusions regarding the systematic nonneutrality of money have not yet been drawn. This is also true of the observation that money "cannot strictly be neutral" since the creation of money by the central bank "involves the substitution of an asset against a different asset" (Niehans, 1987, p. 419), or that there is an asymmetry "inasmuch as money holding can serve as a substitute for lending to defer consumption through time, yet it cannot serve as a substitute for borrowing to advance consumption through time" (Maling, 1987, p. 474).

10.2 From Biased to Neutral Money

Conventional money acts as a biased mediator in economic communication (Chapter 8). Agents who do not need money benefit most from it by privately raking in the pecuniary equivalent of money's general transaction benefits and other money services. Agents who need money are handicapped by high money acquisition costs, that is costs that are high with respect to the mere transaction service from that money. Thus conventional money is *nonneutral money*.

The problem is to have money which renders its useful transaction and liquidity services but does not generate counterproductive interest costs as described in Chapters 4.2 and 6.1. These absurd costs originate from one very simple economic datum: conventional money renders its services (liquidity–premium) without bearing real costs (expenditures). In the long run, this asymmetric structure of costs and benefits greatly unbalances economic relations. To avoid all these imbalances resulting from conventional money, the original disparity of money itself has to be neutralized by equalizing its marginal costs and benefits.

Samuelson, Friedman, and others also propose to equalize money's marginal costs and benefits, though they do not hit the mark intitially by aiming at cash holder's sacrificed alternative benefits. But the liquidity–premium of money can indeed be equalized by liquidity costs attached to money: cost–bearing money. Then the usual monetary prebend of private agents engaged in withdrawing and re–issuing money dries up. Then money continues to provide its liquidity services, but agents have to pay for them.

Conventional money, which renders liquidity benefits without imposing liquidity costs, was characterized as *biased money*. Cost–bearing money, which still renders its liquidity benefits, but which also charges a price that equalizes those benefits, is the ultimate realization of the ideal of *neutral money*. Such money, which bears equalizing liquidity costs, will be exactly the kind of neutral money which up to now has been tacitly, but erroneously, presupposed in most economic models. These theoretical models, although quite plausible, did not permit economists to grasp reality in a satisfying manner as long as they presupposed neutral money, which has not actually existed in a modern economy up to now.

10.3 Prospects for the Performance of Neutral Money

Carrying or storage costs attached to money to make it neutral do not prevent individuals from using the transferral service of money totally. Of course, one presupposition of money serving as a means of payment is that it functions to some extent as a "store of value" (Cass and Shell, 1980, p. 251). But the use of money as such a store of value simultaneously conflicts with its payment function: money being held as a store cannot be used to perform payments. The solution to this paradox can be found in the observation that money's moderate storage cost, as for instance under slight inflation, does not distort money's suitability as a means of payment: "money is a very transient abode of purchasing power, not designed to be a lifetime store of value" (Tobin, 1980, p. 88; see also Jevons, 1875, as quoted in Chapter 4.3: money "temporarily intervenes", and Jones, 1976, p. 758).

The fact that in many countries money has remained in use even under the condition of accelerating inflation, *i.e.* ever–increasing holding costs, calls into question the relevance of treating money as an asset that provides little or no

return (Brunner and Meltzer, 1971, p. 784). Hence it is not true that a distinguishing feature of money "should be its low transactions *and storage costs* as compared to other goods, bonds and futures contracts" (Heller and Starr, 1976, p. 203). On the contrary, transaction costs arising from money in the form of interest cost can be lowered if the storage costs of the medium of payment (liquidity costs) are raised to compensate for the liquidity–premium. In other words, to transfer purchasing power from the future into the present by contract becomes cheaper if money incurs liquidity costs, and correspondingly it becomes less profitable to transfer purchasing power from the present into the future either by cash or by contract. That is to say, burdening the cash holder with a carrying cost constraint means simultaneously releasing the financial cost constraint on credit and transactions.

The cost–benefit properties of money influence the motives and decisions of economic agents. Neutral money will no longer seduce agents into developing an artificial propensity either for liquidity or for behaving as private killjoys of the monetary game by withdrawing and re–issuing money. Of course, neutral money will still function as a "link between the present and the future", less in its currency form than by the use of the monetary unit as a standard of deferred payment. Neutral money like today's money enables agents to "save" in the present time and to buy forward claims to monetary shares of future national product. In this case agents use present transaction money to buy future transaction money. The deferral service is not rendered by money as a *means* of storing value but by the monetary unit as the transtemporal *measure* for present as well as future purchasing power. This monetary unit, like the units of length, weight or volume, can be used by agents for free.

Indeed, there is no *real* "storing" of value in money itself. It is not correct to say (even with regard to conventional money) that both money and debts serve as stores of value *(e.g.* Pesek and Saving, 1967, p. 170). Both claims to future money and money represent certain entitlements to a share in today's or a future date's national product. The storing of value is substituted for by transtemporal contracts and claims in the monetary unit. Hence the "real" instrument of "transferring" exchange value from today to tomorrow is not money as such but the borrower and the whole economic system in which such transtemporal transactions are made possible. The economic system only behaves in a way that makes the saver (and many economists) believe that his exchange value is being "stored". In addition, there are other forms of transferring value through time:

> It is surely a misunderstanding of a monetary economy to model it as if currency, or promises to pay currency, were the only stores of value or even the predominant vehicles of saving. Land and durable goods, or claims upon them, are the principal stores of value other than human beings themselves. (Tobin, 1980, p. 88)

Thus there will still be "saving" under the condition of neutral money, but preferences to save or to spend will no longer be falsified by the miraculous properties of conventional money, which gushes forth its liquidity service stream for nothing and enables its owners to sell and to turn into pecuniary income this magic influx of benefits. The magic of money (Marx, 1890, p. 107; Binswanger, 1985) will cease.

To hold cash will be modestly expensive. Cash holders will continue to optimize their cash by taking into account the real equalization costs of liquidity as they do today by taking into account the hypothetical costs in the form of foregone alternative benefits.

Money will no longer be conceived of and used as a “store of value”, but as a “means to be liquid”. This corresponds with a statement by Hahn (1973, pp. 231–232) concerning money as a store of value: “Its existence is fortuitous since there is nothing which demands the sequential structure which will necessitate the introduction of such a store.”

To store value in money, i.e. to use its deferral service as an instrument, is already uneconomical today in most cases because it is generally more profitable to store value in bonds or stocks or other profit–yielding assets. Consequently, to store value in neutral money will be a bit more uneconomical because it will be less expensive or even profitable to store value in bonds or stocks or other assets too, though one might expect the systematic yield of real capital to fall following the decline of conventional money interest.

The difference between neutral and conventional money can conveniently be demonstrated by quoting from the discussion between Keynes and Hawtrey concerning the significance of the money rate of interest and of carrying costs influencing the spot and future price of assets. The anticipated scarcity or abundance of money, Hawtrey argues, will be reflected either in a general rise or fall of spot prices, or in a rise or fall of the rate of interest. And in the latter case, he admits, “the change in the rate of interest itself prevents the complete adjustment of spot prices, because the margin between spot and forward prices is itself modified by the change in the rate of interest” (Hawtrey, 1935, pp. 610, 591).

However, the complete adjustment of spot prices is not only prevented by the *change* in the rate of interest, but by the money rate of interest itself. There is a twofold reason for this:

– first, the other commodities have to compete with money as an asset that yields its services without burdening its owner with carrying costs and
– second, the other commodities cannot be purchased economically without passing through the monetary state of liquidity.

Hence it will be unprofitable to sacrifice money for the purchase of an asset, unless the returns on the purchased asset at least match the liquidity–premium of money.

Hawtrey sees, of course, the effect that carrying costs attached to an asset have on prices: “The spot price and the future price are linked together by the possibility of carrying stocks during the interval, and the future price tends to exceed the spot price by the cost of doing so” (p. 591). But he denies that carrying costs *applied to money* would be advantageous to the economy. “High carrying costs do undoubtedly militate against the use of a commodity as money, but, *once it is so used,* the carrying costs do not appreciably affect the rate of interest” (pp. 574–575). He neglects to see that, as a consequence of his own assumptions, the future price of money in terms of money can be raised, i.e. the present surplus–price for money over its future price (interest) can be lowered, by the cost of carrying money during the interval in question. Though he himself describes the nonneutral effects of money and interest preventing a future scarcity or plenty of goods from being completely reflected in spot prices, he does not understand Keynes, who laboriously tries to explain to him the significance of nonneutral money in setting the pace for all the other commodity rates of return.

"Neutral money", in the *qualitative* or *structural* sense discussed here, means that conventional money interest goes to zero. This leads to the zero–price–of–money problem: at first sight it seems as if the "price of money" *in general* goes to zero with the consequence that one expects discontinuities to arise (Starr, 1980, p. 261, referring to Hahn, 1966). However, the "price of money" in this connection has to be clarified. A distinction must be made between the price of *cash* and the price of *credit.* For the price of holding cash can still be substantial (e. g. from inflation or Keynesian carrying costs attached to money) while the price of monetary debt (conventional interest) may depend on other factors and go to zero if there is no default risk (or, for instance, if interest costs are compensated for by the gain from inflation diminishing the debt).

Thus, under the condition of neutral money, there is no relevant zero–price–of–money problem: discontinuities regarding *cash* are prevented by the price of liquidity, and "credit at zero cost" only means that the transferral services of the monetary *unit* are costless, ensuring that different supply and demand for different dates are translated directly into spot prices without the cost of the medium of payment falsifying the present pricing of future goods. Probably this is where the solution of the intertemporal transfer problem is to be found at which the approaches of Hahn (1973, 1973a), Starret (1973), Kurz (1974, 1974a), Heller (1974), Heller and Starr (1976), Honkapohja (1978) and Kareken and Wallace (1980) are aiming.

During the transition period from today's money to neutral money, the money prices of real present and future goods will change until they reflect, much more adequately than today, the individuals' *real* expectations and preferences as well as the physical goods' *real* costs and benefits. During this period, of course, discontinuities or anomalies will probably arise from the fact that vast riches have been accumulated under the regime of nonneutral money and that the composition of portfolios will be adapted with respect to the double problem of shrinking pecuniary returns from capital and hence of the increasing relevance of the carrying cost not only of money but also of real commodities.

10.4 Savings and Investments

At first glance it might seem as if agents would be saving less under the condition of neutral money, and as if that would necessarily lead to a lack of financial capital, and to a decrease in investments. But this assumption is also due to the capitalistic delusion (Chapter 8.5): under the condition of neutral money, conventional money interest tends to zero, and hence entrepreneurs will be able to acquire capital, *i.e.* to liquidize some of their own illiquid (present or future) goods, at optimally low cost. Prices of scarce goods will respond more sensitively to needs because these needs will be backed by inexpensive money. Thus a larger amount of productive capital will spring from direct profits (personal savings and funds) instead of coming from borrowed money (outside savings and funds). In other words, capital and returns to capital will be located in the sphere of the *users* of capital.

Saving then is accomplished not only by conventional savers and financial investors, but by buyers paying higher prices for scarce goods, and by entrepreneurs profiting from these prices and saving for investment in their own enterprises. And the profit from these higher prices will lead to faster investment,

increasing production and lowering prices again. This means that the allocation of capital will be improved and accelerated: its journey will be partly cut short inasmuch as the detour–costs of conventional outside saving and financial transfers (i.e. of loans and bonds) will be saved.

To overcome difficulties in understanding it must be stressed that there are two ways to transfer funds from “savers” to “investors”:

– The first is the conventional indirect form of saving money, lending it to the investor, rewarding the saver with interest and burdening the investor with capital cost.
– The second is the direct form of paying prices that include a scarcity premium transferred from the buyer to the producer of the scarce goods, thereby forcing the agent who demands scarce goods to “save” and reward the producer of the goods instead of burdening him with costs.

The second direct way of “saving” and “investment”, of course, contradicts the definition and deep–rooted concept of “saving” as “not spending”, because the “saving” that enables investors to invest is paradoxically accomplished *by spending* the money. Instead of receiving a return above cost from holding cash, lending money or leasing goods, the saver pays a price above cost for holding cash or buying scarce goods. It may be that in this case, to avoid confusion, one should not speak of “saving”, but in either case it must be clear that resources for investment can be more efficiently liquidized by the paradoxical “saving through spending” than by the seemingly rational form of conventional saving.

If other agents still “save” in the habitual form in order to defer demand for a certain period, then interest on outside funds (inasmuch as it is the price for monetary liquidity) will be negligible. This also means that the capital cost rate of production costs will decline and also help to maintain moderate price levels.

To put it in a more general form, suppose that the marginal carrying–costs applied to money equal its liquidity–premium: $c = l$. Then the marginal money rate of interest approximates zero. Now we can quote Keynes and substitute “(zero–)rate of interest” for “rate of interest”:

> If there is a tendency for marginal efficiency of capital to exceed the (zero–) rate of interest, disequilibrium will be prevented by a rise in the supply price of capital goods which will bring down the marginal efficiency of capital. That is to say, the current rate of investment will be carried on as intensively as is compatible with not driving the supply price of capital goods beyond the figure which would reduce the marginal efficiency of capital below the current (zero–)rate of interest. (Keynes, 1935b, p. 586, with my insertion of “(zero–)”)

In short, under the condition of neutral money the marginal opportunity–costs of cash holding, which set the current standard of capitalistic returns, will approximate zero. Thereby neutral money will optimize market conditions for free enterprise: *capitalism at its best* – not in the sense of maximum returns for inert owners of capital, but in the sense of best chances for high profit rewards for personal economic performance of any kind whatsoever.

10.5 Money as the Joker in the Economic Game

To use biased money is like playing an unfair game. Thus it is enlightening once again to treat the functions and effects of money in a game model of a monetarized economy as has been done in Chapter 8.

Money can be understood as a kind of monetary joker amongst the other objects of exchange and value transfer (Suhr, 1982, p. 110; 1983, pp. 59, 110; Suhr and Godschalk, 1986, pp. 27, 35). The monetary joker renders to its owner degrees of freedom in economic decision–making that exceed the options supplied by the other objects of exchange and value transfer. Hence money is superior to other objects of exchange as far as its exchangeability is concerned. Consequently it is systematically easier to buy than to sell.[1] Thus the joker–concept of money adequately illustrates the *superior salability of money*.

In this game concept, the liquidity–premium of money can be described as the joker services or as the joker–premium. The monetary joker is well–suited to pay for this or that, now or then, here or there and to whomever may be concerned. Its utility in the game is derived from these *joker liberties*. Agents of the game need the monetary joker in order to perform in the game. Hence they are ready to pay to obtain disposal over the monetary joker of the game.

At first glance, one might think that the advantages of easy buying (offering the joker) and the disadvantages of troublesome selling (demanding the joker) compensate each other in the course of *alternate* selling and buying. Marx (1890, p. 175), for instance, argued in this way. But in this connection he neglected the inequality of the way the agents were initially outfitted in the game, a point he stressed so much in other connections. And he also neglected the probability of disparities arising from varying savings of individuals and from asymmetric exchange procedures in the long run (Suhr, 1988, pp. 34–42).

It makes quite a difference whether one starts one’s game selling labour and goods with difficulty or conveniently buying these objects of economic interest (Suhr, 1982, p. 108). Thus the question is whether agents have equally easy chances to enter the game. They do not. It is easier for well–to–do agents than for poorer ones to be initially well–outfitted with money (Suhr, 1983, pp. 52–66).

Well–to–do agents have *dispensable* goods at their disposal which they are able to sell *without haste and pressure*. Poorer agents have only their labour capacity at their disposal and this still has to demonstrate its value by being utilized. Moreover, the poorer agents are *compelled by their existential needs* to sell their labour. Rich and poor play with different personal commitment.

The poorer agents play their role in the game staking comparatively high real marginal personal disutilities and utilities. On the other hand, well–to–do agents are quite able to live on their wealth, to wait and see. They play their role staking comparatively low real marginal personal costs and benefits.

In this situation, traditional money supplies the well–to–do agents with monetary equipment that is perfectly suited to turn the unequal initial status of the agents into a prebend for them. Thus money rewards well–to–do agents by granting

1 In the printed book the words "sell" and "buy" obviously were permuted by mistake. There it runs as follows: "Consequently it is systematically easier to sell than to buy.". This, however, would be in total contradiction to the whole work-out above and it is also contradicted by the more detailed formulation just two paragraphs below: "the advantages of easy buying (offering the joker) and the disadvantages of troublesome selling (demanding the joker)".

them an *additional* game–premium instead of offering at least equal chances to all agents.

