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How economists understand (or not) the relationship between the real and the financial economy

Kenneth Hermele

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How economists understand (or not) the relationship between the real and the financial economy.

Author: Kenneth Hermele

Author Affiliation: Human Ecology Division, Lund University

Abstract

Economists' attempts to understand the relationship between the real and the financial economy, and the impact of the latter on the former, go back to the origins of economics but they have gained renewed strength with the financial crisis of 2008 and the resulting economic crisis. The relationship real-finance is variously portrayed as being non-important, mutually beneficial, or destructive, real economic activities losing out to pure speculation and wasteful consumption patterns. The various economics' traditions takes concerning the pro- and cons of the rise of finance capital is discussed, and summarized in a table. In the process, classical and neo-classical, as well as Marxist, Neo-Schumpeterian and Ecological perspectives are discussed (and summarized in the Appendix). Three levels of the economy are investigated: the financial, the real (where production of goods and services take place) and the real-real, where the physical pre-conditions for the other two are located.

The conclusion is that the various sectors cannot be understood in isolation from each other, and that some of the recipes for a resumption of healthy balance between finance and the real economy forget to anchor this vision in a clear understanding the limits to growth supplied by Ecological Economics.

Key words: Real economy, real-real economy, fictitious capital, productive capital, neutrality of money, veil of money, bubbles, financial euphoria.

Contact details: kenneth.hermele@hek.lu.se, or hermele@telia.com

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Introduction

Ask the *Financial Times* how it defines "the real economy", and this is the answer:

> "The part of the economy that is concerned with actually producing goods and services, as opposed to the part of the economy that is concerned with buying and selling on the financial markets."

Intuitively, this definition may seem reasonable, we are used to think that what takes place in the real economy is decidedly different from what comes to pass in the financial sector, the actual production of goods and services occurring only in the former, while the latter is seen to be solely concerned with money and speculation for the sake of money and profits, without passing through production for the market.

This understanding is shared by many economists who otherwise would seem to have little in common. For instance, the editors of Marxist *Monthly Review* recently tried to explain that there is a distinction to be made between the real and the bubble economy, by stressing that

> "the 'real economy' [is] associated directly with GDP, and the speculative or financial economy [is] connected to the bidding up of asset prices or paper claims to wealth."
>
> (Editors 2009:62)

First, note that this attempt to separate the real from the financial economy is misleading as the financial activities in fact do contribute directly to the GDP, just as any other economic activity on the market does. But more importantly, the simple division of the economy in real and financial does not respond to the crucial issue of how the two are

related: are they independent of each other, mutually supportive, or is the relationship perhaps one of potential disaster?

Today, and especially after the eruption of the financial crisis of 2008, critical economists have come to lament the fact that the financial sector has become "too big", that there is an unhealthy relationship when finance grows out of step with the growth – or indeed reduction – of the real economy, which finance is supposed to serve, for instance when it was observed by the ecological economist Herman Daly in 2008 that "paper exchanging for paper is now 20 times greater than exchanges of paper for real commodities" (quoted by Kallis et al 2009:16). We are led to think that there resides a problem here, but it is not exactly clear what it consists of.

The drive among economists to make a distinction – is it real or only financial? – without tackling the central aspect of the real/financial relationship – is it mutually beneficial or destructive? – has not always been the preeminent approach, rather the contrary: historically, economists have been greatly concerned in understanding the role of money, sometimes discarding it as unimportant or insignificant, at other times underlining its central role in the economic process as a whole. The Appendix sums up the various strands of economists' thinking in this regard.

The Veil of Money

That the economy is made up of (at least) two parts which it is wise to keep separate, at least analytically, is not a new idea, nor an idea which has gone out of fashion. On the contrary, there have been arguments concerning both these propositions among economists even before the discipline of economics gained wider recognition with the publication of Adam Smith's *The Wealth of Nations* in 1766, starting with Aristotle and again

coming in focus with the economic writings of David Hume in the mid-18th century (Patinkin & Steiger 1989:131).

One strand among the early economists pitted the real economy against its monetary guise, and underlined that there was no absolute relationship between the real economy and the way the economy appeared in terms of money, loans and debts, profits and incomes. Subsequently, the mutual interdependence and interrelationship of the two facets of the economy was stressed, the two sectors now preconditioned each other, they were seen to be mutually supportive. More recently, and especially forcefully after the financial crash of 1929 and the economic depression which followed, the focus of economists began to shift to the potentially destructive and dominating role which speculative and self-serving finance capital could play *at the expense* of the real economy.

Towards the end of the 19th and the beginning of the 20th centuries, influential economists – from Böhm-Bawerk and Irving Fisher to Pigou, Wicksell and Schumpeter (see Boianovsky 1993, Patinkin & Steiger 1989) – used the then current metaphor among which claimed that money and finance was "a veil", "a cloak", or "a garment", which hid the way the real economy operated. Although finance and money were central aspects of the economy and the way it functioned, a common understanding among economists was that in fact they did add but little, and nothing essential, to the key issue, the production as such.

This had Schumpeter conclude, in 1908, that although there previously had existed different opinions among economists as to the relationship between finance and money, on the one hand, and the real economy, on the other, this had changed, and "economics

> has with hardly any opposition accepted the view that money [...] is only a veil, which covers up deep-seated processes without affecting their essential nature."
>
> (quoted in Boianovsky 1933:733)

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Of course, finance could facilitate investments, and money simplified exchange, but money itself was understood to be "barren", only earning interest because it could set in motion "the productive power of things that the money could buy" (to quote Böhm-Bawerk in 1889, in Boianovsky 1993:728). Hence, money as such did not directly impact the real economy, and many economists stipulated that money was "neutral".

This understanding has carried so much weight that it has remained in the neo-classical tradition, even after the series of financial crises which have characterized the 20th century, probably more than any previous century. Even today, the most influential textbook in economics – authored by Paul Samuelson and William Nordhaus, I am using the seventeenth (!) edition – find it wise to talk of money as "neutral" and postulate that in the long run

> "money changes lead to proportionate changes in all nominal variables but no changes in real variables."
>
> (Samuelson & Nordhaus 2001:559)

This is a strong statement, which underlines the continuity of the "veil of money" – perspective to this very day. Of course, most contemporary students of economics feel uneasy at the proposition that money does not affect a change in real variables – such as production and employment – and this may be the reason why the text book retracts from its previous conclusion and goes on to state that

> "The long-run neutrality of money is [...] only a tendency and not a universal law. [...] Most real-world monetary shifts have left real economic effects in their wake."
>
> (Samuelson & Nordhaus 2001:559-560)

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Surprisingly, we are left with an ambiguous understanding of the impact of money on the real economy, even though even neo-classical economists have had to recognize that there is a relationship, the two spheres are in fact not separate. Money is more than a veil. **Social anthropologist David Graeber maintains that there is something ahistorical about the way neoclassical economists describe the rise of money in order to serve the real economy. According to Graeber,**

