IN SEARCH OF ECONOMIC REALITY

Abstract

This paper introduces a wholly different *deductive* methodology from all other conventional approaches to economics; and although underpinning a few (inductive) Keynesian propositions, it rejects others as being false. The model it uses is dynamic at its very core; which as such is thus impossible to be reduced to a static equilibrium condition[1], regardless if deemed to be an idealized version of reality or not. This would mean that when the economy as modeled is viewed-at statically, all its endogenous values have now become indeterminate; and, while still remaining approachable for practical purposes, not only are these values inapplicable to be used as valid points of departure for an extended theoretical analysis, but also as empirically addable to provide a valid macro picture of our economy. A consequent conclusion is that all conventional economics, dealing with situations that are taken for granted to be, rather than as dynamic processes in a state of becoming, is fraudulent; innocent perhaps as in the case of the progressive factions of heterodoxy, but far less so where orthodox or Mainstream economics is concerned.

Introduction

So how does our economy really work, and how do we go about finding out? Is it even

1.The possibility of this notion may at long last be starting to enter the consciousness of Mainstream* economists also: "A premise of virtually everything I studied in graduate school, and virtually everything I taught as a professor of macroeconomics for some years, was that a coherent model had an equilibrium, and if that equilibrium changed, it would move to a new equilibrium. Surely the events of the last few years call that proposition into question? If the world had unfolded forward from 2007 with no policy actions taken, no lending of the last resort, no expansionary monetary policy, no expansionary fiscal policy, I would suggest to you that there is a real possibility that the right approximation would have been an unbounded downward spiral, a possibility ruled out in any textbook model, or almost any model published in a journal in the last several decades." Lawrence Summers, speech at the London School of Economics forum on "What should economists and policymakers learn from the financial crisis?", chaired by Prof. Mervyn King, 25 March '13.
http://www2.lse.ac.uk/newsAndMedia/videoAndAudio/channels/publicLecturesAndEvents/player.aspx?id=1856
What the (New Keynesian) speaker conveniently forgets to mention however is that those same models he is referring to don't allow a crash to happen, from the position of an already established equilibrium, unless there are *exogenous* shocks involved. And since in 2007 there weren't any so identifiable, the crisis could not have occurred at all! That a coherent model doesn't necessarily have to have an equilibrium *in* time but instead can be in equilibrium *over* time opens up a whole new spectrum of possibilities; all of which are off the radar screen of conventionally educated economists, Keynesians and Marxists included. But at least Summer's observation is a step in the right direction, and in any case I have to thank him for helping me make the point that the validity of the conventional economic equilibrium model needs to be reconsidered.
*) “Mainstream” an alliance of Neoclassical and New Keynesian economics; with the latter, after in fact having bastardized Keynes' thoughts on the subject, proclaiming to have accomplished a synthesis.

possible at all, or is its totality far too complex? It has long been taken for granted that in an economy "everything depends on everything else". Say the latter is true, but this very supposition makes its structure circular, time dependent, purposeful (as will be argued later), and impossible to be explicable within a linear storyline. Yet, throughout the ages, economics textbook writers have attempted to explain the economy's workings by dealing with its internal features that are inherently devoid of an overall purpose; while statically "solving" one aspect of it at a time, that belie its circular nature. When at the same time an appeal to logic is made, a conclusive settling of arguments has now become an impossibility as contradictions are present right from the very outset. For when in a particular, purposefully built environment every state of being depends on everything else, no feature stands all by itself *in* time to be as such identifiable. On the other hand we cannot explain everything all at once either. So is there a way out of this dilemma? This paper is all about presenting just that possibility.

A circularity in logic, while true, is meaningless in and of itself; at least on the level at which the observation of circularity is made. Though when situated at that particular observational level there is no way to falsify this, such noticed circularity could yet be meaningful and have a systematic purpose to “something” that exists on a higher level. So, being the structure's unwitting creators, if we imagine ourselves to already be situated on that higher level and thus, wittingly or not, have the power to both identify its meaning and come up with a certain purpose to the economy; then, on the empirical level, we would indeed be able to start making sense of our ostensible circularly structured economic system after all. But now, instead of trying to clear up a particular attribute of it subjectively and then move on to the next one, we would have to make the overall less fuzzy bit by bit, while keeping our preset economic purpose firmly fixed in the background. The practical result of this alternative approach is that from time to time the reader of this article will likely not be able to escape the rather unpleasant experience of being left hanging. But, given the prize of a new dawn that exposes the possibility of a full comprehension of our economy at the end, and thereby know why its present setup can't possibly keep on working, a more or less insignificant inconvenience to put up with one should think.

If pre-analytically however, we would find it impossible to discern a specific purpose to our economy, our fate is going to be pretty well sealed, as far ever being able to get a solid handle on its full spectrum. Because analytically, regardless of the amount of effort spent, the available information gleanable from its components will intrinsically be insufficient to detect an overall purpose and thus also the meaning of its existence[2]. With respect to the existing linear approaches to economics however, a new lease on life would not be out of the question if either everything does *not* depend on everything else, or our economy is indeed meandering purposelessly through time and unfolding as it should. Keep in mind though, that this new methodological tactic in no way makes us all-knowing about how the economy, as a subset, fits within the set of our natural

2. A telling and obvious example of this is the universe itself.

existence. Because the latter is unknowable we still will have to make leaps of faith, by starting off with a set of first principles that we *believe* to be self-evident. But once that is done we are on our way to comprehend the economy as a whole, and our newly discovered knowledge about it will be true as long as no contradictions or paradoxes show up with respect to our preset purpose. As the journey unfolds we will find that it exposes both the mere shortcomings and outright errors of conventional economic theories; as all these have tried to elucidate the workings of a fundamentally uncertain economy by applying the tools of higher mathematics about conditions deemed to be determinate at every step of the way. But that instead, if indeed the economy of ours is about governing situations that for desirable equilibration purposes are in need to be resolved at some foreseeable point in the future, then the use of accounting principles and simple arithmetic is what will be required to make it all sensible; and thus the use of mathematics in economics becomes an egregious case of misplaced concreteness.

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Just as "war is too serious a matter to entrust to generals"[3], so is the economy too serious a matter to be entrusted to economists. While both types of professions, each in their own domain, have been yielded enormous power over the fate and well-being of human lives; when assigned to project the "big picture" from their establishment positions[4], the interest in maintaining a desirable status in their own very existence is almost bound to lead to downplaying unknowables in favour of neat and oversee-able theories for decision-making purposes by both these professionals. This means that neither operatives will be based on possessing any factual knowledge about specific outcomes, but on what those put in command *think* they know the immediate effect of their acts and initiatives will be. Ultimately it all comes down to guessing, and guessing in this uncertain world of ours is a matter of trying to overcome the odds; nothing more and nothing less. Now while sometimes, and possibly more often than not, educated guessers happen to get it right, at other times they don't. Hence the rather percipient admonition of a statesman made about a century ago. Leaving the matter of warfare hereby alone and concentrating instead entirely on the subject of economics, we will soon come to realize that economists base their conclusions and recommendations not only on things they don't know, but on things that they cannot possibly know and often with disastrous results. And the worst aspect of this ignorance based authority may well be the unquestioned by most and reluctant endorsement by others of the economy's controlling financial sector, while the latter unwittingly casts an essentially bogus but shamanic kind of spell on society.

3. Quote attributed to G. Clemenceau, French prime minister (1906-'09, 1917-'20)
4. The fact that regardless of how misconstrued the prognosis with respect to the eventual outcome turns out to be, firstly the administrators will always be far less affected than those being subjugated, and second, the usual feebleness of any proffered excuses upon failure don't exactly enhance the credibility of those in charge either.

Economists, irrespective of persuasion, whether orthodox, heterodox, or radical (i.e. Marxist), all take the economy to be a structural entity or social arrangement existing, as an integral part of the human condition, *in* time. As a hypothetical point of departure this is as valid as any perceivable different one. For even when at times relatively small sectors of it are faltering, the structure as a whole in one form or another has always managed to continue on from what at least appears to be a definitive base. And so, at some basic overall level, the economy does seem to *be at all times*; and thus ought to be readily available for measurement in terms of a unit of account. But how can we be sure this is the case, and do indeed know if the quantitative analysis that economists come up with is meaningful in any real sense? The first problem they, and therefore all of us, run into is the nature of its unit of account, better known as money. For in spite of countless hours of research by top in their field economists, nobody has yet been able to establish a theory of what money actually is. Or, in other words, the (non-)causal agency of the very unit that everything economic is measured in remains a mystery.

And that's not all, for exactly the same situation holds for that exalted instrumentality, ruling just about the entire world in its name, known as capital. Although this too may come as a surprise to many of you, economists haven't as yet been able to construct a coherent theory of capital either. They're all convinced they know what it is, but, in the main, they reason according to it being just too obvious to need an explanation. Given all this, the fact that not a single one of the numerous monetary reform movements that off and on are in the news these days have theories of money either, and the untold misery of so many in our society, the alleviation of which both the reigning economic policymakers and its dissidents can do no more than experiment with, isn't it high time to take a step back and find out if there isn't another, altogether different methodology available to acquire pertinent knowledge about how the economy works? An alternative approach that is at least as realistic as anything presently existing on the progressive side of the profession, but doesn't give rise to paradoxes, aggregation problems and uncompletable secondary theories?

What if our economic structure doesn't actually exist at any given time, but instead is understood to be an ongoing process always in a state of becoming toward a given purpose? Now, rather than describing economic reality in formalized identities and algebraic equations, transitionally hopping from one ex post determined equilibrium position to the next one, the economy is always in a state of disequilibrium, on its way to be. And it would only get to where it is supposed to go due to some, even though potentially existing, as yet uninitiated and uncertain to happen at all counter-activities. As such the economy would be moving forward not unlike a bicycle does; also always on its way to staying upright, and whose sum of operating forces cannot be neatly expressed at any given time either. It is well known that he dynamic movements of a bicycle on a path from here to there, at no time will put the bike in equilibrium. Every (counter)activity is overcompensating and thus fall-producing. And as we'll come to understand later, selling physical and financial output at cost-plus prices, which is the conventional way of doing business, is also a form of overcompensation. It will show thereby that the maximization of profits motive will always maximize an instability, at least *in* time. Separated out, the indicated profits are thus never free-and-clearly obtained, don't have their own distinct existence, and as such aren't able to be stashed away for whatever desired future purpose, without thereby postponing a dynamic overall equilibrium indefinitely. For such activity would make it impossible for other systemic agents to be able to meet their own commitments within that same time frame[5], with potentially disastrous consequences to the system as a whole.

Although there are of course substantial differences between these two dynamically operating systems, or states of being, with the first one following socio-behavioural propensities while the second is mechanico-physical; being in disequilibrium at *all*[6] times in order to fulfill a systematic preset purpose could well be the governing principle that underlies them both[7]. If indeed so, it would be a serious indictment of any approach that for simplicity sake tries to deal with the subject matter by applying some form of functional static analysis; for by utilizing the latter, the very essence of its field of investigation becomes defined away right from the beginning. Now if furthermore this alternative reality of our economy could unambiguously be shown to be both relevant and able to account for everything we will need to know about its workings, then it won't be much of a stretch to come to the conclusion that a paradigmatic revolution, rather than a mere shift in economic thought will be in order; which this prefatory paper has been written to substantiate, so please bear with me.