Well–to–do agents can conveniently prepare themselves to enter into this game with a starting outfit of money which enables them to profit *pecuniarily* from the joker advantages and privileges of money without *really* needing them and without *really* utilizing them by themselves. After this preparation they can begin their round with money each time while the others have substantial difficulties selling their labour or goods in their compulsory first semi–round of the monetarized exchange of goods. And even in the second semi–round these others are compelled to spend their money on food and housing, being comparatively unable to “wait and see” and to transform dispensable money into additional income.

Gesell who experienced all of this in a real economy as a practitioner summarized his observations as follows:

> The consumer, under the pressure of personal wants, cannot wait, although his money would allow him to do so; neither can the producer wait, although his personal wants would in many cases allow him to do so. But the possessor of money coming forward as a merchant, the holder of the universal, essential, medium of exchange, can wait and thereby embarrass both producer and consumer by holding back the medium of exchange (money). And in commerce one man’s embarrassment is another man’s capital. (Gesell, 1929, p. 306)

Of course, during his waiting the owner of the money sacrifices interest (opportunity–costs). This might seem to him and to economists to be a severe loss, especially as rich people usually are very sensitive regarding their profits. But measured in *real* economic needs, *real* utilities and *real* disutilities, the pain of being unemployed and excluded from the common economic game is incommensurably more burdensome than is the pain arising from foregoing additional profits on dispensable assets during the waiting period.

Selling and buying in the traditional monetarized economy turn out to be not only economically suboptimal, but also in contradiction to the basic principles of justice. Under the condition of neutral money it would still be easier for well–to–do agents to enter into the game, but the chances for the others to sell their labour or goods would be much better. And, of course, rich agents would keep their property. Neutral money does not affect private property relations as such. It only affects the *modes of exchange and value transfer*. Well–to–do agents have less chance to exploit, not the labour, but the transaction needs of others by withdrawing money and by re–issuing it again demanding interest as the price for releasing the monetary equipment.

A capitalistic economy equipped with neutral money will no longer provoke criticism as does the existing capitalistic system, which indeed enables owners of capital to exact from the others a surplus–income not legitimatized by economic venture or performance. On the contrary, capitalism with neutral money can be expected to outperform socialistic concepts not only with respect to individual freedom and responsibility but also with respect to social equality and justice: *capitalism at its best,* also in the ethical sense of the phrase.

10.6 Money Acquisition Cost of Sellers

At first money acquisition costs were defined as the costs of the initial acquisition of money from the money supply system (Chapter 4.2). Then it was shown that the simple lending of money generates analogous costs to borrowers (Chapters 8.3 and 9). These costs of lent money changed their character when looked at as costs of monetary liquidity charged to cash holders in the concept of cost–bearing money. Then these costs changed character again when it was made clear that issuing money does not mean producing liquidity. And now, taking into account the difference between neutral and nonneutral money, it is instructive to pose the question of money acquisition costs in the case of selling goods for money.

Let us pick up the thread of Chapter 3.2, where money proved to be an unfair competitor to other objects of exchange. Again the subject will not be treated in general but by discussing the paradigmatic example considered in that chapter, i.e. by analysing the case of an agent that wants to sell his labour or another good in order to obtain money to live on. The conclusion was that the only goods of sellers that in the end can successfully compete with the buyer's money services and with money's power to create income from financial capital are assets the yield of which at least matches the money–rate of interest.

Meanwhile it is clear that this is no longer a problem of capital but actually a problem of monetary liquidity. Well–to–do agents with money at their disposal have the capability of transforming the low real marginal utility of their monetary liquidity into substantial pecuniary returns that are again demanded by others for whom money has substantial real marginal utility.

What happens when such well–to–do agents do not lend their money to others but consider buying goods? It is quite the same when they buy bonds. And the situation is also similar when they do not buy bonds but labour, i.e. when others strive to sell them their labour.

Imagine an economy without money, but with rich and poor individuals. Then partners of exchange would have to estimate the real costs and benefits both of what they offered and of what they demanded. Then rich partners, as in the monetarized economy, would bargain with objects of smaller marginal utility to them than poorer people. Hence they would have bargaining power at their disposal that would allow them to demand a surcharge from their partners in that they, the rich, could obtain goods that exacted relatively high real sacrifices from the poorer partners while the goods would be of comparatively little real utility to them. However, in the barter economy the poorer participants can ignore the rich agents and continue bartering among themselves, whereas, in the monetarized economy, they depend on the rich agents' money.

Money, in a monetarized economy, is not only the *personal* instrument of economic communication between the owner of the money himself and *his* parters, but it is the *general* medium of economic communication that is needed and demanded by the poorer participants even if the rich agents do not want to buy real goods anymore. Rich individuals now have the *additional* opportunity of transforming their dispensable goods into money and lending this money to the others.

Thus, introducing money into an economy changes the exchange conditions. Rich people get the *additional* chance to exploit not only the poorer ones' primary needs, but also their communication needs. In the moneyless economy where

individuals are accustomed to bartering, the rich cannot prevent the others from exchanging goods, i.e. from helping themselves. But in the monetarized economy it becomes very difficult to engage in economic communication without money. Now rich agents can profit from withdrawing and re–issuing the medium of communication. And they are able to profit not only from withdrawing and re–issuing it, but also by holding back money in the role of a purchaser of labour (or other goods). The sellers, who need the money because of its great marginal utility to them, face purchasers that have passed the point after which real goods are of so little real utility to them that they do not buy and use them because of their real utility, but only because of the chance to make more money with them.

Thus, the sellers still operate in the sphere in which the exchanged goods are of high marginal utility and disutility to them, while the capitalists rake in high *nominal* profits of vanishing *real* economic utility to them. These personal sacrifices of objects of substantial marginal utility now have to be seen as the special *money acquisition cost of sellers*.

Under neutral money, money holders would have carrying costs. Then it would be much easier for sellers to persuade buyers to part with their money. Hence the money acquisition costs of sellers under neutral money would be lower than they are today.

10.7 Cost–Bearing Money vs. Inflation

Neutral money, being cost–bearing, resembles money that is inflated and loses its value. Hence several critics of Gesell's cost–bearing "Free–Money" argued as follows: there is no need of new, complicated cost–bearing money because we already have inflation (v. Hayek, 1976, p. XI; Starbatty, 1977, p. 34; Engels, 1982). Herr even takes the numerous inflationary periods as "gigantic tests" of cost–bearing money (Herr, 1986, p. 123). But these critics disregard the difference between an inflation that shrinks the purchasing power of the *monetary unit* on the one hand and the devaluation solely of the *means of payment* on the other. Langelütke (1925, p. 27) already clarified this difference correctly with respect to Gesell's "Free–Money" concept. Allais (1947, pp. 220, 418, 581) expressly distinguishes the unit of account from the means of payment and proposes to depreciate only the latter. Under the condition of inflation, agents cannot escape from the devaluation of their cash by fleeing into forward claims to future money *(e.g.* bonds) unless the rate of interest rises to an extent that compensates for the loss to inflation. And such high rates of interest, again, influence substantially the propensity of economic agents to become transactors even if the funds to be repaid lose value through inflation. If, however, the devaluation only concerns the money held, then cash holders can escape the carrying costs applied to money by buying claims to future money whose unit of measurement is stable. At the same time other agents have access to transaction money at low or negligible cost.

Of course, there will be an inflationary *impulse* during the transition period when an economy changes its transaction technique from conventional money to neutral money. This is due to the effect that carrying costs on money have on money's velocity of circulation. But even this impulse can be counteracted by reducing the quantity of money. So neutral money gives no reason to fear the negative effects that accompany inflation in the long run.

10.8 Illustrations

In Chapter 2.4 equilibrium problems have been illustrated by curves representing the marginal utility derived from income and the marginal disutility of labour required for marginal income. But in Figure 1, the monetary phase between the selling of labour and the buying of commodities has been omitted, that is the intermediate phase of money and its liquidity services.

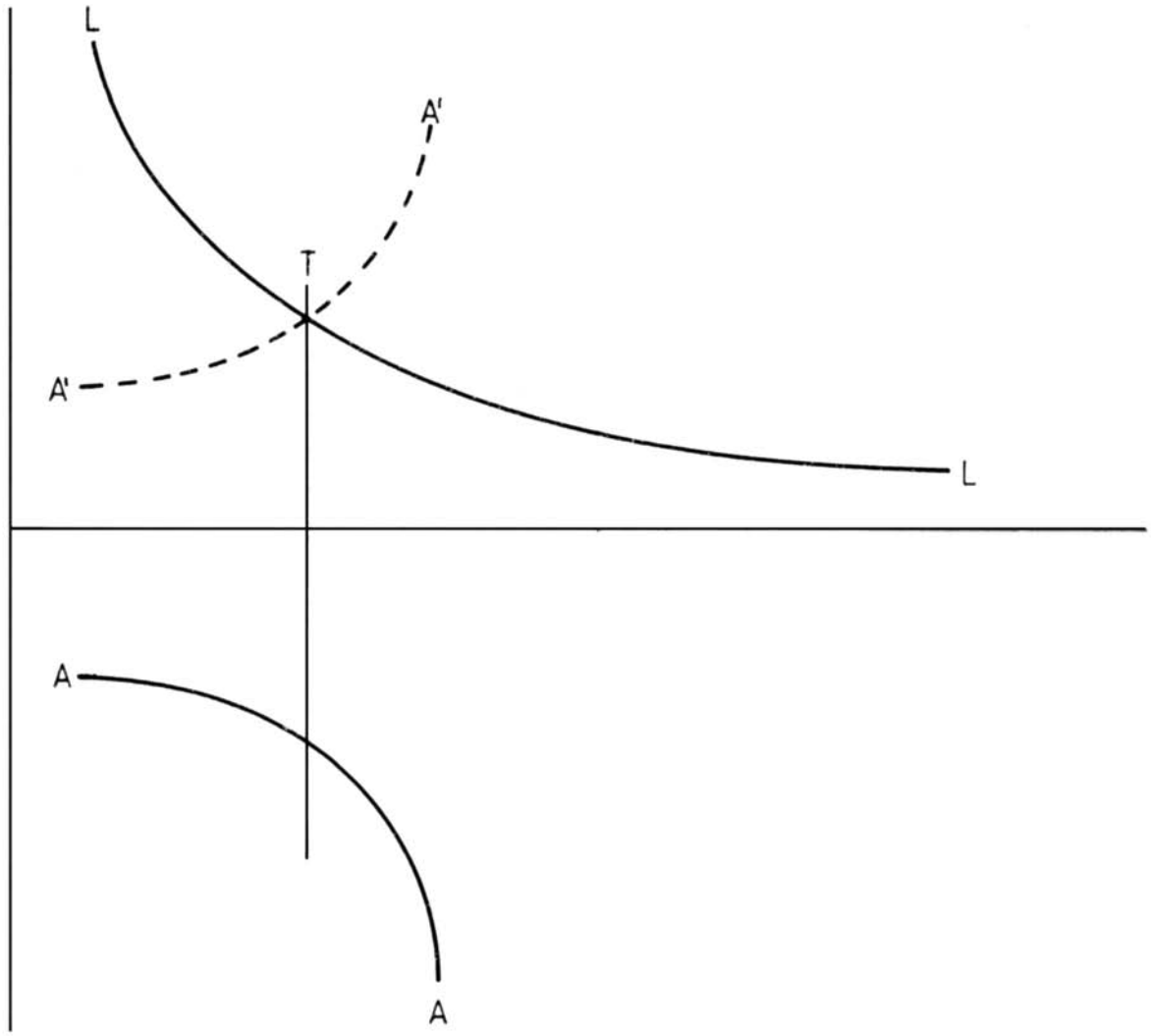

Figure 3
Marginal utility of transaction cash (LL), and marginal disutility of money–acquisition costs (labour or interest paid on outside funds) (AA); the latter throttles the acquisition of cash and hence of transactions, $a = l$, at transaction point T.

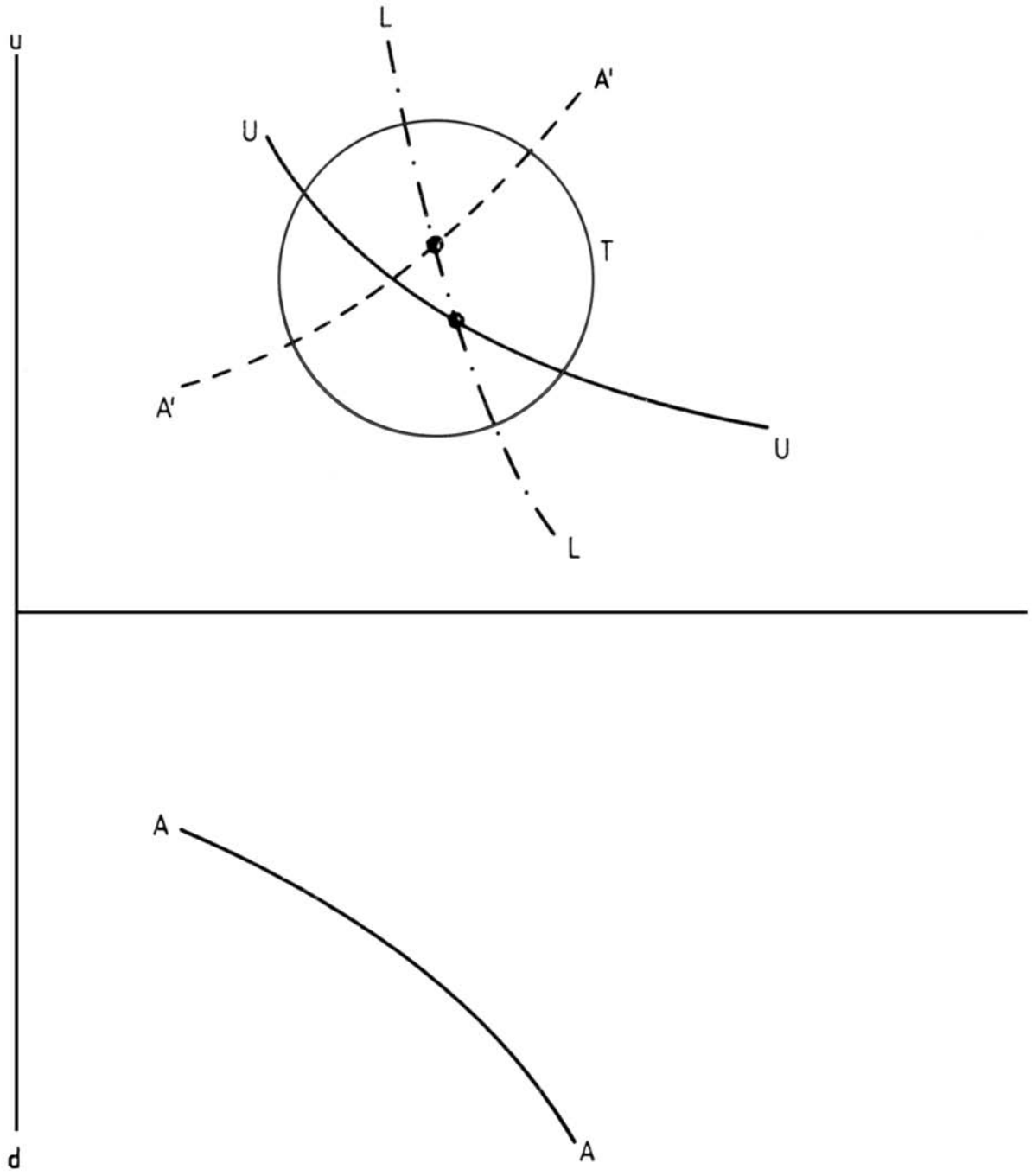

Figure 4
Marginal money acquisition disutility (AA), marginal utility of transaction cash (LL), and marginal utility of purchased commodities (UU), illustrating the money intermediation and transaction point T in Figure 3.

Now, in Figure 3, the relationship between the disutility of money acquisition costs (such as labour or interest on outside funds) and the utility of transaction cash is portrayed, leading to Figure 4, where the curves of Figure 3 are combined with that of Figure 1: individuals have to pass through the state of monetary liquidity before they can obtain the desired commodities, and it is at the point of liquidizing, T, that money holders who do not really need to be liquid can exploit transactors who really need the liquidity simply by holding back the medium of payment unless they are paid interest.

Finally neutral money can be illustrated by the curves of its marginal utility and disutility. First, let us look not at money but at commodities rendering to their owner utility and imposing on him storage costs. As marginal utility shrinks, marginal disutility increases (Figure 5).

