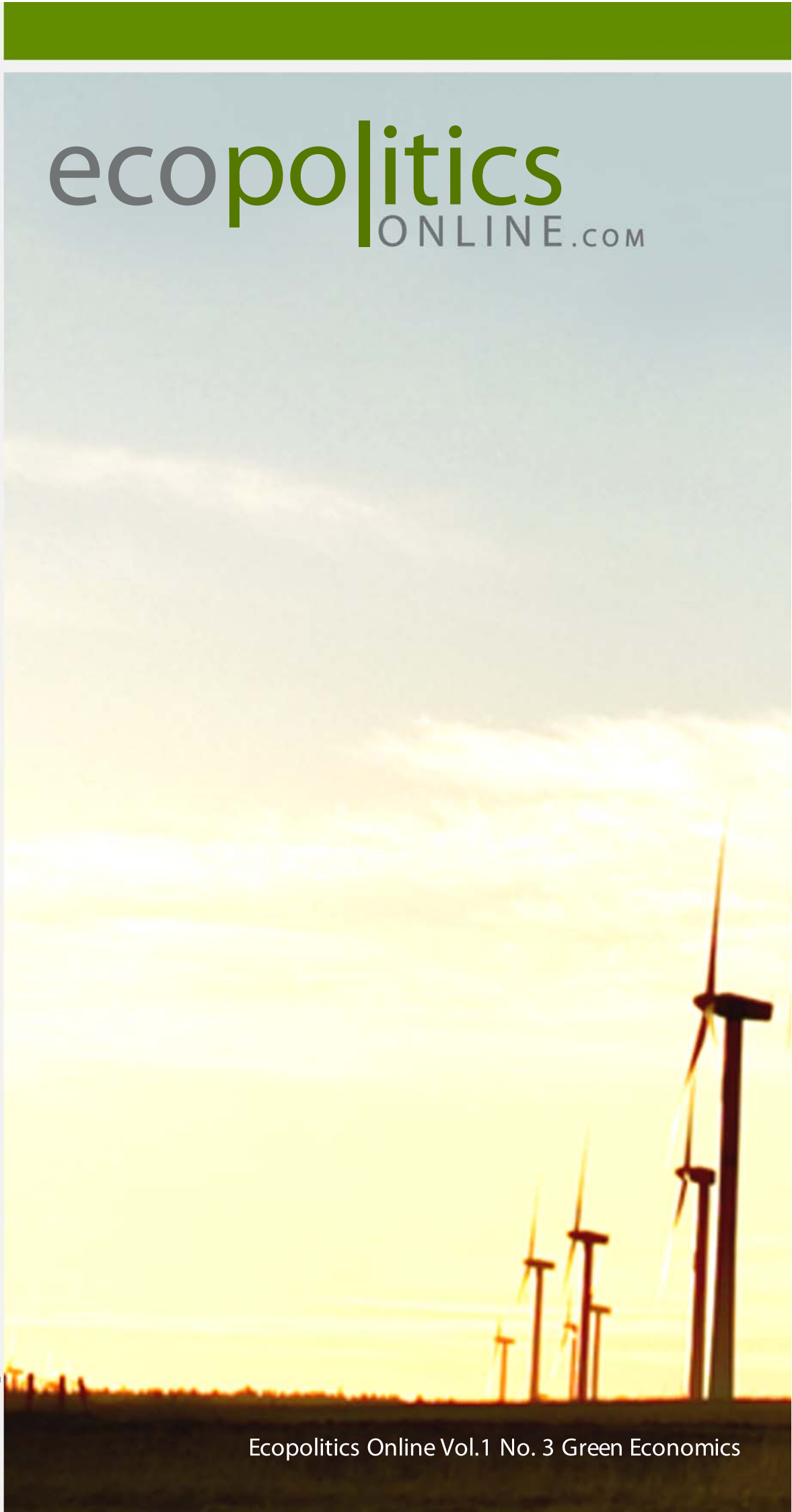


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## JOURNAL AIMS

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**Special Edition: Financial Crisis—Environmental Crisis: What is the Link?**

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**Editors' Introduction to Special Issue: Financial Crisis—Environmental Crisis: What is the Link?**

This is a challenging time to be an academic with an interest in either the economy or the environment: we are being deluged with an over-supply of bad news. From the evidence of accelerating climate change to the increasingly desperate policies of 'fiscal stimulus' and 'quantitative easing' it is difficult enough to keep up with the jargon, never mind the policy. Academics tend to spend their careers looking backwards, analysing what is already safely established and categorized. The present crisis has deprived us of that luxury. Now more than ever our insights and our information are needed to save humanity from two interlinked crises that threaten our future. We need urgent solutions and we need co-operation: for this reason this issue includes contributions from academics and from campaigners.

Rupert Read is both. His essay attempts to step back in order to look forward: he suggests that now is the time for a philosophical as well as political reflection on the nature of money. What money is in its current form is just starting to become startlingly clear to us all, as the money supply rapidly shrinks, bankers hoard, and deflation looms. If we are to control money for the public good, we need to get clearer on its social nature. The tools of Keynes, Marx, Gesell, Douthwaite and others are badly needed now, in order to understand the absurdity of economic ideas influenced by monetarism in a deregulated financial world; the absurdity of allowing money in 'normal' times to grow and grow, in the context of a finite ecosystem; and the necessity for us to rethink what money is and what it could be, in an economically, ethically and ecologically sound future.

Many have questioned whether we have time to worry about the environment now that the financial crisis has become so pressing. What we seek to make clear in this special issue is that the two crises are in fact two aspects of the same crisis. It is a crisis of over-consumption, of debt-fuelled bingeing. It is a crisis of monetary-and-ecological debt; and of what happens when that debt starts to be called in. As Mary Mellor has previously argued in a paper reproduced here, money that is created as debt will be paid back eventually at the expense of the planet, which is the only ultimate source of value. In her paper in this issue, Molly Scott Cato suggests a way of providing a solution to both problems simultaneously, through the creation of an 'environment-backed currency unit' or EBCU, which would provide a sort of 'carbon standard' within which the global economy would be contained. It would also provide the neutral international reserve currency that some of the major players at the G20 summit called for.

In a way that the denizens of the business school could never have expected, the crisis of the collapse of international finance may be turned into an opportunity to rapidly move our economy towards a sustainable future. This is the proposal that goes under the rubric of 'the Green New Deal', and the papers in this issue by Colin Hines and Ann Pettifor (both members of the Green New Deal group) address its origin and outline its proposals. While politicians the world over are now using this slogan, only its originators have ownership of the genuine article, as outlined in their papers.

The slogan for the protests around the time of the London G20 Conference—'Because the Planet doesn't do bailouts'—is quite appropriate to the theme of this special issue. What has become clear to activists and campaigners needs to be argued more cogently to policy-makers and academics. We hope that the contributions in this special issue will help to make this case.

**Molly Scott Cato, Rupert Read; March 2009**

## **1. Rupert Read: Towards a green philosophy of money**

Let me begin soon after the beginning of economics: with money. Money is a concept whose centrality to Economics, especially to conventional Economics, is hard to overestimate: Money is the main means by which economists tend to appeal more easily to an alleged scientificity for their discipline, because it so easily lets them 'Go forth and quantify'.

And yet: economists will protest that I am mistaken. They will say that preference/choice is their fundamental concept, for which money is only a kind of proxy, a conventional 'measuring rod' of value. And they are half-right; hardly any conventional economics (the main exception being some strands of Keynesianism) has anything to say about what money *is*. Rather, a vague answer to that question tends to be *assumed*. I don't believe that I am caricaturing when I remark that, for all the good sense of perspective actually and quite helpfully yielded in the ways that economics textbooks tend to imagine the creation of money on desert islands inhabited by two people, etc., that is soon forgotten, and money 'floats free' of its 'beginnings', as soon as economists begin to *theorize*, as (naturally), being would-be scientists, they love to do. And at that point, as they start to theorize the society they aim to explain, as they begin to produce equations etc. to work up this theory, they start to assume: *that money is a commodity, a thing*, in itself. A thing that is more or less convertible into goods, and thus that facilitates their exchange. Money is a thing, an object, a *stuff* -- and of course, as already-mentioned, marvellously naturally open to *quantification*. (It is this fatal assumption which I am above all concerned to challenge, in this paper.)

This is what makes it possible for people to talk about 'how much money'

they “have”; and similarly, economics makes the most of money’s apparently-numerical character. Numeracy and quantification seem the bread and butter of the economy, and become/became the same for Economics. One of the great trends in -- one of the motors, indeed, of -- Economics is the project of monetizing more and more, of calculating the monetary value of goods that have hitherto not been included in the calculations of academics, businesspeople, etc. .

I am *not* saying that conventional economists simply *are* through and through dangerously-naive Realists about money, fantasising that it is a real thing. I am saying that they *forget* whatever non-naive realism they have, that subordinates money to preference or choice, and tend to fall undeliberately into treating money as if it were in itself a commodity, a good, or at least a direct measure of good. Money is a particularly neat device for giving preferences a numerical face; it is a mathematicisable side of preference satisfaction. Because it mediates exchange and stores value so beautifully.

Economics -- of the conventional kind(s) -- is ‘demonstrably’ a ‘science’ chiefly in that it builds a tremendous edifice of mathematical sophistication and theoretic complexity on the back of the sublimely quantifiable nature of money. But, I am suggesting, Economics does not really know *what* it is quantifying. Thus there is something fantastically unstable about the edifice.

For: there is something fundamentally misleading about money, except to the very clear-seeing.<sup>1</sup> Money at its apparently least mysterious is perhaps money that one can look at: a note, or a coin, with its value actually written on it. But to think then that one is seeing the stuff that money is, and literally reading its value off it, *is* to be a victim of a *deep* delusion.

For, as for instance the population of Germany in the early 1920s, or possibly Argentina more recently, and certainly Zimbabwe now, have very

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<sup>1</sup> I am not talking here about having microscopic eyes. I am talking about the kind of way in which perhaps the Buddha or Gandhi are helpfully-thought of as clear-seeing. They *saw through illusions*, through self-serving rationalisations, through conventional ‘wisdoms’, etc.



bluntly realized: money is nothing unless it is accepted as money. That seems a circular definition. It is. Probably the best single definition that can be given of money <sup>2</sup> is: Money is *whatever people generally regard as money*. The patent circularity of this shows how utterly different this concept -- this 'object' <sup>3</sup> -- is from the founding concepts of scientific disciplines. Money is a social *reality*, where it is -- but, *because* of its *fundamentally* social nature (money is (a main element of) what we <sup>4</sup>use to organise social relations between ourselves), it is through and through conceptual.<sup>5</sup> 'It' rests on nothing more and nothing less than how 'it' is regarded and *used*. In that regard, *it differs fundamentally from the fundamental concepts of (real) sciences: such as electrons, or molecules, or cells.*

The nature of money is best-characterised as a philosophical matter. It takes philosophical reflection, of the kind I have already briefly engaged in above, to disclose the nature of money: as a means of exchange, as *exhausted and constructed* by its use, as *nothing but* its capacity for use. Money is whatever is used as money. And what this philosophy of money discloses is then something perfectly ordinary, something that competent members of a society that is of a certain level of complexity and a certain *kind* of organisation in effect know having to be taught it: what money 'is'. Philosophy does not teach us a theory of money: how *could* it, given the patent circularity I have described above? It simply

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<sup>2</sup> We will in effect examine extensively below why a salient feature of money, this utterly central concept of Economics, is that is in actuality fairly ill-suited to any single all-encompassing definition.

<sup>3</sup> And now, we can perhaps helpfully put the point thus: Seeing money as an object, as a thing, as a stuff, is always to be deluded.

<sup>4</sup> As should increasingly be clear, the identity of this 'we' is itself something which may be put into question. I do *not* mean it to be entirely cross-temporal and cross-cultural. I will suggest below something about the historical and *economic* specificity of money.

<sup>5</sup> See Peter Winch's *The idea of a social science and its relation to philosophy* (London: Routledge, 1990), for explication of this key philosophical point in this domain: that social relations are conceptual or internal relations. That they are not, indeed, best thought of as (external) relations at all. Economics fundamentally misunderstands society, when it takes society to be a collection of individuals. Society is not only this, but also, at the same time, one. We are many and we are one (or: we are neither). When this point, as clear in Zen Buddhism as it is in Winch, is understood, then the individualist preconceptions that underlie *homo economicus*, rational choice theory, and in fact all of conventional economics, are overcome, and the way is left open instead for 'economics with a human face'.

reminds us of something that Economics and the business world etc. can delude us into 'forgetting', or into getting confused about: the way we -- normally, but without any guarantee that we will continue to do so (again, remember Germany or Argentina) -- use 'symbolic' coins and certain pieces of paper etc. etc. to orchestrate the exchange goods and services amongst each other, etc. etc. .

Economics wants to forget this definitional circularity, this human power which is the very essence of money. For, if it be clearly realized that money only is as we choose to do with 'it' -- that, indeed, there is no 'it' except insofar as we continue collectively to find it useful to think and act as if there is -- then the 'iron laws' of Economics start to run into the sand. The quantificational edifice is only as true as we act it into being. This categorical difference from anything found in the natural sciences is not something that conventional Economics is comfortable acknowledging!<sup>6</sup>

Money is as money does; or, better, money is whatever does what what we ordinary practitioners of social interaction know to be money -- from unquestionable paradigm cases that we are all familiar with <sup>7</sup> -- does.<sup>8</sup> A helpful way of summing all this up is this: Economics would be a normative 'science'. But there can *be* no such thing as a science of the normative, a 'normative science'. Economics is normative because it is about people trying to satisfy their needs, and because it cannot prescind from needs which include quite irreducibly normative and open-ended matters such as the need for justice, the need to give

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<sup>6</sup> Marx almost acknowledged it, in rendering economics into a historical and dialectical subject, but he tended to assume that the laws of economics were iron -- and indeed that a fairly-strong determinism operated there-through -- *within particular periods of history*. This is not un-*approximate* to the truth, but fails to include the in principle social-mutability and indeed cessatibility of all such 'laws'. There is a proper discussion of Marx's relation to our subject-matter, below.

<sup>7</sup> E.g. No economist or theoretician could possibly prove to me that buying a newspaper with coins etc. did not involve the use of money.

<sup>8</sup> As for the social meanings of money, and of (what we) *value*; these too are profoundly important, and they are again matters that economists do not tell us about. Rather, we know about them from our ordinary lives, and from cultural and historical reflection(s).

and receive love, and so on, and moreover because these needs and how to satisfy them is not only a matter for individual *reflection* (such reflection is already enough to head any science off at the pass) but also a matter for social -- for 'circular' -- decision and revision.<sup>9</sup> Money is normative, because it is thoroughly involved with all this too, and in part thereby because its nature is in principle almost *utterly open to negotiation and indeed to creation and/or cessation*.<sup>10</sup> Money is barely constrained at all by the physical world. (As Green economists are well aware, this is precisely one of the key potential *problems* with it. Money can grow exponentially, in a bank account, and money is exchangeable for stuff: but what stuff can keep growing exponentially? If one attempts to exchange the money that keeps growing for stuff, one will mine the Earth and all its creatures, and turn them into slag...<sup>11</sup> )

And now we start to get somewhere intriguing: for when we really start to take seriously that whatever does *the kind of thing* that money does is money, then

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<sup>9</sup> Very pertinent here is Keynes's wonderful remark, applied by him originally to as it were market 'group-think', but of wider social application, concerning the way in which humans, but again never physical or biological systems, try to figure out "what the average opinion expects the average opinion to be."

<sup>10</sup> It should be clear enough from this paragraph that I reject root and branch the dichotomy between positive economics -- the allegedly unalloyedly scientific bit -- and normative economics, that is widely assumed among theoreticians of the discipline. I have in mind particularly Milton Friedman's influential -- and disastrous -- presentation of same, especially in the early pages of "The methodology of positive economics" (in his Essays in Positive Economics (Chicago: U. Chicago, 1953)). On my understanding, *all* economics is normative.

<sup>11</sup> As Daly and Cobb argue acerbically, in their "Money, debt and wealth", the Afterword to their For the common good (revised edition; Boston: Beacon, 1994), pp.423-4: "the ruling passion of individuals in a modern economy is to convert wealth into debt in order to derive a permanent future income from it-- to convert wealth into debt that endures, debt that does not rot, costs nothing to maintain, and brings in perennial interest. // Although debt can follow the law of compound interest, the real energy revenue from future sunshine, the real future income against which the debt is a lien, cannot grow at compound interest for long. When converted into debt, however, wealth discards its corruptible body to take on an incorruptible one. In doing so, debt appears to offer a means of dodging nature, of evading the second law of thermodynamics, the law of randomisation, rust and rot. But the idea that all people can live off the interest of their mutual indebtedness is just another perpetual motion scheme - a vulgar delusion on a grand scale."

we can start to see how economists' failure to see through money-as-quantifiable-object to 'its' uses -- i.e. to uses of *anything* that have a good deal in common with what we would naturally call the use of *money* -- actually blinds them to fundamental -- and very practical -- possibilities of social reality. E.g. The possibility that people will act in ways that 'the iron laws of economics' systematically fail to anticipate.

A nice example here is the (now mostly dead / refuted -- by events, more than by economists, as we shall see!) dogma of monetarism. Monetarism was premised upon the notion that there is such a thing as *the* money supply. Given the above, this already probably sounds odd. It should do.

Take what happened under Thatcher in the early 1980s. The British government defined a measure as 'the money-supply', and controlled it. Their control over it was successful; but other broader measures of money then suddenly expanded. Over a period of a few years, this happened again and again; each time the government broadened its definition of money, moving up through a series a "M-numbers" etc., businesspeople etc. *found ways of switching to using/creating money that was not under the government's strict controls*. E.g. 'Money supply' tightly controlled, but credit cards not included within the controls? A sudden expansion in the use of credit cards.

Eventually, Howe and Thatcher gave up on monetarism. What was the lesson? That in an economy with a large degree of flexibility in the creation of financial instruments,<sup>12</sup> and *especially* where there was explicit awareness of the government's efforts to tighten the monetary reins, the control of the money supply was not so much a difficult goal as an *absurd* goal. For again: 'money' 'is' as whatever-can-be-used-as-money does.