> "almost all elements of financial apparatus that we've come to associate with capitalism – central banks, bond markets, short-selling, brokerage houses, speculative bubbles, securitization, annuities – came into being not only before the science of economics (which is perhaps not too surprising), but also before the rise of factories, and wage labor itself. [...] we like to think of the factories and the workshops as the 'real economy', and the rest as superstructure, constructed on top of it. But if this were really so, then how can it be that the superstructure came first?"
>
> (Graeber 2012:345)

The solution to this riddle, Graeber says, is to recognize that money and finance function as a "pump" which bloats capitalist production and facilitates exploitation of ever more workers, from the early 1700s to the present:

> "what we see at the dawn of modern capitalism is a gigantic financial apparatus of credit and debt that operates – in practical effect – to pump more and more labor out of just about everyone with whom it comes into contact, and as a result produces an endlessly expanding volume of material goods."
>
> (Graeber 2012:346)

In other words, although the two spheres can be kept separated analytically, the expansion of the real economy is driven by finance, the two are not independent of each other, and money is thus much more than a veil or a cloak over the real economy, it is, with the image used by Graeber, a pump which stimulates real production.

But if the financial sector can stimulate the real economy and make it grow, it can surely have – and certainly has had – the opposite impact and disturb the orderly functioning of the real economy, hence becoming a destructive force, not a pump but on the contrary a drain on the real economy.

Real and Fictitious Capital

The thought that there is a distinction to be made between the base, that is the real economy, the production of goods and services, and its financial superstructure, the banks and the institutions dealing with money, is in the Marxist tradition discussed as the difference between real and fictitious capital. The only capital which is recognized as real capital is the kind which is put to use in the production process, while money and finance, although they may appear to be capital, in fact are not, since they are not seen to be engaged in production, but only in circulation (if not idly being hoarded with even less of an impact on the real economy).

There are some similarities between the classics and the neo-classic economists, on the one hand, and the Marxist economists, beginning with Marx himself, on the other. In fact, there exists an overlap concerning the issues which the two strands of economists dedicated themselves to, a perhaps unsurprising observation giving the fact that Marx made ample use of the writings and conceptions propagated by contemporary as well as by earlier economist colleagues, both to agree with and to debunk.

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To Marx, in his main work *Capital*, the important point was to distinguish the real economy, where the process of accumulation and exploitation took place, from the financial sector, which only operated in a secondary capacity, to service the real accumulation process. Marx attempted to keep two kinds of capital analytically separate, real and fictitious capital, with money, loans, shares, bonds and finance in general seen as "wholly illusory" when it comes to their "capital-value" (quoted from Marx's celebrated, but unfinished, chapter 29 of *Capital III*, p 4). The basic reason was that there was a danger in disregarding the distinction fictitioius-real: by equalizing money with real capital,

> "[a]ll connection with the actual expansion process of capital is [...] completely lost, and the conception of capital as something with automatic self-expansion properties is thereby strengthened."
>
> (Marx 1894:4)

In other words, in order to underline that accumulation, economic expansion, was the result of the exploitation of labour and the creation of profits through the exploitation of surplus value, it was necessary, according to Marx, to distinguish real capital – which achieved the actual production and accumulation – from the illusory effect of fictitious capital.

In this original Marxist understanding, "actual capital", or "real capital" – Marx used both concepts – consisted of capital applied directly in the production process, while the various variants of "'money-capital'" – here Marx himself uses quotation marks to underline that money should not be seen as real or actual capital (see op cit:7) – only matter in the sphere of circulation.

This is similar to the way Adam Smith more than a hundred years earlier had framed the distinction real capital – money. To Smith "capital", which "the owner does not care to be at the trouble of employing himself" is only "monied interest". This kind of capital, Smith said:

> "is distinct, not only from the landed, but from the trading and manufacturing interests, as in these last the owners themselves employ their own capitals."
>
> (Smith 1976:373-4, book II, chapter IV)

Marx however seems to be open to considering a closer interaction between the real and the fictitious aspects of capital as he conceded that "fictitious capital" may "represent [...] real capital" (1894:6). But he upheld the fundamental division between the two spheres: only real capital initiates real capital accumulation, fictitious capital such as money and finance may represent this process, but can never bring it about.

Unfortunately, Marx's words in this unfinished manuscript are unclear and we find ourselves at a loss when it comes to understanding the significance of his remark that money, i.e. fictitious capital, may "represent" real capital: does it not weaken the distinction real-fictitious, if we consider that the latter "represents" the former, that money "represents" real capital employed in the production process? Does it not in fact constitute recognition that the two are not only interdependent but actually substitutable?

We do not know how Marx would have finalized the third volume of Capital had he lived to do so, but we recognize a crucial, and continuous, problematique when it comes to separating the real from the virtual economy: what is the impact of the latter on the former, how do finance and the real economy relate to each other? As we will see, these are issues which still are very much debated.

Two decades after Capital III was published (by Friedrich Engels), Rudolf Hilferding attempted to bring the understanding of the relationship between finance and production and accumulation up to the new stage which capitalism had attained by the end of the 19th century. In *Finance Capital* he claimed that a new phase of capitalist development had begun, which did away with the Marxian distinction fictitious – real capital.

"Finance capital", said Hilferding , "has the appearance of money capital", that is of fictitious capital in the Marxian sense, but this ought not fool us as it nevertheless "eliminates the division between bank capital and productive capital" just as "the progress of combination among previously separate and independent branches of production breaks down the barriers between different spheres" (Hilferding 1981:235).

To Hilferding, then, the rise of finance capital constituted the latest phase of capitalist development (to quote the sub-title of his book), but to Fernand Braudel, writing some 70 years later, financialization and the rise of a financial sector were recurrent phenomena, connected to the attempt by a declining hegemonic power to postpone its inevitable demise, from Genua via the Netherlands and Great Britain to the current hegemonic decline evidenced by the end of the American century. In this perspective, financialization constitutes a "sign of autumn" for successive hegemonic powers (Arrighi 2010: 166).

That financialization, understood as constituting an ever more important part of capital, and thus of capital accumulation, was either new (Hilferding) or recurrent (Braudel, Arrighi) was not a self-evident proposition to the Marxist mainstream; on the contrary, it was seen as constituting a deviation from the correct Marxist interpretation of accumulation which continued to maintain that industrial capital – that is "real capital" in the Marxist sense – was more important than finance capital, and that the rise of the latter, at best, constituted a transient – not recurrent – phase which soon would be overcome as corporations (i.e. real capital), through their monopoly profits, would become virtually independent of external

finance. The reason was that "the growth of internal corporate financing" would secure that "the dominance of bank capital is a passing phase of capitalist development", to quote Paul Sweezy, a leading Marxist economist of the 20th century (Sweezy 1942:268). Thus, Sweezy forecasted, the importance of finance would at most be a passing phenomenon and the primacy of productive capital would soon re-confirm itself.