The consequences of this novel approach would indeed be more than drastic, and not only for Neoclassical and the New Keynesian, DSGE[8] assuming economists. For even the streams of heterodox thought, with whom I identify as being closest to, those that

5. While the latter isn't necessarily detrimental, as the cutting out of deadwood is essential to the economic health of a free enterprise system, there are definitive limits which will be explored later.
6. Including at $t_{0;}$ i.e., at hypothesized points of departure.
7. Note that this argument is stated at the axiomatic level, where no mere mortal can do better.
8. DSGE = Dynamic Stochastic General Equilibrium. While ostensibly approaching economics from a generally known to be far more realistic dynamic perspective, the latest buzz acronym describing New Keynesian “improved” economics reasoning is dynamic in name only. For in order to remain within its SGE characterization, the antics of economic agents, regardless of their of outlandishness, cannot possibly lead to an economic crash. Just like their pure Neoclassically schooled colleagues assume also, only exogenous forces can do so. In other words, and irrespective of the undertaken path in the meantime, the economy merely moves from one equilibrium position to the next one; with both positions being determined in a static way. Imagine if mechanical engineering principles, that are utilized to work out the applicable forces involved in keeping a bicycle upright, would *a priori* rule out the possibility of a bicycle crash. No doubt the profession would become a laughing-stock and deservedly so. Yet here we have the economic policy makers in charge, deeply engrossed in self-admitted unrealistic assumptions, more or less confidently marching on; and, in the main*, blissfully unaware of the damage its misguidance is inflicting on society. *) See the initial footnote.

base their own particular approaches on Minskian analysis[9], like MMT proponents as well as for instance Steve Keen, all of them rejecting equilibrium economics or so they think entirely, are still relying on the validity of projecting their extended reasoning from statically arrived at economic factors; as these are utilized to formulate (e.g.) the basic GDP identity and aggregate expenditure function: Y = C + I + G + (X-M). In order to do so legitimately however, it is imperative not only to fully understand the nature of the units that these factor components are measured in, but also to know what those specific components actually are, or represent, *at any given time.* In other words, unless these heterodox economists, who like all conventional economists take it quite for granted that the economy *is*, rather than purposely on a path to *become*, can fall back on *already* established theories of money and capital existing *in* time, they too cannot possibly know what they are talking about. Although this doesn't necessarily mean that their conclusions are wrong, far from it as they often get it right regardless, only that they cannot know for sure one way or the other; whereby unfortunately their approach isn't a valid one for *determining* the truth. In order to make the latter stick and thereby put elected public policymakers on the spot, heterodox economists are going to have to acquire the ability to shift the burden of proof away from their own side. And that can only be done by reversing[10] their inductive reasoning and thus start to engage their orthodox adversaries on a level playing field. For in the absence of a competing well-grounded deductive theory, the ruling Mainstream will continue to get away with crying TINA[11]; as they have been able to do now for a number of decades in their desperate but nevertheless still winning play for the hearts, minds, and last but certainly not least the pocketbooks of elected policymakers.

The identified components of the ubiquitously referred to static GDP equality, may, after a substantial number of applied fudge factors, well deemed to be close enough after the fact to give us an approximate idea of what has transpired in the economy. But viewed at in terms of a process, in need to be accounted for on an ongoing basis, all of these factors are moving targets and thus unknowable at any given point in time[12]. Since an economic structure cannot both be and in a state of becoming to be, a choice will have to be made; one that concerns: which approach has a greater chance of being able to depict reality as we perceive it to be, and is best equipped to defeat misery sustaining i.e., reigning economic thought. Now, because *becoming* implies an end purpose, this ultimate purpose cannot be left hanging in the air but herewith becomes the determinate (set) criterion. This makes all process components valuable only as long as these are going to be instrumental in bringing the systematic end-purpose about. And since those activities do always take place anterior to its final

9. After Hyman Minsky's endogenous-money driven financial instability model.
10. As will become clear very soon, this in no way means surrendering to a mathematical-deductive modelling methodology.
11. There Is No Alternative.
12. Accounting being a deductive discipline, its identities are valid as such only because of its own "unrealistic" assumptions. More about why these identities cannot be held unassailably true, later.

fulfillment, their values are necessarily indeterminate (or not yet set) at all times.

So what is the economy's purpose and what does establishing a purpose accomplish as far as understanding the economy is concerned? First off, when the purpose of any kind of systematic arrangement is identified, the whole becomes a self-closed and meaningful entity. But while this is obvious enough on the micro level where individual enterprises are concerned, this article has taken the unprecedented step of arguing, and without the making of a contradiction, that the totality of happenings within the confines of the economy as a whole can also be posited to be an example of such a systematic arrangement; and thus be objectively judgeable as being either true or false with respect to whether any macro component in question remains functioning on a path toward a given preset purpose of economic existence or not. Establishing the truth of an economic action in general would thereby be transcended to a higher and thus superior level from where the subjective expected utility motives of individual agents are held to function axiomatically as determinants of the system as a whole[13]. From the perspective of the objective purpose creator it is also significant that there is no way for ambiguities or paradoxes to appear systemically; but then again, neither is a distributional fairness on the empirical level implied either. Instead, as far as a drive toward equitability on a functional level goes, a purpose creator is a natural pragmatist or an equal *opportunity* provider to a given goal if you wish.

Second, who is (or are) the *deus ex machina,* powerful enough to set the purpose of an entire economy? Think of it this way. What are you yourself in it for? What is it that motivates you to get out of bed in the morning, so as to go function and participate economically? The answer I think is pretty clear cut. The purpose of anyone's provided individual input is to obtain a share of the collective economic output produced by *others*. No such output by individuals is of any use at all to those same people; and so at that point it's entirely worthless to themselves, regardless as to whether it springs from top financial CEOs, minimum-wage earners, or anyone in between. Nor, in virtually all cases, can those agents form even the slightest estimate about what their particular inputs, at any time, will turn out to be worth in terms of a derivative demand for that output on the retail level later on; where thus others seek their particular living-standard enhancement and thereby fulfill their own motivational purpose in economic participation. This renders the economic structure unable to meaningfully establish added individual economic productive agencies ex ante; and it also would mean that before we can dogmatize about socially determined individual production[14], or the productivity of individuals[15], as a determinate point of departure in static equilibrium, there is a hope and expectation of, through as yet[16] indeterminately valued personal

13. Cf. Savage, Leonard J. 1954. *The Foundations of Statistics*. New York, Wiley.
14. Cf, K. Marx; Grundrisse, opening line; which is set up as a strictly supply-side argument.
15. And a ditto supply-side line of reasoning is rendered when the neoclassicals defend the by any human standard preposterous compensation packages demanded nowadays by CEOs and their ilk.
16. Until a final demand for the (derivative) output of those inputs *determines* their values, thereby

input, becoming enabled to lay a claim on the output that others produced. No doubt there do exist a few economically active individuals who are not at all motivated in this way; e.g. pure altruists, as well as misers who ostensibly are in the game solely for keeping score[17].

However those people too are living from the productivity of others. This indicates not only that human inputs aren't directly causal to keeping an economy going, as well as the latter needing to be circularly structured through-and-through for a systematic reproduction to occur; but also that hoarding in degree, commonly known as saving, rather than being “obviously” beneficial, now requires to be fully justifiable in theory. But while none of this rules out the possibility that purposeless circular systems do yet exist, it also at least strongly suggest that such a system sustained by rational human endeavour is indeed both a meaningful and purposeful undertaking; and that any scientific linear and subjective approach to understanding its nature, thus with both artifacts and labour determinately valued at each step along the path of an ongoing progression, is simply doomed to failure. So that consequently, a valid alternative quest of trying to make our field of investigation sensible from having pre-established its purpose has hereby been demonstrated.

The dilemma confronting us immediately herewith is that a mathematical (algebraic S-and-D, implying shifty curves etc.) approach to economics requires all its elements to be determinate ex ante; which means not only the quantitative components or prefixes making up the size of the factor element, but the factors themselves of course as well. The instigation of a meaningful equation with factor components whose identity is yet fuzzy is out of the question. So the fact that sometimes arbitrary distinctions are made whether a certain expenditure is (C) or (I) is not at all the point of contention here. Rather the very identity of (I) itself is now at stake, for, to know what (I) is, a theory of capital is required. Otherwise (I) cannot be real enough to be utilized as a valid point of departure for an extended analysis; which in turn means that the Post-Keynesian and ubiquitously used so-called stock-flow consistent underlying framework isn't feasible either and that a coherent economic analysis following the principles of this alternative approach has to be modeled as consisting entirely of flows.

Looking at (I) empirically but in a dynamic way, we know that it is an expenditure for which a return is thought to be in the offing, otherwise it wouldn't be made. As a form

drawing the economy back toward an equilibrium.

17. Cf. “J.M. Keynes; Essays in Persuasion (1931) Sect. V, The Future: Economic Possibilities for our Grandchildren”. That this kind of human behaviour by a tiny minority is pathological, i.e a deviation from what is generally considered to be moral, right, proper, or good, is known by just about everyone instinctively, and without any need to know even the first thing about economics. Yet the latter so-called “hard” science, based on the axiomatic principle of an individual's subjective expected utility, is not only inherently powerless to recognize, but it even defines away such perversity for what it is. More later...

of capital formation its worth will have been zero[18] if a return never materializes[19]. In the mean time, the worth of (I) as an asset is thus a question mark or indeterminate. We also know that on the level of the firm, expenditures, i.e. booked debit entries, will, on penalty of default, have to be passed on in the selling price of output; which means that a determination and final resolution of (I) cannot ever take place above the retail level of the economy, and thus a separate and entirely independent flow of capitalist expenditures for the purpose of investment doesn't exist[20]. This in turn would mean that the oft touted 70% or so of the economy being consumer spending is misleading also. Instead, consumer spending is 100% of an economy that is operating in dynamic equilibrium over time. So, even though the determination of NIPA's GDP figures uses only added values at each separate economic level, a vexed[21] double-counting still isn't prevented when, within the reality of "a process in a state of becoming", (C) *determines* the value of (I) through (Y), to reproduce itself in an unencumbered fashion, in order for the process to be able to continually keep on progressing. Or in other words, only consumption (C), i.e. all expenditures made without seeking any monetary or (Y) returns, can determine what investments (I) *have been* worth; and, when the seeking of monetary returns on sunk-costs is the economic objective, (I), at all times, remains but a to be resolved negative or systemic debt. So that a growth in (I) is nothing but an initiated accumulation of to be resolved debit entries, and in the reality of booked accounts, ongoingly determining the economy's entire operation as a going concern, is simply one one of debt acquisition and its resolution. This in turn would mean that the vulgar *accumulation-of-depletable-assets* hypothesis, being an essential pillar of economic thought held in common by all factions, hereby collapses.