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<sup>12</sup> See p.134 of Mercy Harmer's "A green look at money" (in Scott Cato and Kennet (eds.) *Green economics* (Aberystwyth: Green Audit, 1999)), for some comments on the absurdity in the last generation at least of monetarism. [My analysis of monetarism here is in broad brush indebted to the ideas of Charles Goodhart.] For more detail on the credit controls and monetary reform etc. needed to help change this situation, see e.g. Pettifor's article in this special issue.

Let's now take a step *back*. How did people come to 'NEED money' in the first place? Answer (with a nod to Marx): they were dispossessed of their own means of production and reproduction and turned thereby into sellers of labour power.

And once this has happened people really DO need money in order to survive. And thus the same historical dispossession that turns them into workers also turns them into consumers - i.e. it makes them DOUBLY useful to capitalism. (Capitalism does not like peasants. They get in the way of its expansion both because they can produce without capital AND because they consume little of what capital produces. Capitalism likes workers who produce a lot and consume a lot – both features, clearly that put capitalism in permanent opposition to ecologism).

Dispossess people of their own means of production and make them dependent on money, and you also make the extent of that dependence infinitely ELASTIC: simply by infinite, 'monetary' (and thus debt and credit) expansion of the categories of 'need' and indeed 'survival'. Capitalist argument: if it makes sense to say that you need money to buy food, it is just 'arbitrary' to deny that you 'need' money to buy a Mercedes Benz or an air-conditioning system. If you need clothing in order to survive in cold climates, it is just 'arbitrary' to deny that you need 6 weeks of tropical holidays every year to (say) 'survive' the 'stress of modern life'. Again: this IS the path, and the ideological high road, to environmental disaster. And of course, you can even tart this recipe for infinite consumption up further with 'democracy' and even 'rights' notions. (You gonna deny me my 'right' to my Indonesian holiday?...)

The fetishism of money and commodities has a real basis in historically



created class relations of production. After all, if you have only your labour power to sell in order to live, it is NOT an illusion or delusion, to think that you'd be stuffed without your (monetary) wages.

So, money is perfectly real *in the context of or relative to* some particular and problematic historical (and contemporary) phenomena and settings.

Money, in our world, *is* a medium of exchange. But that nice-sounding word, “exchange” can hide a multitude of meanings, and of sins. For money *is* also a kind of storage-mechanism for wealth; but *what is (this kind of) ‘wealth’?* We are now in a good position to provide an answer that yields clearly one of the meanings of money, a meaning or aspect that is fantastically important, and also, and I would say *literally, phantastic*. *In societies like our’s*, “wealth” is in a way perfectly real; but it is also - and, I would claim, most profoundly - a shared illusion that allows it to come to seem natural or just that some people labour for others. “Wealth” is: ‘strongly encouraging’ people -- more or less forcing people -- to do one’s bidding, *so that they can do the same, albeit usually on a smaller scale, to other people*. Money, as virtual wealth,<sup>13</sup> is in this sense nothing more than a con-trick. When people want to get richer and richer, what they want is just to have other people do their bidding, more and more and more. That is the astounding humdrum truth that lies behind all the flannel of economics and the mystification of money. Conventional economics is not a positive science: it is a way of

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<sup>13</sup> As H. Daly and J. Cobb argue, following Frederick Soddy, ‘the money supply’ can usefully be regarded as the virtual wealth of the community as a whole. Note that “If everyone tried to exchange their money holdings for real assets it could not be done, because all real assets are already owned by someone, and in the final analysis someone has to end up holding the money. So virtual wealth does not really exist over and above the value of all real assets (which is why it is called “virtual”). Yet people as individuals behave as if virtual wealth were real, because they can easily exchange it for real assets. The aggregate of individuals behaves as if it were richer than the community really is by an amount equal to the virtual wealth of the community. The phenomenon of virtual wealth must occur in a monetary economy, unless the money itself is a commodity - a real asset that circulates at its commodity value.” (p.421).

attempting to conceal from people the (im-)moral truth, that they are being exploited.

The 'virtual weath' that money is (as opposed to the 'real wealth', of life and all that actually sustains it) is a power to purchase, a debt always waiting for the future to pay it. There more such debt there is, the more the future will have to pay.

Raw exploitation is the unpleasant flipside of the 'laws' of 'positive' economics, and the 'natural' result of belief in such economics. Yet, this economics not only perpetuates and reinforces itself; as suggested above, I would submit that, interestingly, a number of economic doctrines, notably Monetarism, are flawed by a failure to include proper consideration of the drivers toward virtually ineluctable growth of money supply, *in a relatively deregulated financial system and a politico-economic system that demands and pushes growth* (which in turn is fuelled by the debt-based / interest-based money-system, the fact of the matter being that private banks and not the state now create most of our store of 'virtual wealth' <sup>14</sup>), and by the way in which human beings will work consciously and unconsciously to subvert money supply controls, in such a system, in a way that puts them always one step ahead of the economic theorists, who are then always trying to catch up *with the latest mutation in what money is*, such mutations being accelerated precisely by the effort to prevent them (i.e. as soon as an announcement is made that (some form of) money is being controlled, the incentive is *explicitly* in place to move to another means of exchange)! Thinking of economics as a science tends to blind one to the *self-defeating* effects of the enunciation of and of attempts to employ some kinds of 'economic laws', and to blind one to the way in which

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<sup>14</sup> See Daly and Cobb's account of the creation of debt-based money by banks, and how it ought to be reformed, on pp.426-435 of their (op.cit.). Serious, tight controls on credit, and capital controls, are essential to changing the situation that I am describing here in the text. As I have indicated (and Daly and Cobb amplify), these will not work without complementary fiscal, regulatory etc. measures to ecologies society and end the 'endless' momentum for growth.

those alleged laws are in any case at a more fundamental level mere outworkings of the 'imperatives' ...*of particular political and economic systems*. This should hardly be surprising: Positivism, in dispensing with realistic assumptions, deprives itself of access to the first hand knowledge that as ordinary competent socio-economic actors we all have of economic life, and of the political and ethical values that *underpin* that life. *If* as a society or as a world we in effect manage to decide to rid ourselves of the growth imperative, and of hyper-reliance on debt-based money, then we will probably be able to achieve some collective level of control of the money supply. Until we do that, we should be entirely unsurprised that attempts to control the money-supply are now doomed to fail. The very idea of 'the money supply' as something to be quantified and controlled *does not make sense* in our *current* economic system. The attempt to catch the tail of something that has a built-in momentum to expand is pointless and indeed, as discussed above, *self-defeating*.

Of course, we need to qualify the idea of a built-in tendency to expand. Private creation of money by banks, via loaning out money they do not have ('fractional reserve banking') is always bad in that it involves private profiteering ('seignorage') by the bankers (or banksters, as some wags understandably like to call them...). In boom times, it can nevertheless seem good in that it facilitates the boom, the expansion -- although of course often simultaneously at drastic ecological cost (the increased output tends to *come from* somewhere...). At times of bust -- at times such as now -- fractional reserve banking is disastrously pro-cyclical. The failure or refusal to lend that this credit crunch has centred around since mid-2008 has resulted in a massive evaporation or destruction of money. Where has all the money gone? Some of it is being hoarded, but much of it has simply melted into air (for of course *it never was* anything solid...). The vast oceans of liquidity have turned into deserts where there is no money. When loans are called in and no new loans are made, *money is decreeted*.

Green Economics may one day succeed in allowing the economy just the medium of exchange it needs (which bankers et al in recessions and notably in the Great Depression -- i.e. Hoover's America -- of the past have more or less deliberately or accidentally more or less prevented) without fuelling inflation. But the very idea of forbidding the economy the medium of exchange it 'needs', the very idea of strict control of the money supply, is to a large extent a pseudo-scientific nonsense, in a world -- as much of the world has been since some point in the 1970s -- where there is a relatively high degree of private ability to create new financial instruments to work to satisfy 'needs' which are not tied to genuine (if open-ended, still being worked-out) human needs nor even of course to ecological limits, but only to constructible desires and to '[conventional] economic imperatives', such as profit -- and repayment of loans.

To be absolutely clear here: I am not of course saying that governments (and central banks) in modern times in our capitalist world cannot control the money supply at all.<sup>15</sup> I'm making the *conceptual* point that they can't control it nearly as completely as much neo-classical economic theory, working with what I have suggested are dubious or *absurd* assumptions, would suggest. At the heart of my conceptual point is this: that controlling money *is nothing like* controlling the supply of a raw material.<sup>16</sup> Further, it is just common-sense that, the more 'the money markets' are liberalised, the less governments can control the circulation and *production* of money. I.e. Economies where the banks, private entities, are legally allowed to create money in a wide array of ways and to a very high degree magnify the difficulty of such control: the debt generated by such creation

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<sup>15</sup> And of course one of the very reasons for the major reforms of money that Green economists advocate is to prevent hoarding in whatever form of money, hoarding such as has had dire consequences at times in history, famously in the Great Depression, arguably also in recent Japanese history, etc. -- and arguably also *right now*, with the failure of banks, even though they are being propped up by taxpayers, to reduce interest rates, to lend to each other or small businesses, etc.

<sup>16</sup> This point could have saved a lot of headaches about why the gold standard was so difficult to stick to, at least without economically-disastrous consequences, had it been understood sooner.

produces more or less permanent pressures to expand the money-supply. This is the juggernaut that neo-classical economic theory -- e.g. monetarism -- cannot stop. In general, it does not of course on balance *want* to stop the economic growth that this money system encourages. But Green economists know that we *must* stop it. Finitude -- the disastrous effects for us and our ecosystems of such growth, in terms of unsustainable work, extraction and inequality, frequently mutually compounding one another -- implies that money *must* be brought under control -- but with full recognition of 'its' morphability; of, we might almost say, its non-existence. (A helpful way to appreciate the nature and character of economics is to consider the following paradoxical sentence as true: *Money is perfectly socially real, yet it is non-existent.*) The use of the term "full recognition" here is important: it implies that this process will have to be *democratic*. There will not be a transition to a seriously Greener economics without a relatively widespread *understanding* of the basic points being made here; and a Green economics just will not be so, unless the society/world of which it is the economics is itself democratic. Democracy and sustainability are inseparable. Because, bottom line: You cannot control money *without (a good deal of) consent*. (Again, there is then a vast difference here between economics and (real) science: it would be quite false to claim that Physics must be a democratic institution, or that Physics could not be true without being democratic. But I am saying that versions of economics which are not on balance disastrous for humans and their - - our ecosystem(s) *must* be widely-understood, and *genuinely -- mutually -- constructed*. We could put the point this way, slightly paradoxically: unless Green Economics becomes widespread in its reach -- in terms of level of understanding thereof, in terms of actual influence, *and* in terms of being open to change from the learning of those it is understood by and affects -- it will not be true. Economics *is part of what it describes/explains*, in a respect in which Physics is



not.<sup>17</sup> )

Thus we have to look far deeper than the Monetarists did. We need a democratically-overseen and explained set of tight -- though crucially *not too* tight to allow into legal circulation in the economy about as much of a convenient exchange-mechanism (“money”) *as is needed* -- restrictions on the generation of money. One possibility might be what I call ‘Citizens’ Money Boards’, which could be established locally, regionally, nationally,<sup>18</sup> and internationally -- at whatever levels there was a currency, and at whatever levels the currencies that there were were (at their current quantity and velocity etc.) having potentially-problematic effects. These Boards, springing from and grounded in a relatively-widespread set of insights into (Green) economics, would have a key consultative role in deciding on the (rough) amount of money that should be allowed/encouraged to circulate, the rough amount needed in circulation, at any given time.<sup>19</sup> The capacity to so decide would be realistically practicable, only with the gradual or immediate abolition of debt-based money.

We have suggested so far various ways in which money can be demystified; turned from a strange kind of *object* back, in our understanding, into the variegated *medium* of exchange etc. that is fairly unsurprisingly typical of a society with a certain level of scale -- a certain size -- and level of complexity of organisation. We have not yet much dwelt upon what is perhaps the most powerful single such demystificatory account: that of Karl Marx. Marx’s central topic was money -- or, more broadly, *capital*. His marvellous literary-

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<sup>17</sup> This point, concerning the necessity for economics *itself* to be democratic and sustainable, is deftly thought-through on p.244 of Robert Costanza’s “Changing visions of humans’ place in the world and the need for an ecological economics”, in E. Fullbrook’s important edited collection, *What’s wrong with economics* (London: Anthem, 2004), which is a volume I think deeply consonant with the radical line of my general argument.

<sup>18</sup> At the national level, such Boards would of course tend to more or less coincide with central banks... See p.429 of Daly and Cobb.

<sup>19</sup> See pp.428ff. of Daly and Cobb for how this control would be exercised.

philosophical ‘analysis’ of ‘the commodity’ -- of how it gets fetishized, and thus deludes people into being exploited etc., -- immediately suggests a project of demystifying money: “Money comes into the world in the shape of its use-value: its being a medium of exchange is its plain, homely, bodily form. Money is thus useful -- and, at the same time, a depository of value... The value of money is the very opposite of the coarse materiality of its substance... Turn over and examine a single coin, by itself, yet in so far as it remains an object of value, it seems impossible to grasp it. How can this, this pathetic little piece of metal, be of value far beyond its worth as a treasure or a decoration? If, however, we bear in mind that the value of money has (in reality) a purely social reality, and that it acquires this reality only in so far as it ‘expresses’ -- or at least buys -- human labour, then at least we start to see what the value of money truly consists in.”<sup>20</sup> Thus the opening of his ‘Das Capital’ is already an entirely-pertinent demystification of money, by bringing clearly into view one crucial *aspect* of ‘it’, an aspect under which money can be viewed that quickly makes tangible to one that and how it is *not* an object, and starts to explicate and make comprehensible that and how a very unequal social organisation can, even in a society allegedly without gods or genetic social hierarchies etc., appear inevitable and natural: money can be profitably viewed -- and an important aspect of money then, at last, becomes perspicuous to us -- as a measure of the quantity and quality<sup>21</sup> of human labour required for the production of something, and thus for its exchange. As things stand, “the social character of men’s labour appears to them as an *objective* character stamped upon the *product* of that labour”;<sup>22</sup> and thus its social character,

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<sup>20</sup> Compare pp.261-2 of my “Marx and Wittgenstein on vampires and parasites: A critique of capital and metaphysics”, in G. Kitching and N. Pleasants, Marx and Wittgenstein (London: Routledge, 2002).

<sup>21</sup> Marx of course argues that the “quality” can be ‘translated’ into “quantity”: that skilled labour is ‘really’ just a kind of multiplied unskilled labour. I would suggest that this is very often a helpful way of seeing things: though *not*, as Marx would have it, a scientific fact.

<sup>22</sup> From Capital, p.320-1 in R. Tucker (ed.) The Marx-Engels Reader, 2nd ed. (New York: Norton, 1978). Italics added.

its being a matter of a social arrangement that can be undone, vanishes, behind the delusive appearance of things -- behind commodities, products, and what is in effect then the *uber*-commodity: money. Thus people start to relate to themselves and their work and each other as if they were relating to or at best entirely through things.<sup>23</sup> “This is the nature of money under capitalism. *But, in its everydayness, it is invisible.*”<sup>24</sup> Green economics too must be about making this ‘invisible’ visible. About returning us to the everyday, to our labour, our soil, and so on, but without the everyday slavery to defunct economists that economic and exploitative and consumerist and money-ist propaganda endlessly subjects us to, under capitalism.

Money, or at least capital, as we observed above, is then a con-trick, a social device for getting people to labour for you. (Recall the case of the wonderfully-indolent Quashees, as described by Marx: “As far as they are concerned, capital does not exist as capital”.<sup>25</sup> Capital, this trick for bringing about work one wants done, is societally-optional.) Other social devices/arrangements for organising labour are imaginable, once one sees through ‘the great money trick’. For instance, collective decision-making.

Marx tended to think that he had discovered, among other things, what (at least modern) money *really is*. His focus was overwhelmingly on providing a ‘scientific’ account of the stage of society that he was in, and especially of its most fundamental organisational feature: money in the form of capital.<sup>26</sup> Rather, he

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<sup>23</sup> Compare also David Andrews’s way of putting this, from Kitching and Pleasants (*op.cit.*): “Marx points out that the idea that there can be social relations between things is ‘fantastic’, but he says that this is ‘what they are.’”

<sup>24</sup> This is a quote from my “Marx and Wittgenstein on vampires and parasites”, *op.cit.*, p.263.

<sup>25</sup> From *Grundrisse*, p.250 in *ibid.*

<sup>26</sup> Though for some useful counter-suggestions on how actually science was rightly more the clothing than the substance of what Marx at times saw himself as up to (which was closer to artistic creation), see Francis Wheen’s *Karl Marx* (London: Fourth Estate, 1999), e.g. this quote from Marx, cited on p.302: “[T]he advantage of my writings is that they are an artistic whole.”

had shed light on -- rendered visible, brought into prominence -- an *aspect* of 'it', an aspect of the social life that, not being robots, we all actually understand perfectly well when we are in the thick of it, in our everyday lives, but find hard to render reflectively, in part because of the propaganda (that is both a result of and a bolster to conventional Economics) that we are subject to, almost every day ... an aspect that he rightly saw that conventional economics and the socio-economic organisational structures that it 'describes' and legitimates obscures and 'fetishizes'. Green Economics needs to hold firm to Marx's founding insight, but *not* use it, as Marx regrettably did, to allegedly found a *science* of (socialist, or whatever-ist) Economics in competition with allegedly-scientific capitalist Economics. We should understand Marx as enabling us to see an aspect of money etc. that is quite shielded from view by the mystification and fetishization (and media- or educationally- sponsored brainwashing) of capitalism. The clearer view we then have is like the clearer view we gain from taking off thick tinted lenses, not from a microscope. Marx simply helps us remove an obstacle from regaining the ordinary understanding that is potentially open to us all of social phenomena, as competent social actors; using him as the basis of a substitute-Science is simply erecting *a new obstacle* in the way of that understanding. Green Economics will be making a probably-fatal error if it attempts to substitute its own true theory of Economics for the false or nonsensical theories of the Marxists and the (neo-)classical Economists, alike. We need to realize -- and this is hard, partly because the overwhelming scientism of our culture makes it seem unacceptably vague to say this -- that the very project of a Scientific Economics is itself unscientific, pseudoscientific.

Green Economics is about recognizing the finitude of resources, and recentring economics on the satisfaction of genuine human needs. Marx correctly understood that Economics is a *historical* discipline; compare for instance the great difficulty that America in 1929-1933 had in overcoming the tight money situation there with the comparative ease in 1980s Britain of overcoming

somewhat similar constraints. And right now, in the 2008-on 'credit crunch' recession, we are radically in uncharted waters: uncharted, in part simply because we haven't lived through them yet...