This negative reading on the links between the real and the financial sections of the economy was reiterated over twenty years later when Sweezy together with his co-author Paul Baran in 1966 in their seminal study *Monopoly Capital* played down the role of the financial sector in the new, monopoly phase of capitalist development which they analyzed (Baran & Sweezy 1968:143-4). They actually understood the financial sector as a net loss to the economy, as something which reduced the rate of accumulation, as a waste of money which more fruitfully ought to be employed in the real economy, to create real production. Sweezy himself (Baran passed away before *Monopoly Capital* was published) has expressed regrets that he had underestimated the role that finance played in the new economy of monopoly capitalism (see Foster & McChesney 2012:187, n 29).

Today, with the rise of finance capital a generalized phenomenon, it has become a commonplace to talk of a new phase of capital development where finance and what used to be called fictitious capital in general, dominate the scene. In the US, the financial sector – Finance, Insurance, Real Estate, FIRE – has more than doubled its size 1980-2010 to become of equal importance to the real, non-FIRE economy (in terms of its share of GDP), and also corporations in the real economy make as much from their financial activities as from the sale of their products. We may thus safely conclude that we are in a new stage of capitalist development (Foster & McChesney 2012:17-18).

One of today's most influential Marxist positions is siding with Hilferding, once so severely criticized for failing to understand the predominance of real over fictitious capital. It is

increasingly recognized that we live in a world shaped by the "financial-industrial complex", and that the present stage of capitalist development could be branded Monopoly-Finance Capitalism (thus adding "finance" to the "monopoly capitalism" coined by Baran and Sweezy):

> "Financialization can be defined as the long-run shift in the center of gravity of the capitalist economy from production to finance. This change has been reflected in every aspect of the economy, including: (1) increasing financial profits as a share of total profits; (2) rising debt relative to GDP; (3) the growth of FIRE [...] as a share of national income; (4) the proliferation of exotic and opaque financial instruments; and (5) the expanding role of financial bubbles."
>
> (Foster & McChesney 2012:50)

With monopoly-finance capitalism we have taken a step forwards in integrating the two spheres of the economy, the real and the financial, a recognition that the two cannot, or at least should not, be understood independently from each other.

From another vantage point, the previously discussed understandings of the link between the real and the financial have one drawback in common: they do not include the actual physical processes which constitute the preconditions for the economic trajectories that we witness. We now turn to the way ecological economists understand the real and the financial economy, to see if we can advance our insights in this respect.

Ecological Economics – Including the Physical

Contrary to the absence of the physical aspects of reality in neoclassical as well as in mid-twentieth century Marxist economics, ecological economics takes as its point of departure the physical environment into which the economy is "anchored" (Georgescu-Rogegen

1971:2). This may seem self-evident, just as an observer of the history of the discipline of ecological economics maintained: the grounding of the economy in the physical reality is a "banal" fact which it would be "difficult to disagree with" (Röpke 2004:296).

Nevertheless, the leading writers in this tradition have made a point of including physical terms and concepts in their titles and headings: the entropy law (Georgescu-Roegen 1971), biophysics (Daly 1992, first edition 1977), and energy (Martínez-Alier 1990). As Daly (1992:17) underlines, the very concept of "steady-state economics" is a physical one, and its success or failure is not measured in monetary but in physical terms.

More generally, what ecological economics brings to our grasp of the relationship between the real and the financial is the need to view the economy as a socio-ecological metabolic process, in which real physical resources are brought into the economy only to be transformed and emitted as goods and waste from the economy into society and nature (Fischer-Kowalski & Haberl 2007). Viewed this way, the real economy is the driver of real physical exchange of labour, energy and material resources, many of them as embodied land, labour, energy and water. In other words, it is not the distinction between real and fictitious capital, nor between production and circulation, which is at the centre of attention in ecological economics, but rather the economy in relation to nature and the environment as a whole, and the difference between the production of goods and services and the finance to enable (or disturb) it, is a secondary concern, after the physical scale of the economy vis-à-vis nature is considered.

Ecological economics – a discipline which dates back at least to the mid-19th century, see Martínez- Alier 1990 – takes as its point of departure the fact that mainstream economics disregards all physical limitations, and that "Neoclassical economists have left natural resources out of their own representation of the economic process" (Georgescu-Roegen

1971:2). This neglect has led to a misrepresentation of "the economic process" where it is seen as freely floating in space. The economy, in this light,

> "neither induces any qualitative change nor is affected by the qualitative change of the environment into which it is anchored. It is an isolated, self-contained and ahistorical process – a circular flow between production and consumption with no outlets and no inlets, as the elementary textbooks depict it."
>
> (Georgescu-Roegen 1971:2)

This verdict of mainstream economics, and its textbooks, is unfortunately still relevant, as anyone can confirm by leafing through a textbook chosen at random (see e.g. Samuelson & Nordhaus 2001) where the environment continues to be analysed as an "externality", and where the basic problem still is the fact that the market cannot adequately establish prices for resource use and emissions. Again, the critique is not new, it mirrors the position Of Georgescu-Roegen (1971:9-21) when he stated that a real understanding of economics must take as its point of departure the laws of thermodynamics.

The real economy, then, is constituted by activities sustained by the energy which reaches the earth from the sun, transformed via photosynthesis. This has led ecological economists to theorize a three-layered vision of the economy in the guise of a pyramid: at the top we find the financial sector, in the middle the real economy, and at the bottom, the real-real economy:

> "the ecological economists' *real-real* economy, the flows of energy and materials whose growth depends partly on economic factors (types of markets, prices) and in part from the physical and biological limits. The *real-real* economy also includes land and the capacity of humans to do work."
>
> (Kallis et al 2009:16)

The stress on the physical aspects of the economic life has at times been so strong among ecological economics that some observers have felt a necessity to distance themselves from this "calorific obsession" (Martínez-Alier 1990:1), namely the idea of measuring economic performance and exchange in energy terms. To Herman Daly overstating the physical aspect of the economy at the expense of social and economic dimensions amounts to "ecological reductionism", as erroneous a position as "economic imperialism", the still dominant take in mainstream economics, which reduces "everything" to money, or, which amounts to the same thing, assesses natural and social states in monetary terms (Daly 1992: 211-23).

That this latter danger is quite real should be evident from the literature attempting to measure the monetary value of ecosystem services in order, it is claimed,

> "to raise awareness of the importance of ecosystem services to society [...] and [...] inform better, more balanced decisions regarding trade-offs with policies that enhance GDP but damage ecosystem services."
>
> (Costanza et al 2014:157).

But what do we actually become cognizant of when we are told that the value of ecosystem services has increased from 46 trillion USD in 1995 to 125 trillion USD in 2011? It is not only that we construct nature as "fictitious commodities" – to use Polanyi's celebrated expression, which he applied to the commodification of land, labour and money, which, he claimed, "are obviously *not* commodities" (Polanyi 1957:72) – but we may actually be invited to consider less of the real importance of the ecological systems when we view them as "services" to the human economy compared to considering them as the key component of the real-real economy. Thus, by attempting to measure the economic importance of

ecological resources we may end up the victims of the "tragedy of well-intentioned valuation" (Gómez-Baggethun & Pérez 2011).