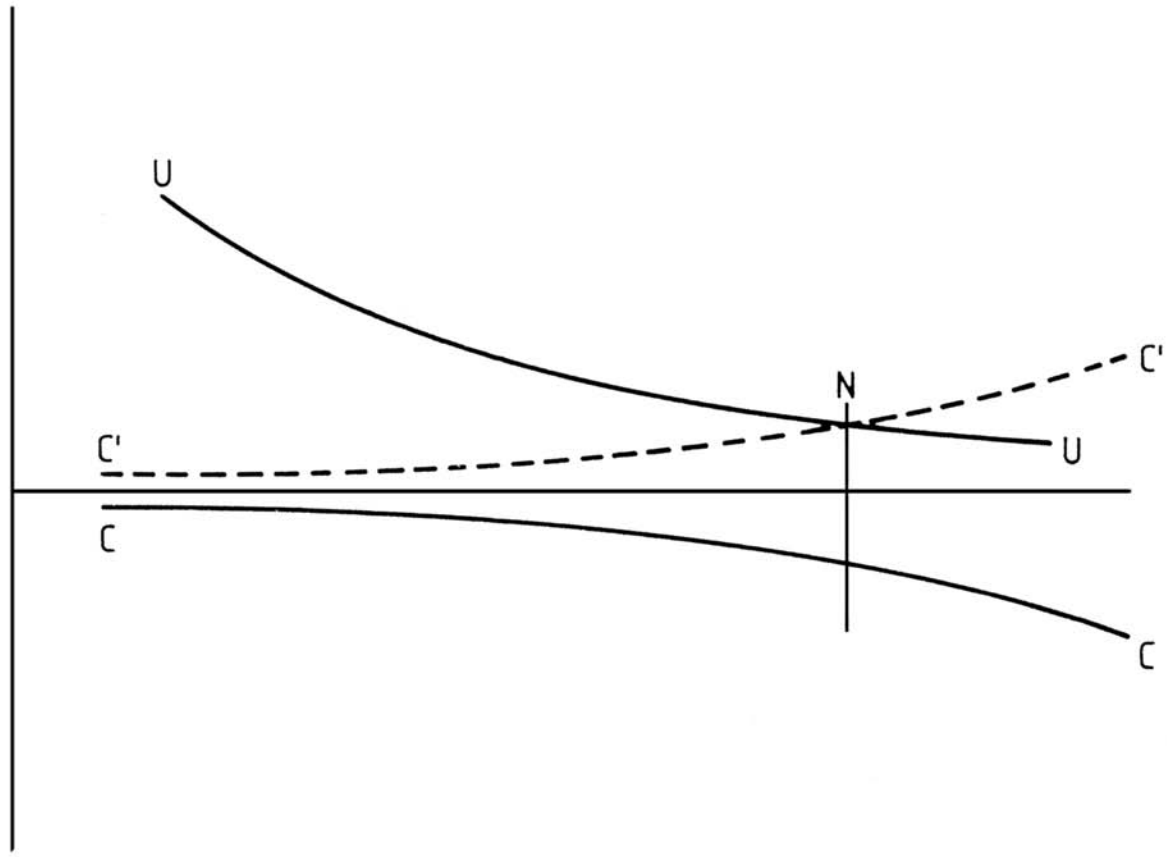

Figure 5
Marginal utility of commodities (UU), and marginal disutility from the commodities' carrying costs (CC); the disutilities counterbalance the utilities at N, the point of neutrality: $c = u$.

Cost–bearing money shows up then in similar curves (Figure 6). Like commodities, money held also renders utility to its owner (liquidity–premium). In addition, cost–bearing money, unlike today's money, burdens its owner with costs, that is, disutility. And once again, the marginal utility of monetary liquidity shrinks while the marginal disutility of marginal carrying costs increases. Hence cash holding will not be extended beyond the point of neutrality N, from which point on the marginal disutility counterbalances or exceeds the marginal utility of the money held.

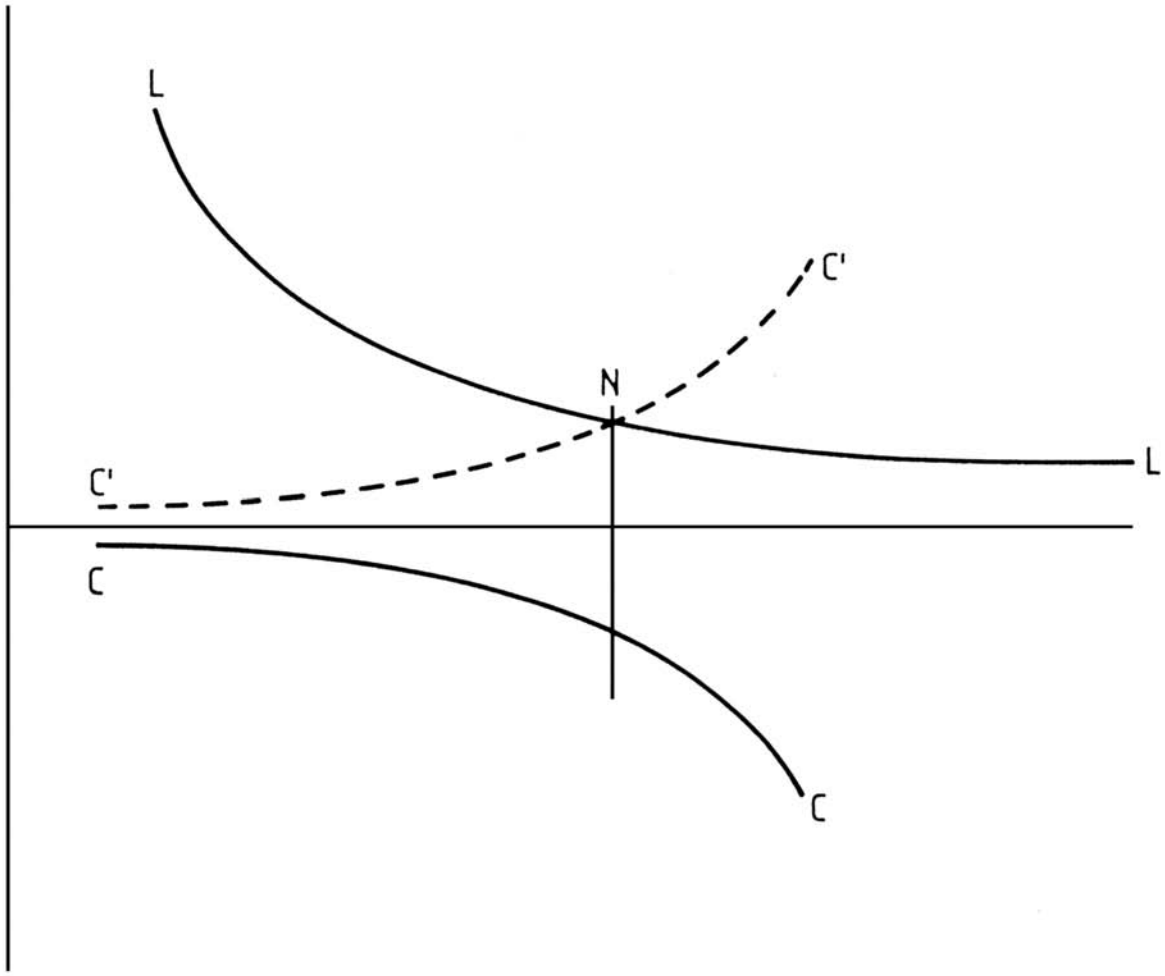

Figure 6
Cost–bearing money: the marginal liquidity–premium (LL), and marginal disutility of carrying costs (CC). The disutility counterbalances the liquidity–premium at N, the point of neutrality: $c = l$.

Finally, Figure 7 presents the curve L'L' of the compound marginal utility and disutility of neutral cost–bearing money. Figures 5 and 7 show that the cost–benefit structure of neutral money is similar to that of real commodities, whereas the cost–benefit structure of current nonneutral benefit–bearing money, as has been illustrated in Figure 2, shows utilities without any real disutilities breaking the seductive desire to enlarge one's money stock. The only reason to limit one's cash holding under the condition of current money is to substitute one's costless money services by assets that render even more net benefits than money yields nonpecuniary returns.

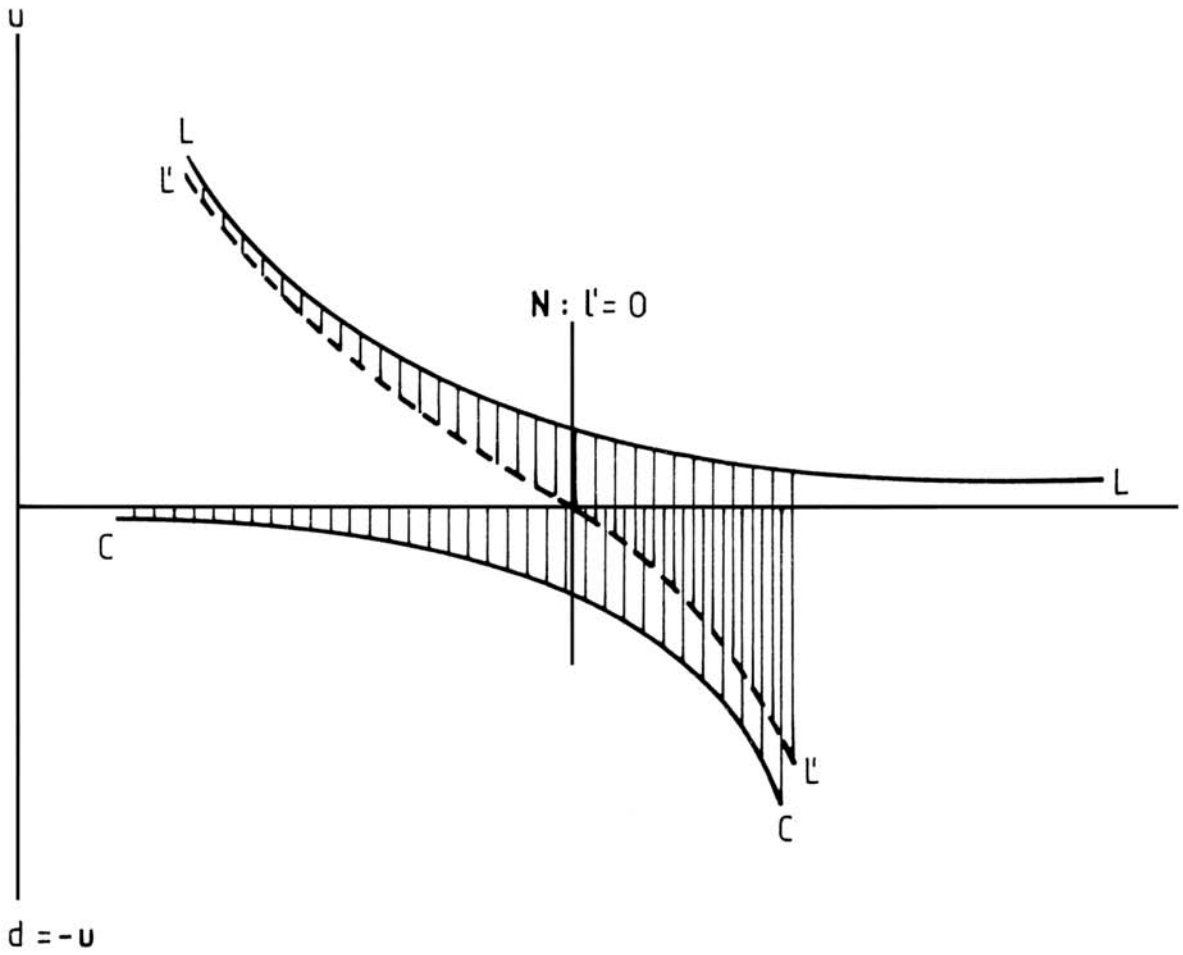

Figure 7
Cost–bearing money: curve L'L' of money's compound marginal utility and disutility ($l' = l - c$) intersects the line of zero utility/disutility (Jevons: inutility) at the point of neutrality N.

Chapter 11

PREDECESSORS

11.1 John Maynard Keynes

John Maynard Keynes (1936, pp. 226, 233–234) and Irving Fisher (1933; 1933a, pp. 226–230) were the first academic economists to consider seriously and to recommend *money incurring carrying costs*. Fisher did not care much about theoretical foundations when he proposed cost–bearing money in his book *Stamp Scrip* in order to master the crisis of the early thirties. But Keynes, revoking part of what he had said about money and interest in his *Treatise on Money* (1930), was not only the first to investigate thoroughly the benefits and effects of monetary liquidity, he also considered in detail the promising effects of carrying costs on money (1936, pp. 225–244). Keynes even drew practical conclusions from his concept in his proposals for an International Clearing Union, suggesting that a fee be charged members of the Union who deviated too much from the zero line of positive or negative liquid clearing balances:

> The regulations which aim at keeping the system of debit and credit balances as near to equilibrium as possible are the following:
>
> (3) A charge of 1 per cent per annum will be payable to the Reserve fund of the Clearing Bank on the average balance of a member state, whether credit or debit, up to a half of its quota; and of 2 per cent on the average balance, whether credit or debit, in excess of half its quota. (...)
>
> (4) Any member state in debit may borrow from the balances of any member state in credit on such terms as may be mutually agreed. In this way each would avoid the contribution under (3) above. (Keynes, 1940–1944, pp. 79, 118; Keynes, 1943; see Hankel, 1986, pp. 70–80)

We shall return to the idea of a symmetric charge on the average credit or debit balance later in connection with the problem of establishing neutral money. Regrettably, Keynes, in the context of his *proposals*, did not explicitly refer to the concepts and formulae of Chapter 17 of his *General Theory*.

The most vivid description of the concept that is to be discussed now can be found in an early draft of a section of the *General Theory* where Keynes considers why “effective demand” in a monetary economy is more likely to be in deficit than in excess:

> I fancy, however, there is a further feature of our actual monetary system which makes a deficiency of effective demand a more frequent danger than the opposite; namely the fact that the money in terms of which the factors of production are renumerated will ‘keep’ more readily than the output which they are being renumerated to produce, so that the need of entrepreneurs to sell, if they are to avoid a running loss, is more pressing than the need of the recipients of income to spend. This is the case because it is a characteristic of finished goods, which are neither consumed nor

> used but carried in stock, that they incur substantial carrying charges for storage, risk and deterioration, so that they are yielding negative return for so long as they are held; whereas such expenses are reduced to a minimum approaching zero in the case of money. If it were not for this consideration, the effective demand at a given moment would be governed by more permanent considerations concerning the direction of popular expenditure averaged over a considerable period of time, and would be less subject to rapid fluctuations such as characterise boom and depression.
>
> By inverting this condition, we can conceive of an entrepreneur system which would be as prone to excessive demand and over–employment, as our actual system is to deficient demand and under–employment; namely, if the means of renumeration would 'keep' *less* readily than the output. (Keynes 1933a, pp. 86–87)

And in the first and second proof of the *General Theory* he described his work as follows:

> This book (...) turns mainly on developing a new theory of relationship between the marginal efficiency of capital and the rate of interest. I shall argue that the theory of the rate of interest held by the classical writers is extremely confused. Even Marshall has nothing which can be fairly called a theory of the rate of interest. The result of this defect has been a fundamental misunderstanding of the way in which the economy in which we live actually works – a misunderstanding so far–reaching that its fruits, if I am right, may have impoverished the world in the past century more than all its wars and may lie at the root of contemporary discontent. (Keynes, 1935, p. 362)

It might be of interest to the reader that most of Keynes' arguments that are to be considered now concern what Findlay (1963, p. 12) called the ideas of the "'mysterious' Chapter 17 of the *General Theory*". Hansen too, in his *A Guide to Keynes*, could not discover much sense in these ideas:

> (...) rather abstract considerations (in Chaps. 16 and 17) (...) These Chapters are indeed another detour which could be omitted without sacrificing the main argument (...) we find Keynes permitting himself (...) a free range of speculation about an economy in which the marginal efficiency of capital, and presumably also the rate of interest, is somehow (the method is not clearly disclosed) driven down to zero (...) Immediately after the appearance of the *General Theory* there was a certain fascination about Chap. 17, due partly no doubt to its obscurity. Digging in this area, however, soon ceased after it was found that the chapter contained no gold mines. Still the discussion (...) is not altogether without merit, and some interesting bits can be extracted from it; yet, in general, not much would have been lost had it never been written. (Hansen, 1953, pp. 155, 158, 159)

Turvey (1966, p. 164) found Chapter 17 "both confused and confusing", and he continued that, "because of this and because it is not a necessary link in a chain of exposition of Keynes' theory, it has been largely ignored." Similarly, Lerner (1952,

p. 173) described this chaptçr as “badly written” and “confusing in presentation and terminology”. Even more recently Herr (1986, p. 128) still found Chapter 17 “not clear or yet at least confusing”.