The birth of new forms of (debt-based) money has / had become markedly easier over just the 80 or so years in question. There are, I would venture to submit, *no* timeless laws in economics. But Marx did not recognise the extent to which that means that there aren't really any *laws* of economics at all, and thus that his Scientific Socialism is a mirage. It is not only a mirage because it fails to take into account the *conceptual/philosophical* point that it must be land and other resources too that are encoded in the price of commodities, etc. -- not human labour alone, for land/resource too is finite. It is a mirage because it fails to understand how, *even staying purely within the realm of the socio-historical, and bracketing the ecological*, as Marx generally did, money only ever is as the social 'system' of one's time does it. Enough people choosing, deliberately or otherwise, to end or transform money, could do so in an extraordinarily short period of time. Again, some societies have known versions of this -- collapses in confidence in money (and then the development of alternatives) -- in ways that we, living in a time of relative financial 'solidity' and organisation, despite -- and indeed fuelling -- the collective insanity of our economic 'system', tend to forget. Money looks natural, the more society 'happens' to work consistently with it, in a self-fulfilling way. But this is not the basis for a true 'social science', whatever that would be. It is only mutually-fulfilling, and self-verifying, social nature/culture. There can be no science worthy of the word for society. The (utterly-unlikely) victory and apparent truth of Scientific Socialism -- or the (equally utterly unlikely, in light of recent events) triumph of Neo-Liberalism -- would hardly prove me wrong; it would prove simply that economists et al can help to make the propaganda that they foment so deep-set that people cannot see that it is propaganda any more. (Note however that it is important to remember that the 'feedback loops' that are of the essence of human and social being can go both ways: i.e. Some economic



doctrines tend to be self-defeating (e.g. Monetarism, as discussed above), but others can tend to be self-fulfilling (e.g. the picture of the human being as a selfish preference-satisfier).<sup>27</sup> The latter are of course highly-dangerous, because as their ideology becomes natural to a society, they are / appear to be simply describing and explaining the very norms and effects that they have helped to create! But it remains the case that they / 'we' have created -- not discovered -- them.)

In an era of the alleged 'triumph' of the market, of 'free-market economics', it was hard to achieve the undeluded vision which the present paper aims to foster. But it is becoming easier by the day... We stand now at a moment of extraordinary opportunity, with 'market economics' / indeed 'homo economicus', no longer the only game in town. For the free market in finance has catastrophically, decisively failed, in the last couple of years -- and suddenly there is an opening for a new vision. Green Economics is a new game in town and, provided it does not aim to replace the existing game at its own game -- i.e. provided it does not seek to become the true Science of Economics -- it offers a *vital* alternative. An alternative that might just help save us from the ecological (and intertwinedly -- inextricably --<sup>28</sup> social and political and economic) disaster that conventional Economics has rained down upon us, and that now threatens, via the risk of runaway climate change, simply to end civilization as we know it -- in very large portions of the globe at least, within a hundred years or perhaps significantly less. And the space can be made for these new games -- including for the abolition of interest-based money, and/or the introduction of demurrage -- precisely by the aspect-shift which enables one to see that economics *lacks* iron laws. All its 'laws' are in part products of human *decisions*. And by that, I don't mean the kind of decision involved in the contemporary consumerist 'choice'

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<sup>27</sup> The difficulty in seeing which will be which ahead of time is of a piece with the absurdity of picturing economics as a science, which we have been discussing throughout. Economics is sublimely non-predictive.

<sup>28</sup> The ecological disaster is for instance largely directly consequent upon the blindfolded and systematic growth-virtual-imperative of money-based economies.

agenda: i.e. roughly, Coke or Pepsi.

*Alternative monies* -- differently and better functioning money systems -- become possible, when we see that 'Economics' can become something like not only what I have characterized it as being, but also a democracy, in the true sense of that word (not in the debased form in which we mostly know it today in 'actually existing 'democracies"): in the sense, that is, of the people ruling.<sup>29</sup> As suggested above, economics itself can -- and arguably, must, if civilization is to survive (or be truly born) -- become a democracy. Economics can hardly be a science, for it must not only be of but also *be* a collective praxis.

A proper understanding of the (useful part of the) legacy of Marxism then is that the point of a true economics would be to make (some particular) *action(s)* seem both necessary and possible. Economics is (or should be) about making it (the world we could be in) happen.<sup>30</sup> There is no positive economics, but only normative economics. As with a non-scientistic Marxist point of view, so with Green Economics: if it is not among other things a collective practical political project, *then it is nothing*.<sup>31</sup>

But there are perhaps even more radical ways than Marx's of re-thinking economics and its 'foundations', such as money. One that is or should be of great importance to Green Economics is Gesell's idea -- and it has precedents of course

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<sup>29</sup> Compare pp.277-8 of my "Marx and Wittgenstein on vampires and parasites", op.cit.: "Over a long time-scale, over generations, it remains possible that, through praxis, a very large number of people will come to find Marx's ideas compelling, and, *until they do, those ideas are in any case very unlikely to be successfully realisable*. Here I am strongly in agreement with Kitching's guiding thought that an 'undemocratic socialism' is a truly hopeless dream (nightmare)." (Italics added). The problem is: it seems increasingly unlikely that we have *got* generations.

<sup>30</sup> Doing this is of course a stupendous challenge in a globalised world: because it is not clear that there can be much in the way of 'Green Economics in one country'. You can only restructure the tax system, alter your currency, put up tariffs etc., if you don't lose too many others' confidence in doing so.

<sup>31</sup> See Kitching's Marxism and Science: Analysis of an obsession (Philadelphia: Penn State Press, 1994), pp.228-231.

in actual historical cases/‘experiments’<sup>32</sup> -- of “demurrage”. Rather than prejudices toward growth and related unsustainable features of interest-based money,<sup>33</sup> with its built in dynamic towards *monetary*-growth and more or less uncontrollable mutation, money could be reconstructed as more simply a medium of exchange, without built-in advantages (which at present it has: no deterioration -- and indeed ease of compound expansion -- over time) over goods, if it has a built-in gradual percentage reduction, or some such.<sup>34</sup> Does Gesell (and small band of followers) offer us anything scientific? Not really. His is: First, a *critique* -- including a critique of the *delusions* that money as we know it encourages -- of money. A deflationary *philosophy* of money, somewhat similar to that that we essayed above. Secondly, a set of *common-sense* and *political/ethical observations* and suggestions about what we want from money and from socio-economic organisation more generally. Thirdly, a striking *idea*, a reconceiving of what money could be; which eventuates fourthly and finally in a number of more or less concrete *practical proposals*. For how we could get from here to there. As in for instance the following, from Margrit Kennedy’s Gesellian work, *Interest and inflation free money*: “It is important to understand that barter clubs reverse today’s banking principles. They reward those who exchange goods and services with interest free money and punish those who sit on their surplus money.”<sup>35</sup> Thus my ‘Citizens’ Money Boards’ would not need to play the main part, in a hopeless uninformed quasi-Leninist fashion.<sup>36</sup> They would be profoundly -- straightforwardly -- guided by the functioning of the economy, in an economy whose money was mostly as it were demurrage-based rather than debt-based.

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<sup>32</sup> See p.38f. of Margrit Kennedy’s *Interest and Inflation free money* (Philadelphia PA: New Society, 1995).

<sup>33</sup> See *ibid.*, p.22.

<sup>34</sup> I.e. an out-of-circulation fee, penalizing money which just sits around not being used productively. Such as fee disincentivizes hoarding. See *ibid.*, p.36.

<sup>35</sup> *Op.cit.*, p.128.

<sup>36</sup> They would rather be, roughly, much-enlarged and improved versions of presently-existing Boards of Administrators for LETS schemes.

This seems to me part of the solution. Gesell's wonderful intervention is economics as ethics, as politics, as common-sense, as policy-studies.<sup>37</sup> And as philosophy, as I urge we (should) understand philosophy. It is not economics as science. It does not re-arrange the deckchairs. It does not entrench us further in the dominant paradigms: of costing everything using a 'medium' that always risks becoming the message, suborning any content, taking over our thinking. As banking-money has taken over so much of our lives, it can be hard to think outside it. But we *can* -- and, probably, must.

It must make starkly perspicuous the complete absurdity involved in notions that grip our culture, notions such as "Let's make lots of money".<sup>38</sup> When most of us see that there is a helpful point of view available from which we're *all* workers, only with some of us working *very* little<sup>39</sup> (e.g. in the extreme case of a capitalist, perhaps doing nothing more than making a few phone calls or shuffling a few bits of paper, while thousands or millions sweat and slave for you), then this social reality will start to seem considerably more intolerable, nonsensical, than it presently does. When most of us see that there is a helpful point of view available from which the Earth belongs to *all* of us and to none of us (as Daly and Cobb

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<sup>37</sup> Now, it might be claimed that 'Policy Studies' work can be genuinely scientific. Isn't Economics as Policy Studies Economics as Science after all? Two things: (1) Such Policy Studies always is saturated with or rides on the back of -- consciously or unconsciously -- our ordinary social understandings, of normative political and ethical commitments and orientations, of philosophy; and (2) It's hardly *science*, anyway. More, at best, like *engineering*. 'Policy Studies' is the production of attempted solutions in specific circumstances, etc. . It bears resemblances, if anything, to (say) applied optics or to the theory of (the art of) surgery, much more than to Physics.

<sup>38</sup> The title of an insightful song by the *Pet Shop Boys*. See also p.59 of Kennedy's *ibid*. Another way of seeing the present paper is then as: part of a project of transformation of what one might mean by "making money", away from the repellent, destructive and *nonsensical* meaning that that phrase currently has, toward a democratic and sustainable alternative meaning, in which "making money" will only be something that our Citizens Money Boards (or some such) do, with our consent and our understanding.

<sup>39</sup> P.266, of my *op.cit.*: "It is only the grand shared fantasy of exchange-value which distinguishes the capitalist's (minimal) labour from everyone else's, which gives it a bright -- blinding -- shine."

point out (on p.432 of *For the common good*), there is an absurdity in regarding money as a whole as private property, *just as* there is an absurdity in regarding land as a whole as private property -- both are, in the end, the 'property' of the entire community, distributed across time *as well as* space), then some people taking such large chunks out of that Earth compared to others, especially when it is via those others' sweat, will start to seem intolerable, immoral, absurd, *unsustainable*. This social-ecological reality cannot stand. It's a false economy... We need to fashion a new one. And *fashioning* is much of what this process must be about: Economics needs to be about trying out what works, including by trial and error. About human beings figuring out (together) just what they want and need from their society and polity and economy, and just how they can get it -- not just about laying a template over what is already there (such that the latter becomes harder to see!), and characterising change as a matter merely of applying a theory already learnt from the study of what is.

To see that wealth -- any accumulation of capital -- is the ability to acquire at will, due to utterly-malleable and groundless social arrangements, an unequal share, a large chunk, of others' time and effort, and/or of the world's resources, is to acquire a new point of view, not to see the facts more accurately from one's existing point of view. The new point of view one acquires when the rose-tinted lenses of the ideology of capitalism drop from one's eyes is a kind of seeing clearly what our social relations and our dwelling in and of the Earth consist in -- it is a kind of return to ourselves and to our home, the Earth. It is new and old. Coming to see that wealth simply is the ungrounded capability to commandeer others' sweat and / or our collective stuff *is* an ethical-political-psychological-philosophical transformation. It is what economics ought centrally to concern -- and what actually-existing economics primarily *prevents* and occludes from people's horizons of possibility.<sup>40</sup>

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<sup>40</sup> Some readers may be concerned that I seem to have moved onto a more radical argument than that which urged moves to non-debt-based money and also to

As we saw for instance in our discussion of monetarism, to think of economics as a perhaps-true-theory ignores the human capacity to falsify any such theory, a capacity for which there is no serious analogue in (real) science. To dissipate the kind of illusions people are prone to in respect of political and economic matters requires not science, not any kind of theory, but rather a simple empirical alleviation of ignorance (e.g. many people do not realise just how little tax is actually payed by most corporations and most of the super-rich) and *philosophy*. It is the philosophical strategems employed by Wittgenstein (and by Kierkegaard, and by Marx, and by some other of the greatest of modern philosophers), strategems which try to inhabit and then explode -- rather than, absurdly, to 'refute' -- delusions and nonsenses which have been my primary inspiration in this essay. And part of what I have sought to show therein is: that a 'Green' (and more or less 'Wittgensteinian') philosophy of money is possible and indeed is in outline always already present to each of us, and (once again, therefore) that a proper economics *is* philosophy.<sup>41</sup>

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demurrage. That is correct. These money-reforms seem to me excellent ways to radically reform capitalism in a green direction. But in the longer term, they *may* prove to be more part of what I have called 'environmental economics' than of 'green economics'; I suspect that the latter will eventually require something far closer to equality of outcome and to the virtual abolition of capital-differentials altogether. (That, as with *some* of the more limited and attainable goals discussed earlier in this essay, such as various forms of wealth-tax, *may* well only be feasible via a long-term development, almost unimaginable as of now, of the Simultaneous Policy framework.)

<sup>41</sup> The astonishing and mad ecocidal truth concealed by our unphilosophical failure to see clearly the nature of money, a failure *fostered* and not dissipated by mainstream economics, is that the answer to the question: "If we are all so in debt, then who has got all the money?" is to quite a large degree, at a time like now: *No-one*. The banks create money by lending. When even they don't end up in the black (as during this mega-credit-crunch, this all-world debt crisis), then *collectively* we are in the red. For money has been birthed as debt: there is no compensatory surplus of cash. This is a social arrangement 'designed' for boom(-and-bust), 'designed' to help foment economic growth as its aim -- but without attention to what we are growing into...



To close by bringing us back once more to the present, and thinking both eco-economically and eco-politically about our current financial predicament: What we *must* ensure is that the attempt to bail out the banks and the debtors is not 'bankrolled' by unsustainably drawing down on our 'natural capital'. For the banks can be bailed out -- the social magic of money means that there are *various* ways in which this can be done, including to some degree simply altering numbers on a ledger (in these electronic days, we needn't always be so crude as to actually print more money, if we want more!). But if we allow debt to go on expanding in one way or another, then we increase the risk that we are going to be unable to repay the loan, ever.

For there is no such thing as bailing out nature...<sup>42</sup>

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<sup>42</sup> Thanks to helpful reviews and comments by many people, including a referee and Gavin Kitching.

## **2. Ann Pettifor: The Green New Deal: Restoring balance and stability to the global financial and ecosystem.**

### 1. Introduction

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*We are today in the middle of the greatest economic catastrophe – the greatest catastrophe due almost entirely to economic causes – of the modern world...I see no reason to be in the slightest degree doubtful about the initiating causes of the slump....*

*The leading characteristic was an extraordinary willingness to borrow money for the purposes of new real investment at very high rates of interest – rates of interest which were extravagantly high on pre-war standards, rates of interest which have never in the history of the world been earned, I should say, over a period of years over the average of enterprise as a whole. This was a phenomenon which was apparent not, indeed, over the whole world but over a very large part of it.*

John Maynard Keynes, First of the Harris Foundation Lectures. 1931.

We are once again in the middle of the greatest economic catastrophe of our time, and as in the 1930s, high rates of lending; at high real rates of interest are the cause. Only this time the threat posed by economic failure is compounded by the much greater threat of climate change, and the threat of peak oil. It was this ‘triple crunch’ that led to a small group of experts, of which I was one, convening over several months in the Spring of 2008 to prepare the way for a major new policy initiative published in July by the New Economics Foundation : the ‘Green New Deal’ (Green New Deal Group, 2008).

In drafting the Green New Deal, we recognised that the triple crunch was inter-linked. That globalisation’s easy, but costly money manifested as the global credit bubble of the last three decades had fuelled ‘easy consumption’. In other words the Anglo-American economies had used their derivatives trading, securitised lending, mortgages, credit cards and overdrafts to max out on shopping – whether for mergers and acquisitions, goods, or services.

This led to amongst other things, a rise in consumption which, through a parallel expansion of manufacturing and carbon use, fuelled toxic greenhouse gas emissions. So for Green New Dealers de-regulated finance, consumption and emissions are inextricably linked. If we are to deal with the threat of climate change, our report concluded, we must deal with the role of the finance sector in inflating a global credit bubble, which in turn inflated consumption, and a global climate ‘bubble’.

Our analysis however, is not widely shared. While there is widespread public anger at the role of the finance sector in causing and exacerbating the current financial crisis, no major Anglo-American political party is willing to admit that the world’s financial centres are responsible, or to make the links between

the financial crisis and the rise in emissions. Very few politicians are willing to analyse the cause of the crisis as the collapse of a global credit bubble, inflated by the liberalisation and de-regulation policies of Anglo-American economies. Nor are they willing to concede that it was the credit bubble that fuelled in turn a range of asset bubbles – including, amongst others, the property bubble, the stock market bubble and the commodity bubble.

Instead, much blame for global economic failure is laid at the door of poor sub-prime borrowers in the United States. Alastair Darling, the UK Chancellor made this blame explicit in his remarks to the UK parliament during the debate on the Pre-Budget Report of 24th November, 2008, ‘a crisis which began, as America itself has said, in the US housing market has seen.....benign conditions undermined. . . The problems in the sub-prime housing market rapidly spread to the entire global financial system, causing a disastrous tightening in credit and undermining confidence.’

([http://www.hm-treasury.gov.uk/prebud\\_pbr08\\_speech.htm](http://www.hm-treasury.gov.uk/prebud_pbr08_speech.htm))

Why are western politicians unwilling to lay the blame for this Great Depression on the finance sector – and in Darling’s case the finance sector in his own backyard – the City of London? The fact is politicians may be too compromised. After all, it was they, supported by those ‘guardians of the nation’s finances’ – central bankers - that de-regulated the finance sector back in the 1970s and 80s and cheered on ‘light-touch regulation’ over the City.

For political links to the finance sector, one need just think back to events on an oligarch’s yacht in Corfu in the summer of 2008 in which both of Britain’s major political parties were implicated. Or to the recruitment of a man until recently Labour’s Prime Minister by J P Morgan in 2008 - at just £2 million a year. Or to Chancellor Gordon Brown’s recommendation in 2002 that an honorary knighthood be bestowed on the man that carries a great responsibility for this crisis – Alan Greenspan.