That this is an actual danger is brought out by the fact that the defence of the procedure of valuing ecosystem services in monetary terms is misleading: in an earlier discussion Robert Costanza and colleagues argued that the rationale for assessing ecosystem services in monetary terms was the need to establish the

> "optimum 'scale' or size of the economy relative to the ecological life support system. To address this question one must be able to directly compare the value of ecosystem services lost with the value of other economic services gained."
>
> (Costanza et al. 1998:68)

Note the seamless transition in the argument from "scale" to "value". But although scale is a key concept of ecological economics and of the relationship between the real economy and the environment, as underlined by Daly 1992 over and over again, scale is measured in physical terms, not in monetary.

The difficulty to grasp the significance of anchoring the economy in the real world is also evident in the (inadvertently) funny conclusion that if "agriculture were to stop, economies would collapse to near zero" (Costanza et al 2014:157); of course, in the event of no agriculture at all, the economy would cease to exist, but so would human life as well, at least if we rule a return to living as hunters and gatherers.

It turns out that assessing ecosystem services in monetary terms has not improved our understanding of the economy-nature interface one bit compared to the point of view embraced by traditional economists, here exemplified by environmental economist William Nordhaus, who once maintained that the impact of climate change on the US economy is

insignificant since agriculture only accounts for 3 per cent of the US GDP (quoted in Daly 1996:63-64).

Again, monetary metrics is not a relevant way to gauge the importance of ecosystem to the real, physical world. Too bad, then, that the record of the main academic journal for ecological economics – according to a new assessment of *Ecological Economics*, the leading journal for this tradition, see Plumecocq 2014 – indicates that the research published under this label has moved in the direction of ecosystem valuation, thereby

> "establishing ecosystem monetary valuation as a social convention among environmental researchers [which] may exclude valuable solutions for environmental problems."
>
> (Plumecocq 2014:465)

The solutions which are excluded from considerations are those that would attempt to limit the scale of the economy in relation to nature. In other words, the monetization of ecosystem services goes against the grain of ecological economics in the very journal which was established to question the economic imperialism (to use Daly's concept) of economics in relation nature and ecosystem, the journal *Ecological Economics* is moving further and further from the three-layered perspective of the economy and more and more in the direction of unified monetary measures.

A similar erosion of alternative takes on international trade can be found in relation to the discourse on unequal exchange. At first there appears to be a similarity between Marxist theories of unequal exchange and those presented by ecological economists: we are talking of unequal exchange of embodied physical resources, labour in the Marxist tradition, and energy, ecological footprints, carbon dioxide, water or weights in the ecological economics approach (Lonergan 1988, Hermele 2013). In this light, it can be maintained that ecological

theories of embodied value of energy, matter, or footprints are "nearly indistinguishable from the classical labor theory of value" (Mirowski 1988:817).

But a division still exists in that the proponents of unequal exchange of labour measure the significance of the exchange in monetary terms, while the ecologically unequal exchange is not expressed in any other metric than the one relevant to the exchange in question, i.e. tons, hectares, litres or kalories (Hornborg 2014:13).

Hence, in the ecological economics tradition, at least as it was originally conceived, there is no attempt to use monetary measures to capture the "real" impact of the economy on nature. Instead of becoming "more real", monetary measures turn the link economy-nature into a surreal relationship, mistaking the issue of monetary value for the "real issue" of scale.

But this objection also applies to the strand of ecological economics which subsumes several dimensions of the real world into one single metric, be it energy, area, or litres. Again this amoutns to running the danger of "reductionistic" thinking, above all the trap of an "energetics bias", of "downplay[ing] the diversity of phenomena in favour of simple homogenous relationships [by] reducing all phenomena to their energetics essences" (Mirowski 1988:823-4).

The solution of applying the three-layered perspective is against this background quite attractive, each layer measured with relevant and different indicators.

Keynesian, Neo-Keynesian and Neo-Marxist Understandings of the Real-Finance Interlink

Of course, to claim that there is an analytical distinction to be upheld between fictitious and real capital, or between the financial sector and the real economy, does not automatically amount to an argument that the two have no impact on each other, although as we have seen this was indeed the position taken by some of the early classical and neo-classical economists, at least when they thought of a well-functioning economy. For instance, John Stuart Mill maintained in 1871 unequivocally that the two spheres had absolutely nothing to do with each other:

> "the relations of commodities to one another remain unaltered by money [...] there cannot, in short, be intrinsically a more insignificant thing, in the economy of society, than money"
>
> (quoted by Patinkin & Steiger 1989:131)

But to Marx, as well as to Keynes, the analytical separation served to facilitate an understanding that the fictitious and the real, productive capital spheres were indeed interrelated, and that also fictitious capital could unleash devastating economic crises in the real economy (Foster and McChesney 2102:55). It has by now become a commonplace, also for Neo-Marxists, to underline the importance of the financial sector to the trajectories of the real economy. A commonly seen impact of the unbalanced growth of the financial sector is the speculative bubble, and once such a bubble bursts, the repercussions on the real economy may be dire. In this Marxist optic, then, finance is liable to have "real world repercussions":

> "Insofar as the financial system is growing not by servicing production, but through a process of money simply begetting more money (in Marx's shorthand M-M') without the intervening production of commodities, this takes the form of a financial bubble."
>
> (Editors 2009:63)

The real economy is still confined to the production of commodities, and finance may be its servant. But when finance attains a life of its own – presumably without a relationship to the production of goods and services – we are living in a dangerous situation in which the "unreal" sector may gain the upper hand.

The relationships between the financial bubble and the real economy are established through at least two mechanisms. One is to simply state, as does Keynesian crisis economist Hyman Minsky, that although "investment determines output; finance determines investment" (Quoted by Toporowski 2005: 143). In other words, there exists a direct link from money and the financial sector to the actual production process.

That the two spheres – the real and the financial – are intimately interdependent and related to each other was an understanding which united Keynes with Marx. In the Marxist tradition this is most easily brought out by the way that capitalist production is depicted as M-C-M': money being turned into commodities which, once sold on the market, generate more money. Thus, money plays a role in the origin of capitalist production, testifying to the necessity "of integrating within a single system the real and the monetary, production and finance" (Foster & McChesney 2012:54).

Keynes embraced a similar understanding when he in 1933, in a brief text called "A Monetary Theory of Production", criticized mainstream economists and economics in general for assuming that money was "in some sense neutral", unable to affect the transactions "between real things". Opposing this, Keynes elsewhere emphatically stated: "money is not neutral" (quoted by Foster & McChesney 2012:51), and he even considered the assumption of neutrality a "nonsense notion" (in a letter written in 1936, quoted by Patinkin & Stegier 1989:137).