What??!... capital is a logical negative and not a form of positive wealth at all? Yes, and it's all based on just a couple of axioms. To wit: 1. our economy *is* an all human-made systematic construct of *accounts*, having boundaries that are open to the natural physical existence into which we are born and live as aspiring beings and whose price all its accounts are made-up from; and 2. it exists *for* the sole purpose of *adding* an extensive variety of use-values to humanity, that couldn't as commonly be obtained in the absence of a formal economic structure, whereby the exogenously existent living standards of human beings are to be enhanced in perpetuity. From those two axioms

18. Not some basic limited amount below which it cannot sink, but absolutely nothing, nada, or zilch.
19. And with these returns materializing only from the investment of others altogether, no singular investment can ever be held causal as a push (e.g.) toward growth..
20. Meaning, on the heterodox side both the non-existence of determinate demand coefficients for capital à la Pasinetti's seminal '81 work: "Structural Change and Economic Growth", and Marx's independent circuit of capital accumulation as depletable positive entities.
21. While there can be no doubt that over time capital goods are counted twice, once during their production and again as embodied final output; at least as long as long as a certain consistency is maintained, the significance of that lies not in this conventional ex post accounting treatment of GDP values. But because an ex ante value designation assigns a determinate value *in equilibrium* even where non (as embedded), becomes resolved later on, *and thus factually a disequilibrium reigned when designated as such*; a valid theory will need to be made compliant, or it will lead to ex ante/ex post discrepancies.

we have deduced that the economy of ours always remains a work in progress, existing strictly to provide our society with a standard of living that without its ongoing creation wouldn't be obtainable. Assail its truth if you must, but also be prepared to come up with a set of first principles that is even more general, whereby capital can logically be shown to be a wealth instead of a debt. Otherwise, I'm afraid, even the launching pad from which to establish a competing theory is lacking. This reversal in sign has come about because by identifying the economy as a human-made system of to be resolved accounts, its reality inverses from having considered the whole to be a physically existing and flow-depletable *stock* of produced goods in time. So, once we set up accounts to keep track of the existence of economic activity, produce output for the benefit of others and not for ourselves, and are concerned with an everlasting continuation of that process or an ongoing *reproduction* within a dynamic equilibrium, logic demands that all supply activity becomes booked as to be resolved obligations or debts; as the conventional static equilibrium based formulation would become contradictory, overdetermined, or illogical. And while approaching the subject by modeling the behaviour of society mathematically, as being determinately valued at every step of the way, may be satisfying for its practitioners, as well as able to garner respect from a general public that doesn't know any better either, it still is quackery. For accounting and math cannot be made to mix. No accountant, not even those who are working for pure monopolists, would claim that their firm's production can ever be considered to be *causal* to consumption; which is the arrow of causation inherent in conventional economic theories of any kind. Now while most if not all the above may well seem to be a wholly outlandish cognition of economic reality, please note that its conclusion of starting out from a position of to be resolved debt is far from original thinking. For the well-known ecological economist Herman Daly, following in the earlier footsteps of Nobel-laureate chemist Frederick Soddy, also identifies capital as "a hypothetical calculation of the present value of a permanent lien on the future real production of the economy"[22]. Unfortunately, while indubitably highly regarded for his ecological insights, professor Daly's work on fundamental economic concepts also still remains unacknowledged.

But what exactly is meant by the term debt, here. How, for instance, can already built physical and all paid-for means of production be a debt? Isn't the meaning of the concept already adequately taken care of by differentiating between industrial and financial capital? To answer these no doubt fair questions, it will first have to become absolutely clear in one's mind that the physicalness of capital and economic output cannot help but be totally suspended, when these are denominated in chosen units of account; and that only the latter representation determines whether the economy's stability, i.e. a dynamic equilibrium is, or is not, being upheld. Furthermore it should be noted that no theory has the power to alter a physical reality. All a theory can do is set

22. See: http://steadystate.org/capital-debt-and-alchemy/?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+DalyNews+%28The+Daly+News%29

up an abstract (parallel and alternate) reality in thought, that is entirely separate from the physical reality as it's being described. Now while the two may well coincide, as mere mortals we can never be absolutely sure of that. The very best we can do in any kind of theoretical investigation is to assume it to be true until a contradiction shows it to be false. And this happens to hold doubly so for an alternate reality that is kept track of by having enumerated all of its elements in terms of a unit of account. For now we are no longer even dealing with a concrete reality in terms of its abstract formulation, but with a figurative map that is outlining what we think the field of this physical reality is all about. By having chosen a denominator we have moved onto an entirely different level yet, both from its physical existence and the abstract conceptualizations of those physical forms in thought; with the latter two comprising the domain of the science of physics. But while physical realities are always theorized to be existing at any point *in* time, the economy, which in terms of its unit of account having become a self-created *process*, and in spite of ongoingly accounted for in distinct periods, exists *over* time. And so it's never possible to hop arbitrarily between the two realities, i.e., from a territory to its map or vice-versa, whenever this seems expedient; or happens to be not even perceptible by conventionally used markers.

Economists don't differentiate between the figurative representation in terms of its unit of account (the map) of economic reality and what they perceive to be its physical existence (the territory) itself. All of them argue as if the map *is* the territory, just like physicists conceptualizing in thought the meaning of the physical world; which, as the appearance of aggregation problems and uncompletable theories of money and/or capital shows, is something that just cannot be done in economics while yet remaining coherent. As an example of the fundamental difference here between physics and economics: the *physical* reality of a production facility, both in terms of its instrumental means and labour power, is exactly the same, the day before as the day after it's closed down, regardless of a decision made by the powers-that-be to call it quits for good, because of ruling economic (micro) reasons. And the same holds true in the macro sphere, say before and after a severe economic crash. The only destruction that has taken place under those circumstances are the sets of figures as outlined on a conceptual map. The reasons for when and why those wipe-outs of representative (supply) figures occur are inevitably demand instigated, which in turn is always created from different and altogether unrelated supply factors. All of this I hope to make clearer when the economy's map, or the economy as we perceive it to be, is explored further.

From its underlying axioms it follows that the economic environment of our society is a closed (endogenous) system of exchange-values whose noted activity is based on, and strictly bound by, accountancy principles; the output of which disappears into an exogeneity with an entirely different system of values that is identified as in-use. More specifically, we have been (freely) provided with resources existing in a physical form outside the economy, that because of a systemic efficiency need to be kept track of through becoming accounted-for upon entry, and thereby for all intents and purposes lose their corporeality while being transformed into final output items; until, when the latter are sold and disappear into that same exogeneity of origin, their physicalness reappears again with a value-in-use. As seen from this alternative perspective, utility, or the motivational driving force behind it all, is exogenous to the economic sphere and the macro-accountants we call economists are map-tinkerers of their investigative field; more or less necessary, but only to the extent that both the processes between natural resources and personal use-values and the exploration of those resources themselves can take place without the development of undue waste. It should be understood however that map-tinkering cannot ever be causal to a territorial reality, while that lies in its state of suspended animation within a system of accounts. And while in an economy of written accounts the latter are significant by definition; in the territorial world of use-values, the world we are actually living in (and *not* the one we're *making* a living in!), it is only the economy's physical output that carries any meaning in giving us the comfortable living we seek, and which thereby motivates each one of us to be economically active.

Human productivity too is a natural resource. It enters the economy just like all the other resources, with which it combines in the process of final output production. But there is a difference in that at any level of development, productivity has a natural tendency to increase over time, both in quantitative and qualitative terms. And even though this accumulation of experience doesn't involve everyone equally who is economically active, productive abilities do increase for a significant portion of the workforce. By learning through doing[23], more and better output production overall is the norm as time progresses, while its pertinent workers at least for a while remain remunerated at previously established levels. This results in currently distributed income being insufficient for a full clearing of the market, and even though in normal times this is countervailed and thus becomes concealed by the excess of presently distributed personal income entering the retail market as a result of real investment into means of production at economic levels above the retail sector; no understanding in full of how the economy works is possible without being able to identify both the source of profit and all the elemental factors involved in the *realization* of economic growth.

Economically active human beings, while gaining experience during the development of the world in which we make a living, know more or less instinctively that such a betterment phenomenon is going on. Each enjoys the feeling of becoming ever more

23. while the concept of "learning by doing", since its introduction* by Kenneth Arrow in the early 60s, has garnered wide support from economists, whether being Mainstream or of heterodox persuasion, none went much further than calling it an important source of technological progress. This paper will attempt to show however that learning by doing is the *only* source of per capita economic growth; and that investments at best build off that and don't have any intrinsic causal power toward fulfilling the economy's end purpose.
*) Arrow, K.J., 1962. "The economic implications of learning by doing". Review of Economic Studies 29, 155–173.

productive, whereby it motivates[24] them to excel in their chosen occupation. It is a powerful drive for the vast majority that want to work, and it stays alive even when this evolution in experience gained doesn't immediately result in a higher standard of living for themselves. Furthermore, wanting to be active as productive members of a society simply for its own sake or in order to provide for one's kin seems to be an underlying connatural trait, that holds true even far beyond humanity. The very survival of species to thrive and prosper is at stake here. Thus no group of individuals within a society should have the power to be able to thwart exoterically extant creative capacities, whereby the freely by nature provided natural resources are combined to become coveted living-standard provisions for humanity as a whole. What is required now is to provide a logical reasoning, as to how to proceed from that basic premise[25] and democracy ought to take care of the rest. At least for as long as the process remains sustainable, there is no way for "affordability" to enter into this logic[26]; and so bringing up limited financial means as an argument at all, becomes immediately suspect to having an ulterior and most likely a self-serving purpose. But then again though, as the old saying goes, "never ascribe to malice that which is adequately explained by incompetence".

At the risk of going a bit too far out on a tangent here, it may yet be opportune to note that when this natural increase in output solely due to gained experience becomes appropriated, to the exclusion of those who made it come about, through the map-tinkering of designated final claims between financial-rent seekers, employers, and employees, the situation with respect to willingly work at a given standard of living may develop a tendency to change. Especially when those claims to final output are indeed

24. This motivation to excel is the *real* source of innovation. Unlike the conventional wisdom of “market- driven” innovation, it is in effect all the time, and way before even the possibility of a market becoming involved.
25. Note that a further axiom to our hypothesized alternate economic theory has been introduced herewith. To wit: no one can be denied the opportunity to participate, i.e. willingly work in *a* purposeful economy on the supply side. Short of criminal behaviour towards the *purpose* axiom, there are no exceptions. Since there no longer are opportunities for human beings to make a living outside of an economy, it is a human right's issue.
26. The implications of this are both huge and wide-spread. Given adequate exogenously existing natural resources, it means for instance that any “sacrifices” by retirees in received social-security benefits due to a rising retiree composition of its population can *only* be justified, if, *against their will*, the presently active generation is required to increase its work dedicated manhours *beyond a naturally having grown productivity*, just so that retirees can keep on maintaining the standard of living they had become accustomed to during their own *productivity-increasing* years of work. But even a cursory look at econ-demographic statistics should immediately clarify, that the “greying” percentage of the overall population, in spite of the ongoing baby-boomer spike, is far less than the gains in productivity that were achieved during those same baby-boomer heydays, let alone that of those having come on-stream since. All arguments in favour of benefit cutting in monetary terms are thus exposed to be not only implausible but false, since all those monetary effects will cancel one another out, for as long as the process of living-standard provision remains dynamically equilibrated. From this it follows that it is the requisite job of economists to ensure such dynamic equilibration to remain in effect, at zero levels of involuntary unemployment and waste of human productivities.

consummated through personally received rent and profit incomes, and thus the whole system even at ever growing levels of inequality, stays well within dynamic equilibrium conditions. For with full-employment conditions now remaining in effect, a resentment will start building among employees; and this is likely to lead to a demand for higher remunerations, or possibly even sabotage when denied. Power factors play important roles in our economy, but only to the detriment of an effective operation.