Initially, Keynes himself was aware of the difficulty of his subject: what makes money unique with regard to its effect on the rate of return on capital? Robertson, in a letter to Keynes about a very early draft of the chapter, insisted on a better clarification of money’s significant properties:

> Now why, why, why should poor old money be alone excluded from the generalized theory, and nothing said about its productivity in terms of itself when discussing the forces which determine the own–rate of interest which borrowers will offer for its use? Surely at this time of day you will not reply with Aristotle that money is barren? (Robertson, 1935, p. 509; see the reaction in Keynes, 1936, p. 225).

Keynes answered:

> I admit the obscurity of this chapter. A time may come when I am, so to speak, sufficiently familiar with my own ideas to make it easier. But at present I doubt if the chapter is any use except to someone who has entered into, and is sympathetic with, the ideas in previous chapters; to which it has, I think, to be regarded as posterior. For it is far easier to argue the ideas involved in the much simpler way in which they arise in the chapter on liquidity preference. (Keynes, 1935a, p. 519)

However, the final version of Chapter 17 seems to me to be as clear and simple as Keynes himself characterized his ideas in the preface to the *General Theory* and in his essay on “Alternative Theories of the Rate of Interest” (1937b, p. 250: “exceedingly simple”).

This chapter is also fundamental for Keynes: “Until we have answered these questions, the full significance of our theory will not be clear” (Keynes, 1936, p. 222; see also Barens, 1987, p. 167, for additional references concerning the controversy about Chapter 17.). Hence Chapter 17 is a key to better understanding the further concepts of the book, though I admit that Keynes did not draw all the conclusions implied in the elementary statements of the “mysterious Chapter 17”. He opened a door, but he did not step through it to reconstruct his theory. Instead of directly concentrating on money as a means of effecting production, exchange and consumption, that is instead of persuing his concepts of an “entrepreneur economy”, he focussed on the symptomatic problem of uncertainty. Uncertainty became central to Keynes’ vision in the *General Theory* and even more central to his Keynesian followers.

In the *General Theory,* Keynes looked at monetary liquidity mainly through the eyes of the cash holder and investor, not of the entrepreneur, the dealer, and the consumer. Of course, he examined macro–economic relations and consequences, and he described the use of money for the transaction of current business. But looking at the *cash holder and investor*, he did not recognize equally well the existential transaction needs of the *others* as the basic factor that guarantees demand for monetary liquidity. So he was not sufficiently aware of one important fact: the micro–economic monetary *liquidity* of cash holders and potential investors,

which proved to be “inactive”, *illiquid frozen money*, means *destroyed liquidity* as soon as one looks at it not from the cash holders’ and investors’ point of view, but from a macro–economic standpoint with one’s attention focussed on the means and procedures of transactions. Nevertheless he described repeatedly and vividly the macroeconomic consequences of an increase in cash holding, namely a cessation of activity.

The other agents cannot participate in and benefit from the monetarized economy; that means they are unable to save information and transaction costs unless they get the money that they want to use.

Money is the bottleneck through which agents have to pass before reaching other goods. They have to accept the costs of the monetary system if they want to make their way through the transaction defile of double coincidence of supply, demand, and timing. This defile separates their personal present and future needs from the present and future goods of the others, and it separates their personal present and future goods from the present and future needs of the others. But then, agents understand the costs of *passing* through the bottleneck as the *capital costs* of the acquired goods, without noticing that in this way it is money that *leaves its mark* on the other goods: as borrowed money burdens the borrower with interest, so do the goods acquired with borrowed money. And as money renders interest to those who have dispensable money at their disposal, so it is with those owners of dispensable goods if they transform the low marginal utility of their goods into high pecuniary returns.

But Keynes did not have to think in terms of transactions like that to find out and express the same economic relation between expected returns on financial capital on the one hand, and expected returns on commodities on the other. He stressed that the interest rate of money, being the significant rate, sets the pace for the rate of capitalization for commodities, and this, of course, is a professional way of expressing that money leaves its capitalistic marks on other goods.

The specific properties of money, a systematically profitable good, are automatically transferred to the rest of the goods which cannot be reached by agents but by using money. And since the profitableness of money has its primary source in the free benefits of liquidity, the systematic profitableness of real assets also has its primary source in money’s liquidity–premium.

Thus if there is something like “natural interest” or the “natural rate of interest”, then its origin is to be found in money services, in the benefits of monetary liquidity, which were called the “liquidity–premium” by Keynes. Then, of course, it is not really a “natural” rate of interest, but rather some kind of “pure money rate of interest”.

However, interest, the exchange value of money services, is actually not totally independent of other economic factors such as the demand for “capital” and capital’s “marginal efficiency”. But the mutual influence between these factors is asymmetric to the extent that the existential transaction needs of agents are so urgent that they are even willing to pay interest (real expenditures), while money serving as capital money instead of transaction money is dispensable money to its owners. It is not worth paying a price for other than foregone alternative benefits. In conclusion, Keynes was for the most part right when he stressed that the money–rate of interest sets the pace for the rate of returns on other assets (1936, p. 235). And he was right to consider carrying–costs attached to money as a remedy.

After all, Keynes' *General Theory* should be reconsidered with regard to the consequences of "carrying costs" on money. This corresponds to the fact that most monetary theory presupposes zero storage costs of money *(e.g.* Hahn, 1971, p. 435: "without the use of any resources"), so that, if this parameter is introduced into the models, a wide range of consequences arises.

Peculiarly enough, these liquidity costs are something quite similar to the "costs" of cash holding discussed in Samuelson's or Friedman's concept of optimal money. Clower and Howitt (1978) come very close to the Keynesian argument by introducing real storage costs on money and correctly concluding that such costs would lead to a decrease in average money holdings (p. 459). But *believing* that social optimization requires the payment of competitive interest on money, their final conclusion is that the optimal situation is to have the rate of storage costs on money equal to the negative rate of return paid on money that is lent (p. 460). This amounts to negative storage costs, that is to positive pecuniary returns on money held.

Monetary economists are aiming at equalizing the marginal opportunity costs and benefits of money, and Keynes points out: "What matters is the difference between the liquidity–premium and the carrying cost" (1936, p. 237). So both modern monetary economists and Keynes are engaged in the problem of the unequal marginal utility and disutility of money! Both Keynes on the one hand and Samuelson, Friedman and others *(e.g.* Feige and Parkin, 1971) on the other deal with a disparity between money's costs and money's benefits.

Not only neoclassical monetary economists are engaged in the problem of "equating the rate of interest on money and bonds" (Perlman, 1973, p. 435), Keynes also treated the subject. The Keynesian carrying–costs solution leads to *bringing down* the pecuniary returns on bonds to the zero level of pecuniary returns to money while the neoclassical interest–bearing money solution leads to *bringing up* the zero pecuniary returns to money to the level of returns on bonds. Tacitly starting from a common or at least a very similar concept, they have reached contradictory conclusions: Keynes proposed carrying *costs* for money, while the others propose additional *benefits* in the form of interest to be paid to money holders. As has been explained above, in this case Keynes was on the right track, while neoclassical monetary economists are not. Keynes proves to have had the better welfare instinct and the better sense of economic equilibrium.

A reconsideration of Keynes should start at the point where Keynes (1936) asked why such a thing as liquidity–preference existed. Part of his answer was:

> There is, however, a necessary condition, failing which the existence of a liquidity–preference for money as a means of holding wealth could not exist. This necessary condition is the existence of *uncertainty* as to the future rate of interest, *i.e.* as to the complex of rates of interest for varying maturities which will rule at future dates. (p. 168)

This statement and other parts of the General Theory have led to a misunderstanding of Keynes: as if this aspect of uncertainty were *the only* reason for the existence of the liquidity preference (*e.g.* Friedman, 1969, p. 25, footnote 19; Barens, 1987, pp. 158–161). According to this misunderstanding, the liquidity preference would go to zero if there were certainty as to the future rates of return on assets.

But Keynes, as we have seen in the above quotation, limited his statement to “a liquidity–preference for money *as a means of holding wealth*.” And before that passage he admitted in the very same paragraph:

> In this connection we can usefully employ the ancient distinction between the use of money for the transaction of current business and its use as a store of wealth. As regards the first of these two uses, it is obvious that up to a point it is worth while to sacrifice a certain amount of interest for the convenience of liquidity. (See also Lavington, 1921, pp. 28–31)

Then he dealt with the second of the two uses and discussed the problem of uncertainty as to future rates of interest.

In other words, Keynes never questioned the preference for liquidity of money as an instrument of readiness for current transactions. Above all, the unique suitability of monetary liquidity for precautionary or speculative purposes depends on its *general* suitability for performing transactions at once without any additional costs of preparation. And it is mainly this aspect of monetary liquidity which is of crucial interest in connection with money as a neutral instrument of economic communication.

As the transaction needs of economic agents cannot be choked off, the demand for transaction–money will stay at a high level. This simultaneously guarantees that the money–rate of interest, under normal conditions, will systematically stay at a level substantially above zero – except, of course, for the *new monetary parameter* “carrying costs” introduced by Keynes.

The rate of interest will stay at a high level particularly because an increase in saving, which leads to an increase in the loan money supply, always means that, other things equal, the very same money was previously withdrawn from the realm of circulation and transaction money, thus creating a lack of fluid financial resources corresponding exactly to the loan money offered (above Chapter 9.1 referring to Gesell, 1929, p. 312). In this way loan money supply creates its own lack of transaction money and hence its own loan money demand.

According to Keynes (1936), objects of exchange have different grades of liquidity. “Liquidity” is a third quality of goods besides their usual “use value” and their “exchange value”:

> The power of disposal over an asset during a period may offer a potential convenience or security, which is not equal for assets of different kinds, though the assets themselves are of equal initial value. There is, so to speak, nothing to show for this at the end of the period in the shape of output; yet it is something for which people are ready to pay something. The amount (...) which they are willing to pay (...) we shall call its liquidity–premium *l*. (p. 226; see also Lavington, 1921, p. 29: “return of convenience and security”.)

And now follow the very simple and elementary passages which should be reconsidered by monetary economists who are dealing with the effects of money on the economy in general:

> The total return expected from the ownership of an asset over a period is equal to its yield *minus* its carrying cost *plus* its liquidity–premium, *i.e.* to $q - c + l$. That is to say, $q - c + l$ is the own–rate of interest of any commodity, where q, c and l are measured in terms of itself as the standard. (p. 226)
>
> It is characteristic (...) of money that its yield is *nil*, and its carrying cost negligible, but its liquidity–premium substantial. (...) It is an essential difference between money and all (or most) other assets that in the case of money its liquidity–premium much exceeds its carrying cost, whereas in the case of other assets their carrying cost much exceeds their liquidity–premium. (pp. 226–227)
>
> In this connection the low (or negligible) carrying–costs of money play an essential part. For if its carrying–costs were material, they would offset the effect of expectations as to the prospective value of money at future dates. The readiness of the public to increase their stock of money in response to a comparatively small stimulus is due to the advantages of liquidity (real or supposed) having no offset to contend with in the shape of carrying–costs mounting steeply with the lapse of time. (p. 233)
>
> Moreover, the low carrying–costs of money as we know it play quite as large a part as a high liquidity–premium in making the money–rate of interest the significant rate. For what matters is the *difference* between the liquidity–premium and the carrying–costs. (p. 237)

According to Keynes, the combination of three characteristics of money makes the money rate of interest the significant rate:

(1) the zero or at least negligible *elasticity of production* (pp. 230–231);
(2) the zero or near zero *elasticity of substitution* (p. 231),
and
(3) the negligible *carrying–costs* (p. 233).
To these three must be added the basic reason for money's zero or near zero elasticity of substitution, that is
(4) money's *indispensability for passing through the transaction defile* of double coincidence of supply, demand and timing.

Barens (1987, p. 175) is right in that Keynes, in this connection, neglected to identify carefully the reason for money's negligible elasticity of substitution. We will soon see that money, in its function as a reserve asset, can very well be substituted for and that errors can arise from this ambiguity regarding money's substitutability (pp. 100–101, below).

Let us now focus our attention on the simple Keynesian formulae introducing carrying–costs on money into the interest and capital theory. If the own–rate of interest of an asset is given as:

$$r = q - c + l$$

and if money's pecuniary yield $q^* = 0$, and its carryings costs $c^* = 0$, then the own–rate of the asset "money" shows up as:

$$r^* = l$$

But if money bears carrying costs equalizing its liquidity–premium: $c^* = l^*$, then:

$$r^* = l^* - c^* = 0$$ [2]

It is obvious that these findings and relationships are relevant for stock–holding in general. Usually a moderate stock of commodities other than money offers some conveniences to its user, but it also burdens its owner or user with costs mounting with the lapse of time. What are the consequences?

> Even though a larger stock might have some attractions as representing a store of wealth of stable value, this would be offset by its carrying–costs in the shape of storage, wastage, etc. Hence, after a certain point is reached, there is necessarily a loss in holding a greater stock. (Keynes, 1936, p. 233)

> In the case of money, however, this, as we have seen, is not so, – and for a variety of reasons, namely, those which constitute money as being, in the estimation of the public, *par excellence* 'liquid'. Thus those reformers, who look for a remedy by creating artificial carrying–costs for money through the device of requiring legal–tender currency to be periodically stamped at a prescribed cost in order to retain its quality as money, or in analogous ways, have been on the right track; and the practical value of their proposal deserves consideration. (p. 234)

Bubeck (1966) has tried to illuminate the consequences of carrying costs attached to money using Hick's IS/LL–apparatus and other diagrams. In addition, Kaldor (1939, pp. 29–58) has shown the significance of low carrying costs as a main condition which must be present in normal circumstances in order for a good to be suitable as an object of economic speculation. But the notion of carrying costs on money in this connection has been explicitly neglected in later treatments of the same subject because current money bears indeed only negligible costs (Tsiang, 1958, p. 401; Gandolfo, 1986, p. II.18). The idea of *artificial* carrying costs on money, expressly recommended for consideration by Keynes (1936, p. 234) and Allais (1947, pp. 418, 581), has not yet been thoroughly investigated.

2 In the printed book this formula runs as follows: $r^* = c^* - l^* = 0$, and obviously the variables c^* and l^* were permuted by mistake, as this third formula is derived from the first formula above with the plus and minus signs of c and l exactly the other way around.

11.2 SilvioGesell

Keynes (1936, pp. 353–358, 32, 371, 379) acknowledged the monetary proposals of Silvio Gesell (1891, 1891a, 1897, 1929), the originator of equalization costs on money. Gesell recommended cost–bearing money ("Freigeld", which means "Free–Money") already at the turn of the century, and Keynes freely admitted that Gesell had been "unduly neglected". Having in mind Gesell's thoughts, Keynes (1936) even confessed:

> Owing to certain palpable defects in the argument, I entirely failed to discover their merit. As is often the case with imperfectly analyzed intuitions, their significance only became apparent after I had reached my own conclusions in my own way. Meanwhile, like other academic economists, I treated his profoundly original strivings as being no better than those of a crank. (p. 353)

And Robertson, in his letter mentioned above, agreed with the "qualified benediction of Silvio" (1935, p. 510).

Keynes approved the valid kernel of Gesell's theory, but he criticized Gesell for overlooking the need of an explanation why the money rate of interest is positive and for his failing to explain why the money rate of interest is not governed by the standard set by the yield on productive capital. "This is because the notion of liquidity–preference had escaped him" (p. 356).

Indeed, Gesell is no real precursor of Keynes as regards the whole framework of liquidity theory. Nevertheless, he observed some of the advantages of money which Keynes also integrated into his concept. He concentrated on the transaction–motive of agents needing transaction money, and, in so far as this aspect is concerned, Gesell fathomed the functions of money as an instrument of economic communication even better than Keynes.