In more recent studies, the interdependence is taken more or less for granted, and Greta Krippner, in a her study of the rising role of finance in national economies, simply states that finance is not necessarily "*unproductive*", a statement which had to be made, it seems, in order to ward off the view that there is a strict separation between the real economy and finance:

> "Financial and productive activities are closely related to each other, and much financial activity supports production – although clearly not all of it does."
>
> (Krippner 2011:4)

To Krippner, finance *may* be part of the process of production of goods, and she considers

> "the question of whether specific financial activities are productive of economic value or purely wasteful as an empirical matter, not one that can be settled a priori."
>
> (Krippner 2011:168, n 10)

The integration of the two spheres may be functional, in the sense pointed at by Krippner, but we must still be aware of the danger of reductionism discussed above in the section on ecological economics: although we now realize that the monetary and the real economy are intertwined, we are well advised to keep them analytically separate, thus avoiding the danger of losing sight of one at the expense of the other.

The issue of the real versus the financial keeps haunting scholars who diagnose the ills of contemporary capitalism, especially after the 2008 financial crisis. One attempt makes use of the Marxist distinction between use and exchange value, and distinguishes "object-oriented" investment and production – resulting in use values – from those which merely are "investor-oriented" and based on capturing exchange values only. This distinction is then viewed as the salient feature of today's economic system: object-oriented investments

are investments in the real economy, while investor-oriented investments, which can reap profits without taking the detour, as it were, via the production and sale of goods and services, are seen as investments benefitting only a *rentier* class living off unearned income. The fact that the latter investment may yield considerable profits without bringing forth any real goods and services is noted, indicating that it may lead to global inflation (Sayer 2012:171-172, 177). But this impact is only worth mentioning as long as the bubble keeps expanding; once it bursts, it will become evident that the financial sector may hold an important sway over the real economy, even bringing it down as a the period of "financial euphoria", to quote John Kenneth Galbraith (1993:4) is followed by depression: "the speculative episode always ends not with a whimper but with a bang."

It is now time to pass to the second mechanism by which the financial bubble affects the real economy, and this impact also occurs when the speculation economy is in full swing. It takes the route via the influence of finance on the distribution of income (see Galbraith 2009, Wilkinson & Pickett 2010, Stiglitz 2013, Piketty 2014). After a considerable period of diminishing social gaps, following upon the rise of the welfare state after WWII and lasting until the breakthrough of neoliberal political ideas on a grand scale in the early 1980s, inequality has once again become a fact of life in the global economy. Today, the income distribution in rich and mature economies have begun to mimic the gaps which existed one hundred years ago, that is before the advent of democracy and the welfare state, especially for the top 0,1, 1 and 10 per cent of the wealth holders, respectively.

Already when analysing the mechanisms which resulted in the financial collapse of 1929, John Kenneth Galbraith (2009:177-178) identified the unequal distribution of income, and especially of rents and dividends, as one of the main driving forces making the economy an easy prey to shocks. First, as the goods and services craved by the superrich – according to Galbraith this segment was made up of 5 per cent of the top earners, accounting for one third of total income – consisted less of essentials (and more of luxuries) than those

demanded by people with average earnings, the rich had greater possibilities to postpone consumption in time of crisis than ordinary citizens; this led automatically, Galbraith argued, to further pushing the economy down, thus increasing the crisis and postponing the recovery, especially in the absence of public policies and automatic stabilizers (such as unemployment benefits, public investments and under-balancing of budgets).

There also exists another influence emanating from the financial sector over the business cycle. Charles Kindleberger underlines in his historical survey of financial crises and speculative boom-bust periods during the last 400 years that the provision of easy finance is an important underlying cause of the speculative upsurge, a period of "increases in the supplies of credit", the common first stage of the sequence "bubble-mania-crash" which has remained the pattern along the centuries of financial crises (Kindleberger & Aliber 2011:273). The expansion of the financial sector – or, less neutrally, a stage of "monetary incontinence" (Toporowski 2005:138) – thus sets the scene for the following crash in the real sphere.

Entrepreneurs, Managers and Shareholders

The attempt to establish secular patterns in the way the real-finance relationship works, while fruitful in their own right, may understate the changes in the way the real economy operates which also need to be considered when analysing the impact of the link. One such line of arguments deals with the change which has occurred in the commanding heights of the corporations, and how it has influenced the balance finance-real economy.

The gradual replacement of entrepreneurs by managers in the post-WWII period was seen by many economists as an advance which improved the functioning of the real economy. Historically the entrepreneurs, the founders of the firms and corporations which produced the goods and services of the real economy, and also the actual provider of real capital – as

opposed to the "monied interests" which Smith offhandedly talked of – was assumed to be tightly allied with the interests of society as a whole. During this period, we could have said that "what was good to Ford, was good to the whole society". But gradually, so the story goes, entrepreneurs were turned into *rentiers*, or at least into capitalists which preferred to secure their own incomes and dividends at the expense of the productive investments which would have benefited the real economy, and hence society as a whole in terms of increasing production, employment and income.

With the replacement of these entrepreneurs by a managerial class which allegedly had a greater interest in seeing growth and investments in the real economy over and above what the entrepreneurs were willing to accept, the real economy gained the upper hand. This "managerial revolution" took place in the US economy during the first half of the 20th century, growing more pronounced after the Second World War (Galbraith 1967, Chandler 1977). (Since the managerial class, in contrast to the entrepreneurs, did not get the profits that the corporations yielded, they were assumed to maximize the success of the corporation which they directed, not their own personal fortunes (Galbraith 1967: 125-129).

A sequence of "capitalisms" was established here, beginning with "family or entrepreneurial capitalism", leading over to "financial capitalism", when the role of bank and loan capital became essential to the growth of the firm, only to end up with the "modern business enterprise" where "managerial capitalism" was the rule (Chandler 1977:9-10). This was the time when a politician who had been, not the owner but the President of General Motors, would indeed say that "what was good for our country was good for General Motors, and vice versa" (Charles Erwin Wilson at the Senate hearing after being nominated as Secretary of Defence, 1953).

With the advent of neoliberalism and the further freeing of finance capital, we enter a new stage of management, where "shareholder value" has become paramount, signifying a turn

to "investor capitalism" (Dore 2008:1102). (The term should remind us of the distinction between real and financial economic *activities* discussed above, stressing the fundamental difference of object-related investments to investor-related; Sayer 2012).

The shift if discernible in the policy statements produced by the influential lobby group American Business Roundtable when presenting its philosophy concerning the role of management in the direction of firms and corporations. As late as 1990 it was saying that "directors' responsibility" went beyond shareholders' interests and included "the interest of all stakeholders as part of their responsibility to the corporation or to the long-term interests of its shareholders", echoing the old mantra of the managerial class (quoted by Dore 2008:1105). Only a few years later, by 1997, the tune had changed and shareholders' value had become "paramount":

> "The paramount duty of management and of boards of directors is to the corporation's stockholders. [...] The notion that the board must somehow balance the interests of stockholders fundamentally misconceives the role of directors."
>
> (quoted by Dore 2008:1105)

The transition of the CEO of big corporations from entrepreneur to manager, and further to maximizer of shareholders'values is now complete, and no other responsibilities, neither to the society at large, nor to the corporation's own long term development interests or to other stakeholders such as employees are recognized as being part of the relevant management concerns.