The latter was an extraordinary act of deference in light of Greenspan’s views about the role of government. As recently as the 4th August 2008, writing in the Financial Times, he celebrated the role that “Adam Smith’s invisible hand” had played in “quietly displacing government control of economic affairs. Since early this decade” he wrote “central banks have had to cede control of long-term interest rates to global market forces”. Greenspan went on to warn of “*the danger* that some governments... will endeavour to reassert their grip on economic affairs” (my italics).

Just three months after this was written, governments on both sides of the Atlantic had broken with long-held taboos. Both PM Gordon Brown and President George Bush used taxpayer resources to avert danger and effectively nationalise a range of financial institutions, including two of the biggest banks in the world – Citigroup and the Royal Bank of Scotland (RBS) – to protect them from the punishing discipline of global market forces.

And still politicians would not concede that the cause of the crisis lay with these institutions. Until they do politicians and policy-makers will not be able to analyse correctly and then deal with the devastation of what will come be known as the Bankers Depression, or indeed with the imminent threat of

climate change and peak oil. To tackle all three of these ‘crunches’ the interests of the finance sector will have to be subordinated to society’s and the ecosystem’s interests.

Secondly, Anglo-American politicians will have to abandon the certainties of orthodox monetary theory. Namely that money is a commodity, and that its "price" - the rate of interest – is set, and should be set, by the forces of supply and demand, just as the price and distribution of oil is set by the forces of supply and demand.

This orthodoxy is a nonsense. Money is not a commodity. It is not dug out of the ground, nor does it grow on trees. Credit, and in particular the concept of bank money, is man-made, and based on confidence and trust. Furthermore, the creation of credit – and with it bank deposits - does not arise from the volume of savings deposited in the banks. Interest rates are a social construct – they are decided by a committee of men, taking into account the interests of finance and the economy. And as such, unlike oil or copper or diamonds, money and credit is a free good, and therefore "there are no intrinsic reasons for the scarcity of capital" as Keynes argued in the *General Theory*.

Because the creation of credit is effectively costless (if not risk-free) and because credit is therefore a free good, there is no reason for it to be scarce, and absolutely no reason for the ‘price’ of capital – interest rates - to be high. Indeed the sustainability of the ecosystem requires that interest rates should at best be at 0% - or ‘the natural rate’ - so that we never try to extract from the ecosystem more than it provides. (From this point of view, Islamic banking – which is a form of stakeholder banking in which interest is abhorred – would be far more appropriate to an ecologically sound economic system.)

To develop appropriate policies for financing and sustaining investment in the Green New Deal, our group concluded that society and governments must first manage and regulate the creation of credit, the movement of capital and the setting of interest rates. Until we, as a society acknowledge the need to do that, there will be little hope of financing a Green New Deal in a way that is sustainable (ie easily repayable) in the long-term, and of ensuring that investments in the GND do not require additional economic growth to generate the funds needed to repay debts and interest. In other words, to limit economic growth, to ensure the sustainability of the Green New Deal, and to maintain a ‘steady state economy’ – requires, in the first instance, firm regulation and control of the finance sector and very low, if not zero rates of interest.

## **2. The Historical Background**

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Our international financial system was, until relatively recently, reasonably stable, equitable and fair, at least for the ‘developed world’. Lending and borrowing was under control, low rates of interest led to high investment and affordable government expenditure, these led to relatively high incomes and high rates of saving in OECD countries. Income inequality was at its lowest.

The crisis of the 1920s and 1930s had taught western societies grave lessons about the folly of allowing “*the money-lenders to take over the temple*” – the main theme of President Franklin D. Roosevelt’s inaugural speech, in 1933 – at the height of the international financial crisis.

*A host of unemployed citizens face the grim problem of existence, and an equally great number toil with little return. Only a foolish optimist can deny the dark realities of the moment.*

*Yet our distress comes from no failure of substance. We are stricken by no plague of locusts. ....Nature still offers her bounty and human efforts have multiplied it. Plenty is at our doorstep, but a generous use of it languishes in the very sight of the supply. Primarily this is because the rulers of the exchange of mankind's goods have failed, through their own stubbornness and their own incompetence, have admitted their failure, and abdicated. Practices of the unscrupulous money changers stand indicted in the court of public opinion, rejected by the hearts and minds of men.*

*... Faced by failure of credit they have proposed only the lending of more money. Stripped of the lure of profit by which to induce our people to follow their false leadership, they have resorted to exhortations, pleading tearfully for restored confidence. They know only the rules of a generation of self-seekers. They have no vision, and when there is no vision the people perish.*

*The money changers have fled from their high seats in the temple of our civilization. We may now restore that temple to the ancient truths. The measure of the restoration lies in the extent to which we apply social values more noble than mere monetary profit.*

Roosevelt, 1933

In 1944, before the end of World War II, world leaders, and a group of economists, including John Maynard Keynes, gathered at Bretton Woods, and vowed, effectively, never to allow bankers to rule the international economy again. Instead, they created a new and more stable international financial architecture – the Bretton Woods System. Under this improved, but imperfect system, governments co-ordinated and co-operated to construct an international financial architecture:

- that imposed controls over the movement of capital – capital controls and exchange controls;
- this control over capital flows gave governments the power to set the rate of interest over loans of different terms and risk, at levels most appropriate to domestic conditions;
- and thereby restored to governments one of the most vital levers over the economy.
- At the same time the Bretton Woods conference created the key-currency standard whereby, through international co-operation, the dollar helped anchor and co-ordinate the value of world currencies, by linking its value to gold, so

each dollar was worth 1/35 of an ounce of gold, or \$35 an ounce.

- introduced a system of international co-operation and co-ordination to ensure that currencies did not drift too far apart in value;
- which gave governments effective control over exchange rates, another vital lever for the economy;
- [confusion here – in my view the point is that concerns about exchange should not have greatly impinged on domestic policy setting, and fixed but adjustable rates provided a good degree of stability.]
- thereby regaining the initiative for governments, giving them room for manoeuvre, or policy autonomy; and finally
- encouraged governments to ration, or cut back on foreign imports and balance these with exports.

The IMF was created to supervise these arrangements, and to act only as a firefighter lending to countries with temporary exchange difficulties, and negotiating any necessary changes to the fixed exchange rates. (The IMF's board later gave the institution greater powers, in particular to begin lending for 'development' on the basis of conditions, to low income countries.)

John Maynard Keynes favoured an International Clearing Union – not the key-currency standard that was finally adopted, but was overruled. He also wanted the IMF to have a matching power to draw funds from countries with surpluses – to give it the even-handed capacity to maintain international equilibrium between countries. The US, at the time the only surplus country, vetoed this proposal .

In order to discipline and restrain the international money-lenders that had wreaked such havoc on the global economy in the 1920s and 1930s; and in order to restore *policy autonomy* to governments, the Bretton Woods architects had, above all, recommended capital controls .

Keynes and his fellow Bretton Woods architects argued that democratic states should regain from financial markets the right to control over key levers of the economy, namely the flow of capital, and its corollary, the management of interest rates . In his view: "*the whole management of the domestic economy depends upon being free to have the appropriate rate of interest without reference to the rates prevailing elsewhere in the world. Capital control is a corollary to this*" (Keynes, *Collected Writings*, Volume XXV, page 149). The aim of domestic monetary policy was to be the cheap money that he saw as necessary to prosperity.

The Bretton Woods Agreement ensured that people should be free to exchange any national currency for any other for purposes of trade or travel. But for the first fourteen years after 1945 most governments kept control of their citizens' access to foreign exchange. Some restricted foreign investment and ownership within their territory. Broadly speaking, they did their best to restrict imports to what could be paid for. (Milward, 1977) Under the Bretton Woods system, while the dollar was key, the US government was nevertheless

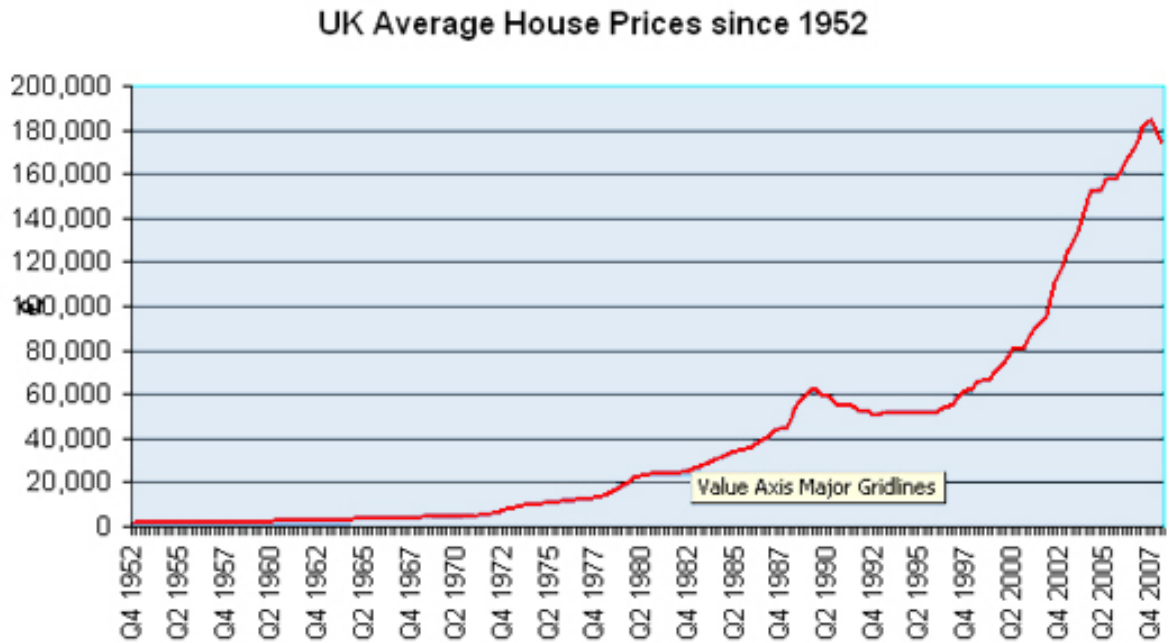


subject to stiff constraints, and was obliged to ration imports in balance with earnings from exports. All governments were obliged to balance their books - their trade and capital accounts - with the rest of the world, and co-operated and co-ordinated internationally to ensure that there was no build-up of large deficits or large surpluses.

The Bretton Woods system, though not perfect, and though not the full realization of Keynes's ideas, remained in place for almost 30 years, until the 1970s. During that period the world, including continents like Africa and Latin America, enjoyed unprecedented economic stability; rising growth in income; and expanded trade. There were no financial crises of any magnitude. Barry Eichengreen and Peter Lindert, distinguished economic historians both, have noted that, 'In retrospect, the three decades following World War II seem to have been a golden era of tranquillity in international capital markets, a fulfilment of the benediction "May you live in dull times". . . Sovereign defaults and liquidity crises were relatively rare.' (Eichengreen and Lindert, 1991.)

The evidence for these benign conditions can be seen in the charts below, which track debt, house prices, inflation and the consumer price index in the US and UK over the period from about 1950 to 2008. (If there are gaps, it is because of gaps in data, and in particular in the consistency of data over this period.) They reveal the direct correlation between de-regulation and the rise in debt, inflation and property prices. All were low and stable during the Keynesian period of 1945 until the end of the 1960s. After President Nixon's unilateral default on the US's obligations to repay its debts in gold, which led to the collapse of the Bretton Woods system in 1971; and after the gradual de-regulation of the finance sector in the 1970s and 80s, the break with the post-war 'golden age' is very distinct.

Thus ended the Bretton Woods era, and was launched the era of unfettered capital flows and easy, if costly credit: the era of globalisation. This era came to an abrupt end on 9th August, 2007 with the global freezing of lending between banks.



### **3. Managing money and debt-creation**

*It is well enough that people of the nation do not understand our banking and monetary system, for if they did, I believe there would be a revolution before tomorrow morning.*

Henry Ford, American industrialist and pioneer of assembly-line production method.

Money and its link to debt-creation is not well understood. However the link is firmly established. By creating money at virtually no cost, charging high real rates of interest on loaned money; and then adding additional 'charges', banks and creditors :

- Extract assets from the productive sector in a manner that can fairly be described as parasitic;
- Extract assets from the ecosystem at rates that are unsustainable;
- Transfer assets from those without, to those with assets;
- Make a claim on the future;
- Build up exponentially rising levels of debt – both financial and ecological - which are unlikely to be repaid in full.

The debt becomes ultimately unpayable because the rate of interest, or the rate of return on this privately created credit, exceeds the rate at which society (broadly Industry and Labour, to use Polanyi's terms) and the ecosystem can be renewed, can generate additional resources, and can repay.

This would be bad enough, but costly credit is a crime against society and against nature for another reason: it demands exponential rates of return on an asset, money, which is costless to create. Whereas those who grow e.g. tomatoes, have to engage on the one hand with Land in the broadest sense and with Labour; and because Land (including the climate) and Labour can affect the profit and loss rate of growing tomatoes, this way of making money carries risks. Those on the other hand that grow money or credit do not have to either engage with the Land, or with Labour to create credit. It is effectively effortless activity, which requires minimal staff for basic banking services. The creation of credit, unlike the growing of tomatoes or Nike Shoes or McDonald's hamburgers, does not involve Land or Labour. In other words it's what economists call 'a free good' – like the air we breathe, or the wireless radio waves we may encounter in a public library. And as a free good, its price should be free – or else very low, to cover the diminishing fixed costs of creating credit.

Money's great benefit is that it facilitates exchanges. Furthermore, as Keynes noted, it can do that without "*ever coming into the picture as a substantive object*" (Keynes, *Collected Writings*, Volume XIV ). In other words we can get paid our wages/salaries or can pay taxes without notes or coins – substantive monetary objects - ever being required.

Today money enjoys much greater sophistication than it did in the past. Even then, it was a significant innovation and evolution over a system of exchanges based on *barter*. Today we benefit from another form of money: *bank money*. Over time money has evolved. The original token money (including the bank note) was, at the first stage of its evolution, based on a commodity – a bead, or shell or metal, and then a precious metal, silver or gold. During the second stage of money's evolution commodity money was changed into *bank money*, based not on a tangible object but on something more ephemeral: trust and confidence.

In today's economy, most transactions no longer involve *cash* (i.e. notes and coins) but entries in a ledger or account – that is, *bank money*. Our taxes would be, on the whole, not paid in tokens, coins or notes; instead employers pay salaries and make PAYE transfers with bank money. Goods are purchased by direct debit, or credit card; or by bank transfer. Everyday *consumption* (clothes, food, magazines, entertainment) can be paid both through *bank money* (using credit, debit cards and cheques) and *cash*.

Bank money, unlike commodity money, is *intangible* – you never see or hold it. The amounts held by economic actors at any point in time are simply figures entered into a ledger or a computer, printed occasionally on a bank statement. Of course you could choose to withdraw the amount on the ledger of your bank account and hold it as notes and coins, in which case bank money is turned into 'real' money but generally people do not do this – they keep their money in the bank and spend a large part of it in transactions which do not involve cash. As Geoff Tily notes:

*There is no tangible quantity corresponding to the aggregate of bank money in an economy at any point in time. Such a tangible quantity/quality is not a necessary characteristic of money. The acceptability and hence validity of bank money is due to its being able to facilitate ... transactions.*

Tily, 2005

In understanding bank money we need to understand that money held in banks does not necessarily correspond to what we understand as income. Nor does it correspond to savings, or depend on the volume of savings. *It does not necessarily correspond to any economic activity.* The one-to-one link that existed between metal tokens and economic activity back in the middle ages – the exchange of a silver token for a pig, for example - does not exist in today's banking system. As John Law, the Scottish economist who was one of the first to understand and advocate bank money, is credited by Schumpeter as saying:

*'Money is not the Value for which Goods are exchanged, but the Value by which they are exchanged.'* (See Schumpeter 1954, p.322).

A second, vital point to understand about bank money is this: bank money does not exist as a *result* of economic activity. Instead, bank money *creates* economic activity.

As long as fifty years ago, the economist Joseph Schumpeter noted that:

*“...it proved extraordinarily difficult for economists to recognise that bank loans and bank investments do create deposits. And even in 1930, when the large majority had been converted and accepted the doctrine as a matter of course, Keynes rightly felt it necessary to re-expound and to defend the doctrine at some length...and some of the most important aspects cannot be said to be fully understood even now.”*

Schumpeter, 1954, p.324

Things have not changed much since 1954. The quotation below, from a recent Question and Answer session with Ministers in the UK's House of Lords (about a report by James Roberts of the new economics foundation on creating new money) demonstrates that it is still extraordinarily difficult for economists, officials and ministers to recognise that bank lending does not depend on the receipt of deposits; that loans create deposits.

*Contrary to the report of the New Economics Foundation, banks are not provided with a hidden subsidy. Funds loaned out to customers must either be obtained from depositors or the sterling money markets, both of which usually require the payment of interest.*

Lord McIntosh of Haringey (UK Government minister), 2001, in Boyle, 2002, p.84.

Like Lord McIntosh many of us still assume that bank loans represent a gift from someone (either locally or internationally) who, unlike ourselves, has taken the trouble to deny themselves a portion of their income and to deposit this in a piggy-bank or savings account – or to lend it out on the international capital markets. Most mainstream economists still believe that banks have “savings” – either theirs, or those of others – and extend these savings to others as credit – charging interest. This is not the case. *The money for a bank loan does not exist until we, the customers, apply for credit.*

Nor do banks have to hold ‘reserves’ in order to lend. All they need to hold is the collateral (e.g. a guarantee against a property) on a loan. In other words, far from the bank starting with a deposit or reserves, and then lending out money, the bank starts with our application for a loan, the asset against which we guarantee or secure repayment, such as our house, and the promise we make to repay with interest. A clerk then enters the number into a ledger. Having agreed the loan, the commercial bank then applies to the central bank (e.g. the Bank of England) for the cash element of the loan. This cash element (notes and coins) is the small proportion of the loan that will be tangible to the borrower. The rest is bank money, which is intangible. The central bank provides – on demand – the necessary cash element.

Once the commercial bank has obtained the cash from the central bank we the borrowers, then obligingly re-deposit both the bank money (the undrawn part of the loan) and the cash, which together make up the sum of the loan, in either our own, or in other banks - creating deposits. Even if we spend the

cash, the recipient of our cash will deposit it. By this means do new loans create deposits in banks. Because printing and minting the cash costs the central bank a fair sum, the central bank charges a rate of interest to the commercial bank when it issues notes and coins to that bank. The commercial bank pays this in due course, and passes on the cost both of the central bank's fee (interest rate), and its own, to the borrower.