Having provisionally identified a reigning dynamic equilibrium as an ongoing final resolution (direct spending) of the totality of the economy's booked expenditures (i.e. deb(i)t[27] entries), that became wholly embedded in retail output and thus is assumed by retailers as being resolvable, it should now be clear that there isn't any ex ante rate of profit on capital either. Capital is an inanimate matter that neither has the power to initiate anything nor direct returns to come its way. Although map-tinkering can show a particular capital to have been profitable, retailers cannot have the foggiest idea nor do they care about the ratio of previously dedicated costs, profits, rents, and taxes[28], that are embedded in the cost of their merchandise. All they care about is a resolvability of their own assumed costs, so they can stay in business; and for that they rely on past experience and/or hope for the best. Thus, with the totality of cost-derived incomes cancelling out on the retail level, which takes place regardless of allocation shares, profit income too can only become determined through the direct spending of received profit incomes, as there is no other available income to do so. This means that profit rates are indeterminate ex ante also, and could well be set any level. Realization in full would indeed occur if, in general, all received profit incomes were to be directly spent, either by its personal receivers or by additionally hired employees as proxy spenders, regardless at what level these profits were set ex ante. And furthermore, as already was hinted at before and in contrast with the radical Marxian approach in particular, some profit setting is indeed indispensable to the workings of an efficient economic system. It is the only sustainable way whereby not only an increase in output through learning-by-doing can become fairly distributed, but also serves to cut out deadwood thus keeping the economy healthy and poised as such for a natural growth; though

27. In spite of conventional wisdom fully differentiating the concepts of debt and debit, in the macro-account picture of disbursed and to be returned income here presented, both concepts identify with to be resolved expenditures for which, at least under (dynamic) equilibrium conditions, repayments in full become an imperative. This means that a remittal of debt by borrowers isn't as steadfast in diminishing the overall resolution of systemic negatives as is taken for granted by borrowers and lenders alike. So when a third party like a bank is involved, and fees and interest payments become part of those to be resolved negatives, the onus of differential income resolution now rests entirely with its creditors as a systemic debt is still present and there is no other available income to do so. Further to that and even more significant is that because booked debits as a rule precede credits rolling in and thus everything starts out on a footing of systemic debt acquisition, it now becomes virtually impossible to rectify ever increasing debt to GDP ratios; unless some real growth from exogenously existing natural resources can be called upon, since all newly to be disbursed personal income represents no savable surplus but is a to be resolved debit entry already.

28. That this state of affairs also has momentous consequences with respect to governmental budgets has to remain outside the scope of the argument, at least for the time being.

only to the extent that exogenously existing and sustainable natural resources will allow this to happen.

This brings us to the baffling issue of the money supply and everything associated with the performance of money in our economy. So far it has proven to be impossible to come to an understanding of what money actually *is.* From the set of first principles that neoclassical economics is deduced from, money is simply a veil. But a veil cannot possibly become a *cause* of economic activity, and so this arrived-at conclusion is blatantly self-contradictory with respect to the monetary policy recommendations from the reigning Mainstream. But while the heterodox factions of the profession reject the veil concept of money because of empirical and thus inductively gleaned observations, they all lack the necessary premises to show as to why this is so in theory. The main reason for that failure is that in order to come up with a coherent and *objectively* true theory of money, the *purpose* of money has to follow unequivocally from exogenously set first principles; as from within any field of causal factors, the totality of available systemic observations will always be inherently insufficient to determine a definitive overall purpose[29]. Therefore the would-be sophisticated catchphrase "money is what money does", as has been professed by those dissidents[30] who put their conviction in inductive reasoning alone, means giving up on the development of an objectively true theory of money; i.e., putting blinders on and choosing to remain fully ignorant in that respect. Furthermore, at least according to this alternative approach's inferences as we will discover soon, (the value of) money has to be considered to be a moving target and as such cannot be assumed to *be* a concrete entity at any time either; ruling out all further conclusions that are usually drawn from this held to be "determinate" point of departure. When however this vital restriction is inadvertently ignored, while somehow yet holding on to the idea of what an economy ought to be all about, contradictions have a way of appearing; whereby any and all attempts to codify the full meaning of money come to an end. Let's see if we can justify why and how this newly proposed alternative interpretation of money in our economic reality is valid.

Is money a wealth, is it just a claim to wealth, or is it both and why? From the above presented outline of the economic system, it can be inferred that money is strictly a unit of account and claim to wealth; nothing more, nothing less; and thus, as it stands so far, rules it out to be some independently existent wealth. Note that its underlying supposition set (in order to fulfill a preset purpose, the economy will always need to be in a state of becoming, requiring a unit of account to keep track of its inputs for a final distribution of its outputs, making all its components exist *over* time rather than *in* time) isn't directly observable from any vantage point within the economy, but is arrived at instead from outside the economic system proper. It is a hypothesis, i.e. existing below the posed thesis of the economy's workings itself, but yet in full conformation with that

29. Admittedly an induction, but one that has withstood the test of time without fail; and thus true until a systematic counterexample yet proves it to be false.
30. Cf: http://econ.utk.edu/documents/davidsonpapers/ARESTIS%20CHAP09%20davidson.pdf

thesis' axioms; and, just like the latter, this is deemed to be true until it would lead to an internal contradiction. Consequent empirical observations, thus those now made from within the system proper, even though these cannot be axiomatic, still have the power to put any axioms and hypotheses to the "veracity" test; both on the negative and the positive side of the scale. So that in order to further pursue our investigation, it will probably be propitious to start off with how money comes into existence.

Fitting right in with my thesis, a couple of quotes from J.K. Galbraith will set the stage for truth-finding about money perfectly; both in reference to the approach taken in this paper and what has transpired in the past. First, the most famous one: "The process by which banks create money is so simple that the mind is repelled." And second: "The study of money, above all other fields in economics, is one in which complexity is used to disguise truth or to evade truth, not to reveal it." Although, unlike perhaps was still the case in Galbraith's time, when, at least notionally, money was still backed by gold, the creation of money is nowadays well-known to occur out-of-thin-air, or out of "no-thing"; just about all economists argue, without being able to theorize why, as if money becomes a *thing* right afterwards. And the few who don't explicitly do so are still confused in the way it remains a no-thing, by yet falling back on two of the three functions that money is generally held able to perform; to wit, as a (to be rolled-over) *stock* being a medium of exchange, and as a store of (viewed *positive!*) value[31], that is applicable in the acquisition of some other positive value. How, when, or why, a known debt[32] at its inception subsequently transforms into a positive and storable wealth as cash has never been explained by anyone yet. But if the dispersion of know-how through an appeal to logic is important to these purveyors of heterodox economic theories, I'm afraid it's still an imperative. And what in effect has been an evasion of logic has resulted in an inability to remediate social suffering, so not at all something to be satisfied with. Being a unit of account or a standard of value, the third of the three money functions, everyone agrees on; including me, but with some crucial provisos as will become clear soon.

Having touched on a philosophical principle, a couple of paragraphs back, that as I

31. Keynes, in the wake of publishing his GT, made the remark (paraphrased) that the "store of money" objective is a kind of reasoning befitting only those inhabiting a lunatic asylum. He at least understood such saving to be disequilibrium inducing, and had reworded the already from antiquity dating "savings paradox" into the paradox of thrift in the GT. But a paradox is an internal contradiction, indicating that one (or more) of one's premises is wrong and/or superfluous. It is the only available signal to anyone theorizing a suspected reality, and Keynes should have heeded that serious warning by making the necessary adjustments. For in the absence of the latter, and now forced to argue his own point from a paradox riddled theory, he couldn't possibly quell the belief of economists that in this day and age of fiat money, it has self-evidently become possible to create some storable *thing* out of *nothingness*; which after all is a trick that even the universe itself hasn't been able to accomplish since the "big bang" some 14 odd billion years ago. So that, as far as (Post-)Keynesian economic theory is concerned, it could be said that the by Keynes induced notion of a money stock being a material "store of value", left the door open for the inmates to take over the asylum and run it.
32. Soon to be further clarified...

understand it underlies all valid reasoning, it is probably expedient to expand on this a bit yet before returning to money as the main subject currently at hand. Keynes should have realized that whatever appears to be true cannot be firmly established, at least not in a timely fashion, on the same level from where the observation is made. He thus committed his followers into taking the almost impossible path to truth, by arguing from a specific, the empirically observed paradox of thrift, to the general in the form of how the economy in its totality works. Now when having to theorize the natural world into which we are born and cannot step out of in order to obtain an objective point of view, inductive reasoning would be an inescapable restriction that all of us have to live with. But if our economy is held to be a human-made system axiomatically, and put in place for a purpose that we can comprehend, the situation changes completely; for then there is no way for paradoxes to appear in such an arrangement. Although due to the impenetrability of the human behavioural structure, with its utility generating attribute (under the known influence for instance of perceived rationalities and uncertainties) could well allow internal contradictions to come to the fore, human nature will always exist exogenously to any system *purposely* put in place by human beings. And while a deduced theory grows out of a limited set of axioms, as these were induced from a higher level; whereby the entire theoretical field becomes identifiable strictly in terms of those axioms (with denoting a more generally applicable theory according to the smaller number of axioms needed to achieve a bounded close), an induced (e.g. Keynesian) theory is unbounded. So that is one reason why, if it's at all feasible, a deductive methodology is almost infinitely more reliable than an inductive one. But moreover, because any field of investigation cannot both have a set boundary and be unbounded, Keynesians can neither accept that the economy is a human-made system, nor that human beings willingly participate in it with an overall purpose in mind, without this bringing about yet another couple of paradoxes. That nevertheless most Keynesians do so implicitly, and thereby (from this alternative perspective) do get it right more often than wrong, doesn't make up for the apparent fact that a paradox riddled theory isn't going to overturn an established orthodoxy; one that at least seems to be consistent within its own premises, regardless of the latter's admitted disconnect to reality. After having placed the emphasis on final demand as the determinant of each and every economic activity, all Keynes would have had to do was to investigate the full set of circumstances, whereby thought to be valid savings interfere with that final demand determination and when they don't; rather than simply accepting that the paradox of thrift appears to be an integral part of our economic reality. Although he did come awfully close[33], it evidently wasn't quite far enough to escape the virtually built-in paradox. For then instead of having made a 90° turn with respect to orthodox theory, he would have made a full 180° turn; but now setting for himself the condition with at

33. "Consumption—to repeat the obvious—is the sole end and object of all economic activity...The consumption for which we can profitably provide in advance cannot be pushed indefinitely into the future...A diminished propensity to consume to-day can only be accommodated to the public advantage if an increased propensity to consume is expected to exist some day." J.M. Keynes: GT, 1936 p.105.

least the potential to remain consistent.

A unit enabling the itemization and standardization of economic accounts is a no-thing. It is the conceptual (i.e., non-physical) means whereby systematically, the physical reality of natural resources (products of nature) can become temporarily suspended, until these physical realities reemerge from the economy as materialized standard of living enhancements. During their more or less short "economic" time, and while being reworked through the ultimate inputs of human labour, these physical products are all just itemized accounts; and they only have a numerical identity, or be just a reality "on paper" (and in terms of money). Money is allowing a working relationship to exist between a territorial (physical) and a mapped (conceptual) reality. As such its function is true as long as the affiliation between the two realities is stable. And while a *thing* is a physical entity existing in time, a relationship on the other hand is a conceptual instrumentality having a non-physical nature that, although creatable in an instant, prevails *over* time. Real wealth, in contrast, having been produced on many levels to all yet culminate in the form of a living-standard enhancement, as well as the thereby acquired production expertise, takes time and effort to develop. Also, a relationship or affiliation is a composite of more than a single entity. No part of a relationship can ever become something all by itself, thus one-sidedly able to accomplish anything without affecting the other side (or other parts) of the relationship. The nature of relationships in our world is such that they can indeed be created "out of thin air". Get two parties together, willing to accomplish a goal or purpose, and voila the relationship now is there. The criterion though, as will become clear later, is that as seen in the aggregate, legitimate relationships with possible distinguishably-motivated agents need to be able to function in principle; for when it *can't* due to preset conditions, the potential for the entire system to collapse becomes created.