In connection with the issue discussed here, the relationship between finance and the real economy, the enhancement of shareholders' values as prime objective of management heralds the return to domination of finance over production which loomed before the managerial revolution of the post-WWII era: we are once again back to the threat of sucking

resources from the productive sphere and divesting them in the hands of the leisure class, only that now this threat does not come from second or third generation of tired or incapable entrepreneurs but from the highest echelons of management cadres, who cater to the short-term financial interests of increasingly influential institutional investors.

It has been noted that the rise of share holders' value as a first priority for management has a clear detrimental impact on the distribution of income by

> "tak[ing] resources that otherwise would have been reinvested or returned to other factors of production [read: labour] which, among other effects, enhances the income stagnation currently experienced by ordinary employees."
>
> (Jacoby 2008:9-10)

The point, then, is that irrespective what system of corporate governance that we envisage – be it entrepreneurial, managerial or institutional – it will affect the overall distribution of income and profits among all the stakeholders, which in turn of course will have an impact on the investment rates, economic growth and *what* it is that grows in the economy, goods or services, and who can access these.

And in all these systems, not only labour and the rank and file employees but also the real economy, the production-oriented investments in use-values, run the danger of losing out.

A Neo-Schumpeterian Perspective

In contrast to this basically critical line of arguments regarding the relationship finance-real economy, there are also perspectives which consider the expansion of credit and finance as more than just a destructive force derailing the real economy. On the contrary, it is possible to see it as necessary to technical progress and economic and social

development, as a promoter of the development of the real economy. This is the take of Carlota Perez who underscores that finance is a co-driver of innovation, technological revolutions and "great surges of development". The concept of economic development as a process of "creative destruction" – Schumpeter's celebrated phrase – is here the point of departure and the question Perez asks is what is the role of finance for this process to come about? See Figure 1.

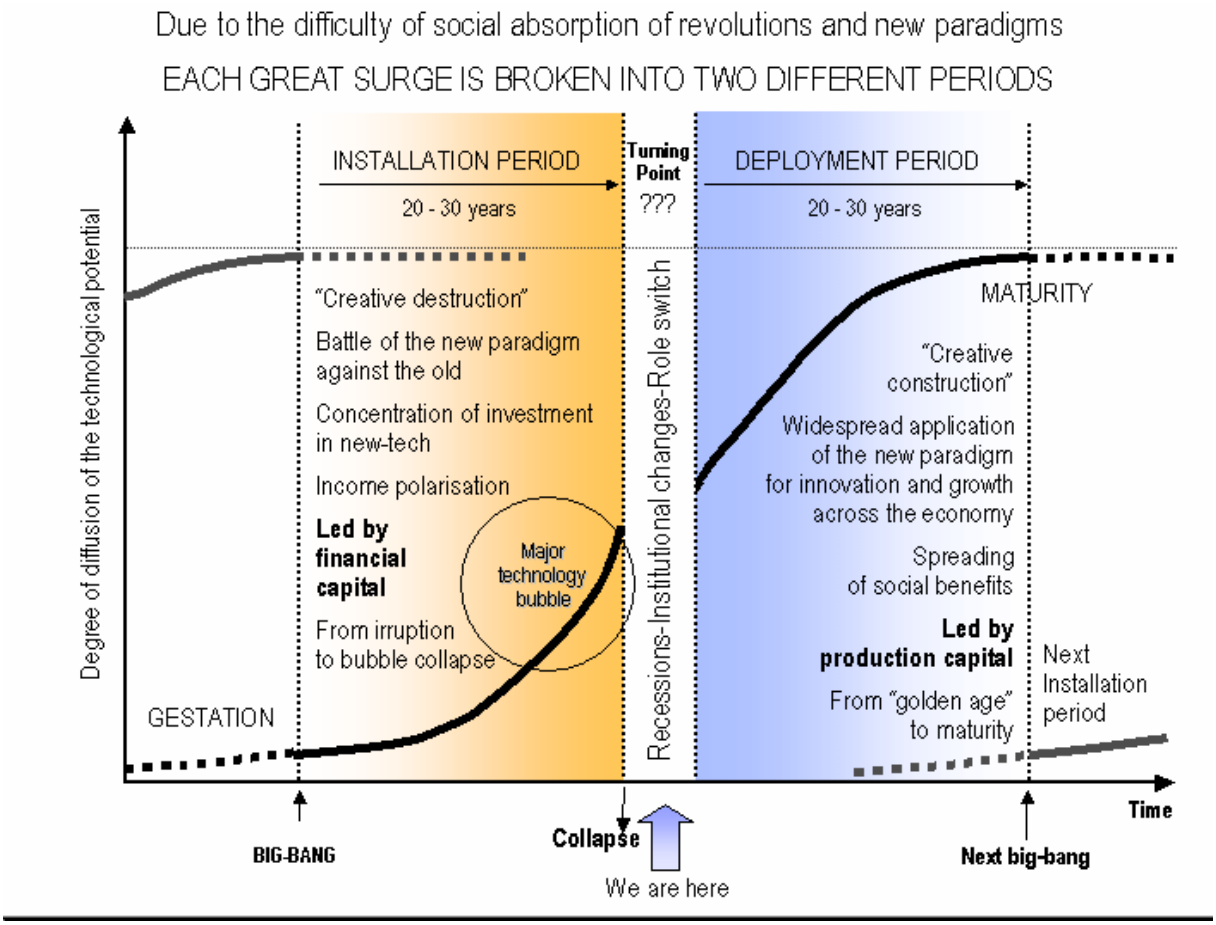


Figure 1. From Installation to Deployment of Innovations according to Carlota Perez

Figure 1 is clearly based on a perspective which takes at its focal point the Centre of the global economic system, the realm where consecutive industrial revolutions have taken place. Each great wave of innovation passes through two phases, a period of installation followed by a stage of deployment. In the installation period, finance capital is leading,