While an increasing number of transactions can be carried out without cash, there are many that still depend on cash, like coins for parking meters so we, the bank's customers, want to hold a portion, albeit (in the UK) only a small proportion, of our money as cash. A bank is therefore obliged to offer cash to its customers according to demand, depending on their credit standing or overdraft limit. As a consequence banks have to hold a ratio of deposits in the bank, as cash. This is known as the cash ratio or 'reserve requirement'. This tends to be a small fraction of total deposits. In any case, as noted above, any cash issued and spent (mostly in retail transactions) very quickly returns to the banking system as deposits. If a shopper were to go to a hole-in-wall and draw out £100 in cash to spend at her local coffee shop, newsagent or cinema – this money would quickly be re-deposited in banks.

This being the case, a popular illusion nevertheless persists: that banks can only lend on the basis of reserve requirements. In other words, to lend £1000, banks need a reserve requirement of £100 in their vaults. The reality is exactly the opposite. *Reserves are created to support lending.* The Bank of England (for example) provides cash to British commercial banks, *based on public demand for that cash.* Cash is created by the central bank only once borrowers apply for loans.

It is important to note that central banks place no limit on the cash made available to banks. *Because the central bank provides cash on demand, there is therefore no limit to the cash, bank money or credit that can be created by commercial banks.* The only restraint on the bank money or credit that can be created is the ability of the loan to be matched, or 'secured' by collateral – e.g. a property. In the Anglo-American economies that so eagerly de-regulated credit creation after the 1970s, the upward spiralling prices of assets provided as 'security' (e.g. property, stocks and shares, works of art, race-horses, veteran cars) enabled private banks to follow and even accelerate e.g. the property spiral by pushing lending upwards too, to create a vast global credit – or more precisely debt - bubble. This bubble is unprecedented, historically, in scale.

In the UK in 1982 the ratio of coins and notes to bank deposits was 1:14. At the end of 2005 the ratio had more than doubled, to 1:34. Put differently: in 1982 there was about £10.5 billion in circulation as notes and coins. Retail and wholesale deposits amounted to almost 14 times as much: £144 billion. By 2005 there was only £38 billion circulating in notes and coins, and almost 34 times as much - £1,289 billion – held in banks as retail and wholesale deposits (Office for National Statistics, May 2006). So for every £1 circulating in cash in 2005, £34 took the intangible form of bank deposits.

These historic numbers demonstrate that the ratio of cash to bank money is not a constant: cash declines over time as confidence in bank money grows,



and we make ever-greater use of e.g. credit cards, bank transfers, Oyster cards and internet banking.

Today in the UK and US (but not in many countries in Africa, for example) a larger, and ever increasing proportion of transactions will be carried out as simple account transfers that do not involve coins and notes. The increased use of credit cards and of internet banking are two of the most visible examples of this non-cash bank money.

#### **4. Interest as a social construct; money as a free good**

The rate of interest is effectively, the price of bank money, set by commercial banks, and largely (but not always) linked to the official or base rate, set by the central bank (e.g. the Bank of England, the ECB or the Federal Reserve.) The initial basis for this 'price' of bank money is set by the central bank when it sets the base or official rate. Since 1994, the private banking sector, led by the British Bankers Association (BBA) has set a parallel rate – the London Inter Bank Offer Rate or LIBOR. This rate – which covers loans in a range of countries and for a range of risk and terms – has always closely tracked the official, or bank rate. However, during the current financial crisis, LIBOR has diverged dramatically from the base rate. In other words, central banks have lost control over rates of interest set by the private banking system.

So how are interest rates set? Remember, the central bank enjoys the sole power to issue notes and coins. No other private bank can issue notes or coins, while every private bank can create credit. In the past publicly-controlled central banks would have had the power to create, or regulate the creation of bank money, and therefore credit. Today that power has been privatised, with commercial banks granted power to create unlimited volumes of credit – through the creation of intangible, costless, bank money. However, it is the sole power to issue notes and coins that provides central banks like the Bank of England with the mechanism for setting the official, base rate of interest. The central bank does this by providing cash on demand i.e. without limit to a commercial bank, in exchange for collateral owned by the commercial bank (collateral can take the form of assets, e.g. Treasury bills or bonds).

To give a practical example. If Citibank UK intended to make a loan of say £6,600 to Josephine Bloggs, the bank could demand £300 of that loan from the Bank of England in cash (the amount that Josephine is likely to draw in cash. Remember that the cash to bank money ratio in the UK in 2004 was 1:22.) In return Citibank would offer an asset of £300 to the Bank of England. The central bank holds this 'collateral' or asset for a period - say two weeks, and then returns it to Citibank at a *discount* of its value, retaining say 5% of the asset, or £15. The difference between the original value of the asset and the new value – i.e. 5% - is *the rate of interest* (an arrangement known as a repurchase agreement or "repo") on a specified date. In other words, the central bank takes its cut, and returns the commercial bank's asset to the bank, less 5%. The rate at which these assets are discounted is the rate set by (in the case of the Bank of England) the Monetary Policy Committee, and is known to us as the Bank rate of interest.

It is important to note at this point that the rate of interest is a social construct. The Bank of England arrives at its decision as a result of consultation between members of the Monetary Policy Committee and the Governor of the (MPC) – all of whose members are there by *political appointment* of the UK's finance minister, the Chancellor of the Exchequer. The rate of interest is fixed bearing in mind the various interests within the economy, broadly represented by Finance, Labour and Industry. *The official rate of interest is not set according to the demand for money.* The less cash there is in the economy, the more free money the banks create.

So how much can banks lend given that they do not need to find money/deposits in the first place? The answer is that there are no limits to the creation of bank money and therefore of credit, and like other free goods, the price (or interest) should therefore be very low. The cost to a bank or finance company of entering numbers into a ledger is ludicrously low, or non-existent. Note too, that the cost of obtaining cash from the central bank is passed on to the borrower. If pushed, bankers would explain that their costs involve an infinitesimally small share of the cost of the ledger, of the pen or computer; of the wage of the member of staff that enters the number; and of the rental costs of the building. With the development of technology, and with the growth of credit, these fixed costs disappear. Josiah Charles Stamp (1880-1941), President of the Bank of England in the 1920s said that,

*The modern banking system manufactures money out of nothing. The process is perhaps the most astounding piece of sleight-of-hand that was ever invented. Banking was conceived in inequity and born in sin... But if you want to continue to be slaves of the bankers and pay the cost of your own slavery, then let the bankers continue to create money and control credit.”(cited in British Association for Monetary Reform, 2007)*

Given these very low costs, and given that there is no limit to the volume of credit/debt that can be created, then credit is essentially a free good. Prices in free markets are supposed to rise for scarce resources. There is (as yet) for example, no price for the air we breathe, because there is no (apparent) limit to it; and it is not scarce. In the same way, there is no scarcity of credit; no limit to its creation.

To understand how the cost of an almost free good can be multiplied, it might be useful to compare the interest charged by commercial banks on “free” bank money, to the rates paid for the use of wi-fi, or wireless networks in hotels, airports, restaurants etc. Like bank money, the cost of generating wireless has an initial fixed cost, and is subsequently very low for the provider, so in the US public authorities like libraries offer free access to the radio frequencies needed to transmit data. But by capturing and controlling access to this essentially free good, private sector providers are able to charge a rent on units of time-use of radio frequencies, and to make extraordinary capital gains from this rent.

Keynes understood that money was essentially a free good. In his *Treatise on Money*, he wrote, ‘Why then...if banks can create credit, should they refuse any reasonable request for it? And why should they charge a fee for what costs

them little or nothing?’ (Keynes, 1930). The answer of course is that if the bank is a publicly-owned bank, a bank answerable to the citizens of a nation, then there is no reason why it should charge a fee, or interest, for what costs little or nothing. There is no reason why it should not create debt-free (i.e. non-interest bearing) money for public works. If publicly-owned banks, or the government, exercised the power to create credit, citizens would be saved a great deal in taxation.

During the Second World War, and in the years afterwards, Keynes helped both the Bank of England and the Federal Reserve understand the monetary system, and to devise money operations that enabled the central bank to offer low, very low rates of interest on a range of loans – short and long, safe and risky. As we in Britain have just realised, in 1950 interest rates were as low as 2% - and have not been as low since then. With the de-regulation of capital flows, and with the privatisation of interest rate-setting, central bank governors and elected politicians gave away these vital powers to keep interest rates low – to international capital markets the private finance sector, embodied by the British Bankers Association (BBA).

### **5. Globalisation and the Dismantling of Bretton Woods**

The contrast between economic conditions today and the low rates of interest, the high levels of investment, employment and wages of the Bretton Woods era could not be greater. Low rates of interest are anathema to money-lenders; but are vital to all those who engage in productive work; those who undertake vital research, and develop new medicines and other products. They will be vital to the financing of the massive expansion of home insulation and clean technology central to the Green New Deal. If we are to mobilise a carbon army of green-collar workers, then raising the finance to pay these workers without bankrupting the economy, and without making unsustainable claims on taxpayers, the ecosystem and the future, will be vital.

One of globalisation’s most destructive legacies is high real rates of interest. Indeed it was high rates of interest that eventually burst the global credit bubble in August, 2007 Real interest rates long term loans (as opposed to the official rate set by the central banks for short-term loans) were, and remain high in most economies, deterring investment in research and development – and in new green investments.

Giant oligopolies now control our market places, and the governmental response to the Credit Crunch is strengthening their hands. Nowhere is this clearer than in the ‘consolidation’ or monopolisation of the banking sector. Oligopolies, encouraged by loose government regulation, eliminate competition. Ignoring the cheerful, blind ideology of free marketers, they force up prices for vital goods like drugs, and capture disproportionately high profits. As the Financial Times noted:

*in a production system marked by extreme outsourcing, oligopoly does not result in the end of competition so much as the redirection of competition downwards, as lead companies capture more power to set supplier against supplier, community against community and worker against worker.*

Financial Times, Leader, 14<sup>th</sup> February, 2006.

How was Bretton Woods dismantled? The truth is that it was done stealthily, behind the closed doors of a small group of the world's political and financial elites, with little public and academic debate. To this date the events of 1971 are little known, little understood and seldom studied. Bretton Woods was replaced by a system still in force today. This system of financial liberalisation is different from the old gold standard, in that it is not anchored in gold or any other commodity for that matter. Instead it is anchored on a system of debt; US debt.

The story, summarised briefly, began thus. By the late 1960s, the US had become the world's biggest creditor, and had used its position to displace the UK as a super-power. However it had begun to build up a deficit, as a direct result of military spending on the Vietnam War. The US refused to sell off gold reserves and international investment to reduce this deficit. Instead on 13th August 1971 at Camp David, President Nixon made an extraordinary policy reversal and announced unilaterally that the US would no longer conform to the Bretton Woods system. Nixon made clear that the dollar would no longer be linked to gold, nor would payments be made in gold. Nor would the US sell its gold or international investments to raise funds to pay for imports or to pay off debts. (van der Wee 1983). In other words, the US declared that it would unilaterally default on its foreign obligations to repay debts in the form it had contracted to do so. This represented, at the time, the biggest-ever default by a sovereign government.

As Herman van der Wee has written, 'such a fundamental decision as the abolition of the gold-dollar standard, taken unilaterally by the United States and without any prior consultation with the rest of the world, was regarded as an arrogant expression of the American policy of domination.' (Van der Wee, 1987). Instead of paying its debts by selling exports and earning gold, with which to repay its creditors, the US offered something much less tangible: bank money in the form of US debt – US Treasury Bills. In other words it was suggested to creditors that they might want to hold new loans to the US as a form of collateral for the debts they were owed!

## **6. The design of a global, debt-based financial architecture**

At the same time, US policy-makers invited the IMF to design a new international financial system. An effort was made; some insist that the effort was serious, but that it came to nothing. Instead, and by default, the dollar became the global reserve currency; and US debt – low-cost loans to the US – formed the basis of all international reserves. Central banks would no longer hold gold, as evidence of their reserves and to pay for foreign purchases; as evidence of the general health of their economy. Instead they would hold US debt – IOUs of the US's Federal Reserve Bank printed on paper.

It is important to note that this new financial system was not the result of considered, planned and co-ordinated action by the international community of world leaders. That while the Bretton Woods system worked well overall,

there were clearly strains, and it had become necessary to make changes and improvements, in particular to the exchange rate system. But these changes were not then made as a result of careful deliberation by wise scholars, responsible leaders and their expert advisers. Instead they were made in reaction to the unilateral default on its foreign obligations by the US government in 1971.

The effect of these new arrangements was to dramatically transform the international financial system. First, by dismantling a cornerstone of the Bretton Woods system, the link of the reserve currency to gold, the removal of controls over the movement of capital, in particular US capital, began. The US could expect to borrow money in the currency it printed. By re-valuing or de-valuing that currency the US could, therefore, increase or lower the value of its foreign debts. Furthermore, because there was no longer any benchmark (i.e. gold) against which its currency would be measured, or indeed any constraints against which its balances (imports/exports) would be assessed, the US need never again be obliged to structurally adjust its economy to restore it to balance (a requirement regularly made, since the 1980s, of poor, debtor nations). This meant that the US, just by issuing billions of dollars of IOUs to willing buyers, could now borrow limitless amounts of money on the international capital markets without restraint, and use these resources to pursue apparently endless consumption.

That is not to say that constraints to international borrowing were all removed instantaneously. Potential creditor countries still maintained capital controls, which made it difficult for money to be transferred to the US in the form of a loan. The US, supported by the finance sector and the UK government, then began a sustained campaign to discredit and lift international capital or exchange controls – a campaign that succeeded with the elections of Margaret Thatcher as British Prime Minister and Ronald Reagan as US President in 1979.

Today, instead of holding gold reserves, all countries mainly hold low-cost loans (IOUs or Treasury Bills) issued by the US - as reserves. These huge holdings of reserves represent staggeringly large loans to the US, at very low real interest rates. (Poor countries that need to borrow on international capital markets pay much higher rates of interest). Rich and poor countries alike hold these Treasury Bills in their Central Banks, as evidence of their creditworthiness, and of the health of their economies. Larry Summers, until recently the US's Treasury Secretary or finance minister, has noted that, 'The largest international flow of fixed-income debt today takes the form of borrowing by the world's richest nations at (probably) negative real interest rates from countries with very large numbers of poor.' *Business Times*, 9th March 2004.

The silent, revolutionary changes to the international financial system began the process that was to remove the stabilisers which had ensured that international trade remained balanced, without countries accumulating deficits or surpluses.

The result, after more than twenty five years is the build-up of substantial imbalances. The US today imports half as much again as it exports. Not only



does it have the biggest deficit run by a G7 economy in the past 30 years, at approximately 7% of national output, but it needs to raise from abroad an approximate \$1 trillion a year, about \$3 billion a day. As a share of America's economy, this external deficit had more than doubled by 2005.(IMF, World Economic Outlook, April, 2005). Recently it has fallen to about 18% of GDP.<sup>1</sup>

The US is not the only country to build up trade deficits: Britain's trade deficit has recently hit record levels.

Somewhat alarmingly for the central banks and private lenders that have lent money to the US, American policy makers have indicated that America's Federal Reserve could use its the power to cancel its own debts, by printing more dollars and lowering the value of the reserve currency. A speech in 2002 by the new governor of the Federal Reserve, Mr. Bernard Bernanke, caused considerable controversy, but is illuminating:

*Like gold, U.S. dollars have value only to the extent that they are strictly limited in supply. But the U.S. government has a technology, called a printing press (or, today, its electronic equivalent) that allows it to produce as many U.S. dollars as it wishes at essentially no cost. By increasing the number of U.S. dollars in circulation, or even by credibly threatening to do so, the U.S. government can also reduce the value of a dollar in terms of goods and services, which is equivalent to raising the prices in dollars of those goods and services.*

Bernanke, 2002 [speech].  
<http://www.federalreserve.gov/boardDocs/speeches/2002/20021121/default.htm>

Mr. Bernanke has helped ensure that the reproduction of bank money, by means of a mechanical or digital printing press, will remain at the centre of the debate about international finance. Above all he has demonstrated that the US has extraordinary powers to manipulate the global economy.

Today's financial system resembles the earlier periods of globalisation in almost every respect. It prioritises the interests of the finance sector, and in particular the creators of credit. It provides for the unregulated growth of trade – regardless of imbalances between nations; environmental or other impacts, and certainly with little regard for those I will loosely define as 'Industry' and 'Labour' within nations.

The US's ability to use its financial assets to obtain, cheaply, additional resources; its ability to leverage its political hegemony to Hoover up assets from poor countries; the absence of any form of international framework to discipline the US (and other sovereign) countries building up imbalances: all these issues raise profound ethical questions about the unjust edifice that is today's international financial architecture. Above all, President Nixon's unilateral actions in 1971 granted the United States powers and rights to embark on a path of sustained and unchecked consumption. As a result, the US has massively increased consumption in a way that appeared to have no limit until checked by the Bankers Depression that began on 9th August, 2007 when inter-bank lending froze.



Today the US has plunged into a deep recession, and moved from being the world's biggest creditor, to the world's biggest debtor and consumer. As the World Bank has noted, this means that today, in contradiction of orthodox neo-liberal economic theory, money often flows from where it is scarce (low income countries like India and China with large numbers of poor) to where it is plentiful (high income countries like the US and the UK). In other words, money flows from the poor to the rich. This is the very reverse of what orthodox economists teach in all our universities when they write of wealth trickling down from rich to poor. Neo-liberal economists imply that the trickle down effect is as natural a law of economics as gravity is a law of physics. Today's international financial system proves that it is not.