Gesell (1929) stressed the suitability of money for exchange purposes and its convenience for agents with money at their disposal. Above all, he investigated why the interest rate of money is positive, and he found reasonable answers in the realm of the transaction needs of agents, which, again, Keynes failed to take into account thoroughly enough:

> Wares must (...) be sold for money; that is, there exists a compulsory demand for money equal in amount to the stock of wares. The use of money is therefore as indispensable to all as the division of labour is advantageous to all. The more advantageous the division of labour, the more indispensable is money." (1929, p. 106)

> It is indeed not altogether impossible to dispose of the products of the division of labour by barter, but barter is cumbersome and requires so many complicated preparatory arrangements, that producers generally cease to work rather than have recourse to it. (p. 105)

According to Gesell, the usefulness of money, which forces agents to pay a price for using it, is based on its transaction function. From this point of view, cash holders' liquidity derives its liquidity–premium and potential pecuniary profitability from

money being indispensable *for the others* to perform transactions. On this foundation Gesell developed quite a consistent interest theory, and some of his arguments sound very modern today:

> Having established these facts I shall next answer the question: What circumstances limit the amount of interest that money can exact for performing the function of exchange? The reason for considering this question at once is that the answer best reveals the true nature of interest on money.
>
> If money is capital because it can arbitrarily interrupt the exchange of commodities, it will be asked why interest does not rise by the full amount of the advantage we derive from the use of money in our economic system. (...) Money knows that competitors will appear if it sets its tribute too high. (...) Three quarters of the inhabitants of the world still cling to primitive production. Why? Partly because the exchange of commodities by money is too heavily burdened by interest. This expense must cause producers to forego the production of commodities for exchange (wares) in certain branches of their activity, or even in general, and to continue the primitive system of production. The choice between production of goods for home use and wares for market depends on an arithmetical calculation (...) If, now, the possessors of money demand too large a tribute from the wares, that part of present–day production which oscillates about the marginal utility of the division of labour is abandoned, and primitive production takes its place. (...) Barter has the same effect upon the demand for money, for the medium of exchange, if money claims too high a rate of interest. (... Then) barter can often successfully resume competition with it. (pp. 306–308)
>
> Only one straight line can be drawn between two points; the straight line is the shortest, and the shortest – translated into economic terms – is the cheapest. (...) The shortest and therefore the cheapest road between producer and consumer is money. (With primitive production, indeed, goods make a still shorter journey, namely from hand to mouth. But this form of production is less fruitful than the production of wares which results from the division of labour.) All the other roads (barter, bills of exchange) which commodities can use to reach the consumer are longer and more expensive. If it were otherwise, if ready–money had no advantages, as a medium of exchange, over bills of exchange, why would anyone give 105 dollars in bills of exchange for 100 dollars in money? But the shortest and cheapest road can be closed by the possessor of money, and he never leaves it open unless he is paid for the advantages of the straight road, money, to the devious roads. (p. 314)

This indeed is a very modern transaction–cost and competitive transaction technologies approach. To illustrate how modern Gesell's thoughts are let me quote from Niehans' (1971) research work on money and barter concerning the "trade possibility frontier":

> Assume that transaction cost rates are increased wherever there is any exchange, be it direct or indirect. In general, this will tend to lower the

> volume of market exchange. This is so, in part, because the rise in transactions costs, similar to a tax on exchange, will make it relatively more profitable to consume one's own endowment. A possible result is complete self–sufficiency of individuals. It is logically conceivable that even small transactions costs will shut off all trade, if tastes and endowments are sufficiently similar. (pp. 229–780; see also Jevons, 1871, pp. 103–104, as quoted above in Chapter 4.5)

Exchange is the mutual increasing of utility (Jones, 1976, p. 759, referring to Feldman, 1973). But with costs of transactions, that is with costs of "financial capital", exceeding the expected gain in utilities, exchange becomes unprofitable.

Originally, however, Gesell had developed his concept using another observation which is very similar to Keynes' considerations concerning the carrying–costs of commodities mounting steeply with the lapse of time. Gesell saw that money (gold) enabled its owners to wait without having costs, while the sellers of labour or wares had costs (see also Chapter 6.6 above referring to Perlman, 1971, p. 238). Thus Gesell in his first writings aimed at equalizing the properties of money and wares by imposing costs on money too. This is where the word "Schwundgeld" (dwindling money) for Free–Money comes from. Most of Gesell's followers adhere to this explanation of the inequality of money and other objects of exchange. Hence they hinder themselves from grasping the real superiority of money on the market, which derives from its supreme salability. Nevertheless, the idea was, and still is, valid inasmuch as carrying costs would equalize the characteristics of money and other objects of exchange as regards their chances in economic communication.

Gesell also gave some quite convincing explanations of why the money rate of interest sets the pace for returns on productive capital and not the other way round. In this respect he seems to me to be even more consistent than Keynes.

> Every producer is also a consumer, and just as in barter each party receives the other party's whole product, so every producer must at present regard the full price paid by the customer as the return service for his own product. If he does this, wares must seem to him negative capital. Wares then appear in their true character namely as bank–messengers for money–capital. Wares collect basic interest from the consumer, not for the producer but for the possessor of money (medium of exchange), somewhat as a postman collects the price of a cash–on–delivery parcel. (p. 318)

Gesell then describes how the capitalistic properties of money are transferred to other commodities:

> If money in the course of a year can exact 5% interest from the wares, the house must be able to exact the same tribute from its tenants, the ship from its freight, the factory from wages. (p. 319)

And finally:

> So–called real capital is therefore anything rather than real. Money alone is true real capital, basic capital. All other capital objects are completely dependent upon the characteristics of the existing form of money; they are its creatures; they receive the title of nobility, the title of capital, from money. (p. 320)

Keynes (1936, p. 376; see also Allais, 1947, p. 606) thought that it would be possible to lower the interest rate and simultaneously to increase amounts of capital: “It would mean the euthanasia of the rentier, and, consequently, the euthanasia of the cumulative oppressive power of the capitalist to exploit the scarcity–value of capital.” Dillard (1942, p. 351) mentions that Gesell had had the same idea: “The power and means exist of drowning interest in a sea of real capital, within reasonable time” (Gesell, 1929, p. 323).

But Gesell had a definite reservation concerning the money–rate of interest which Keynes did not have in this connection, though Keynes also knew well about this as the threshold which prevents real capital of lower marginal efficiency from being produced and which ensures that capital stays scarce. Gesell was inexorable in this respect; he was clearly aware that money would continue to be indispensable *for transaction purposes* and hence would continue to yield “basic interest”:

> Let us suppose that three–quarters of mankind are carried off by the plague. The present ratio between proletariat and real capital would be fundamentally changed; to every tenant there would be four houses, to every farm labourer four ploughs, to every gang of workmen four factories. Under these circumstances real capital would no longer yield interest; the competition of house–owners would depress rents, and the competition of employers would reduce profits to such an extent that probably not even the full costs of upkeep and amortisation could be recovered. (...)
>
> Under such circumstances only one form of capital would continue to exist, namely money. For although all other capital objects would have lost the power of exacting interest, money would have no need to reduce its claim for interest, even if 99% of the population had died out. The produce of the interest–free instruments of production, the wares, would still be compelled to pay the same interest for their exchange, just as if nothing had happened. (Gesell, 1929, pp. 323–324)

Gesell found money interest to be the product of an “independent capital, namely money”. He called it “basic interest” (“Urzins”). And this is one of his central theorems:

> Basic interest is the point of equilibrium about which the interest on all forms of real capital oscillates. (pp. 316, 323)

This statement, concerning the “anchoring problem” of the rate of return to capital mentioned above (Chapter 1.6, referring to Tobin, 1961, p. 225), comes very close to Keynes’ (1936) famous view about the money–rate of interest ruling the roost:

> The relation between the ‘spot’ and ‘future’ contracts, as quoted in the markets, is notoriously different for different commodities. This, we shall find, will lead us to the clue we are seeking. For it may be that it is the *greatest* of the own rates of interest (as we may call them) which rules the roost (...); and that there are reasons why it is the money–rate of interest which is often the greatest (because, as we shall find, certain forces, which operate to reduce the own–rate of interest of other assets, do not operate in the case of money).” (pp. 223–224; see also Keynes, 1937a, p. 103, as quoted in Chapter 1.6)

Keynes in his subsequent argument did not adhere to this first assumption of “the greatest” rate of return dominating the others. He found that it is *money’s* rate because of money’s unique economic characteristics (elasticities of production and substition; cost–benefit structure).

In Chapters 10.3 and 9.4 the argument was: under the condition of neutral money different preferences for present or future goods should show up in different spot prices, which no longer would be levelled and shifted by the money–rate of interest. This should be the case with future or present physical capital too. If the equalization cost attached to money approximately compensates its liquidity–premium, the interest–rate *of money* should be expected to go to zero, leaving it to the spot prices of present and future goods to reflect the different scarcities, preferences, and expectations of economic agents. Nevertheless Gesell (1929) did not expect money’s interest to disappear as fast as that:

> The day on which Free–Money assumes the functions of exchanging commodities, will see no great changes in interest. The interest upon existing real capital will remain for some time unchanged. Even new real capital which the people can produce with untrammelled labour will yield interest. This new real capital will, however, depress interest in direct proportion to its own increase in quantity. (...) But if real capital is still producing interest and it is possible to buy with money commodities which can be assembled into new, interest–bearing, real capital, it is clear that anyone seeking a loan of money must pay for it the same interest as is yielded by real capital. (...) Loans of Free–Money must therefore pay interest as long as real capital yields interest. (pp. 342–343)

The Keynesian criticism, quoted at the beginning of this chapter, probably contributed to the fact that Gesell has never since been really taken seriously within, or outside, Keynesian economic thinking. This applies especially to the verdict of Keynes (1936) on Gesell’s practical proposal for “Freigeld” (free money):

> If currency notes were to be deprived of their liquidity–premium by the stamping system, a long series of substitutes would step into their shoes – bank–money, debts at call, foreign money, jewelry and the precious metals generally, and so forth. (p. 358)

This verdict has been quoted frequently as evidence against Gesell’s Free–Money concept *(e.g.* Myers, 1940, p. 69; Herr, 1986, p. 123; 1986a, p. 481), but it is invalid (Dahlberg, 1938, pp. 95–97), above all because Keynes himself repeatedly

emphasized in the very same *General Theory* that money “has an elasticity of substitution equal, or nearly equal, to zero” (p. 231, similar p. 238), and that there is “no (...) other factor being capable (...) of doing money’s duty equally well” (p. 234).

In his verdict Keynes mixed up substitutes for money in its function as a store of value and as an instrument of readiness for transactions on the one hand (asset money) and substitutes for money in its function as a means of payment on the other (transaction money). This problem is similar to that of reserve assets:

> It is vital, in this case, that money, to be held as a reserve asset, can be substituted by other forms of holding reserves. There is thus, in this sector, an operation upon a Liquidity Spectrum. (Hicks, 1967, p. 41)

Of course, precious metals conveniently serve as stores of value which can easily be transformed into money again. Nevertheless, they have to be sold or to be liquidized in some other way causing additional transaction costs before the stored value can be used to carry out payments again. These liquidizing costs or illiquidity–costs (Jarchow, 1982, p. 51) are the subject matter of the concept of the “transaction demand for cash” (Baumol 1952, Tobin 1956).

Looking through the eyes of the cash holder and investor, most of the substitutes Keynes has enumerated may well suit the liquidity and investment purposes of investors. Inasmuch as today’s money is not only used as a means of payment, but also to “store wealth” or to enjoy its “deferral service”, substitutes will indeed step in. Cash–holding for purposes other than transaction will be reduced. But the *other* agents predominantly need money in its general payment function. Thus, as far as they are concerned, money does in fact have an elasticity of substitution nearly equal to zero. They will use money as long as money fulfills its function as a means of payment, even if this money is slightly inflated and even if this money carries with it moderate equalization costs. Thus cost–bearing money, i.e. neutral money, will not be substituted by other assets in its real function as money. It will work. Radecke (1954, p. 19; Bubeck, 1966, p. 32) reports that, in a letter, Keynes admitted that he was wrong with regard to the asset substitutes for cost–bearing transaction money. Debts at call, however, are indeed substitutes for holding money as a means of readiness, and they may become a preferred form of monetary readiness in an environment of neutral transaction technologies.

11.3 Irving Fisher

Irving Fisher, who also aggreed with Gesell’s practical proposal, admitted that economics owed a lot to Silvio Gesell, in the same way that medicine owed much to “untrained” minds. In his book *Stamp Scrip* Fisher, assisted by Hans R. L. Cohrssen and Herbert W. Fisher (1933, p. 17), wrote about Gesell:

> In 1890, while in Argentina, he proposed essentially that particular substitute for money which now bids fair to sweep this country, under the name of Stamp Scrip. Gesell, before he died, accumulated a considerable following abroad; but it took the tortures of a depression to bring about any practical efforts to make use of his Stamp Scrip idea. (p. 17)

Fisher also found much in Gesell's philosophy to which he, as an economist, would not subscribe, especially Gesell's theory of interest. But Fisher believed that in the emergency of that time Stamp Scrip could be made "as useful an invention as Manuel Garcia's laryngoscope" (p. 17).

In contrast to abstract modern monetary economic writing, the authors of *Stamp Scrip* described the problems in very vivid language understood by everybody, and this, of course, might be one of the reasons why *Stamp Scrip,* similar to Keynes' idea of carrying costs on money, has not, as far as I can see, received any profound theoretical attention from professionals since 1933.

Fisher observed the Swap Movement spreading across the country. Individuals who at that time promoted schemes of barter proved to Fisher that overproduction was *not* the cause of the depression. Barter, he wrote, "shows goods not over–produced but dead–locked for want of a circulating transfer–belt called 'money'" (p. 3). The Swap–Movement of that time with its attempts to develop some kind of payment certificates brought Fisher to the idea of combining the barter activities with the Stamp Scrip concept: "I hope the two will coalesce" (p. 7).

The situation in the Thirties, of course, was quite different from that today. Bank money has disappeared and currency was hoarded. The liquidity trap really worked at that time. But there is also a significant similarity. Today producers and dealers are looking at markets again, and there are people who want to work to buy more products. But the activities and goods are once again dead–locked for want of the circulation–belt called 'money'.

In 1933, the want of money was due to the destruction of bank money by the withdrawal of deposits and to the destruction of the monetary liquidity of currency by trapping it in hoards. Meanwhile the situation has changed: today the want of money is extremely relative. There is a mass of money active on the financial markets. A multiple of the amount of money required for real economic purposes moves within the financial hydrocephaly of today's capitalistic system. But producers, dealers and consumers have difficulty recycling this money from the monetary sky to the roots of economic transactions. They cannot afford the costs of the monetary system whenever they start activities the marginal efficiency of which cannot compete with the *monetary* standard of returns on financial capital. Thus, as during the Swap–Movement in 1933, economic agents once again strive to find ways to exchange their goods *without money*. And once again there is the chance to introduce neutral money into the free market economy: neutral money, which is the cheapest or the optimal medium of exchange and value transfer.

11.4 Maurice Allais

The factors of production achieve their maximum productivity if the money rate of interest is zero. This is the central thesis of Maurice Allais' (1947) investigation of the monetary economy.

To eliminate the possibility of withdrawing money from circulation Allais proposes both a separating of the functions of the unit of account (monnaie de compte) from those of money in circulation (monnaie circulant) and continuous depreciation of the money in circulation in relation to the unit of account at a rate of 5–10% p.a. (pp. 418–419; 581–582 with note 161(5)). Allais realizes that his concept is similar to those of Fisher and Gesell although he admits that he had not yet been able to study them in detail (p. 585, note 161(6), and p. 599, footnote

164(31)). The significant property of money in this connection is the same as the one stressed by Gesell and Keynes, namely that money can be stored without any storage cost to speak of. Allais gives the most coherent and systematic analysis of the complicated effects of money and interest on the economy.

However, where he proposes the depreciation of cash he does not explicitly persue the effects of this measure on the rate of interest. But, in this connection, it seems clear from the formulae underlying the theoretical parts of his study and from other statements that interest will decline when the “monnaie circulant” loses value relative to the stable unit of account, that is, relative to bonds and to other claims contracted in the monetary standard of deferred payment. Hence the depreciation of the “monnaie circulant” will also lead to the economic Pareto optimum envisaged by Allais in his above–mentioned central thesis.

The main point of material difference between Allais’ approach and mine concerning the characteristics of money lies in that he largely integrates money, with both its costless use value and the price paid for its use, into the complex economic system of the other goods’ use values and prices, while I try to picture money from different points of view as the elementary means of economic communication and transaction. These various perspectives of the phenomenon of money, for instance, include the money holder’s options and superiority in exchange on the one hand and the transactor’s risks, costs and impediments on the other, both of them as seen through their own eyes.

The requirement of double coincidence of supply, demand, and timing, which has been characterised as the “transaction defile” that can be overcome efficiently only by using money as the key, constrains economic proceedings to such an extent that money appears in a role that dominates the structures and flows in the economy even stronger and more directly than in the role assigned to money in Allais’ analysis.