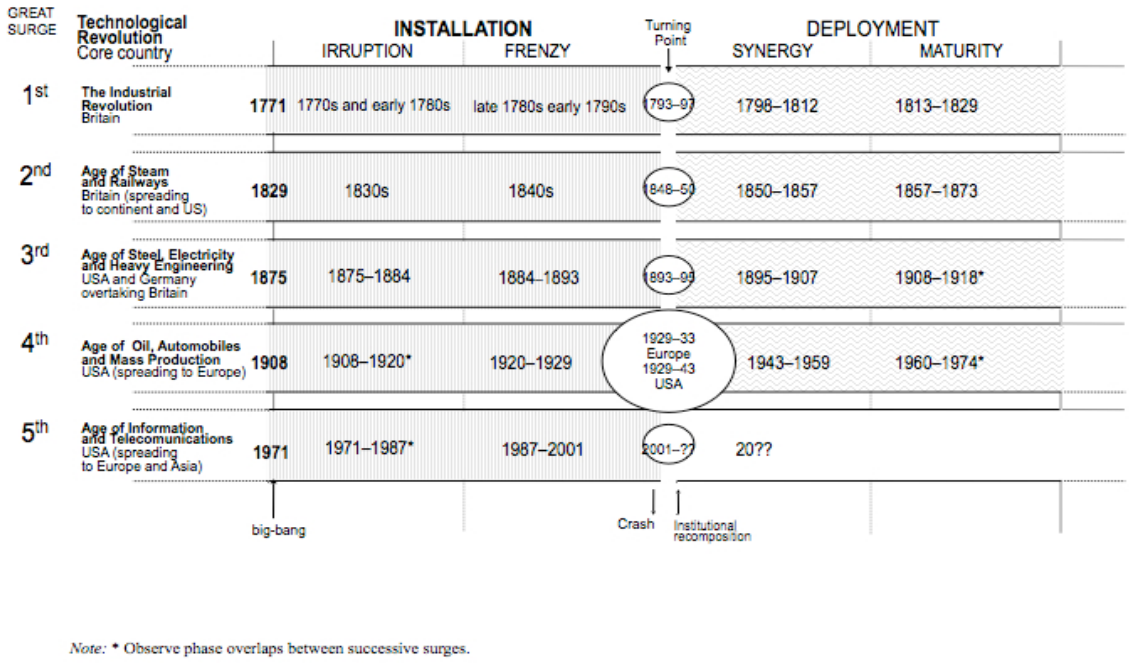
opening the door to bold and new ideas and systems, the first step in the chain of events which make up the process of creative destruction. This phase can include wild waves of speculation until it ends up in a turning point, a crisis which does away with the previously dominating systems of production. The impact on the real economy is thus destructive, but seen as constructive as it opens the poor to what is to come.

Following this, the deployment period follows, leading to wide-spread implementation of the new innovation until it reaches maturity; during this phase industrial and production capital is at the helm of the economy and financial capital recedes.

The pattern is as regular as the one described by Kindleberger in the sequence manias followed by panics followed by crashes, but construed in a more positive light: big bang technological innovation, followed by the installation period (where finance capital dominates and where the economy passes from a stage of irruption to a normally brief stage of frenzy), in turn leading to a crash, which heralds the turning point, when we leave the installation phase and enter deployment. The deployment period thus begins with a crisis which bridges over to the first of two stages of deployment, synergy followed by maturity, again building up to a new big bang.

The pattern is surprisingly stable, see Figure 2. It shows how the installation-deployment sequence repeats itself over and over again since the Industrial Revolution.

Figure 5.2 Approximate dates of the installation and deployment periods of each great surge of development



Note: * Observe phase overlaps between successive surges.

Figure 2. Source: Perez 2002.

We are presently, says Perez, at a turning point after the installation phase of the information and telecommunications revolution, right after the crash, but before we can have any substantiated belief that we will indeed enter a new and better phase of deployment in which productive capital again will take the lead.

The only thing we can be sure of, following Perez, is that the financial euphoria of the latter part of the 20th century has come to a disastrous end. That the installation phase, with its dominance for speculative and dare-devil finance would culminate this way would have come as no surprise to Keynes, who during the previous turning point – the crisis following the crash of 1929, the circle just above the present one in Figure 2 – concluded that the balance between the real and the financial economy had been seriously dislodged. In a well-known passage from *The General Theory* of 1936, he issued a warning against letting the financial and speculative economy dominate:

> "Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation. When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done."
>
> (Keynes 1973:159)

A New Golden Age – Without Foundation in the Physical World

The fact of economic life, however, seems to be that the periods of "steady streams of enterprise" are, although recurring, transitory periods after and before more revolutionary stages of economic developments; this is what Keynes was up against in the 1930's, and it is what we are confronted by today. Carlota Perez is on the outlook for a more reasonable balance between the real and the financial economy, something we have seen was possible to achieve in the post-WWII period. "If history is a guide", she says

> "the global financial meltdown of 2007-08 marks a period of transition from a world guided by financial criteria to a world guided by production, growth and welfare criteria. [...] The capacity of a new global and national regulatory framework to induce finance out of short-term speculation and towards concentrating on the real economy will determine the shape and the extent to which a global sustainable golden age can flourish."
>
> (Perez 2010:36)

It is, at least, something to hope for, a world in which the real economy is the main concern and finance its servant – although the verb "induce" seems to be too soft a mover in order to achieve the desired transition, something stronger and more decisive will surely be needed. Still, the fact that finance during the first decades after WWII no longer was leading

the economy is rightly interpreted as an indication that the supremacy of finance over the real economy is susceptible to reversals (Perez 2009:802).

This is a complementary reading of the "recurrency" of the dominance of finance capital (a thesis which we came across above, see Arrighi 2010). Then recurrency then was connected to the rise and fall of hegemonic imperial powers, and to the violent re-shuffling of world economic and military power; now it is related to the more peaceful sequence of industrial revolutions.

Still, there is something worrying about the conclusion that only a new industrial revolution may usher us into a state where finance capital may be controlled by productive capital. On the one hand it is the only optimistic reading of the future of the interface finance– real economy which I have come across that manages to find historic evidence for an exit from the present-day dominance of finance capital (apart from hopes of replacing capitalism and the profit motive by an economic system more amenable to social and ecological objectives). On the other hand, this Neo-Schumpeterian prospect lacks reference to the real physical world, to the real-real economy, neglecting the lessons we have learned from ecological economics. Instead the hope is pinned to "a highly productive and innovative society in a global context, guaranteeing environmental sustainability and increasing social well-being and satisfaction for all" (Perez 2010:37).

We are once again stuck with the vision of a free-floating economy without limits, and without definite physical boundaries. It is as if the whole debate on the centrality of physical limits to, and the scale of, the real economy never had taken place.

The Merger of the Real and the Financial

Today, following the financial crisis of 2008, we do not yet witness the government action which (at least historically) has been required in order to reverse the dominance of finance capital over productive capital (Piketty 2014). One reason for this may be that the merger of the two kinds of capital which has taken place from the end of the 19th century, real with financial capital, has made them inseparable, although the investments which this new form of capital, call it finance capital (Hilferding), monopoly-finance capital (Foster), or shareholder serving capital (Dore 2008, Marazzi 2011) realizes still may be possible to categorize as belonging to either the object or the investor world (Sayer).

As we have seen already, some analysts stress that there is a new phase in the relation between the real and the financial economy, and that the profits generated in the latter are not put to use since they are not reinvested in "instrumental capital", that is in production: we are living in a period of growth without accumulation, and the situation becomes ever more serious since there is a "trend of growth of non-accumulated profit", leading to a decrease of the rate of accumulation (Marazzi 2011:28-29).