## **7. Green New Deal: The Financial Proposals**

The Green New Deal involves a dual approach. First, proposals for the renewal of the domestic and international financial system, including a changed regime of taxation. Second, proposals for state intervention to allow higher public and private expenditure – targeted at environmental projects that will dramatically cut fossil fuel use and hence help to tackle climate change and peak oil. Central to the transformation of national economies and the global economy will be the re-regulation and restriction of the international finance sector. Finance will have to return to its role as servant, not master, of the global economy: to return to its given role of dealing prudently with people's savings and providing regular capital for productive and sustainable investment. The initial proposals of the Green New Deal group for financial renewal involve:

- Holding the Bank of England's interest rate at a low level indefinitely.
- Very much tighter controls on lending and on the generation of credit.
- The forced demerger of large banking and finance groups. We want to see retail banking split from both corporate finance (merchant banking) and from securities dealing. This would echo the Glass-Steagall legislation of inter-war America, which separated retail and investment banking but was repealed in the 1990s by President Clinton, advised by Larry Summers and Robert Rubin.
- Breaking these demerged financial entities up into smaller banks, on the principle that mega banks make mega mistakes that affect us all. Instead of institutions that are 'too big to fail', we should aim for institutions that are small enough to fail without creating problems for depositors and the wider public.
- Subjecting all derivative products and other exotic instruments to official inspection. Only those approved would be permitted to be traded. Anyone trying to circumvent the rules by going offshore or on to the internet would face the 'negative enforcement' – their contracts would be unenforceable in law.

- Offering the same protection for our remaining top-class industrial companies as is routine in France or the United States – and perhaps go further.

Ultimately, our aim is an orderly downsizing of the financial sector. Our Green New Deal relies for funding on a mixture of public and private spending financed by borrowing. Such borrowing is essential during a depression, when the government must intervene as the corporate sector shrinks. This government intervention generates employment, income and saving, and associated tax revenues repay the exchequer. This is the multiplier process, attributed to Richard Kahn, Keynes's closest follower. Any public spending should be targeted so that domestic companies benefit, and then the wages generated create further spending on consumer goods and services. So combined heat-and-power initiatives generate income for construction and technological companies, and then workers' salaries are spent on food, clothes, home entertainment, the theatre and so on, creating demand for those industries.

The mathematics of the process are such that the public investment should create an exactly increased amount of new saving, rather than being a draw on existing saving. Equally the higher level of saving as a result of public works will create demand for new savings instruments. This can be met with innovative government instruments, such as green savings bonds. The same argument demonstrates that there is nothing wrong with reliance on public expenditure for a good part of national economic activity. The extent of that activity should be a matter for political and democratic choice, for it merely directs real resources into certain uses, while private impetus may direct resources elsewhere. The issue is surely complementarity of purpose and full utilisation of resource.

A Green New Deal will to some extent replicate the three major planks of the original 1930s New Deal, designed to deal with the aftermath of the credit crunch of the late 1920s. These were:

1. Franklin Roosevelt's strict regulation of the cause of the problem – a greedy and feckless financial sector. This had been the major culprit in causing the Great Depression, made worse by governments thinking they had to let the market rule.
2. The provision of funding for infrastructure, part of which was paid for by an increase in taxes on big business and the rich – a measure which also had the positive effect of dramatically decreasing inequality.
3. The investment of billions of dollars in a wide range of infrastructural projects such as highways, dams and bridges, as well as in training and better working condition. Its purpose was to get people back to work and generate business opportunities.

The Green New Deal will, however, differ from its 1930s predecessor in that there will be a much bigger role for investments from private savings, pensions, banks and insurance.

Today's economic and business downturns, and consequent rises in unemployment, are not yet on the scale of the Great Depression. But we believe they will inevitably increase as debt-fuelled demand is curbed in response to the present credit crunch. To fill this deflationary gap the Green New Deal will encourage investments that are labour intensive, generate huge business possibilities and help solve the triple crunch all at once.

## **Conclusion**

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Climate change is a global phenomenon, and requires a global response. However, if governments are to be able to co-ordinate and co-operate to forge agreements on methods for abatement and adaptation, then it will be vital that they first co-ordinate and co-operate to stabilise the global financial system.

For, as the Green New Deal report argues: imbalances in national and international financial systems are inextricably tied to imbalances in consumption and fuel emissions. To stabilise emissions, it is also vital to stabilise financial systems, and to subordinate the finance sector to the interests of humanity and the ecosystem.

## **References**

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Boyle, D. (ed) (2002), *The Money Changers* (London: Earthscan)

British Association for Monetary Reform (2007), available at:  
[http://www.monetaryreform.org/moneytextbook/New\\_Money\\_Text\\_Book004.htm](http://www.monetaryreform.org/moneytextbook/New_Money_Text_Book004.htm)

Green New Deal Group (2008), *A Green New Deal: Joined-up Policies to Solve the Triple Crunch of the Credit Crisis, Climate Change and High Oil Prices*, (London: new economics foundation).

Keynes, J.M. (1930), *Treatise on Money and the General Theory of Employment, Interest and Money* (New York: Harcourt Brace and Co.)

Schumpeter, J. (1954), *History of Economic Analysis* (London: Allen and Unwin)

van der Wee, H. (1987), *Prosperity and Upheaval: The World Economy 1945–1980*. Pelikan

Books. First published by Deutscher Taschenbuch Verlag GmbH & Co. KG in 1983. Translation published in Britain by Viking, 1986.

## Notes

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1. Federal Reserve Bank of Cleveland 'The Net International Investment Position' Owen F. Humpage and Michael Shenk. June, 2008. <http://www.clevelandfed.org/research/trends/2008/0808/01intmar.cfm>. US net international investment – the broadest measure of US external debt – is currently estimated at year end 2007 at -\$2,4 trillion. (US Bureau of Economic Analysis, June 27, 2008. <http://www.bea.gov/newsreleases/international/intinv/intinvnewsrelease.htm>)

### **3. Colin Hines: Why the 'Green New Deal' Requires a Green New Protectionism**

#### **Introduction**

Section one of this paper is a description of what 'The Green New Deal' is and how it could be financed. The term was first coined by the author and the report of the same name was first published in July 2008 by the New Economics Foundation (nef) to deal with the 'triple crunch' of climate change, energy insecurity /price instability and the financial and economic meltdown (nef, 2008)

The report was the joint work of the Green New Deal Group of which the author is the convener.

Section two on the other hand is solely the opinion of the author and builds on the work in his book *Localisation: A Global Manifesto* (Hines, 2000). It makes the case that for the global economy to recover from its present financial crisis in a way that is socially and environmentally sustainable and which will reduce inequalities worldwide will require a radically different end goal for nations' economies. The discredited and fast collapsing neoliberal model, with its emphasis on subordinating all national aspirations to the need to be internationally competitive in a world of ever more open borders, is no longer appropriate in the 21<sup>st</sup> century.

Yet present day politicians are still hoping to return to business as usual, i.e. maximum economic growth through ever greater resource and energy use, and increasing world trade and financial flows. This is not an option in terms of the terminal damage done to the present banking system, stock markets and public confidence in the system that is seeing the collapse in demand for both goods and services of the world. Neither is it an option for the future survival of a planet that must reduce energy and resource use and to achieve this must introduce a completely different goal of rebuilding sustainable, resilient and self-reliant local economies world wide.

For this to occur the beggar-your-neighbour mantra of international competitiveness above everything needs to be replaced by a better-your-neighbour emphasis on the protection, rebuilding and rediversification of national economies worldwide. However it is crucial to be clear that this needs to be done in a cooperative internationalist manner, not the one-sided protectionism of the 1930s with its oxymoronic hope that one country could erect barriers to others exports, whilst the rest of the world would continue importing

This whole idea of exports as the main motor of the economy has to be rejected and in its place the goal of diversifying local economies as the way to generate new jobs and business opportunities in a way which has environmental protection at its core: in short a global Green New Deal made possible by a Green New Protectionism. The arguments for this fundamental shift, the policies needed to achieve it and why it will enhance the potential of really achieving a global Green

New Deal in the timescale needed to save both the environment and the global economy is the subject of Section Two.

### **1. What is the Green New Deal?**

The Green New Deal entails re-regulating finance and taxation plus a transformational policy programme aimed at tackling the unemployment and decline in demand inevitable in the wake of the credit crunch. It involves policies and novel funding mechanisms to substantially reduce the use of fossil fuels. This in turn will help us reduce the damaging effects of climate change and allow us to cope better with the coming energy shortages caused by peak oil.

A Green New Deal will to some extent replicate the three major planks of the original 1930s New Deal, designed to deal with the aftermath of the credit crunch of the late 1920s (see Krugman, 2007 and Badger, 2008). These were:

1. Franklin Roosevelt's strict regulation of the cause of the problem – a greedy and feckless financial sector. This had been the major culprit in causing the Great Depression, made worse by governments thinking they had to let the market rule.
2. The provision of funding for infrastructure, part of which was paid for by an increase in taxes on big business and the rich – a measure which also had the positive effect of dramatically decreasing inequality.
3. The investment of billions of dollars in a wide range of infrastructural projects such as highways, dams and bridges, as well as in training and better working condition. Its purpose was to get people back to work and generate business opportunities.

The Green New Deal will, however, differ from its 1930s predecessor in that there will be a much bigger role for investments from private savings, pensions, banks and insurance.

Today's economic and business downturns, and consequent rises in unemployment, are not yet on the scale of the Great Depression. But we believe they will inevitably increase as debt-fuelled demand is curbed in response to the present credit crunch. To fill this deflationary gap the Green New Deal will encourage investments that are labour intensive, generate huge business possibilities and help solve the triple crunch all at once.

Using the methodology of the *Stern Review* (Stern, 2007), it has been estimated that the UK will need to reduce carbon emissions by 80 per cent from 1990 levels by 2050. 'Although considered conservative by many, several versions of how to achieve this target have been laid out. One ambitious carbon reduction programme that could meet this goal and also includes detailed costings was drawn up by the Institute for Public Policy Research. This envisages no new nuclear power, and that the result will be consistent with avoiding a 2°C increase in global warming, as long as all other nations instigate similar programmes.



Importantly, however, early action is necessary so that we are not left with impossibly high targets for carbon reduction as we approach the middle of the century. According to Kevin Anderson of the Tyndall Centre for Climate Change Research at Manchester University, the UK needs to achieve year-on-year cuts in its greenhouse gas emissions over the coming decades in the region of 7 to 11 per cent, if it is to play its part in preventing potentially irreversible global warming. This is far, far beyond anything yet achieved in any modern, fossil-fuel dependent economy. It implies a radical departure from current policy approaches.

The ippr proposals would cost between £50 billion and £70 billion per year – roughly two-thirds of the present NHS budget of £105 billion per year. To put these figures in perspective, the Government receives £46 billion per year from gilts (bonds issued by the government), national savings and so on, and pension funds receive £50 billion in new contributions annually (their total worth being around £1,450 billion) (International Financial Services, 2008).

The ippr research concludes that it is cheapest and easiest to decarbonise electricity supply first, provided this is matched by increased efficiency and conservation for both suppliers and users. This will involve, for example, a massive increase in offshore wind and decentralised renewables, such as solar photovoltaics. Another key sector is buildings, which are responsible for 40 per cent of emissions. It is these two sectors that will form the bulk of the initial investments facilitated by the Green New Deal.

Thus a serious investment in building new energy-supply systems – including energy-efficiency, combined heat and power and renewables for millions of homes and other buildings – would amount to a £50-billion-plus programme per year. Interestingly these figures are close to what was spent by Roosevelt's New Deal. It has been estimated that between January 1933 and December 1940 \$21.1 billion was spent on public relief and federal works programmes. This amounted to about 3½ per cent of total GDP over the same period, and today would be equivalent to £50 billion a year in the UK (roughly \$500 billion in the USA).

Roosevelt's was a huge infrastructure programme aimed at employing four million workers. It paid for over 600,000 miles of roads, over 120,000 bridges, nearly 40,000 schools, 8,000 swimming pools and over two million public toilets. It also had a 'green' aspect. The Great Depression coincided with a wave of natural disasters, including the Dust Bowl and devastating floods. Roosevelt's New Deal included the Civilian Conservation Corps, which involved millions of Americans in wilderness preservation and the promotion of health through outdoor recreation. These policies were the basis for the emergence of modern environmentalism in the USA (Maher, 2007).

An effective Green New Deal approach will require a legislative framework backed up by price signals adequate to accelerate the shift to a low-carbon economy. Such signals should include steadily increasing carbon taxes and a price for traded carbon that is high enough to cause a dramatic drop in carbon emissions. Even more important will be a huge increase in investment in energy infrastructure.

To kick-start this policy transition, the Climate Change Bill should require regular annual emissions reductions on a pathway toward hitting a cut in carbon emissions of at least 80 per cent by 2050. This might not ultimately be enough, given the earlier discussion of atmospheric carbon dioxide concentrations. But it will send a signal big enough to energise efforts to accelerate low-carbon technologies. From there on we can realistically hope for a momentum that will get us on track for low or zero carbon well before 2050. There is already now a carbon race, ranging from car makers to supermarkets, as major industries compete to out-bid each other on pledges to reduce emissions. Sweden has a plan to go zero carbon, using no fossil fuel, by 2020. The very near future will judge how much is warm words, and how much is seriously meant.

An all-encompassing programme, focusing initially on the goal of 'every building a power station', will involve traditional energy-saving measures such as insulation through to large-scale combined heat and power. It will also need a greatly accelerated uptake of renewable technology. The production and installation of these technologies will initially need substantial market-enablement support from the government. This has been the case in all big new technological transitions. The internet was originally developed and funded by the US military (The Internet Society, 2007). In energy terms, renewables markets are growing very rapidly overseas, because of the generous subsidy approach of some governments (e.g. Japan, California) or policy innovations such as feed-in tariff laws (e.g. Germany, Spain), which have resulted in a large increase in the use of different members of the renewables family.

Germany combines these approaches. It provides low-interest loans for older properties to reach new-build energy standards. Its feed-in tariff programme ensures that anyone generating electricity from solar PV, wind or hydro gets a guaranteed payment of four times the market rate. This has created 250,000 jobs and demand is such that Bavarian farmers, with large barn roofs and fields, are the biggest customer group for PV in the world (Guertler, 2008; Seager, 2007).

## **2. Financing the Green New Deal**

At the heart of a successful programme to tackle climate change will be ever-rising fuel costs per unit of economic activity. A serious recession will cut energy demand and might result in a price drop, but it is clear that the imminence of peak oil, coupled with the need to make fossil fuels ever dearer to enforce climate-change agreements, will ensure rising costs per unit of economic output. Rising fuel costs will allow ever greater profits to be made from investing in increased energy efficiency and renewables. It is the cost savings from moving out of intensive fossil fuel use, minus the cost of implementing energy-saving and clean-energy infrastructure, which will fund the repayment of loans made under the Green New Deal. Of course the more rapid the increase in carbon prices, the greater will be the incentive to invest, the potential profit from investment and the speed of transition to a low-carbon future.

Government funding for the Green New Deal could come in part from the increase in the Treasury's coffers from rapidly rising carbon taxes and carbon trading. Also now that energy prices are high, and before North Sea oil is

exhausted, introducing a windfall tax on oil and gas companies would be a huge funding source. Fossil fuels are an unrepeatable windfall from nature, yet the UK Government has so far failed adequately to take advantage of its income from oil to prepare for a low carbon future. Norway, by contrast, has used its oil surpluses to help create a safety

net for future generations that is today worth around €260 billion (£198 billion). This amounts to €75,000 (£57,000) for every man, woman and child in the country. The UK could follow Norway's lead and set up an Oil Legacy Fund, paid for primarily by a windfall tax on oil and gas company profits.

Part of these increased revenues would need to be used to raise benefits for the poorest people in our society, who would otherwise be too adversely affected by such price rises during the transition to a low-carbon future. Grants would be required to cover 100 per cent of the cost of changes needed to the dwellings of the most disadvantaged, to increase energy efficiency and fit renewables.

Public funding could be augmented by encouraging the use of private savings from individuals, pension funds, banks and other savings vehicles to invest in a government-backed Green New Deal. Savings in banks and building societies are at present guaranteed up to £50,000, and such a guarantee could be extended to a Green New Deal investment. This would carry the proviso that such funds would be earmarked solely for investments that reduce carbon use. Savers could also be let off taxes on gains from investment in carbon-reducing infrastructure, as is the case for infrastructural investment in the US municipal bonds market.

Other sources where citizens and institutional investors can provide funding for the Green New Deal include investment in 'green gilts' (government bonds), guaranteed not just in terms of an interest rate, but also in terms of their use to reduce carbon. Kiddies Go Green/Families Go Green/Grandparents Go Green bonds could be introduced and would have the side-effect of revitalising the fusty national savings industry.

Governments normally like to steer clear of the constraints put upon them by such hypothecation. However the *Stern Review* showed the level of serious disruption to the economy that will be caused by inadequate efforts to abate climate change, and this should render any such qualms redundant. On top of this, the energy crunch will focus minds on mobilising alternatives to oil and gas as fast as possible. There is a wall of money in pensions and other savings, plus a recognised need by the Government for people to save much more. Guaranteed investments via a Green New Deal programme will help provide the upfront funding needed for the low-carbon future.

Local authority bonds could be the major vehicle for the funds raised for this programme. In the USA, there is a \$2 trillion (£1 trillion) municipal bond market. Apart from Transport for London's (TfL's) recent successful £600 million bond issues, such an option is virtually non-existent in the UK. Yet this source of funding, and local democracy, could be promoted relatively easily if the returns on the money saved from the low-carbon investments, minus their cost, were used to repay such bonds. There are no legal constraints on local authorities

raising funds through issuing their own bonds,<sup>1</sup> but it has not been encouraged by governments since the 1980s.

In November 2004, the Treasury authorised the Greater London Authority's TfL to issue bonds as part of its £2.3 billion borrowing to improve transport infrastructure. TfL is, in legal terms, a local authority. The first issue of the TfL bond in December 2004 easily raised the £200 million required, and in March and December 2006 two further bonds of £200 million each were issued at very competitive rates as the market became more accustomed to such issues.<sup>2</sup>

Such local authority bonds could be spent on ensuring energy efficiency and providing renewable energy for each of the country's three million council tenants, as well as for all other local-authority-owned or -controlled buildings, such as town halls, schools, hospitals and transport infrastructure. Local authority bonds could be an investment route for pension funds and even individual savings to help fund such a crash programme.

For the private sector, encouragement for homeowners and those running factories and offices would need to take the form of subsidies towards the costs of energy efficiency measures and installing renewables – or tax breaks to carry out such work. In 2007, the world invested over \$100 billion in renewables for the first time (UNEP, 2000), most of it private money. Hundreds of millions of dollars are flowing into venture capital funds investing in renewables and other clean energy technologies as the oil price rises. Even if the hardest of times materialise as the triple crunch begins to bite, it seems a reasonable supposition that for the private sector, clean technology is going to be a relatively safe haven.