The most obvious difference is, of course, Allais’ comprehensive application of mathematical instruments and the complete lack of such an apparatus in my study. Hence his “Économie et Intérêt” might in this case or that serve as a mathematical complement to my less rigorous descriptive study.

11.5 Other “Monetary Heretics”

Among the monetary heretics there are some more who considered cost–bearing money, but they are usually neglected in this connection.

The first is N. Johannsen. He proposed a tax–bearing money in his book *Die Steuer der Zukunft* (1913). Schneider (1951) and Schnack (1951; 1951a) have compared his ideas with those of Keynes (see also Müller, 1981, pp. 7–11). Johannsen suggested substituting conventional taxes by a tax on money. His idea was to withdraw conventional money and to replace it by Marktaler notes which would be subject to taxation by a loss of 1% of their original face–value a week. In order to maintain the same amount of money in circulation new notes were to be spent by the government to the same extent as the old notes lost their value in the course of time. Johannsen expected several economic advantages from this in addition to its convenience as a method for levying taxes. Money, he thought, would continue to yield interest, though the rate of interest would fall (p. 145). Unlike other taxes the money tax would be an incentive to buy goods. It would stimulate business, reduce unemployment and improve social relations (pp. 15, 162). The

capacity of saving would grow while at the same time “over–saving” (pp. 226, 244) would cease due to the increased propensity to buy (pp. 162–163). Johannsen also knew that tax–bearing money was something quite different from inflation. He even recommended his concept as an efficient remedy for inflation (pp. 14, 25, 150, 168).

With respect to the neoclassical concept of interest–bearing money, it is worth mentioning that tax–bearing money first occurred to Johannsen when he himself observed and experienced the effects of interest–bearing money in the form of small denomination compound interest bearer bonds:

> I said to myself: as paper money of this quality, with continuous revaluation, tends to disappear from circulation and thus to diminish the demand for goods, a paper–money which is devaluated continuously must inversely tend to stimulate demand and liven up business. (pp. 209–210, author’s translation)

More recently Marty (1976) has hypothesized a tax on real cash balances focussing his attention on the optimal tax problem, the creation of money, and the deadweight–loss question, but without taking into account all the consequences of his concept for monetary economics.

Another concept of money worth mentioning here is the “ageing money” of Rudolf Steiner (1918; 1922; Suhr 1988a). Steiner, who founded the anthroposophist movement, also dealt with economics. He criticized the dependence of workers on capitalists. The possibility of enlarging one’s stock of money simply by earning interest seemed to be “nonsense” to him. Like Gesell he observed that money was an unfair competitor (“unreeller Konkurrent”) with wares (Steiner, 1922, p. 174). Thus money should lose value by “ageing” like other real goods. His theory includes the distinction between “Kaufgeld” (purchase money), “Leihgeld” (loan money) and “Schenkungsgeld” (gift money). But the concept is not very clear in all respects.

Otani (1981) has reinvented cost–bearing money. His concept is very similar to Gesell’s, though he, unlike Gesell but similar to the technique described in Chapter 14, recommended checking accounts with the money balances being charged a fee of 6% p.a. This proposal has now been adopted by Kennedy (1988).

Chapter 12

THE MONETARY WELFARE OPTIMUM

From the very beginning of this essay, the goal has been to identify basic deficiencies in the welfare optimum of the capitalistic economic system. Already in Chapter 1.5 it was assumed that capitalism would be best if returns on mere capital approximated zero. The starting point of the investigation was *capital*. But step by step attention shifted from capital in general to *financial* capital in particular, and above all to the transaction benefits of *money*, that is to money's monetary liquidity, its services, and its liquidity–premium. Now it is time to summarize the results.

12.1 Equal Marginal Utility of Assets

The first welfare criterion applied to capital assets in Chapter 1 was the standard of equal marginal utility of assets. The question now is whether neutral money would help to approximate this standard.

As has been shown, conventional money interest, by setting the pace for returns on real capital, ensures a systematic disparity between the real utility of capital to its owners on the one hand and the real utility of capital to its users on the other: the stream of returns to capital makes sure that stocks of low real utility to their owners will tend to expand at the expense of agents using real capital of high real utility to themselves. This means that assets will continue to have different marginal utilities, which is a guarantee that the economy will not reach its welfare optimum.

Under the condition of neutral money, conventional money interest tends to zero. As a result, the returns on financial capital will also approximate zero. Hence agents will no longer pay returns on mere production capital as they are able to buy the needed means of production with money the interest on which tends to zero (and the liquidity costs of which are negligible, if cash holding is kept optimal).

Suppose returns on mere capital are zero. Then well–to–do agents, who have at their disposal goods of negligible real marginal utility to them and who use these goods as capital, will also have zero returns on this capital. The disparity which existed between low real marginal utility of capital to them on the one hand and high pecuniary returns on this capital to them on the other, this disparity disappears.

Thus well–to–do agents will continue to own their real capital assets. They will have the chance to sell them and to spend the money. They will also continue to be able to hold their goods and use them at low or negligible marginal utility to themselves. But they will not have the possibility of transforming the *negligible* real marginal utility which their capital assets have to them into *high* pecuniary returns.

If, however, the assets of well–to–do agents do not only yield low or negligible utility or returns to their owners, but also burden them with costs, then they have a problem: since mere capital has net returns approximating zero, they lack capital income to finance the expenditures connected with their stock of assets. And as they must live too, they have even more expenditures which diminish their stocks. Both costs of goods and living expenses lead to a reduction of the capital stock,

unless its owners earn returns on their labour–capital or on other economic performance, as, for instance, on venture engagements.

After all, neutral money will ensure the reduction of cost–bearing stocks with low or negligible real utility to their owners, and it will improve the chances for other agents to gain disposal over money and real capital as a useful and "productive" foundation for their economic activities. It will also improve the chances of producers of all those precious goods which can be expected to be stable or even rise in value without burdening their owners with substantial carrying costs and which may even yield aesthetic or other non–pecuniary returns.

In other words, as pecuniary returns on idle capital drop to zero, the chances for "returns" to one's own activities and the chances for nonpecuniary and immaterial "returns" will be improved. In a competitive capitalism with pecuniary returns to assets tending towards zero, all goods yielding a nonpecuniary return over cost have a chance to win the competition.

I would have no objections to such a new asymmetry of exchange nor to an over–parity of goods yielding aesthetic or other nonpecuniary returns over mere money and capital with a zero–return to stock. On the contrary, this is the final concept and standard of CAPITALISM AT ITS BEST: the nonpecuniary yield of assets, that is their *real* utility for human beings, outperforming, at the margin, their pecuniary zero–returns. Then the economic system serves best the real needs of its members, and money's utility is reduced to its *real* function of facilitating changes in the rights to enjoy specific real utilities of goods other than money. Then, moralists might regret, individuals will still not cease to strive for riches. But they will have to take into account the real utilities and, of even greater importance, the costs of the real goods; and no monetary minimum standard of return to stock will provide for capitalistic income to finance the real costs of large stocks.

12.2 Equal Marginal Cost and Benefit

The second standard of welfare applied to capital in Chapter 1 was the criterion of equal marginal cost and benefit of assets. Capital in conventional capitalism does not fulfil this welfare condition, because its benefits systematically exceed its costs.

Under the condition of neutral money, money's costs and benefits are equal by definition. And if money's benefits (its transaction service and the liquidity–premium) are equalized by liquidity costs attached to money, then not only does money carry costs and benefits that neutralize each other, but also borrowed money and bonds will earn a price that is the price for money's benefits and costs neutralizing each other, which is also a price approximating zero.

Since the money–rate of interest sets the pace for the rate of pecuniary return on other capital, the standard of equal marginal cost and benefit balancing at zero will apply to mere capital in general. Hence, at the margin, neutral money will ensure that capital assets fulfil the welfare criterion of equal marginal cost and benefit.

12.3 Reinternalization of Money's Externalities

The third welfare criterion to be discussed here is the postulate on avoiding externalities. Although it has not been mentioned explicitly in the argument above, many of the above statements fit into an externalities–approach (Suhr and Godschalk 1986, pp. 96–99). This approach might seem superfluous in this connection, but it is very instructive to look at money in terms of externalities (Vaubel, 1984). In the following, however, we do not discuss the whole range of externality problems in connection with money but concentrate on the "asymmetric contributions to and benefits from production of liquidity" and to the "rewards for sabotaging the game" discussed in Chapters 7.4 and 8.3.

Every agent who disposes of and accepts money contributes to the production of monetary liquidity, the benefits of which are enjoyed not only by himself, but also by the other agents. As far as the others profit from his contribution, he generates *positive externalities*. But at the same time he is profiting from the contributions to the production of monetary liquidity which come from all the others who dispose of and accept money as a means of value transfer. To this extent there is a symmetric structure in the internal production efforts leading to external benefits and in the external production efforts leading to internal benefits just as in every well–balanced mutual contract. Hence external benefits are rewarded by internal benefits, and external costs are compensated for by their own contributions to the production process.

But cash holders enjoying the liquidity–premium of "idle money" have internal benefits although they have dropped out of the production line of monetary liquidity, and even though they are disturbing production by withdrawing money's technical equipment from circulation. Thus cash holders have pure internal *benefits* and create pure external *costs* only. And the others, who go on to dispose of and accept money, create these pure external benefits for the cash holders without being rewarded by an equivalent internal effect.

Similar to the cash holder, the financial investor, who lends money to others, exacts pure benefits from the others:

— First, it is money's liquidity, produced by the others, whose utility he is leasing to the borrower. The lender commercializes positive external effects produced by the others. The interest is the pecuniary substitute he receives for these primary positive externalities.
— Second, the interest returns to the producer of the liquidity. This amounts to external diseconomies of a secondary degree: the contributions of the others to the production of money's liquidity not only cause positive externalities in the pay–boxes of cash holders and investors, but also rebound as negative effects to the others who re–borrow the money. The borrower has to pay interest for being allowed to reproduce the very same liquidity which enables the lender to exact interest from him.

Thus the current monetary transaction technique introduces into the economy a complicated system of counterproductive externalities.

In other words, the cash holder's nonpecuniary consumer's surplus is at the same time the real seller's and consumer's deficit. This is due to the uncertainties and interest that overburden him.

Under the condition of neutral money, money will continue to serve as an approximately symmetric means of liquidity to all active agents who dispose of and accept money in the course of their production, trade and consumption activities. And it will continue to be a convenient instrument of micro–economic liquidity to everybody. But the liquidity service of money to cash holders will be connected with costs which compensate for the utility of monetary liquidity. This means that the positive external effects to cash holders, which are produced by the others, will be neutralized.

Whether the externalities will not only be neutralized but also be re–internalized depends on what is done with the neutralization cost. If, for instance, the liquidity–costs flow to the banking system and are used to cover costs of money issue and money transfer, leading to lower prices of money issuing and transferring services, then the others profit from it and externalities are being re–internalized.

12.4 Real vs. Nominal Marginal Efficiency of Capital

Nominal returns on financial capital *appear* to be adequate in the sense of "efficiency of capital". But *actually* they are not. This again is part of the "capitalistic delusion". It is most inefficient to withdraw funds from where their utility is high and to have them flow to where it is low. There is obviously a disparity between the high nominal rate of efficiency and low real utility of the capital *to its owner*. Equalization of this disparity would mean that nominal returns should represent real economic utility or efficiency *with respect to the agent in question*. This means that marginal nominal returns must go to zero conforming with the drop of real personal utilities or efforts to zero.

In other words, at the margin, there should be no such effect as the "productivity" or "efficiency" of mere capital; in question should only be the productivity and efficiency of those who produce or utilize the "productive capital". This is what I would like to call the *real* productivity or efficiency of human capital, which must be distinguished from the *pecuniary* "efficiency" in the sense of "return over cost" (Fisher, 1930; Keynes, 1937a). The rate of return over cost, as expected by the financial investor, measures not the *productivity* of capital but the "investment *opportunity*" (Fisher, 1930), which depends on the scarcities of both the real goods that are to be produced and the real investment goods required for the production. These real scarcities, again, ought to be reflected in the spot prices of the goods themselves without the prices being falsified by the scarcity and price of present over deferred *money*.

Of course, the "real" productivity of human capital has to be priced in the context of needs and demand on the markets. And there will be a scarcity–premium for entrepreneurs who discover scarcities and for their staff: a scarcity–premium that much resembles conventional returns on capital. But the beneficiary of these returns is the entrepreneur, the producer of the goods, the risk bearer, not the owner of the mere "capital", and there is no "floor" of minimum constant return to present over deferred money that prevents scarce "capital" from becoming abundant.

So once again we return to Keynes (1936) and to what Hansen (1953, p. 155) called a "flat statement" because Keynes found sympathy with the "'preclassical' doctrine that everything is 'produced by labour'":

> It is much preferable to speak of capital as having a yield over the course of its life in excess of its original cost, than as being *productive*. For the only reason why an asset offers a prospect of yielding during its life services having an aggregate value greater than its initial supply price is because it is *scarce*; and it is kept scarce because of the competion of the rate of interest on money. If capital becomes less scarce, the excess yield will diminish, without its having become less productive – at least in the physical sense (...) It is preferable to regard labour, including, of course, the personal services of the entrepreneur and his assistants, as the sole factor of production, operating in a given environment of technique, natural resources, capital equipment and effective demand. (pp. 213–214)

And we return to Silvio Gesell (1929), whose "treatment of demand is so incomplete and so dependent upon false assumptions (...) that it is almost worthless as a basis for further economic reasoning" (Myers, 1940, p. 69), or who "was an amateur with a very ingenious, albeit logical mind" (Gaitskell, 1933, p. 399):

> Clearly, therefore, so–called real capital produces interest because it can only be formed by the payment of a sum of money and because this money is capital. So–called real capital has not, like money, the power of extorting interest. Real capital (...) only makes use of a state of the market forcibly established for its own ends by money, namely an artificial limitation of the production of real capital with the purpose of keeping the supply of it constantly below the demand. (p. 321)

So this is what the miraculous "constant return to scale" in capitalistic economies comes from.

Instead of "marginal productivity", thought of as a divine property of dead physical capital, we should speak of *marginal surcharge*, thinking of scarcity as the presupposition of returns to the mere *ownership* of scarce goods (low marginal utility) that are separated from the *users* of the goods (high marginal utility). This is also the final point of coincidence between the aims of Marx, Gesell, and Keynes. In our economy, users are increasingly dependent on the owners of goods. Hence the owners are able to exact high prices for goods of negligible or even negative marginal utility to themselves. These prices do not really measure the scarcity of the goods that are not being produced because it does not pay to produce them. What such prices do measure is the *degree of dependence* of the users on the owners (see Stützel, 1976, col. 4414–4424).

In brief, nearly all current thinking, or rather belief, concerning physical capital's "productivity" or "efficiency" is due to the fact that the effect of nonneutral money on the real–exchange economy, *i.e.* its artificial standard of sacrificed interest (systematic opportunity costs), has not yet been sufficiently unveiled.

Thus it is symptomatic that the strategies to optimize money by creating money that yields pecuniary returns *(e.g.* Samuelson, 1969; Friedman, 1969) or grows in value *(e.g.* Engels, 1981) are strategies that optimize money only *nominally*, without respect to their counterproductive effects on the *real* economy. Monetarists, who consider foregone alternative yields as costs to be compensated for, are engaged in a mere nominal compensation calculus that results in even more real general transaction impediments than before. Engels (p. 10) also claims to realize an

optimum, namely, that, at the margin, “the share of labour in national income is 100%, and the share of capital correspondingly zero”. However, he conceptualizes a monetary unit that embodies conventional returns on capital because it is defined in terms of the market portfolio. Hence the rate of return does not really go to zero. It is explicitly expected to go to zero only nominally. That means that the share of capital in national income also disappears only nominally. It is hidden in the rising purchasing power of Engels’ asset money. Above all, this asset money is conceptualized so much in favour of the capitalist and cash holder that outside interest on money cannot be expected to disappear. As described with respect to the corresponding neoclassical concept in Chapter 5.1, in reality transactors would have to pay even higher real rates of interest than before.

Finally, there is one more aspect of the duality “real vs. monetary”. As the medium of economic communication, money functions as a means of representation: *real* economic events are paralleled by events of *nominal* accounting, balancing, payments, clearing, budgeting, etc.

In recent times the economy has been theoretically understood as an autopoietic social system. Though this approach has not yet been developed in detail beyond the first abstract and very general sociological descriptions, it enables one to look at disparities between real and monetary terms and quantities from an unusual perspective. According to the autopoietic system’s view, everything that occurs in the economy should be paralleled by current self–references. Money, then, is understood as the very “concurrent” and “institutionalized self–reference” of the economic system (Luhmann, 1983, p. 154).