In other words, the basic problem, the reason why we talk of financialization, is "profits without accumulation"(Marazzi 2011:48), which points a finger in the direction that we need to achieve a return to production, to get economic growth – accumulation – going, irrespective of at what scale production will take place.

This nostalgia for "doing things" (Marazzi 2011), this longing for the industrial state which ruled before the most recent turn to finance in the 1980s, appears at the same time as the outsourcing of production – and hence of resource use and pollution – to economies of the South, notably China, is gaining ever more speed in what amounts to a clear case of environmental load displacement. In other words, the negative impact on the real economy from the continued expansion of demand, fuelled by the continuous rise of financial profits

in the North, is taking place in the parts of the global system which have become the factories of the world in a new international division of labour.

The role of finance in realizing profits without accumulation (or with less accumulation) in the North is closely related to the externally-oriented development model which was promoted by the IMF and the World Bank after the emergence of neoliberalism as the dominant economic creed. This model, contrary to the Keynesian and Neo-Keynesian understandings of the central role of domestic demand for accumulation in the real economy, is co-existing with the outsourcing of production to the parts of the global economy which previously used to supply mostly raw materials and agricultural products, a transformation of the real economy made possible and paid for by the growing volumes of financial rents, emanating more and more from within the financial sector itself (Marazzi 2011:81).

The phenomenon is not new, and its existence has been discussed at least since the UNDP began to warn of "jobless growth" over twenty years ago (UNDP 1993). What is novel, however, is that we better understand the mechanisms which underpin this dismal development path, and the role of finance in establishing the pattern. It is increasingly the production of financial profits in the financial economy – not in the real economy – which fuels the transfer of productive capacity, and thus of accumulation in the real economy, to countries such as China. To be clear: the expansion of finance pays for the expansion of the real economy, but these processes now take place in different social and national spaces.

Thus we end up with a challenge: the real and the financial economies have amalgamated, realizing profits in the former depends increasingly on the availability of finance from the latter, there simply does not exist

> "a good real economy and a bad financial economy [...] every productive act and every act of consumption is directly or indirectly tied to finance."
>
> (Marazzi 2011:106-7)

There is nothing automatic about these processes, the merger of the two spheres is the outcome of policies, which in turn are based on the "unlearning" of the experiences of earlier periods of financialization and commodification, and the social and economic catastrophes directly connected to them. As Galbraith has quipped, financial memory rarely exceeds twenty years (Galbraith 1993:87).

Recognizing the role of politics, and thus of power relations, has led some observers to advocate a surprisingly traditional remedial policy in order to re-establish sound development trajectories in Europe by recapturing the real economy and making it independent of the financial sphere. They advocate that through government intervention we could achieve

> "the creation of jobs directly in sectors of high intensity labour, like education, health care and social services, urban infrastructure maintenance, youth employment programs, domestic aid, cultural and artistic projects and scientific research."
>
> (Marazzi 2011:115)

It should be clear that this delimitation of the real, socially beneficial economy from the financial economy, including the critique of the financial rescue packages which salvage banks and the financial sector in general while the population as a whole is "treated" with austerity, has a severe limitation in that it disregards the actual physical production of material goods, the use of energy, and the disposal of waste. In this sense, the attempt to

strengthen the real economy lacks an understanding of one of the salient traits of the real world, its materiality, its physicality, its real-real-ness.

In other words, we are back to the old contradiction between those economists who realize that the economy is an open subsystem of the natural world, and those who prefer to visualize the economy as an entity with no other limits than the ones imposed by bad policies. The physical limits of the real economy in the sense advocated by ecological economists is still a fact of the real and real-real economy which most economists hardly have begun to grapple with.

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Appendix. Summary of Understandings in Various Strands of Economics of the Finance-Real relationship

Economics Tradition	Main concepts, terms, arguments, rhetoric figures
Pre- and Classical Economics	Irrelevance of money to real production, distinguish money/productive capital (Hume, Smith, Mill)
Neoclassical Economics	The real is hidden behind "a veil" of money (Böhm-Bawerk, Fisher) Money was erroneously seen as a passive veil (Pigou) Neutrality of money does not affect the real economy (Samuelson)
Keynesian Economics	Driver of investment, driver of speculation (Keynes, Samuelson) Neutrality of money "nonsense notion" (Keynes) Finance impacts the distribution of income → the real economy (Galbraith, Piketty)
Marxist Economics	Distinguish between fictitious/real capital, financial/productive capital (Marx, Sweezy)
Neo-Marxist Economics	Merger of the two: monopoly-finance capital, profits without accumulation in production (Hilferding, Foster, Marazzi) Recurrent periods of domination of finance capital in periods of hegemonic decline → new hegemon leads in production capital (Braudel, Arrighi)
Neo-Schumpeterian Economics	Finance capital leads in installation period → production capital leads in deployment period; recurrent pattern (Perez)
Environmental Economics	Monetize nature → everything economy, dissolves the distinction real – finance (Costanza)
Ecological Economics	Keep the real physical economy analytically separate from the monetary economy (Georgescu-Roegen, Daly, Martínez-Alier) A three-layered economy: finance, real, and real-real (Kallis)

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THE ABSTRACT OF THE PROJECT IS:

The research programme will integrate diverse levels, methods and disciplinary traditions with the aim of developing a comprehensive policy agenda for changing the role of the financial system to help achieve a future which is sustainable in environmental, social and economic terms. The programme involves an integrated and balanced consortium involving partners from 14 countries that has unsurpassed experience of deploying diverse perspectives both within economics and across disciplines inclusive of economics. The programme is distinctively pluralistic, and aims to forge alliances across the social sciences, so as to understand how finance can better serve economic, social and environmental needs. The central issues addressed are the ways in which the growth and performance of economies in the last 30 years have been dependent on the characteristics of the processes of financialisation; how has financialisation impacted on the achievement of specific economic, social, and environmental objectives?; the nature of the relationship between financialisation and the sustainability of the financial system, economic development and the environment?; the lessons to be drawn from the crisis about the nature and impacts of financialisation? ; what are the requisites of a financial system able to support a process of sustainable development, broadly conceived?'

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THE PARTNERS IN THE CONSORTIUM ARE:

Participant Number	Participant organisation name	Country
1 (Coordinator)	University of Leeds	UK
2	University of Siena	Italy
3	School of Oriental and African Studies	UK
4	Fondation Nationale des Sciences Politiques	France
5	Pour la Solidarite, Brussels	Belgium
6	Poznan University of Economics	Poland
7	Tallin University of Technology	Estonia
8	Berlin School of Economics and Law	Germany
9	Centre for Social Studies, University of Coimbra	Portugal
10	University of Pannonia, Veszprem	Hungary
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12	Middle East Technical University, Ankara	Turkey
13	Lund University	Sweden
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