### **3. Government Action: National and International**

The first thing that UK Government will need to do is put in place a national plan for a low-energy future and its provision on the ground. There is no such plan at present: no risk analysis of the peak-oil threat and no contingency plan for what would happen if oil and/or gas supplies collapsed rapidly. Such a plan would include oversight and coordination for generating the funding from Government, the energy industry and a range of private savings vehicles for investment in the multi-decade programme for the transition to a low-energy future.

There will be a need for a training, education, research and development programme for the 'carbon army' of workers needed to bring about a low-carbon future. To reduce carbon dramatically will require expertise ranging from energy analysis, design and production of hi-tech renewable alternatives, large-scale engineering projects such as combined heat and power, and offshore wind at the high skilled end; though to medium and unskilled work making every building energy-tight, and fitting more efficient energy systems in homes, offices and factories. A carbon finance sector will be needed to publicise, advise and put into practice the range of funding packages inherent in the Green New Deal. The advantage of the massive required scale of this energy transition will be that millions of jobs can be created. Thousands of new and existing businesses and services will benefit, and a large increase in tax revenue will be generated for the government from this new economic activity.



There will be vital resource-planning roles for government. Rapidly decarbonising a national economy will, in the long term, maximise energy security in the UK. The initial national planning for such a programme will have to consider, however, whether in the medium term there will need to be a guaranteed allocation of fossil fuels to ensure adequate energy for the transition to a low carbon economy. This will include energy for the production of the enormous amounts of materials, from steel to pipes, needed for renewable-energy generation and energy-saving products. It will also include ensuring the availability of the energy required to put in place a new regional grid system, ranging from large-scale wind, wave and tidal electricity to decentralised energy systems that increase domestic and local energy production. The same strategic allocation and reserve process might be needed to ensure adequate supplies of the raw materials needed, such as iron and aluminium.

Looking beyond the UK, as Europe's economy slows in the wake of the US-initiated credit crunch, the EU could take a much-needed lead. The Green Alliance recently proposed a European budget for climate security that would involve Brussels re-orienting its public investment programme to set up a dedicated low-carbon fund for energy and transport infrastructure, an investment fund to help move China and India towards low-carbon economies, and a budget to help the poorest countries adapt to climate change (Hale and Singleton-White, 2007).

A UK Green New Deal plus a large-scale European investment programme in cutting carbon emissions would demonstrate that rich countries are serious about tackling climate change. Were this to be combined with significant funds for poorer countries to cut their carbon output, this twin approach could be just what is needed to overcome the logjam that is bedevilling efforts to bring the developing world into an effective post-Kyoto agreement.

If our Green New Deal ideas are adopted in the UK, the Government will need to work hard to advocate similar policies and practices throughout the world. Appropriate trade and aid policies will be needed to support global progress towards a low-carbon approach. The multilateral climate negotiations will provide a useful platform for this, but the government will need to be vocal and active in other fora too. Any global climate framework will have to guarantee both environmental integrity and a workable, global political solution. For this to occur it will have to display certain characteristics. As a minimum these are likely to include:

- *Setting a formal greenhouse-gas atmospheric concentration target.* A formal international target has been set in terms of limiting the average surface temperature rise to 2°C, but efforts are needed to keep the temperature rise as far below 2°C as possible. Anything beyond 2°C carries the risk of precipitating catastrophic runaway global warming.
- *Delivery of a fair, effective and equitable international agreement.* The agreement which will be drawn up to follow the Kyoto Protocol beyond 2012 must deepen

emissions reduction targets in industrialised countries, allow for greater mitigation contributions from some of the larger developing countries, and ensure a strong focus on adaptation. Wealthy industrialised countries need to do their fair share by setting legally binding, annual, constantly contracting carbon budgets. They need to plot a course, year by year, towards zero emissions.

- *Revival of an important dimension of the original spirit and intent of the UN Framework Convention on Climate Change (UNFCCC) – that developed countries should take leadership by reducing emissions at home.* In addition, poor countries must be given the opportunity to escape poverty through massive investments in adaptation and renewable energy and through greater flexibility in the rules governing the global economy on issues such as trade, finance and intellectual property.

- *Developing an alternative development paradigm, capable of delivering real poverty reduction in a carbon-constrained world.* This would involve extensive dialogue with, and active participation by, people in developing countries.

- *The recognition of forced displacement – in the form of environmental or ‘climate’ refugees due to global warming – within the Geneva Convention.* There needs to be flexibility in immigration policy, proper protection of displaced people and a compensation fund for those affected. Adaptation funds under the UNFCCC and Kyoto Protocol need to increase in size by several orders of magnitude, in order to match the costs of unavoidable adaptation and pay for clean-energy substitution.

- *Free technology transfer.* This is especially important in relation to energy technology, where developing countries should not be constrained by the restrictive regimes governing intellectual property in the global economy.

Another possible source of funding for the Green New Deal proposals lies in the potential for mobilising the capital entrusted to the world’s pension funds to finance the investment required for environmental transformation. Pension funds are not charities. They are governed by the obligation of fiduciary duty to pursue the best interests of their members rather than the ethical whims of their trustees. But two pressures are forcing pension funds to consider this duty anew. The first is the tightening regulation on pension fund disclosure and valuation across the Western world, which is prompting pension funds to more clearly match their liabilities (in terms of making out future payments to their members) with their mix of underlying assets. One recent study from a European investment bank estimated that tightening rules in the UK, the USA, France, Germany and the Netherlands would shift pension assets out of risky assets, such as equities, into relatively risk-free, long-term bonds to the tune of \$2000 billion (Hagart and Knoepfel, 2006). At present, the supply of such long-dated bonds is relatively limited. This inevitably results in a downward pressure on bond yields, partially defeating the purpose of shifting into bonds (Oddo Securities, 2006).

The second pressure is that of climate change. Along with leading sustainable investors, many leading pension funds – such as ABP in the Netherlands, CALPERs in the USA and USS in the UK – have been at the forefront of efforts to encourage the investment community to acknowledge the systemic threat



posed by climate change to their ability to pay out future pensions. As universal investors, pension funds deploy their assets across the market. This means their returns are functionally related to the throughput of the wider economy. With climate change threatening to reduce global economic output by as much as 20 per cent, according to the *Stern Review* (Stern, 2007), pension funds face a further threat to their financial viability.

So far, leading pension funds have supported voluntary initiatives, such as the Carbon Disclosure Project, to raise awareness in the marketplace. Along with the UN Principles for Responsible Investment, such initiatives have served to drive up standards across a range of environmental and social issues. A number of institutions have also dedicated portions of their assets to specialist clean-energy funds – invested in both private and public equity.

The Institutional Investors Group on Climate Change has published groundbreaking research showing that incorporating climate change is now essential for effective investment strategies ([www.iigcc.org](http://www.iigcc.org)). But no pension fund has yet digested the full implications of the 2007 climate consensus – that emissions need to be at least halved by 2050, with upwards of 80 per cent cuts in the industrialised world. The implications are clear: avoiding catastrophic climate change will require an unprecedented shift in investment capital by pension funds and other holders of long-term assets.

These twin challenges converge on a common solution. Pension funds have a rising demand for relatively risk-free assets to match their liabilities in ways that also avoid the severe threat of climate disruption and put their portfolios on the right side of the low-carbon transition. The solution lies in a new generation of Green New Deal-type ‘climate bonds’ raised by municipalities, national government and international financial institutions.

We believe the Green New Deal will need to be debated, campaigned for and introduced in the next year. This apparently tight deadline is likely to become more pressing because of the unavoidable need for Government to deal with the seriousness of unemployment and deflation resulting from the worsening economic downturn. In the year ahead, the Green New Deal Group has predicted that authoritative calls for action on peak oil will gather force. And of course, if the ‘peakists’ are correct, then we are most unlikely to proceed far into the next decade before the shock hits (North, 2009).

In addition, scientific opinion is now coalescing around the idea that we have less than a decade to start drastically reducing carbon emissions to prevent runaway global warming. So a crash programme of action needs to be put in place as quickly as possible. The more quickly it can be instigated and executed, the bigger the chance of making a soft landing once the full force of the triple crunch is washing over our economy.

Change is built into today’s consumer-based, hi-tech economy. But rapid change outside of any meaningful human control is something different again. Responding to such unchosen demands for rapid transition is an art in itself. This

is what faces us in the multiple crisis driven by energy shock, credit crunch and climate change, in which we can now include the emerging global food crisis.

In our living memory, the scale of economic re-engineering needed to prevent catastrophic climate change has only been witnessed in a wide range of countries during war time. No other approach looks remotely capable of delivering the necessary volume of emissions reductions in the time needed. In that light, we can learn from war-time experiences, positively and negatively. The best of those lessons can then be translated into our contemporary circumstances. As Churchill said, it is not enough that we try our best: we have to do what is necessary.

#### **4. A Green New Protectionism**

It seems almost audacious to challenge the unanimous thunderings of the suits of Davos, the free market cheerleaders Gordon Brown and Peter Mandelson and yes even the editorial of left of centre paper the Observer, all warning of the dire consequences of a return to any form of protectionism. These restatements of economics principles without any argument or attempt to relate them to the real world are given considerable media attention.

Let's start with the usual cliché of the lessons of the Thirties. The first thing to make clear is that post Crash efforts to protect national economies weren't the cause of the Great Depression. That, like the global recession we face today, had its beginning in feckless, greedy financiers profiting hugely from the gullible. The latter were assured that their debt sodden investments could deny the laws of economic gravity and that the market could only go up. In the Twenties the investing frenzy centred on shares, in the Noughties on property. In the Thirties the collapse of the banking system, and with it credit flows, led to huge increases in unemployment. Governments reacted to electorates' fears about more job losses from foreign imports by trying one-sided protectionism, involving putting up barriers whilst hoping that others will keep theirs low. Not surprisingly this made an already bad situation worse.

Massive expenditure on New Deals and World War Two gradually paved the way for a return to increased global trade and financial flows. What is different today is that once we pick ourselves up and dust ourselves down, we will face very different realities. Foremost will be the urgent need to curb carbon emissions and wake up to the fact that oil supplies will peak in the next few years (North, 2009). This should and will preclude a return to the recent levels of long distant trade. Shifting to a 'Look to the local' emphasis makes both environmental and social sense (Woodin and Lucas, 2004; Cato, 2009). It provides a route map to the major domestic sources of labour intensive work crucial to getting us out of our present mess - green infrastructural renewal and face to face caring.

Deglobalisation is in any case happening already. Tanker trade worldwide has already reduced by over 90%, whilst investors are fleeing from foreign investments to the bosom of government backed domestic savings. This trend should be built on in order to shift the global political and economic mantra away from beggar- your- neighbour international competition, to a better- your-

neighbour emphasis on rebuilding and rediversifying local economies every where.

This 'Protect the Local Globally' approach (Hines, 2000) will also see an end to the well meaning but utterly self defeating advice to leaders of poor countries to gear their countries futures to exporting to the rich. Peddlers of this bog standard development theory in fact spelt doom for the hopes of those such as Africa's coffee growers or textile workers, as they were elbowed aside by cheaper Asian exports (Lines, 2008).

The global economic slowdown should allow us the space to organise for an era of minimal, but just and green global trade. This would be carried out within as short a distance as possible, in goods that cannot be produced in importing countries, with the exporters' profits used to benefit the majority and fund ever more broad based national economies. Thus Europe for example would buy its coffee from Africa, but under fair trade terms involving long term contracts. This would allow a securer economic future to Third World exporters, rather than today's emphasis on trying ruthlessly to undercut and outcompete their neighbours.

However the most incredible aspect of the present debate about protectionism is that most politicians, economists and commentators still seem to labour under the delusion that the economy will return to its old ever growing self. Provided of course governments have spent enough of taxpayers money to get the credit sluices open and ensure everyone is borrowing to consume again. This is neither environmentally desirable nor financially likely. The only thing that can now be added to the certainty of death and taxes is savings. People are deeply worried about the threats posed to their economic security and are and will save in response. Yet this is seen by economic commentators as a regrettable hindrance to our return to the threadbare free market comfort blanket they so pine for.

The reality is that it is vital to see savers as our saviours. The wall of money in pensions and savings mostly accruing to baby boomers could be spent in an act of intergenerational solidarity on funding a massive national carbon reducing programme. This would balance the debts we have imposed on our descendents through the bank bailout. This could reduce the public finances that would otherwise be needed, thus reducing the future tax burden for the children of the soon to retire and protecting the planet for their grandchildren.

There will doubtless be many who will still see such a localist, just and fair protectionism as a major economic threat. These are the retro economists and commentators, bizarrely in the majority, who reject the logical and common sense desire for the US to use their own steel in public infrastructural investment, or for British jobs to be prioritised for workers born in Britain, or working here legally. They seem to instead pin their hopes on the patronising 'we feel your pain' posturing of pro market leaders, awaiting a return to business as usual. For such misguided souls, the BNP's Ad Van ominously circling the pickets at the Total refinery and playing to their growing gallery with calls for British jobs and Bankster bashing, should surely serve as wake up call. Such forces could well be the winners from misguided yearnings for a return to a status quo long past its sell

by date. In times of growing insecurity, protection is what people want, and those who offer a fair and green form of it are likely to be the winners.

## **Conclusion**

Economic globalization has a clear end goal: maximum trade and money flows for maximum profit. From this end goal comes a clear set of policies and trade rules supporting this approach. The adverse effects of this economic priority have become increasingly evident and include growing inequality globally, job insecurity and adverse environmental effects. There is now growing support for a radical alternative, that of localization (Hines, 2000; Woodin and Lucas, 2004). This has at its heart the protection and rebuilding of local economies rather than gearing them to ruthlessly out-compete each other internationally. Depending on the context, the 'local' is predominantly defined as part of the nation state, although it can be the nation state itself or occasionally a regional grouping of nation states. Everything that can sensibly be produced within a nation or a region should be. Long-distance trade is then reduced to supplying what could not come from within one country or geographical grouping of countries, the historic role of such trade.

Localisation is not about restricting the flow of information, technology, management and legal structures, but it is about a different end goal for such activities. Localisation could help to ensure a more just, secure, environmentally sustainable future. It is not a return to overpowering state control, merely governments' provision of a policy and economic framework which allows people, community groups and businesses to rediversify their own local economies.

The route to localization consists of a set of interrelated and self-reinforcing policy areas. The basic steps are:

- Reject international competitiveness and replace this by the reintroduction of protective safeguards such as tariffs and quotas for domestic economies; This is the necessary precursor to being able to carry out the rest of the policies;
- a site-here-to-sell-here policy for manufacturing and services domestically or regionally;
- localising money such that the majority stays within its place of origin;
- local competition policy to eliminate monopolies from the more protected economies;
- introduction of resource and other taxes to increase environmental improvements and help fund the transition to localisation;
- increased democratic involvement both politically and economically to ensure the effectiveness and equity of the movement to more diverse local economies;
- reorientation of the end goals of aid and trade rules such that they contribute to the rebuilding of local economies and local control.

*Under these circumstances, beggar-your-neighbour globalization gives way to the potentially more cooperative better-your–neighbour localization.*

*Notes*

1. The Local Authority (Stocks and Bonds) (Amendment) Regulations 2000; Statutory Instruments 2000 No. 1680 Companies Local Government, England and Wales.
2. This borrowing is allowed under the Government's Prudential Code of 2004.
- 3 These policies can be found in greatly expanded version in Hines, 2000.

*References*

- Badger, A. (2008), *FDR: The First Hundred Days*, (New York: Hill and Wang)
- Guertler, P. (2008), *How Low?* ACE report, commissioned by WWF.
- Hagart, G. and Knoepfel, I. (2006), *Sustaining Interest: Outcomes of a Mistra Workshop on Environmental, Social and Governance (ESG) Issues in Fixed Income Investment* (Zurich: onValues Ltd).
- Hale, S. and Singleton-White, S. H. (2007), *European Budget for Climate Security (Investing in Our Future)* (London: Green Alliance).
- Hines, C. (2000), *Localisation: A Global Manifesto* (London: Earthscan).
- International Financial Services (2008), [http://www.ifsl.org.uk/upload/PB\\_Pension\\_markets\\_2008.pdf](http://www.ifsl.org.uk/upload/PB_Pension_markets_2008.pdf)
- The Internet Society (2007) <http://www.isoc.org/internet/history/cerf.shtml>
- Krugman, P (2007) 'The Conscience of a Liberal: reclaiming America from the right' (London: Allen Lane)
- Lines, T. (2008), *Making Poverty: A History* (London: Zed).
- Lockwood, J., Bird, J., Alvarez, R. (2007), *2050 Vision* (London: ippr).
- Maher, N. (2007), *Nature's New Deal: The Civilian Conservation Corps and the Roots of the American Environmental Movement* (Oxford: Oxford University Press).
- Green New Deal Group/nef (2008), *A Green New Deal* – available at: <http://www.neweconomics.org/gen/uploads/2ajogu45c1id4w55tofmpy5520072008172656.pdf>
- North, P. (2009), 'Eco-Localisation as a Progressive Response to Peak Oil and Climate Change: A Sympathetic Critique', *Geoforum*
- Oddo Securities (2006), 'The irresolvable \$2,000 billion pensions conundrum', cited in Hagart and Knoepfel (2006).
- Seager, A. (2007), 'Germany sets shining example in providing a harvest for the world', *Guardian*, 23 July.
- Cato, M. S. (2009), *Green Economics: An Introduction to Theory, Policy and Practice* (London: Earthscan)
- Stern, N. H. (2007), *The Economics of Climate Change* (Cambridge: University Press).
- UNEP (2008) *Global Trends in Sustainable Energy Investment 2007* (New York: UNEP).
- Woodin, M. and Lucas, C. (2004), *Green Alternatives to Globalisation: A Manifesto* (London: Pluto).



#### **4. Molly Scott Cato: A New Financial Architecture based on a Global Carbon Standard**

Abstract: The present crisis in the global economy is more serious than anything that we have witnessed since the 1930s, yet policies designed to tackle it are limited and inadequate. Those that have been proposed, in terms of fiscal stimulus, rely on an outmoded view of the economy, where money can be used to force economic growth. Since the recognition of planetary limits such a strategy is no longer admissible. Instead, we need a global system where countries agree to limit their carbon dioxide emissions: this paper outlines the Contraction and Convergence model, which proposes that countries do this within a framework of equal per capita emissions for all global citizens. However, within the existing financial architecture such a policy would do nothing to prevent the US from continuing to print dollars and to use these to gain an unfair share of world production. Other countries controlling reserve currencies would also be able to avoid strict limits. The policy answer proposed is that of the Ebcu (environment-backed currency unit)—a neutral global trading currency to be used by countries that have also signed up to the C&C model.