This is exactly the situation as it exists at the point of money creation. But before going any further, it should first be made explicitly clear what constitutes credit. Having credit is having the potential ability to make good on an obligation to produce. This ability is inherent in the physical productivity power of individuals, or in groups of individuals, within a society; and thus, while not absolutely sure to happen, a "believable" (i.e. a credit) attribute. Banks don't create that, nature does. The only thing that banks do in this respect is to underwrite that ability to function properly within an economic system. To do so however means that instead of just initiating a new moral obligation, as these have come about since the dawn of human society, the starting point of all productive activity has now become a to be resolved numerical debt; and, while the resolution of that debt is ongoing, a sharing in the pertinent future productivity of the borrower by the lender. So what Nature giveth within its own positive physical realism since time immemorial, banks now assess themselves the power to take away the productivity of individuals, through the means of a self-created and ruling numerical reality; whenever the endogenous goal of banking, a numerical return, is no longer met, and a debt is deemed by them to have become unresolvable. A potential collapse in the financial system, it being the time when the underwriting of credit has come to a stop entirely, can thus only be caused by those same banks having misjudged over time the strictly numerical (i.e. mapped-resolvable) productivity of some or other faction actively involved within the economic system; for the actual physical ability to produce output hasn't changed. Bankers, misguided by incoherent economic theories with respect both to sign (positive and negatively valued entities) and as to whether the economy exists in time or over time, hold that the map *is* the territory; whereby, having made fundamental errors in the way the economy operates, the bankers' own role in the numerical unresolvability dilemma has since become imperceptible. More to follow...

Graham F. Towers, while governor of the Bank of Canada, gave evidence before the Canadian Government's Committee on Banking and Commerce, already in 1939, that "Each and every time a bank makes a loan (or purchases securities), new bank credit is created — new deposits — brand new money." [So that] "[b]roadly speaking, all new money comes out of a [b]ank in the form of loans. As loans are debts, then under the present system all money is debt." Now the possibility of changing the present system for another, and presumably better system, is a point that falls outside the scope of this paper. But it's extremely important for the coherency of an economic theory, to stay consistent with the empirical conclusion that "all money is *debt";* and for the latter to change into an actual wealth, a logical chain of events needs to be presented as evidence or it's a non-starter. From the above it is clear that to take up one's credit numerically from a bank creates a loan, creates money, creates debt, and creates deposits. I'm not aware that any economist would explicitly disagree with this particular rendition so far. But the problem is that, in their outright belief or at least confusion about money being a thing, they all hold that from this it has to follow that the money supply thus has to diminish with the redemptions of loans. Unfortunately however, this misinterprets what, at least in the world of enterprise, is going on; which has serious consequences, as far as being able to close a coherent theory of money and therewith provide the realistic economic guidance that society is so desperate in need of in order to do justice to all.

When a (would-be) business person with an enterprising idea and say a paid-off house as collateral steps to her friendly banker; and if the loan officer, after having studied the pertinent business plan, does agree that returns on the new investment are a likely possibility, newly created funds will be deposited onto the bank account of our posed entrepreneur. The books of the (new) business owner will show both a liability (debt) and an asset; similar to the books of the bank, except, as we all know, with a reversed liability entry. The borrowing firm is now in the position of being able to spend. These expenditures end up, either as the personal incomes of its own (new) employees, or as the personal income of their suppliers' employees; to by enlarge be spent on the retail level. If the extent of such economy-wide borrowings is significant, retailers will notice a speed increase by which their stock turns over, and may well increase prices; especially if they were operating quite profitably before. On the other hand, and in particular if they have been hanging on by the skin of their teeth for a while, retailers may leave prices as they are, at least for the time being. It's an exogenous decision, made entirely distinct from any particular borrowing, and there is no direct causation involved whatsoever. If wealth can be equated to standard of living availability, then the idea that new financial inputs or investments ipso facto create wealth is a myth. For the above has started to indicate that the enlarged availability of personal income for direct spending purposes, after private sector capital investments are made with the intention of inciting future corporate growth, may very well lead to a *lessening* value of anterior per unit income earning.

When there is more money being made available than there are goods (with previously embedded incomes) to buy, either the preexisting workforce as a whole loses out through a rise in prices, or a number of participants will now have to do without those goods and the money they hold would be valueless with respect to an augmentative living standard obtainability. The latter point, while of the essence, cannot possibly be dealt with if it's *premised* that money is a store of value. Furthermore and aside from this worthlessness in part coming to the fore as useless inflation, as subsequently "saved funds" this money would be just as useless. For the personal income that is going to be disbursed later, i.e. during the time that the new investment embedded derivative retail output will finally appear on that market, in the aggregate is quite sufficient by itself to clear all such growth derived final output from the then existing retail market. And if everything with a vertically integrated cost later becoming for sale on the retail market is already spoken for, how can there be any real worth in those accumulated savings at all? Since we already know that loans create new deposits and thus savings aren't necessary to supply “funds” to those dipping into their credit allowances; at least one of the conventionally trotted out justifications for savings is a myth with respect to the banking system as a whole. But that's not all there is to it...

Although banks seek deposits from savers, they only do so because in order to lend and/or buy securities in *multiples* of those deposits, they need reserves at a CB; and maximizing lending, i.e. bank-asset/general-debt creation, is the goal of all banking. In the mean time, savers are being paid just a pittance and always substantially below the yield on lending, so that the accrued interest to savers ends up not costing the banks more than a bare minimum. And by operating in reverse, i.e. by dis-saving, the economy is now subject to a possible CPI inflation also, just like through producing new and additional investment goods as explained above. But while perhaps as a first impression, such dis-savings seem to be an identifiable source of income to the non-vertically integrated portion of retail output production (mainly comprising all kinds of consumer services), a short reflection shows otherwise. For in general, when those kind of services are bought and paid for, personal income obtained from the vertically integrated and driving part of the economy can be understood to have made merely a slight detour and thus temporarily suspend the needed resolution of accumulated deb(i)ts; until these service income receivers and/or their beneficiaries turn around to do their own direct spending on vertically integrated final output in its stead. While on the other hand in the case of dis-saving money, by first having been spend on those services, in the same rebound are at least potentially inflationary again. All of this strongly suggest that a dynamically evolving economy is in no absolute need of any personal savings; not for investments, nor for any market clearing purposes. And that having the opportunity to postpone the direct spending on final output in our economy is just a personal convenience; but one that involves a potential cost to all.

Of course non of the above preliminary reasoning about the causation of investing is meant to convey that, during the times additional employment is being created, the existing part of the working population is victimized for the benefit of the new workers. Only that an exchange-value production economy, with a unit of account keeping track of the exchanges between producing and reaping rewards in terms of that production's final output, is a *social* structure at its very core. Any and all attempts at its expansion and/or transformation[34] are borne by society at large, in its sharing of the already existing final output, until its progressive results become capable of being integrated later. When, already with an economy theorized as simply non-growing, no straight linear relationship between the physical factors of supply and demand can be depicted to exist when the underlying motive and purpose of each individual supply activity now, is the systematic (round-about) creation of final demand for output that was created in the past, through an output that eventually is going to benefit other individual suppliers of economic input in the future; an expanding economy is even more complicated than that. The only way such systems can be formalized is by means of a unit of account; where, as debit entries initially, systematic debts to a later fulfillment and determination become created. As such, and in order to remain logically coherent, a simultaneously full *suspension* in theory of the ongoing transformation of *physical* artifacts by human labour becomes essential. Now, whenever invested-in growth enters the economy's picture and the unit of account is thereby expanded to accommodate that growth, a mismatch between the disbursed unit of account and a reward in terms of final output becomes unavoidable; that is, unless production and its consumption can be portrayed to occur simultaneously. But since a time lag between producing, being rewarded for that effort and its consumption is almost always an inevitable condition, the available consumption has to be (temporarily) in deficit.

This kind of dynamic reasoning doesn't originate with me, but with a contemporary of Ricardo and Malthus named Sismondi. His theory of growth, even though he gets to the point somewhat differently[35], concludes (paraphrased) that: in order for growth to

34. A telling example of the latter would be the ongoing energy-supply transformation from fossil fuels to "green" renewables. The likely claims made by investors in these new technologies, that their risk-taking is responsible for such advancement, has no bearing on the herewith exposed fact that whenever new money is involved, it's always the community at large that bears the brunt of any in-pipeline progress.
35. Although Sismondi places these incurred losses at the feet of the merchants selling living-standard provisions, the crux of the matter is not who incurs them, but that they occur at all *as a consequence*

be able to materialize, well spread out tiny *losses* have to be incurred; but that, as long as the attempted growth isn't too excessive, such losses are harmless. Over the years since, Sismondi's insight has been more or less ridiculed by many, especially in the orthodox establishment, as an adding up of small losses so as to produce a gain. But a few top rated economic scholars like Malthus, Luxemburg, Amonn, Schumpeter, all to varying degrees left open the possibility that, even though admittedly not quite understanding the dynamics of it all themselves, Sismondi could very well have been right all along. Now if these mostly towering figures in the history of economic thought could muster this kind of self-deprecating attitude, then perhaps it's about time to give the non-algebraic and indeterminate dynamic approach to economics that Sismondi originated and I'm herewith further developing a fresh going over. Especially given the more than dismal failure of even cutting-edge comparative static, linear, as well as non-linear/chaotic dynamic economics, all starting out from a common *determinate* point of departure, to cope with let alone solve the problems of the actually existing economy of ours.

And so, it has always been a kind of virtual sacrifice by the community at large, that, as a consequence of progress and in the main unwittingly, shares its final output with the newly employed who had no hand in the production of that existing output and whose original producers now take a personal loss. The "quality" of a financial sector both in having made those new loans available and by reallocating existing capital, thereby having caused the system to achieve its apparent growth, cannot possibly be substantiated[36]; and therefore, regardless how "obvious" it all seems, is nothing but a

of growth; and thus that reality and the nominal representation of economic reality in terms of a unit of account are *not* ipso facto the same. A possibility that will remain well beyond the ratiocinative horizon of just about all economists, at least for as long as they aren't being pressured into establishing a true theory of money; while in the mean time, thanks to the support of all economic theories holding money to be a determinable good*, just about everyone remains convinced of money's might.
*) Whether money as an economic good is fully substitutable for all other produced goods remains a heated point of contention between the Mainstream and some heterodox approaches, but no one seems to question its nature as a good.
36. A couple of study-papers based on empirical findings make this abundantly clear. First there is the relatively recent paper by Weisbrot and Ray*. It shows that the per capita economic growth over the last couple of generations or so in the developed world amounted to about 2% annually. Given that almost the entire purpose of the financial sector is to facilitate economic growth, and we also know that a fair bit of that 2% growth outcome became accounted-for from non-financial-sector retained profits; with the size of the former comprising not only its own obtained income of well over 7% of GDP** but also mediating the investment of other incomes say about double that at least, that sector has a lot to answer for. For the efficiency rate of that sector's input as a whole is therefore at best about10% only, thus with a 90% waste factor, *if 100% of economic growth would indeed be attributable to new capital formation*. But second, there is the even more pertinent seminal work by E.F. Denison from 1962**. It showed that new capital formation can only account for *at most* 15% of the total accomplished growth in productive output, and that the lion's share of growth is due to acquired knowledge of all kinds (education, experience, etc,). So now we're all the way down to about 1% efficiency and 99% waste in growth generation, as per the cost of having to maintain our covertly over-bloated financial sector. But regardless of the indicated arithmetic, if even a tiny fraction of those