One of the tacit assumptions of symmetry underlying Luhmann’s (1972) view of the economy is that money has the “same identity” regardless of whether you have it or you do not have it (pp. 201–202). This presupposition is valid for money’s exchange value but invalid for its liquidity services. Money at hand renders liquidity services which can be transformed into a pecuniary income stream. Thus money at hand attracts more money to its owner while a lack of money costs him interest and tends to enlarge his debt. Hence Luhmann’s monetary “concurrent self–reference” within the economic system proves to be an asymmetric self–enlarging dynamic of stocks of both positive and negative financial assets. This asymmetry does not correspond to but contradicts the differences in the real transaction needs of the actors in the economic system. If, however, monetary terms do not appropriately represent real needs, utilites, values, endeavours, expectations, and so forth, and if monetary payment accounting dynamics (message transfer) do not represent real transaction activities, then the agents concerned with this system, practitioners as well as academics, are acting on the basis of misinformation, illusion and error.

It has been demonstrated that money interest is not a premium for productive behavior of individuals but a ransom for not disturbing economic communication. Interest is not the legitimate quid–pro–quo for any positive contribution to the national product that we have thought it to be. Hence our symbolic representation receives interest for something which it is not. Due to this fact we were unable to grasp what happens when the positive feedback mechanism of compound interest (and of returns to reinvested returns in general) is working, producing the monetary hydrocephaly of the capitalistic world, which at the same time is a negative hydrocephaly of debt.

Knowing that this means a pathological representation of real economic events we now see that the system is becoming “mad” in the sense that it is losing its

capacity for adequate symbolic self–representation, that is the system is losing its identity. The self–organization of the financial subsystem is making itself independent from the real economy, and this, in the long run, means the end of self–reference and autopoiesis of the socioeconomic system.

Since in the capitalistic economies monetary quantities disengage themselves from reality, this economic system is not running with proper self–references. It is running amok by referring its money more and more not to real economic events but to its money and to money that has previously referred to money.

Hence the symbolic internalization of the system's self in its environment fails, and the system also fails to master its problems of autopoiesis. The *belief* in physical capital's autonomous productivity is the basic misinformation that prevents practitioners and academics from realizing reality.

12.5 Ecological Aspects of Neutral Money

The money–rate of interest by setting the pace for the pecuniary profitability of real assets hinders the production of real capital of lower pecuniary marginal returns. The higher the money–rate of interest, the higher is the pressure on entrepreneurs to avoid internal costs, that is, to externalize into the environment as much of the cost as is possible. This *additional* pressure comes from the structure of money and it decreases with the decrease of the money–rate of interest. Thus under neutral money, when interest goes to zero, this additional burden on resources will cease.

The standard of pecuniary profitability will then be indicated by a break–even point in the literal sense of the word "even": if real benefits and real costs are balanced at zero and the value of the good is preserved, activities are already correctly arranged economically. They will no longer be measured by the artificial pecuniary standard of sacrificed interest (systematic opportunity costs). The capitalistic *rate of return* would then be replaced by a "natural" or "biological" *rate of reproduction*.

As the actual asymmetric cost–benefit structure of money and capital induces large scale disequilibrium of the economy, which is counter–balanced mainly by steady growth, there is some kind of coercion to grow exponentially in the capitalistic economies as they exist today (Chapter 2.4). Such growth is unnatural, of course, and ecologically harmful. Thus it would be ecologically beneficial to eliminate the artificial necessity to grow. Since neutral money brings about a complete rebalancing of the asymmetric structures of money, the pathological force to grow will also be removed.

But neutral money's effects are ecologically ambiguous, at least in the short run. There is, indeed, a coercion to grow today, but the same structures which generate this pathological necessity to grow also generate economic communication costs, which, camouflaged as "capital costs", brake (Herr, 1986a, p. 480) economic activities. These cost–brakes will be released and economic activities will increase (Suhr, 1983, p. 131) if neutral money is established.

But, at least in the long run, those effects of neutral money which are ecologically beneficial will probably outnumber the harmful ones. And, from the very beginning of the transition period, it will be cheaper than it is today to invest in environmentally beneficial projects. Furthermore, as other urgent problems of today are dealt with, for instance, the burdens of indebtedness and involuntary

unemployment, more political and financial energy can be devoted to ecological assignments.

Finally, the delightful aesthetic or other nonpecuniary yield from a whole environment will have the chance to compete successfully with the dull pecuniary zero–returns on idle financial assets.

Part 5

ESTABLISHING NEUTRAL MONEY

Chapter 13

COST–BEARING MONEY: AN HISTORICAL RETROSPECTIVE

The theoretical concept of cost–bearing money is quite new. But in ancient Egypt and in medieval Europe there were examples of cost–bearing means of payment that resulted from special economic conditions or legal circumstances. And in the Thirties of our century several projects were launched to create Free–Money in Europe (Onken, 1983) and Stamp Scrip in the United States (Cohrssen, 1983, as in Chapter 13.4 below).

13.1 The Grain Giro System in Ancient Egypt

When Gesell first published his idea of cost–bearing money he illustrated it by describing a general commodities bank (Gesell, 1891). Individuals delivered their products to a warehouse, and in exchange they received certificates enabling them to claim goods from it again. To this extent Gesell's concept is similar to other attempts at monetary reform (e.g. Gray, 1831, 1848; Bray, 1839). But Gesell recognized that the commodities in the warehouse would be subject to losses (storage cost, ageing, *etc.*). Thus he proposed letting the certificates lose value as the commodities in the warehouse did.

With this framework of a new transaction technique, Gesell nearly reproduced the characteristics of the ancient Egyptian grain giro system. In Ptolomean Egypt, peasants delivered their grain to public storehouses and received certificates containing information about the date of delivery and the grain quality. Taxes were paid by giro–transfer of grain–claims. Purchases were carried out by using transfer giro orders or cheques. The storehouses had a kind of clearing system, and it is reported that account holders had to pay a fee for administration and storage services. The storage fee was connected with the giro balances and probably corresponded to the quantity and the period of the grain storage. In the Roman period, both the grain giro system and the Roman banks acted concurrently, and in many cases payments in the grain giro system were preferred (Preisigke, 1910, pp. 1–12, 62, 114, 185; Godschalk, 1986, pp. 17–18).

It would be interesting to know more about the grain giro transaction technique of ancient Egypt and, in particular, about the effects of this form of cost–bearing money on the economy, the society, and the culture of the country. But research work has, as far as I can see, not yet focussed on this aspect.

13.2 The Medieval Bracteaten Currency

Although the economic and general histories of the time between 1150 and 1350 yield only meagre reports about the special influence of the monetary system, medieval Europe provides an example of two hundred years of unparalleled prosperity that most probably must be seen in connection with the *bracteates* money (Walker, 1959, pp. 29–107; Cohrssen, 1933). In that time Central Europe experienced the change from a moneyless society to one adopting for the first time a medium of exchange of small denomination in its daily transactions.

The bracteates were thin silver coins that could be broken easily to provide for even smaller coin when necessary.

> The main feature of the bracteates, however, was their periodical recoinage, 'renovations' as this was called. From one to three times a year the coins were called in exchange for new coins at an average loss of about 25 per cent. Through these frequent recoinings, the towns, bishops and sovereigns would collect their taxes and make their profits. (...) The tax was, of course, spread over the entire period of an issue; thus if a coin circulated for four months to be renovated after that period with a deduction of 25 per cent, the average loss per month was 6 per cent. (...) Money was nothing but a medium of exchange; its only service, to constantly change hands in the exchange of goods and services. The results (...) are still today outstanding monuments of early German and middle European culture which came to blossoming with a splendor never again attained. For, while monied wealth could not accumulate, real wealth was created. (Cohrssen, 1933, p. 40)

Important cities were founded and eastern Germany was colonized during this time of the bracteates currency. Thus there was no lack of "real capital". The prosperity, however, seems to have produced its own end:

> Among the new enterprises, the silver mines of Germany were opened and produced tremendous amounts of the metal. Silver was used for costly dishes, house furnishings, buttons, and ornaments in churches. But as the metal supply became abundant, and the people more prosperous and more independent, they revolted against these periodical renovations of the currency. (Cohrssen, 1933, p. 41)

As a consequence, periods between renovations became longer, coins more and more durable and heavier. And the money tax had to be replaced by other taxes that burdened people with costs in a way much less sensible economically than were the taxes on money held. And, above all, a new type of capitalism emerged.

13.3 Free–Money Projects in the Thirties

During the great depression in the Thirties of our century the *Freiwirtschaft* movement of Gesell's followers found opportunities to initiate Free–Money projects to overcome unemployment and to demonstrate the validity of their ideas. There have been other endeavours to realize Free–Money in Switzerland, France, Spain, and the U.S.A. (Onken, 1983, pp. 11–15), but the two most successful were those of Schwanenkirchen in Germany and of Wörgl in Austria (Fisher, 1933, pp. 18–29).

Already in 1926, Hans Timm and Helmut Rödiger had started preparing practical tests for Free–Money. In 1929 the *Wära* barter association was founded in Erfurt. The aim was to facilitate exchange by issuing exchange certificates to the members. Two years later more than two thousand firms were taking part. All of them agreed to accept *Wära*. "Wära" was the name of the certificates, meaning merchandise currency, with each unit at a parvalue with the Reichsmark. On the reverse side the bills had dated spaces on which a stamp had to be attached each month amounting to one per cent of the bill's face value.

During the first six years the project did not arouse much attention. Then the system proved its effectiveness in Schwanenkirchen, a small village in Bavaria of less than five hundred inhabitants who derived their income largely from a local coal mine.

> There was not the slightest hope of reopening the coal mine, as all through Germany deflation raged, leaving bankruptcies, suicides and overcrowded jails in its wake. In this trying period, Herr Hebecker, the owner of the mine, assembled his workers. He told them that he had succeeded in getting a loan of 40 000 *Reichsmark*, that he wished to resume operations but that he wanted to pay wages not in marks but in *Wära*. The miners agreed to the proposal when they learned that the village stores would accept *Wära* in exchange for goods. (...) The shopkeepers too were happy. Although at first they had felt a little hesitant about *Wära*, they had no choice, as no one had any other kind of money. The shopkeepers then forced it on the wholesalers; the wholesalers forced it on the manufacturers, who in turn tried to pass it on to those who carried their notes, or they exchanged it at Herr Hebecker's mine for coal. (...) Indeed, one could not have recognized Schwanenkirchen a few months after work had been resumed at the mine. The village was on a prosperity basis, workers and merchants were free from debts and a new spirit of freedom and life pervaded the town. (Cohrssen, 1932)

The *Wära* movement counteracted the deflationary policy of the government. Thus the government forbade the use of *Wära* by an emergency law passed in November 1931.

Wörgl in Austria had 4,300 inhabitants. Mayor Unterguggenberger organized a Local Relief Committee to solve the community's unemployment problem. This committee launched a project similar to that in Schwanenkirchen.

> The solution of the Wörgl situation pointed to Stamp Scrip. The town would issue it, with the consent of the workmen and of a sufficient number of the merchants and also of the local savings bank. The bank was to hold a

> guarantee fund (...) There was no final redemption; and the stamps, at 1 per cent per month, were to be sold by the town (...) Every holder of the scrip was to have the privilege of redeeming it at the town treasury or at the local banks at any time; but for such a redemption a service charge of two per cent had to be paid. (Fisher, 1933, p. 24; see also Muralt, 1934; Hornung, 1934).

The scrip, issued in July 1932, was soon accepted by all individuals and institutions with interests primarily within the vicinity of where the scrip was supposed to circulate. Current taxes and arrears as well as other debts were paid, streets were rebuilt and asphalted, trees were planted, a bridge was constructed, unemployment was reduced. Even the banks shared in the benefits of the cost–bearing money. Fisher (1933, p. 28) reports that the mayor said that the scrip had fulfilled all their expectations and that it should be adopted nationally. The experiment attracted the interest of other villages.

The Austrian government, however, prohibited the scrip because it contradicted the National Bank's currency notes monopoly. In September 1933 the scrip had to be withdrawn from circulation (Unterguggenberger, 1934).

13.4 "The Stamp Scrip Movement in the U.S.A."

by Hans R. L. Cohrssen

It was in New York in the spring of 1931 that a handful of like–minded individuals founded what we called the Free Economy League of the U.S.A. for the purpose of propagating the idea of stamp money to help fight unemployment. That is, we advocated the issue of scrip with dated spaces printed on the reverse side to which a stamp amounting to two percent of the face value would have to be attached each week for the bill to maintain its par value. Therefore, at two cents a week for a dollar bill, after 52 weeks the bill would have paid for itself and be taken out of circulation.

The publications of the German Free–Economy movement had introduced us to the experiences in Schwanenkirchen with Wära and in Wörgl with stamp–scrip. I wrote an article about this for the then influential weekly *The New Republic* (August 10, 1932). It was just coming off the press when I read that Professor Irving Fisher had pointed out in a lecture that the efforts of the administration and the Federal Reserve System to bring money and credit into circulation had been fruitless because it was impossible to control its velocity of circulation. I telephoned him to draw his attention to the Wära and Wörgl experiments, and he invited me to dinner. The proposal to use stamp money to help overcome unemployment fascinated him, and he wanted to know whether I would be willing to help him popularize the idea in America. Was I ever!

What distinguished Irving Fisher from his mostly less prominent colleagues was, in my experience, his open–mindedness: the fact that he invited me, listened attentively as I talked about Silvio Gesell, Wära, and Wörgl, and spontaneously decided that this was a practical way to attack the problem of unemployment. In addition, he immediately understood that stamp scrip could be a decisive step towards economic recovery, and, simultaneously, one in the direction of stabilization.

As an example of how quickly and effectively Fisher assimilated this, for him, new idea, I should like to quote from his book “Booms and Depressions” (1933a, pp. 226–230), which was published shortly thereafter.

> To stimulate buying, an ingenious scheme (...) has been suggested. Let the government print billions of special dollar bills, the reverse side to be divided into 12 spaces, each the size of a one–cent postage stamp and each space dated; the dates to represent the first day of 12 consecutive months. (...) This unique plan would put immediate purchasing power in the hands of every customer, including the unemployed. (...) It would then help solve two problems at once, immediate unemployment relief and reflation. (...) One advantage of this plan is that it puts no added strain on gold reserves. Nor would it involve any raid on the Treasury (...) Besides serving as a temporary expedient to break the depression, stop hoarding, and reflation, the plan could also be adapted to serve as a permanent instrument of stabilization by varying the interval between stamps, or the quantity in circulation, or both. Of course the government could issue such bills in payment of its own expenses or purchase of bonds. (...) With this power the volume of the bills could, from time to time, be regulated up or down as required. This regulation should, of course, be restricted by law to the purpose of stabilization according to an index number.

During the first six months that I worked for Irving Fisher, I spent a substantial amount of time answering the many questions that communities, cities, businessmen, and industrialists had regarding stamp srip. In addition, there were letters to the editor to be written, usually to correct misleading newspaper reports. And then there was the drafting of laws and the putting together of a small book entitled “Stamp Scrip” (1933), a handbook, if you will, for those interested in issuing this emergency currency. A total of 450 to 500 communities and cities expressed their interest at that time. The book also includes the bill introduced by Congressman Pettengill, Indiana, and Senator Bankhead, Alabama, which, if passed, would have provided for the issue by the U.S. Treasury of $ 1 billion of stamped money certificates annually until the purchasing power of the dollar had regained its pre–Depression level. Another law, which would have permitted communities and cities in Pennsylvania to issue stamp scrip to finance job–creating measures, also appears in the book.

The experiences with Wära in Schwanenkirchen and with stamp–scrip emergency money in Wörgl are also outlined in “Stamp Scrip”. “The mayor with the long name,” as Wörgl’s burgomaster, Herr Unterguggenberger, was referred to, “was shrewdly and very properly resolved that the town should be one of the beneficiaries of anything that was done.” Professor Fisher sent Dr. Hermann Scheibler, his Swiss associate, to Wörgl for a firsthand assessment. He reported that after the stamp scrip had been issued, not only were the current taxes promply paid, but the taxes in arrears were also collected and that in the second half of 1932, Wörgl carried out public works projects valued at 100,000 Schillings: seven streets were asphalted, twelve roads were improved, the sewer system was extended to two more streets, trees were planted and forests improved, and permanent jobs were given to from 30 to 50 of the unemployed inhabitants. And certainly most important of all, the rise in unemployment was brought to a halt. At

the conclusion of his report, Dr. Scheibler quoted Mayor Unterguggenberger as follows: “The Stamp Scrip of Wörgl will have historic significance, because it has kept its promise to provide ‘work and bread’. It has, in fact, fully satisfied all our expectations.”