self-serving and *fictional* account of reality. The sustainment of a mapped dynamic equilibrium, while more and/or better means of production is being created, is thus being upheld *not* by the introduction of investments made by risk-takers, but by an actual postponement of determining the economic value of those investments; that in the meantime is carried by the community at large as a to be resolved *debt*, until the ensuing growth in final output can first be integrated and subsequently determined by becoming for sale on the retail market. By that time, purchasing power will be equal to the availability of that final output and able to satisfy everyone economically involved at a now higher level of development than before; if it weren't for the fact that by then an entirely new set of induced investment growth, also in need to be integrated within the unit of account, will normally have been in-pipeline for a while already also. Or, in other words, not only is the economy always in debt to itself and no determinate positively valued launching pads can ever become built anywhere within the structure, to serve as a solid point of departure for an extended analysis of further development, but, and this is the kicker, the value of the measuring unit of all the structural components itself is never fixed at any particular point in time either; all of which means that a comprehensive mathematical formulation of economic values and/or prices is totally out of the question. Instead this alternative approach to economics dictates that the only way to make sense of our economy, is to regard its dynamic equilibrating motion as being a pulling action out of accumulated negatives (i.e., booked debit entries). If instead a pushing activity were indeed a valid depiction of how an economy in fact works, from a theorized base of more or less perpetually

currently employed in the financial sector could be re-schooled and actually perform some useful work in the real economy, the efficiency rate of the financial sector as a whole is currently well into negative territory; whereby it happens to be doing tremendous harm to productive workers. Why for instance should, or better said *can,* financial interest charges and fees exceed any achieved growth figure? Where is that "money" (or fair return on made investment as the saying generally goes) supposed to be coming from? What has all that applied "leveraging" accomplished over the years past, other than create an unrepayable debt? Talking about “wasted” transfer payments in the form of established but “unsustainable” entitlement programs! Please note that just about all the above holds true even within the Mainstream paradigm. Denison was a neoclassically trained economist and his findings have never been successfully challenged. So that even by its own standards, the very *attempt* at economic growth by the financial sector is pathological as far as its outcome is concerned. Its inherent effect is a usurping of productive output from the meek, who don't know any better but assume it to be the natural result of free enterprise. No wonder that for most, the boom out of the latest recession never happened. This not only speaks volumes as to the power of that sector, but also that as long as heterodox approaches are just as stuck as the Mainstream on treating capital as a cumulative stock with a positive value, they will unlikely be able to make a dent in its hegemony; as the accumulation of "funds" for investments is a necessity, isn't it? And the more capital the better, no? More on this later too...

*) http://www.cepr.net/index.php/publications/reports/the-scorecard-on-development-1960-2010-closing-the-gap

**) Dean Baker, RIGGED pg. 51. http://deanbaker.net/images/stories/documents/Rigged.pdf

***) E. F. Denison, The Sources of Economic Growth in the U.S. and the Alternatives before. Us (New York: Committee for Economic Development, January 1962, Supplementary Paper No. 13.)

reoccurring equilibria from which to push, booked and also invariably unencumbered! credit entries would be the first to make an appearance on the economy's scene, to as such provide a determinate solidity to hypothesized economic stocks; which, both given the evident lack of coherently applicable money and capital theories, as well as the logical placement of capital on audited accounts being the debit side, has clearly been proven to be unrealistic.

New money becomes created through a bank loan, because of a bank's belief in one's creditworthiness. Through loaning money for business purposes, banks temporarily function as intermediaries between two or more economic parties, amongst whom this trust in the ability to pay back a rendered service by having the debtor's output (costs) accepted on the next level downward to the retail level isn't established as yet. Banks have been chartered to extend government sanctioned IOUs to *allow* a newcomer to play the economy's game. But this doesn't add one iota to the player's capability to directly or indirectly entice final output to be taken off the market by consumers; being the means whereby the (passed-on down) cost of drawn loans, through the expended personal income of those consumers, can become repaid under dynamic equilibrium conditions. In other words, banks merely extend repayable economic *debts* that, in conformance with later to be fulfilled repayments on the retail level by other parties altogether, are of indeterminate value at any particular time and thus unable to *cause* positive results to come about from the outset. Neither they nor for that matter their even blacker sheep relatives, the shadow banks, are a determinate *source* of wealth. Virtually all suppliers require a track record before credit is extended to them, and so it becomes a catch-22 situation for most newcomers on the economic scene; but it is credit, or the belief that someone will make good on a given promise to be productive, toward aggregate final demand that allows the economy to propel itself forward.

Money therefore is underwritten credit, accounted-for in a mapped reality. It doesn't alter anything in the physically existing (real) world. The credit driven and vertically integrated economy codifies, in terms of a generally accepted unit of account, what in the more primitive circumstances of self-contained communities, operating in earlier times on a single level and was an unwritten but deeply felt sense of needing to reciprocate in kind; "doing something for me obligates me to return the favour, not necessarily right away but at least in the foreseeable future", in order to straighten out, i.e. equilibrate the situation between multiple parties. But the unit of account providing banking establishment deals with this codification process by almost imperceptibly turning the tables on the taken-on obligation aspect of it all.

Just as the ultimate economic purpose of government taxation is to arrange a claim, or a share of the final output produced by the economy at large, for its public income receivers[37]; so are financial fees and interest rates charged for the purpose of doing

37. Note that unlike other heterodox approaches, government activity here is fully integrated within the economic system as a whole. Its purpose therefore isn't some ad hoc made assumption, like "claiming

the very same thing for those who obtain their personal income from the institution of banking. No borrowing means that no personal income can become accounted for to accrue to anyone involved in that part of the financial sector. It is therefore the lenders who now become obligated to return the favour; and the only way, from then on in, to maintain a dynamic equilibrium, thereby upholding the existing employment conditions (that is without additional hiring), is through the direct spending of financial sector disbursed personal income. For the carrying costs of the taken-on debt by borrowers can only be resolved through the direct spending of their lenders' personal incomes.

Like economy-deep buyer-accepted profit income, no other economically obtainable income is available to resolve those specific charges. Yet, and aided by conventional economic theories that without exception don't differentiate between the means and the ends of economic activity, the financial sector has been enabled to keep alive the myth of borrower culpability in cases of default. Whilst, even with the best intentions and/or carefully build-up reputation in the world, it just isn't possible for borrowers in the aggregate to pay back their loans, if the direct spending of rentier income and the like is refrained from, just for the sake of idle balances on financial accounts and its associated bragging rights. So banks, either following in the footsteps of their pure orthodox micro-economics inspired exculpators where money as a veil isn't considered at all, or are relying on the New Keynesian DSGE model where so-called “real” money balances become an input in a production function, in either case are ignorant of both committing relevance and composition fallacies; by holding onto the myth that since individual borrowers are obviously responsible for paying back their loans, this in and of itself proves that the same holds true for borrowers in the macroeconomic sphere. The taking for granted, rather than theorization, that money after having been created through loans turns into a positively valued determinate *stock*, just needing to be rolled over a number of times in the right way and speed, so as to not only pay off all these contracted-for debts but make everyone better off in the mean time as well, is the very assumption that obfuscates not only the DSGE (synthesis[38]) model as being a myth or nonentity, but all other conventional economic approaches as well. Or in other words, and in terms of this alternative approach to economic reality, the lack of a coherent monetary theory, which is an accusation that cannot be made from any existing dissident perspective also lacking such a theory, is what's been doing all models in.

Further to the above, and now specifically with respect to the Post Keynesian branch

resources and output for itself in order to carry out its own socioeconomic goals"*, but follows logically from the economy's end purpose as a whole. So even if (e.g.) the below referred-to MMT framework can beat the rap of needing to come up with coherent theories of money and capital before they can hope to overturn orthodoxy, its proponents will still lose out to this alternative approach as a result of being less general.

*) Cf. http://bilbo.economicoutlook.net/blog/?p=22106

38. How two theories, with one holding money to be a veil and the other holding that money is an input in a production function, consider themselves as yet be synthesized seems to me as just another sign of how desperately the Mainstream is trying to seek respect.

of heterodoxy: on the one hand holding firm onto the notion that the money supply is endogenously determined by the demand for bank loans and thus concluding that all money is debt (i.e. a conceptual relationship between two or more entities), which comes to an end with the redemption of loans; while on the other hand arguing that money or *m* has come to exist as a statically existing determinate *stock* (i.e. a non-debt encumbered *means* of payment), and a material *thing* with a built-in velocity variable able to singularly finance expenditures (rather than going into debt to finance an expansion) just isn't a coherent line of reasoning. A relationship is neither a thing that can readily circulate as a cause, nor can it develop a velocity. While, as based on the underlying hypothesis that money is both a means of exchange and store of value, money may possibly *appear* to function that way; as primarily upholding an economic relationship between debt acquirers and resolvers, this telling heterodox hypothesis falls apart and would require a theorization of money being solely a *thing*. In terms of this proposed paradox-free alternative paradigm on the other hand, money, or “m”, never loses its identity as strictly being a unit of account and claim to final output, and as such represents a relationship of producers who acquire and consumers who take it upon themselves to resolve economic debt, through the disbursement and spending of money income; and thus provide for a reproduction capability to keep on happening.

The above shows that financiers and the way whereby they advance their inputs not only isn't causal to the process of growth determination, but saddle society with a to be resolved debt instead. And while a steadfast refusal to take responsibility for the resolution of their own integral part of that debt accumulation is the order of the day, these conceited moneymen are yet being allowed, by the equally ignorant powers-that-be, to play the role (as if) they're being causative to economic growth. Is there any conceivable reason why the cause of having become irresolvable debt, i.e. the vain skimmings by the financial sector, ought not to be dispensed with? For like kids given the keys to the candy store, a sickening cannot help but be the natural outcome from misplaced power to those who are ignorant of innate effects. Of course all borrowers gamble when they take up a loan. Unforeseen circumstances cropping up that will prevent a payback and leave them less well-off than before is always a possibility. But they should at least be assured that the overall game isn't rigged. Now, while addicts may decide to take their chances with a crooked wheel when that happens to be the only game in town, in the end nobody forces them into gambling; but borrowers don't always have that same option. With its lenders getting away with claiming to be "doing God's Work"[39], firmly supported in that belief by Mainstream economics[40] and clueless

39. http://www.reuters.com/article/2009/11/08/us-goldmansachs-blankfein-idUSTRE5A719520091108
40. The underlying culprit is the utility theory of value. For all intends and purposes this very principle legitimizes at the axiomatic level, and thus above the level where society functions and takes its clues from, the value-seeking reactions of lenders (a.k.a. the financial industry, incl. CBs, IMF, WB) upon returns on their investments. This new and alternative approach to economics on the other hand, by having taken our set of first principles from the domain where justice itself must find its source, is able to undercut by logic what conventionally has been held to be an unassailable truth; thereby showing without doubt how an unfaltering reliance on utility, as foundational socioeconomic principle, interferes

as to the havoc that “Work” is wreaking, how are borrowers as a group supposed to be able to discern that the combined set of conditions that allows financial institutions to so-called legitimately retain received profits now contains an absolutely unavoidable foreclosure for some? How is this group of unfortunate patsies supposed to calculate the utility of their own actions? How, after umpteen years of duly having paid their monthly finance, student-loan debt, and mortgage charges, at rates whose aggregate non-resolvability was built-in right from the very start, could they have foreseen that bankruptcies, home evictions, and worse, have now become the ineluctable order of a society, whose constituted-power agenda yet all its members are bound by; and that wrongfully-sanctioned predators will systematically be enabled to confiscate whatever assets remain, and becoming victorious all over again while sacking the victims' in prudence built-up economic existence, according to its very own loan-officers, indefinitely?