The experiences of 15 American communities are presented in the book “Stamp Scrip” as examples of how the scheme should *not* be carried out. Following the example set by Hawarden, a small town in Iowa, they all issued emergency currency to which a stamp had to be affixed with each transfer of the scrip; that is, there were no specified dates for stamping. Of course, strictly speaking, this was also stamp scrip. However, here the stamps functioned like a turnover tax, hindering the transfer of the scrip rather than stimulating it as did the stamps that had to be attached every week. The real Wära–Wörgl dated type of stamp scrip circulated succesfully in, for example, Dothan, Alabama. And St. Paul, Minnesota, a city of over a quarter of a million inhabitants, decided to issue $ 100,000 worth of dated stamp scrip as soon as it could get the authority required by law from the Minnesota legislature. At that time, more than 100 communities, including several larger cities, had planned to follow the instructions in the book and issue stamp scrip.

At the beginning of 1933, Professor Fisher sent me to Reading, Pennsylvania, a medium–sized industrial city where the local Chamber of Commerce had requested help in issuing stamp scrip. A committee of ten bankers and two businessmen were willing to guarantee the project. The city was prepared to accept stamp scrip in payment of taxes and other fees. The banks would accept scrip on deposit and pass it on to their customers. The unions agreed to the partial payment of wages in stamp scrip after retailers, wholesalers, service stations, insurance companies, doctors, the telephone company and farmers had likewise declared that they would accept it for goods and services. The bills and the 2% stamps had been printed. The banks and stores had received signs reading, “Stamp Scrip Accepted”, and the banks were ready to sell the stamps. Everything was set to start on Monday, March 7, 1933.

I can still vividly remember sitting around together on Friday, March 4th, listening to President Roosevelt’s inaugural addres. It was during this speech that he coined the famous phrase, “The only thing to fear is fear itself.” He then directed that the banks should be temporarily closed, and he forbade any further issue of emergency currency.

In the meantime, Professor Fisher had received an inquiry from the state of Oregon concerning the issue of $ 75 million in stamp scrip to finance public works projects, and he sent me to Washington, D.C., to see if I could persuade the new administration to exempt Oregon from this regulation prohibiting the issue of stamp scrip. Friends of ours in the House and Senate arranged for me to meet with some of the New Dealers. The Secretary of Labor had nothing against the scheme, but she couldn’t decide the matter. Then I saw the Secretary of the Interior, who, although also not opposed to the idea, didn’t have the power to grant the necessary permission. The project, he said, would have to be approved by the new Secretary of the Treasury, Mr. Woodin. As he was ill, I spoke to his deputy Dean Acheson, who later became Secretary of State. He informed me that he would have to have an expert opinion from his advisor, Harvard Professor Russel Sprague, before he could decide. I had a very cordial meeting with Professor Sprague. He told me he wanted to look at the proposal and that he would inform me of his decision. We met again

the following day, and he said that, in principle, there was nothing to be said against the issue of stamp scrip by the State of Oregon for the purpose of creating jobs. However, our scheme went much farther: it was an attempt to restructure the American monetary system and he had no authority to approve such a proposal. That put an end not only to our stamp scrip movement but to a model project that might indeed have led to fundamental monetary reform. Later on, I turned over twenty files bursting with correspondence with people who had expressed interest in stamp scrip to the New York Public Library, where, to this day, they can still be examined.

Thus the stamp scrip idea was never realized. Fisher, however, continued to work fighting against shortcomings of the New Deal economic policies, and trying to improve the monetary foundation of the economy. This included his 100% money concept (Fisher, 1936; Allais, 1947, pp. 404, 417), which, even today, is by no means obsolete, neither in general, in view of the national and international money supply problems, nor in particular, in view of this book's efforts concerning cost–bearing money.

In summary we can say that the technical difficulties of attaining currency stability seem minor in comparison to the general lack of understanding of the problem itself. As long as the "Money Illusion" (Fisher, 1928) is not overcome it will be virtually impossible to muster the political willpower necessary for this stability.

However, what is important today is the reduction of unemployment resulting from monetary measures such as credit restrictions, high interest rates and overindebtedness. The examples of Schwanenkirchen and Wörgl have shown that the issue of stamp scrip can create jobs without adding to community, city or state debt. In Wörgl it was demonstrated that this type of self–help threatened neither morale, public order, nor social peace. The unemployed cannot wait. Public works projects, especially those directed at environmental protection, should not wait. I do not believe that anyone should have to wait for anything when it is a question of relieving social misery.

Chapter 14

THE REALIZATION OF NEUTRAL MONEY

Our minds are accustomed to money as we know it. Neutral money has had little chance to unfold its own variety of forms in practice. Theoretical fantasy usually cannot compete with the manifoldness of reality. Thus it is difficult to predict what will happen once development of "neutral" transaction technologies has started.

For instance, we speak of "money services" and treat them as something that springs from money over the course of time. Interest is also a constant *flow* of returns to financial capital. The transactor's problem to become liquid, however, much more resembles impulse–phenomena (Stützel, 1958, p. 239) than constant flows of nonpecuniary services or pecuniary returns. Hence the characteristics of neutral money, as now conceptualized, are probably still too similar to conventional

money. Debts at call, for instance, might become a typical form of neutral money (Chapter 11.2 referring to Keynes 1936, p. 358).

In addition, we are entering the age of the “moneyless society” with its variety of credit cards and electronic payment technologies. With respect to this financial environment the following ideas concerning neutral money might not seem very modern, but we must understand and reconstruct conventional money before we can advance to neutral electronic transaction technologies.

14.1 General Aspects

The task of creating cost–bearing money is similar to the task of creating interest–bearing money. Bryant and Wallace (1980) and Wallace (1983) have hypothesized forms of interest–bearing money. Carrying out a transaction with an interest–yielding bank note or a small–denomination bearer bond “requires both parties to perform a cumbersome calculation or other routine for discovering its present value at the moment of transfer” (White, 1987, p. 452). This claims resources and hence lowers the propensity of transactors to make use of such money for everyday payments.

The same happens with cost–bearing small–denomination notes. These impediments, though not explicitly elaborated, were probably the reason why Keynes, approving of Gesell’s idea, “which may carry with it the essence of what is needed”, thought that it was “not feasible in the form in which he proposed it” (Keynes, 1936, pp. 356–357).

One might think of solving the problem by transferring interest to the money holder by deflation (Friedman; Engels, 1981; Fama, 1983). Correspondingly, costs would be transferred by inflation. However, deflation (or inflation) would not only influence the amount of cash holders’ purchasing power but also the value of the positive (or negative) financial assets held by money creditors (and debtors). This effect would, in the case of our cost–bearing means of payment, contradict the concept of neutral money, which includes a neutral monetary standard of measurement and deferred payment.

With either interest–bearing or cost–bearing money there is the problem that a certain amount of purchasing power (dimension: monetary units) is to be connected with an influx or efflux of purchasing power (dimension: monetary units per period). Conventional money, having developed from commodity money to flat money, only represents the amount of purchasing power (stock) and does not suitably represent an influx or efflux (flow). But bank money is not subject to the physical restrictions of currency, notes and coins. Thus it seems possible to create neutral bank money and develop by competition appropriate transaction technologies that employ coins, notes, credit cards, bank money, and electronic facilities with their various advantages and disadvantages in a way that adapts most economically to the payment needs and customs of transactors. Even Johannsen (1913, pp. 48–54), for instance, found no need to burden small denomination money with costs too.

Due to the physical properties of conventional money, monetary evolution has had little chance to develop in the direction of cost–bearing money. Gesell (1892, pp. 223–236; 1922), in his fairy tale about the Isle of Barataria, imagined a commodity money that loses weight and hence value by natural shrinking, but our real monetary equipment does not, of course, have this property. On the contrary, the technical substrata are durable, so that the rest of the economic system has

adapted itself to the given structure of money, and so has most of the theorizing in monetary economics. Modern financial innovations illustrate this process of adaptation. Some “monetary heretics”, however, have invented several practicable ideas for attaching costs or other disutilities to money (See Walker, 1952; Creutz, 1986), but these ideas also had no chance to take hold and to develop because they were prohibited by the authorities when they were on the verge of becoming successful.

The monetary techniques discussed by the heretics include the stamping system, adopted by Fisher (1933), as well as, for instance, a periodic lottery to determine the serial numbers (or colour) of the notes to be withdrawn from circulation at a price below parity (Gesell, 1892, p. 255). This latter imaginative suggestion was reinvented by McCulloch a century later (1986, p. 75; Yeager, 1986, p. 241) as a technique for interest–bearing money. And, above all, this balloting method, creating uncertainty–costs for cash holders, would come close to the idea of reducing the marginal utility of money by making the prospective utility of money as “uncertain” as the real prospective returns (See Chapter 6.7, referring to Hahn, 1971a, p. 70).

14.2 The Next Step in Monetary Evolution

“One way of looking at monetary evolution is to regard it as the development of ever more sophisticated ways of reducing transaction costs” (Hicks, 1967, p. 7). Therefore we have chosen the transaction cost approach (Chapter 4). One of the problems is that monetary transaction costs (interest being the price of liquidizing one’s goods) in most cases are connected with credit costs *(i.e.* with the costs of lack of confidence) or other costs. Conventional interest, thus, is an amalgamation whose different components must be kept separate from each other, at least theoretically. To give somebody “credit”, though usually understood as “lending money”, is something quite different from transferring to him liquid transaction money. Hence the task of organizing an optimal credit system is different from that of organizing an optimal system of acquiring liquidity. The transition from today’s money to neutral money largely means a change with regard to liquidity, not touching on the problem of having confidence in someone’s ability to repay, though both problems cannot be strictly separated from each other in practice. All this has to be kept in mind when concepts of neutral money are considered.

Hicks (1967) has suggested a number of measures of general relevance in this connection:

> Some organization would be required; for it is not possible to think that any economy could be rationally organized in which anyone could borrow funds for nothing, on nothing more than his own statement that he needed them. Some kind of sifting must always be required, and some kind of organization to do the sifting. Any such organization must have costs attached to it.” (pp. 58–59)

This includes, of course, the problem of credit rationing, but, as has been stressed, “credit rationing” (for references see: Vogt, 1983, pp. 167 and 204) is different from “liquidizing” given objects in general. If, for instance, the borrower provides the lender with security in the form of gold worth twice as much as the money

borrowed, then the question of confidence concerning repayment is no longer a problem, but the borrower still has to pay the interest price for the period during which he is able to utilize monetary liquidity instead of enjoying the feeling of possessing gold.

The incidence of (individual) credit problems in the acquisition of money is a function of what security the debtor offers the creditor. Thus, in the following argument, we can assume that the credit part of the liquidizing problem is either negligible or solved separately by the parties in question. We can now concentrate on the question in the next step of monetary evolution: how is the financial system to be reorganized to produce optimal liquidizing techniques? In our argument, this question is approximately identical with the problem of avoiding anticipated and protracted transaction costs in the form of conventional money interest.

14.3 Neutral Money as a Financial Innovation

Let us pick up the thread of the paradigmatic equalization of money's costs and benefits (Chapter 6.2) and the generalization of this paradigm (Chapter 6.4). The idea is that money's costs and benefits are approximately equal when the cash holder is charged a price for monetary liquidity at a rate that approximates the rate of conventional interest. This idea must now be transformed into practice.

Assume a bank ("N–bank" for "neutral money") that is supposed to issue neutral money (N–money). N–bank's customers demand neutral bank money balances in order to make payments amongst themselves (no clearing problems). Let N–bank acquire the money for its credit business from the financial markets (refinancing, reliquidizing). Hence N–bank has to pay conventional interest. Let the margin between conventional debtor und creditor interest be 2%.

If, now, N–bank wants to charge its N–money customers liquidity costs instead of conventional interest, the margin between conventional creditor interest and new debtors' liquidity costs must be at least 2% to have the same yield from the business. The liquidity costs, however, are to be charged not only to the bank's N–money debtors, who are the first in the series to use the new money, but to all the other customers using the new financial facilities. And the debtors as well as all the others are charged liquidity costs solely for the amount and the period of their (positive or negative) liquid N–money balances, not for the amount and period of the credit given to the N–money debtors. Then both debtors and other customers using N–money services have the very same type of liquidity costs, *i.e.* transaction costs.

It is not very easy to understand and visualize N–money as just described. One has to do some intellectual exercises to get accustomed to the methods of the financial innovation in question. The biggest impediment, however, on the way to understanding is the objection that the system cannot work for several reasons. Who, for instance, will be so foolish to accept N–money, which burdens him with liquidity costs? Who will put his money into the system deliberately? As a consequence, who will participate without legal coercion? And with legal coercion, what other financial innovations will be developed to escape liquidity costs and flee into the conventional system of premium–bearing money?

In this connection it must be remembered that there is a difference between "voluntary" demand for money, coming from wealth–holders who calculate in terms of opportunity costs (Chapter 4.3, with reference in particular to Hicks, 1967,

pp. 15–16), and involuntary (Hicks) or “compulsory” (Gesell) demand, coming from transactors of real economic business, who, in case of need, are ready to pay interest to become liquid. Current economic theory is accustomed to speaking in terms of money being held voluntarily (again Chapter 4.3). This narrow framework prevents economists from understanding that transactors of real current business might very well be glad to have money *with* liquidity costs but *without* interest. This will become evident as soon as the holding of financial negative stocks by transactors and the costs of these stocks are completely incorporated into the inventory concepts of the transaction demand for cash.

If transactors, who have a compulsory demand for transaction money, can avoid the high costs of outside funds (current “capital cost”), they will readily pay the low liquidity costs, which are comparable to today’s opportunity costs of cash holding. Hence there should be no lack of participants who quickly realize the advantages of the N–money financial innovation. They will understand the benefits of the system even faster as an increasing number of local authorities’ treasuries grasp the point, take the opportunity to finance projects at zero–interest rates, and announce the acceptance of N–money cheques or giro orders in payment of local taxes. If there are any difficulties in refinancing (reliquidizing) the issued N–money, the participants can easily raise enough funds among themselves to launch their projects.

However, the system as described up to now will not work yet. N–bank has to pay, at least during the transition period from conventional to neutral money, interest to its creditors, wages to its staff and returns to its owners using *conventional money*. Thus the bank also has to charge the participants in the N–money system liquidity costs in old–fashioned conventional money. As a consequence, participants need to have two accounts with the N–bank: a conventional account for the customer’s conventional money and a N–account for his N–money.

Of course, many other questions and problems arise and have to be solved (Suhr and Godschalk, 1986, pp. 137–147). However, we can confidently leave most of them to the practitioners, who, once they have understood the system, can bring neutral money to life better than monetary theory can.

If, for instance, positive N–money balances incur liquidity costs, the customers of the bank will hold only negative N–money balances. Hence liquidity costs will have to be charged symmetrically on the participants’ (average) balance, positive or negative, just the same way as Keynes proposed for the International Clearing Union (Chapter 11.1). And, once again, this is somewhat difficult to understand. It is in accordance with the requirement that liquidity costs are to be charged regardless of whether the liquid balances are a creditor’s or a debtor’s money (endowment neutrality of the N–money system).

Due to the fact that we are accustomed to thinking in terms of “credit” and “interest”, it takes some time for our minds to realize that, with respect to “liquiditity”, it makes no difference whether the balance is positive (with uncertainty about the disposal of the money) or whether it is negative (with uncertainty about the acceptance of the money). The crucial point is the deviation from the zero line of the N–money balances.

If a customer with a credit balance only in N–money wants to have conventional currency notes or needs to pay a bill with conventional bank money, the system can solve the problem in different ways. Either the N–money facilities allow withdrawal

of conventional money from the N–money account with the effect that the liquidity costs continue to be charged until the (conventional) money is redeposited, or the customer lends his N–money to the N–bank in order to reduce his N–money liquidity costs and then takes a loan in conventional money.

No customer will deposit conventional money directly to create a positive N–money balance. He will lend this money to the bank and then perform his transactions using N–money credit, profiting during the transition period from the margins between the conventional and the new system, thereby helping not only to reduce these margins but also to approximate the properties of conventional money to those of neutral money.

Coins will probably continue to serve as change money. Currency notes will, to some extent, be withdrawn from circulation (Gresham’s Law). They will also serve as a convenient liquid reserve asset, the spot price of which in N–money will exceed its face value.

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