Conventional economics isn't equipped to provide guidance nor to help, for even when the non-orthodox social-progressive factions in economics try to take a stab at it, they only have been able to do so on normative grounds; which can then be summarily rejected as being “non-scientific” by the reigning orthodoxy. There is nothing normative however in setting up a system that from the outset *prevents* a distinct portion of loans to be paid back under equilibrium conditions. It is nothing less than manifest anti-social behaviour, when those so-called pillars of society who themselves are surely in it for the material rewards it brings them to consume in leisure, deny others from enjoying the fruits of their particular productivity as well. To the extent of charging finance fees and interest costs either as an economic *end* in and of itself, or to speculate with by buying so-called “securities”, inflating their value; these unavoidable charges became *causal* to aggregate default on contracted-for debts and its associated depressive conditions, because *utility* for obtained funds at no time is an equilibrium determinant. By having forced the macro economy into a net-save position, the typical status of a running disequilibrium has moved too far out of kilter and thereby well beyond a resolvability potential through the purchasing of final output. A static equilibrium can be shown not to exist[41] and for a dynamic equilibrium to remain achievable, the economy has to keep on redeeming itself; yet, it will only do so under a set of circumstances that cannot be deviated from. In summary: the most pertinent condition for a soundly operating economy is a non-retention (non-hoarding) of profits; narrated above as having been financially obtained thanks to a reigning monopoly on charged rents, but the same effect holds true for the various degrees of monopoly enterprise as well. A flaunting of this specific condition means that (at least part of) the economy will come to a stop and fail, with all the unnecessary misery that these defaults in repayment,

with our innate sense of justice. So that the utility principle and justice cannot both be sourced in that same domain.

41. Once expenditures have been made, firms fail in the absence of cost-covering returns. Or in other words, every *action* leads to a fall, unless independently (i.e. by other economic agents) *counteracted* later on in time.

resulting foreclosures and subsequent evictions entail. God's Work?.. Not!!

But let's back up a bit again. During the time that a business loan is being paid off, the economy's state of affairs changes in a number of important ways. First, as mentioned already, the final recipients of bank appropriated pertinent interest income are herewith able to command their specific share in available final output. Even though quite a lot more lagged, this potential activity takes place of course under the same limitation as was outlined above, where received personal income due to the making available of additional loans is now in *surplus* to a full market-clearing condition of already *existing* final goods and thus a potential source of inflation. Second, and yet more detrimental, is that charged and received interest payments naturally compounds, or progresses geometrically, and thus bound to far surpass the likely arithmetical progression of the direct spending by financial sector bigwigs; setting the system up for an inescapable failure. But third there is a most positive development, as business credit-in-trade will slowly be coming into effect, substituting for the cash-on-the-barrel-head stipulation of doing business that most entrepreneurial effort had to deal with from the very outset. And as a result of such credit, normal payments to suppliers can be postponed for 30, 60, and even as long as 90 days; while yet remaining a firm in good standing within the entire business community it is operating. When the business loan eventually becomes redeemed and thus the interest-paying expenses of the borrowing firm have come to a stop, in which way could this redemption in full now possibly be detrimental to the "money supply" of the economy? The only from now on affected parties are the bank-income recipients. Within the scheme of a continued reproduction, no shortage of "money" has been developing that would in any way prevent final market clearing. If anything, given that the propensity for direct spending by the common rentiers of the financial sector is likely to be lower than average, the market clearing of final goods at cost-plus prices should even improve.

As was mentioned previously, from this alternative perspective, the "money-velocity" concept of conventional economic theory no longer has any meaning. Because not only can money as a "no-thing" not develop a velocity, it can't even be thought of as forming a sensible supply or a *stock*. A supply of no-things?.. But there is yet a bit more to it than that. Since credit-in-trade, while supplanting bank-underwritten credit over the course of a business loan, consequently sustains the productive activity entering the books of businesses and makes them operate as going concerns on the economy's map; once advanced, operational credit-in-trade is indistinguishable in effect from the supply of bank-credit or money. An acquired to be resolved debt is a to be resolved debt, regardless whether there are two or (now) three parties (also a bank) involved. At first glance it may appear that the only practical difference in the two situations is the set time-limit for resolution. For while credit-in-trade between business dealings on a given level seems needing to be resolved within a couple or three-month maximum, after which the debt is expected to have been passed on and accepted on a level lower down; bank loans, as long as its monthly repayments are kept up, may well take years to resolve. But, since economic debt is merely rolled over from level to level and thus a terminated resolution cannot ever take place above the retail level, accounted-for credit-in-trade with respect to some underlying physical entity, slowly metamorphosing into items of final output for sale, may effectively take years to fully resolve itself also.

The cardinal points affecting loans are that creditors set the time-limit for resolution and retailers assume all higher level economic debts as their own. So that the latter cannot be expected to wait forever for economic creditors to fully resolve their own particular portion of both the embedded cost-accretion of retail merchandise and the making up for a loss in discretionary direct spending by borrowers while a personal loan is being paid off. The economic patience of creditors is a two-edged sword; which both casually defers economic fulfillment by saving instead of spending directly, and also severely truncates economic activity by pulling plugs. And since, as a relationship, money no doubt can become created without effort and a negligible cost anyway, not only is there is no virtue whatsoever in the net "saving" of only one side of it, but, as shown before, it damages the very relationship that money, as a *no-thing,* represents in reference to fulfilling the economy's end purpose.

The size of an economy is determined by the effective demand for its final output. Only a lack of demand for that output, resulting in its producers defaulting on commitments made to reproduce, can reduce the so-called “money-supply”; which, in the scheme of a vertically integrated monetary economy, are but aggregate debit expenditures that are being passed on downward to the retail level for a final resolution. “So-called” because the “money-supply” is a misnomer, as under the conditions of a reigning dynamic equilibrium, money is no more than an accounting measure to set the size and claim of economic flow activity. That flow due to being *determined* by aggregate final demand has nothing to do with the money-supply-issuing banks subsequently receiving their repayments, nor with any of the specific borrowers of that money. Instead, as long as expectations about its efficacy to resolve economic expenditures remain indeed fulfilled, it will last; and possibly forever. Only once (part of) this flow stops, for reasons of insufficient demand for derivative final goods as outlined above, will money effectively cease to exist, as a now shrunk market has deflated its value. And this regardless as to whether institutional powers yet condone its accumulation on some kind of an account as a stock. And it is specifically with regard to this latter notion that all progressive heterodox economic approaches that are operating at present still get it lamentably wrong too.

For despite getting a lot right about the nature of money and its creation, like it being a debt, its endogeneity, and its coming into existence before CB reserve requirements are met, they all still hang on to the idea that changes in the CPI fully account for its inflation and deflation; not to more than mention again, its stock and velocity attributes. While, as a unit of account, money itemizes not only the size of economic production but also accounts for the size of the elements that make up their descriptive identities and equations. So that when additional money (debt) makes an appearance, in its role as a measuring device of the totality of applied means toward the chosen end, the value of the unit of account itself is what changes in reference to those means *at all positions ex ante of fulfilling that end purpose*; and therefore discontinuities occur in regard to the size (or value) of factor elements insofar as these were measured in money values anteriorly. Thus even though it all comes out in the ex-post occurring wash of fulfilled purpose *over time* achieved at the retail level; because the value of the unit of account itself is now elastic *in time*, ex-ante taken snapshots in its terms cannot be shown as realistic representations of what is, with respect to what the economy's final purpose will later dictate it to be. And so, in terms of its accepted unit of account, the present is always incomplete.

So where does all that leave us when having to deal with any current situation, when the totality of available endogenous information about the operational use of economic components is inherently insufficient for the timely determination of their values? Well, in pretty much the same position as the comptrollers of the business world deal with it. The accounting discipline is fully aware of the at any time reigning uncertainty of any pertinent firm's true state of affairs, and their assumptions give them enough wiggle room to yet come up with a telling set of books; all without either feeling the need to resort to, nor even having any use for mathematics at all, in order to make sense. The "going-concern" assumption allows them to portray an equilibrium of entries. But the assumptions of non-overlapping periods, a stable unit of account, and the known influence of materiality in account audits, leave no room for doubt that no more than an approximation of the truth is displayable at any one time. And yet, the economics profession in its entirety takes it for granted that accounting identities are unassailable truths. Isn't it ironic that those who specifically hold the macro economy to be no more than the sum of its micro components yet reject the logical reasoning of a fundamental uncertainty that underlies the accounting accuracy of micro? Is there another faculty in the whole of academe more affected by the fallacy of misplaced concreteness than conventional economics?

An economy as a bounded structure in a state of becoming, changes just about all commonly held perceptions of what economic notions like money, capital, profit, debt etc., actually are. Keynes expressed similar sentiments about his own approach's ability to affect a fitting change in economic understanding, when in the concluding paragraph of the preface to his GT he remarked that comprehending what his new book is all about requires "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". That is why some of what was already previously indicated in this narrative, bears repeating but now in a slightly expanded context; as well as further elucidating thereby the main reasons for the dire economic straights we find ourselves in at present.

One of the most striking distinctions between conventional economic thinking and this alternative approach concerns the meaning of debt in the overall scheme of things. For since all disbursed personal incomes by firms are booked debit entries, i.e. made expenditures, income doesn't appear on the scene out of a vacuum as a determinate free and clear (positively valued) quantifiable entity to either be spent or invested, as Keynes made one believe it is; but, as previously shown, in the macro-sense is a to be resolved debit, or debt in a systematic sense, already. This means first of all that any supply activity, in terms of a general overall purpose, equals the acquisition of a booked systemic negative; so that no portion of received personal income, as a deemed positive entity, can be saved to pay off economic debt acquisition in the aggregate. All that does statically is robbing Peter to pay off Paul; but, as much more meaningful expressed dynamically, put the income of economic creditors in the position of now having to clear overall systemic debt instead. Separating out conventional debt from overall systemic debt has been obscuring the essential sameness of the two notions, in regards to how an economic system keeps itself afloat. Consistent with its etymological origin, debt and debit can be understood to convey the very same meaning[42]; i.e., a to be resolved negative, without this ever leading to a contradiction that would render the interpretation invalid. While debt to a creditor in the conventional sense just means that, herewith agreed to, an additional party to a working economy has become introduced; which action now increases the accounted-for and to be resolved debt amount by the to be paid interest. If the upholding of a dynamic equilibrium is indeed a deemed criterion, so as to remain fulfilling the economy's set purpose, it's all to be redeemed just the same; and a non-resolution or default will decrease the level of economic activities, i.e. will shrink the economy's income producing capacity. The only quantity around which aggregate systemic economic-debt resolution can revolve is the non-pecuniary (real) value-in-use of physical final output on the retail level. So that somebody somewhere down the line, through direct spending, has to take some consumable item off the retail market and dedicate it to personal use beyond the economic sphere, in order to offset to the same magnitude a number of earlier booked debit entries made on the ledgers of various producers. To the extent that this doesn't, or no longer even can possibly happen, the economy's creditors are holding only fictitious assets, and the economy is simply biding time until this becomes generally recognized and a crash occurs.

Essentially since all economic assets without receiving a return, but yet subject to a resolvability prerequisite, are worthless; no economy, that is arranged in such a way that double-entry booked transaction recordings keep track of all its goings-on, can create net positives. And this in turn means that all funds, including for instance any derivative and/or hedge funds created to supposedly uphold those values, eventually

42. For example in Italian, the term "debito" means both debit and debt.

do require a direct spending on final output in order to be validated as *having been* useful. It should also be noted that from such an accounting perspective, i.e. with booked credit entries resolving previously entered debits, the hypothesized way for Keynesian multipliers to enter the analysis falls apart too.

The key argument is that as long as every economic *action* is a booked debit entry, initiated because a return is expected, and being worthless without it; only a *reaction* made for non-pecuniary reasons, through the purchasing of some final output item, can validate all economic initiatives. Before disappearing from the economy's sphere altogether, every one of its actions is still a to be resolved negative or debt; as the only function of all economic activity, or a fulfilling of its preset purpose, is an exogenously enjoyed consumption or standard of living enhancement. This indicates not only the total futility of derivatives or hedges to create net positive values within an economy, but also the potential detriment that a pathetic accumulation of these kind of funds can have on the economy's health in general. For, given the size of the derivatives market, even if by far the greatest portion of the players' funds are created *ex nihilo* as a result of buying into it on margin, a significant part is yet likely to have been extracted from profits made in the real economy; profits that ultimately came from business' debit-entries in general. Those expenditures will end up as assumed by retailers in the cost of their merchandise, who in turn are in dire need of subsequent returns in order to stay in business. So only to the extent that the million dollar+ paychecks as received by for instance hedge-fund managers do indeed end up in the coffers of the retail-goods sector will the economy tend to equilibrate out. The rest, and no doubt by far the greatest part of the funds, remains unresolvable debt for some and fictitious assets held by others.

Although at the original inception of those derivatives on the commodities' market there were some tangible advantages, in unavoidable mishaps in the output of nature now becoming distributed amongst various stakeholders, there never were any net gains to be made. It was always understood that just like investing in the stock market, with respect to exchanging the partial ownership of already existing and “productive” assets, some investor's gain is someone's else loss. Stock market losses, due to a diminished confidence in the eventual productivity of those assets, usually affect only a relatively tiny portion of the overall production value, i.e. resolvability potential of the real economy, and thus generally speaking, are affordable. Affordability, in this case of paper losses, meaning: allowing the real-goods producing economy to yet keep on operating just as if nothing significant has happened. Derivatives, on the other hand, have become a different kettle of fish entirely. The numbers involved are now so huge, with the total amounting to many multiples of the world's GDP, that a crash in their so-called values could be catastrophic. Not so much in and of themselves as just being side-bets in financing, but because of their interconnectivity with regular commercial banking practices since the Financial Services Modernization Act of 1999. And of course most of all because the indisputable culprits of such a crash have been able to use their political power to obtain first priority in compensation under the Bankruptcy Code. I guess that's a privilege that ought to come when supposedly doing God's Work...

While perhaps at first glance the leveraged new loans made by the financial sector, or its purpose of enhancing aggregate values of financial assets, doesn't appear to be all that problematic with respect to the resolution of real-economic debit expenditures. If anything, the fees skimmed right off the top as bonuses to its executives could be especially helpful to the luxury goods industry; the unit of account being singular within a world economy of interrelated foreign exchanges, all its economic ventures are accounted for within a single system. This means that there is no such thing as a self-bootstrapped financial economy, but that finance is just another economic sector whose assumed costs by its debit-entry bookings require a resolution from the whole. Just like all costs incurred by firms in the real economy, the costs of say financial hedges are passed on. If typical hedge-fund costs are 2% interest and 20% of the profits, then the age-old economic questions -- where do aggregate profits and interest come from? -- crop up again. And just like the answer already provided is: they are determined through the direct spending of profit and interest earners in an economic reflux, so can the answer to the resolution of hedge-fund costs only be: they have to come from the direct spending of hedge-fund profit and interest earners, as no other wherewithal income exists.

The problem is immediately obvious, these dreamed-up exotic financial instruments cannot possibly succeed in reaping returns for any stretch of time. For although the appearances of a reigning dynamic equilibrium and the creation of additional wealth as time goes on may be upheld for a while, by applying the principles of a Ponzi scheme; there aren't by far enough luxury goods producible to potentially satisfy the tastes of hedge-fund profit and interest earners, and thus resolve the enormous accumulated costs through debts associated with their creation. In other words, the extraction of income from hedge funds, brought into existence through newly issued loaned money by shadow-banking institutions, is putting the economy in the position of having to resolve a debt that cannot possibly be resolved. All officially sanctioned leveraging, done from already indeterminate fulcrums of financial capital that are still managing to extract returns from the real economy due to way-down-the-line direct spending, is in fact fraudulent; because no new *resolvable* values-in-exchange can possibly become created. Another form of pretty much the same unresolvable debts are resulting from central bank initiated “quantitative easing”, that from the beginning of this century have been dedicated to acquire so-called real but non-performing economic assets from member banks, whereby the book values of the latter became inflated, but at the same time without the possibility of adding to any aggregate values-in-use. Not to more than mention herewith, OMOs in the form of credit swaps that governments like the one of Greece have reverted to in order to finance (read: hide) their budgetary deficits; and which, in light of current financial reverberations hugely upsetting the lives of countless millions of people in those so-called debtor countries, is an even more significant development yet. But this again is a subject falling outside the scope of this paper.

In any case, whether these rogue kind of financial procedures, however sanctioned, can be relied upon to define the nature of money, i.e. is it money or only virtual money that is created through leveraging beyond real-economic growth outcomes and what is the difference? remains up for debate. Since in order to be considered valuable, derivatives, like all capital assets not being determinate quantities, do require returns to materialize in terms of a numeraire; and, since they lack an underlying use-value, there is no way for any self-amortization additional to the amortization of real-goods producing capital to take place. This not only means that the real economy has to remain serving as a backdrop to the financial part of the economy, but also that the money floated originally on its behalf is as worthless as monopoly board-game money. Yet, on the micro level, there is no way to arrive at an operational distinction; hence my designation of it as virtual money. The so-called financial wizardry of Wall Street and the mega-banks, is nothing but a giant counterfeiting scheme; although sanctioned by, on moronic economic advice relying, government policies and thus making it, however superficial in theory, very much real in practice for its direct beneficiaries. This means that the Chartalist notion of the imprimatur of money being a governmental function cuts both ways too.

But whether any new "money" is involved, or the profits extracted from real-economic (oligopolistic) market control now become dedicated toward financial speculation and existing debt remains unresolved, conventional economics has yet to provide an explanation as to what's going on, even within their own realities. Only when the havoc and despair of the affected powerless in our economy, arising to the same extent as economic rent income *not* resolving into a living standard enhancement for unearned income receivers, is regarded as objectively equal to the pleasures of everyone enjoying a decent standard of living, does the non-resolution of imposed financial fees or the striving for so-called "net-worth" by the influential become an equally justifiable alternative. Or in other words, those economists acting upon behalf of finance would have to come up with a set of premises, from which the equal economic benefit of havoc/despair and the living standard choice of rentiers who control our economy can be deduced, in order to justify the status quo. Since this task is clearly impossible, the obvious answer is for government to finally step in, denounce its faith in conventional economics and either tax away all those finance "benefits", or outlaw them outright.

What virtually every pundit seems to miss, because they all lack the theoretical underpinning to reach that devastating conclusion, is that the FIRE sector's so-called "contribution" in fact is a three-pronged *attack* on the real economy. First, the charging and having the power to force the bulk of its income into the cost of real economic output, but with the otiose occupants of that sector neither having the inclination nor even the remotest possibility of directly or indirectly resolving those costs in real terms.

Second, the further syphoning-off of economic debt resolving personal income, every time a consumer acquires a good or a service on credit, and interest becomes part of the cost price. And third, the yet additional squeezing of consumers by raising the cost of credit (cards), in a feeble attempt to make good on the enormous losses incurred on non-performing loan activity; leaving all those consumers who are rolling over their lines of credit even less capable of resolving normally acquired economic operating deb(i)ts. These are all constituting *the* essential components of a real malfeasance; by staking preemptive claims to huge proportions of output not because they need or want it in terms of a quality living standard provision, but because it temporarily will make their books look better to their shareholders. And the staking of claims without resolution means only one thing: a thwarting of life-sustaining reproduction, with the disastrous result of involuntary unemployment and all the dire personal consequences that go along with it. So it's far worse than just being a property crime, i.e., a massive transfer of wealth upwards by kleptocratic means; it literally is destroying peoples lives, conducted with the full blessings of mainstream economic theory.

In the final analysis, the inability to repay home-“equity” loans in the aggregate has nothing to do with hidden fees or ballooning interest payments. If these creditors were to turn around and apply their now enlarged personal incomes towards living standard improvement, everyone desiring a job would potentially remain employable in theory and able to pay back their loans over time. The distribution of the achieved standard of living may well become even more patently unfair, in a lowering of the living standards for the great majority of borrowers over time, and that a full disclosure of all loan conditions is essential goes without saying; but nobody was holding a shotgun to the borrowers heads and a dynamic equilibrium would reign. Furthermore, progressive taxation would always be able to counterbalance powerful financial interests. Instead however, we're being set up to take a fall, because there is no way to remain upright let alone thrive under the conditions of a non-resolution of disbursed income.

All lending at costs in terms of charged fees and interest rates that exceed the resolvability inclination through the direct spending of creditors issuing those loans is predatory lending. They constitute Dr. Michael Hudson's brilliant observation that "debts that cannot be repaid, won't be repaid". I believe to have gone one step farther however, in that by having established the effect directly from its cause in a deductive way from a set of first principles, it now puts defaults squarely at the feet of creditors only and no one else. Indeed until the very substance of rentier "holdings" becomes defined from its own set of premises, and thus its losses and gains are clearly establishable in those terms, a hapless whitewashing of banking misdeeds by clueless right-wing politicians, (e.g.) by blaming the CRA for the still rampant mortgage defaults in the U.S., is no more than ideological blather without any credence.

And yet, I lay the ultimate blame for the reprehensible situation we're having to deal with at present not at the feet of the FIRE sector, but charge the economics profession with failing to put a stop to FIRE's ability to carry out its dirty tricks. Without an effective enabling, virtually unbridled financial shenanigans couldn't be going on. FIRE needs the economics profession like a junkie needs a dealer. Orthodox equilibrium theorists bestow finance with a controlling influence that is fundamental rather than institutional. It assures the authoritative powers that be, that FIRE's market returns on capital formation are always feasible, because an equilibrium is ontological and its effect is operational at all times. So why should the FIRE sector's "capital formation" become bridled by those same authorities, when time upon time its efforts are being lauded by its own trusted advisers as the essence to future prosperity? The underlying answer of course is another question: how many crises does it take to prove to authority, that a theory fundamentally denying the possibility of crises to occur is sheer bogus?

So for the purpose of this article we have come full circle, hopefully having pointed out why a non-rectifiable disequilibrium is the natural direction for an economy to take without implemented countervailing actions by supra-market powers, i.e. governments; and thus having given credence to Summers' surmisal as cited in the initial footnote. That the herewith stated explication takes the situation at hand far beyond Summers' worst nightmare; and if this eventually were to lead to devastating consequences for the current economics profession, I'd say it's long overdue that these vain enablers lose their their ill-gotten influence, having ruined so many people's lives. Competent economists shouldn't find it that hard to adjust and take over the reign.

John S. Vertegaal
(just a pundit and without any credentials in the economics profession, thank goodness)