Keywords: Financial crisis, credit crunch, Ebcu, Contraction and Convergence, climate change, Bretton Woods

##### *1. Introduction*

There has been much commentary over the past couple of years seeking historical comparison for the crisis we are witnessing in the global financial system. The consensus seems to be that this is the worst crash since that which began on Wall Street in 1929, depressed economies around the world through the 1930s and was only really resolved in the huge reflation that was brought about by the Second World War and the increase in global demand as a result of the destruction of goods that wars always bring (Galbraith, 1994). Following the war the victorious nations met at Bretton Woods to negotiate a system for global finance that would be stable and fair and would ensure prosperity. At this time most of the countries that now make up the United Nations did not even exist—they were still the ‘possessions’ of the Western industrialized countries, which, under the system of colonialism, also claimed to own their resources. It is little wonder that this system has failed to protect the interests of the states that have been born since 1945.

The system designed at Bretton Woods was flawed but managed to achieve nearly 30 years of stability and steady economic growth for those in the wealthy nations of the West (the system and its consequences, with reflections on its relevance of our current predicament, are well described in an article available online: Davidson, 2008, and Pettifor, this volume). It relied on nations basing their currencies on the dollar standard, whose value was itself backed by gold. It was Nixon’s decision to cut the link with gold to fund the Vietnam War (Douthwaite, 1999) that finally broke the Bretton Woods system and put the world on the slow but inexorable path to another global crash, a destination we arrived at some time during 2008. The question is whether we can find a new global financial architecture that will have the advantages of the Bretton Woods



settlement, but without the flaws. This paper argues for a such a system and one which, in addition, comprises a fair method for sharing CO<sub>2</sub> emissions and a new currency in which these emissions can be traded.

The paper builds on two other proposals which are under discussion in various arenas:

- Contraction and Convergence—a mechanism for reducing emissions and sharing them equally between world citizens (see more at: <http://www.gci.org.uk/contconv/cc.html>)
- Cap and Share—a system building on C&C but extending it to include a proposal for a system of issuing and trading in emissions permits, and a currency (the EBCU) to enable that trade (see more at: <http://www.capandshare.org/>)

If we could extend the second idea so that, over the next 30 to 50 years, a neutral, carbon-backed global currency gradually takes over from the unstable debt-based reserve currencies that have dominated the global economy since 1945, we may have found a way towards an equitable and sustainable global economy. The paper argues that the current financial crisis makes the creation of a stable and neutral international currency vital and increasingly urgent.

The paper is in two parts, which are then linked in the final section and the conclusion. Two separate discussions represent the two sides of the financial crisis—ecological crisis coin: the first relates to carbon trading schemes as a solution to climate change; the second describes the need for a stable, neutral global currency.

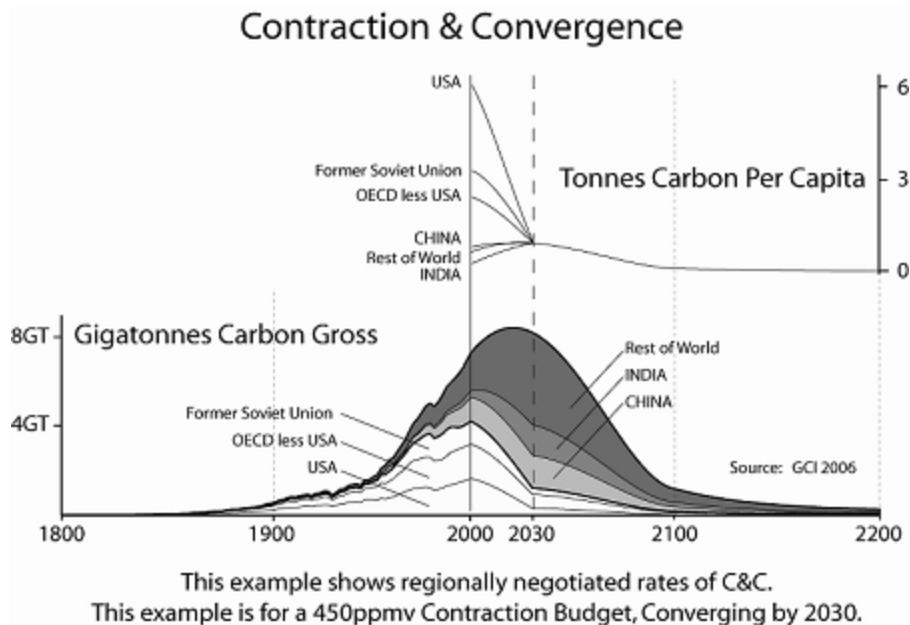
The following section provides a sketch of the two schemes that are proposed to address aspects of the interlinked crisis: Contraction and Convergence as a solution to anthropogenic climate; and Cap-and-Share as a means of sharing emissions fairly within nations. The second part of the paper provides a critique of the reserve currency system we have been living with and argues the need for a new, more stable global currency. It also suggests some ways of closing the gap between money and goods—or between the nominal and real economies—which is the root cause of instability in the financial system. Such policies of monetary management cannot be undertaken by countries in isolation, since investment funds and the speculators who control them can use their financial muscle to undermine them. Hence there is a need for an international agreement to enable domestic economic management, and this provides the focus for the next section. This reprises arguments made at Bretton Woods about the importance of a neutral currency and of balance in international trade before exploring the possibility that the neutral currency might be ‘backed’ by the global environment and what consequences such a design might have. The final section offers some conclusions and opens the political discussion about how the negotiation of this new financial architecture might be achieved.

## *2. Contraction and Convergence and Cap and Share*

Contraction and Convergence is a proposal from the Global Commons Institute for how the Earth’s atmosphere (the ‘global commons’<sup>1</sup>) should be shared, which is another way of saying how the right to produce polluting carbon dioxide should be distributed (Meyer, 2000). It is a simple plan to cap total emissions at

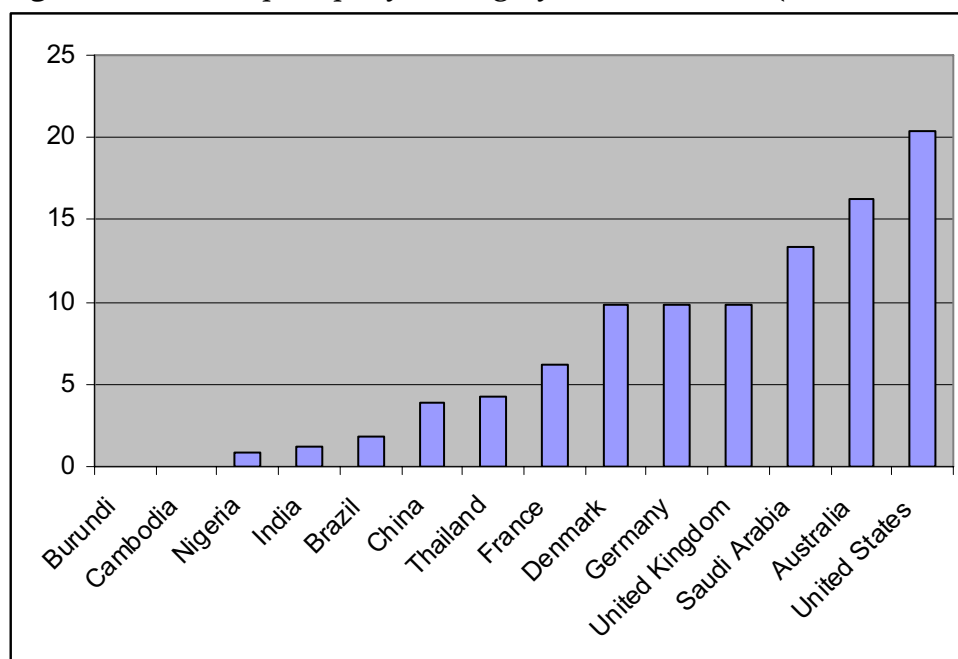
the level suggested by the best available science (relying on the Intergovernmental Panel on Climate Change<sup>2</sup>) and then to share these equally between all the world's citizens so that everybody receives a carbon credit. Figure 1 illustrates the Contraction and Convergence model, indicating how emissions have risen and how they countries will be expected to reduce them over the next 50 years. The contraction is this decline; the convergence is the movement towards global equality in per capita emissions. Comparisons of the ratios of various countries' emissions at present and under an equitable regime are presented in Figure 2 and Table 1. The figure indicates that countries have not significantly reduced their per capita emissions since 1990, and that in the case of some, emissions are still increasing. The table makes it clear which countries can expect to gain and lose under the C&C regime.

**Figure 1.** *Illustration of the Contraction & Convergence Model for Global CO2 Emissions Reductions*



*Source:* Thanks to Aubrey Meyer and Tim Helweg-Larsen of the Global Commons Institute for producing and giving permission to reproduce this figure.

**Figure 2.** Emissions per capita for a range of countries in 2004 (tonnes of CO<sub>2</sub>)



Source: UN Statistics Division

An econometric analysis of the C&C proposal (Böhringer and Welsch, 2004), found that such a system combining per capita entitlements with trading was 50 per cent more efficient in terms of reducing CO<sub>2</sub> emissions than national limits without trading. The tradable permit regime allowed developing countries to improve their economic welfare, partly as a result of improvements in the terms of trade (resulting from the imputation of carbon cost to production processes and transport).

**Table 1.** Carbon dioxide emissions per capita, 1990, 2000 and 2004 for various countries (tonnes of CO<sub>2</sub>)

	1990	2000	2004
Burundi	0.0341	0.0374	0.0291
Cambodia	0.0465	0.0416	0.039
Nigeria	0.4803	0.7185	0.8263
India	0.793	1.104	1.2023
Brazil	1.4023	1.8582	1.8001
China	2.089	2.6295	3.8393
Thailand	1.7645	3.3215	4.2849
France	6.413	6.0409	6.1608
Germany	12.3505	9.7042	9.7881
UK	10.1281	9.8543	9.7934
Denmark	9.6858	8.6761	9.8013
Saudi Arabia	15.6837	13.0743	13.3811

Australia	16.5139	17.647	16.272
United States	18.8256	20.9293	20.3792

*Source:* UN Statistics Division.

While the idea of per capita shares appears simple and straightforward there has been discussion about exactly what ‘equity’ would mean in terms of CO<sub>2</sub> emissions (Cazorla and Toman, 2000). Should countries with larger historical CO<sub>2</sub> burdens be allowed lower rates of emissions in future to compensate, for example, or should countries whose citizens have particular requirements for fossil-fuel use (say because they live in colder climes or have more elderly as a proportion of the population) be given larger shares? Countries which rely particularly heavily on fossil fuels to maintain their current standard of living make a case for ‘grandfathering rights’ to allow them a larger percentage share in the future to match that they have enjoyed in the past (as in the recent case of Poland in the EU negotiations, see Tran, 2008). Others (e.g. Long, 2006), have argued that the ‘minority world’ (or developed) countries owe debts to the ‘majority world’ countries for the damage that their historic emissions have already caused, which makes pure equity in fact unjust. These arguments are significant and will play an important role in the negotiations that will secure an international agreement. For the purposes of this paper, however, they are a second-order concern and for this reason ‘equity’ is here interpreted as meaning exact equality in terms of carbon rights per individual citizen.

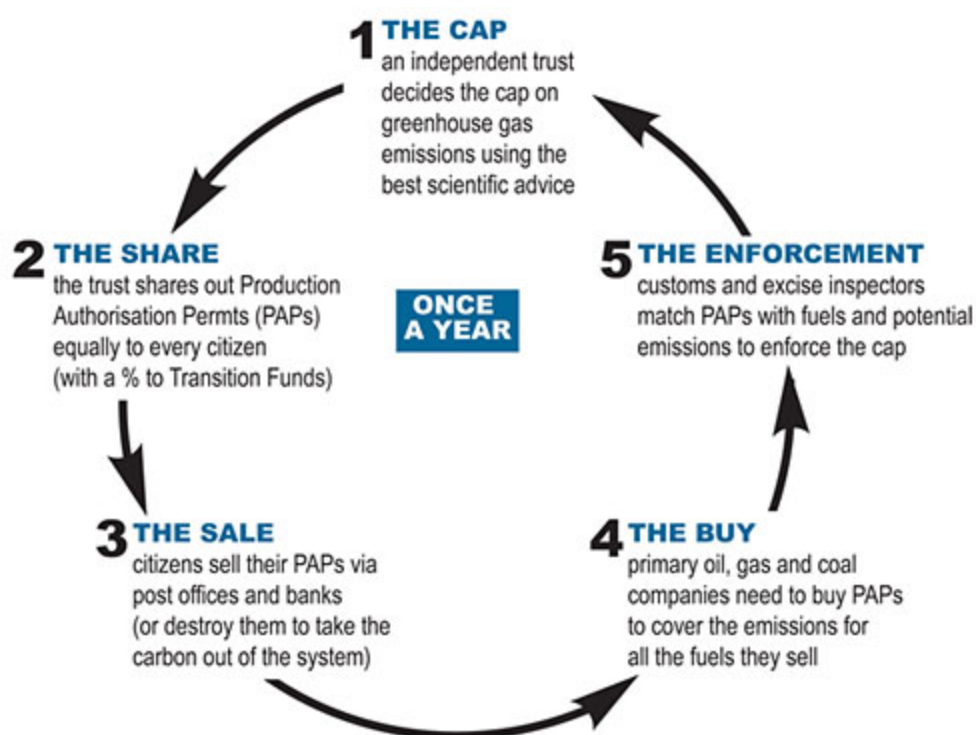
The cap-and-share proposal (henceforth C&S: see Feasta, 2008) operates within the C&C framework but proposes a mechanism to facilitate the exchange between countries that produce too much CO<sub>2</sub> and those which have not yet reached their limit. It proposes that each country is allocated an emissions tonnage share based on its population. This should then be translated into permits to produce CO<sub>2</sub>, which would be allocated to citizens who could then decide whether to sell them or destroy them (thus removing potential CO<sub>2</sub> from the atmosphere). The other side of the market for CO<sub>2</sub> will be the purchase of these permits by energy companies: the scheme is ‘upstream’ in the sense that it controls carbon where it enters the economy, i.e. at the point that suppliers of fossil fuels extract them from the Earth. Without a permit any extraction of fossil fuels would be illegal.

This scheme has been criticised on the basis of the complexity of the permit system. An alternative is Barnes’s (2001) idea of the ‘sky trust’, which is similar, but governments themselves auction the permits and transfer the income generated to citizens via a Citizens’ Income scheme. Both types of scheme can be criticised on the basis that there will be problems with enforcement and illegal extraction and trade in permits, as well as forgery, but these are no more serious than for other carbon trading schemes.

So far we are sticking fairly close to the original proposals made by FEASTA, but there is a problem: that of the perverse incentive of taxing ‘bads’.<sup>4</sup> As CO<sub>2</sub> emissions decline, a significant source of fiscal revenue will decline with them. In democratic, welfarist states we would hope that these revenues would have underpinned the introduction of a form of Citizens’ Income as they are either sold by the state and the proceeds shared on a per capita basis (Barnes, 2001), or issued to citizens who can then choose whether to sell or destroy them

(Feasta, 2008). People will have grown used to relying on this income, especially those who are carbon-frugal—they need to have a continuing incentive to reduce their consumption and engage in pro-climate behaviour. The value that governments can share through cap-and-share schemes is a windfall gained by commodifying the most critical global commons, the atmosphere, and selling the right to utilise it in the form of emissions permits. As this reduces, it could be substituted by the other crucial global commons, primarily the land itself, via a land tax. The proceeds of this tax could support the continuing payment of CI, while exemptions could be made available to those using some of their land for sequestration.

Figure 3: An Illustration of the Cap and Share model for the distribution of the right to produce carbon dioxide



Source: Cap and Share website: [www.capandshare.org](http://www.capandshare.org).

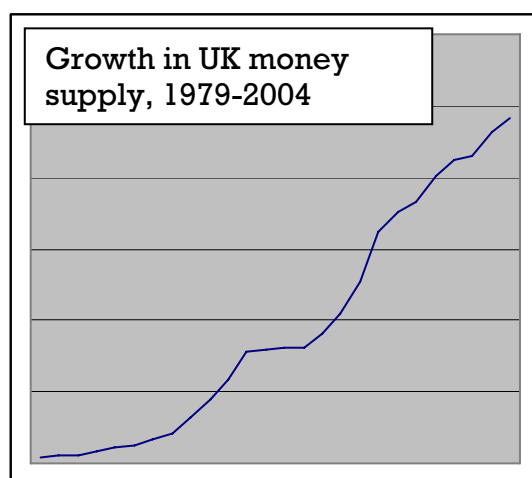
Lengthy and complex discussions will no doubt ensue about the precise design of the trading system that will enforce a cap on CO<sub>2</sub> emissions. For the purposes of this paper the more important question is, what currency will that trade take place in? However just the initial allocation of permits, if the money that is acceptable to buy and sell more is neither fairly allocated nor independent of political control by a nation or bloc of nations, the permits to pollute will eventually follow the money and a just outcome will not be achieved. Thus carbon trading cannot be made equitable without addressing the inequities in the current global financial regime. The following section describes the instability of the current financial system which has led to the current crisis. A system designed for stability and neutrality is necessary to underpin a global carbon trading regime.

### 3. *Why do we Need New Currencies?*



To grasp the importance of creating new currencies requires an understanding of the nature of money creation. This is a discussion fraught with confusion, even amongst leading politicians and bankers, and rewards considered study, without which any proposal appears senseless (Rowbotham, 1998; Robertson and Huber, 2000; Hutchinson *et al.* 2002; Pettifor, 2003). In his recent book *Capitalism as if the World Matters* (pp. 190-1) Jonathan Porritt talks about ‘the utterly perverse way in which money supply is managed in almost all countries’. He continues:

“about 97 per cent of the UK's money supply is created by commercial banks more or less out of thin air as interest-bearing (profit-making) loans; the remaining 3 per cent is created debt-free by the Bank of England and the Royal



Mint as bank notes and coins. The banks in the UK make about £20 billion a year in interest from this arrangement. . . The money supply created in this way is not linked to real resource use or to the amount of goods and services in the national economy—it is based entirely upon the banks’ commercial judgement about the ability of an individual or an enterprise to repay their loans. The more money there is, the more debt there is; as the money supply increases, so does a nation’s indebtedness.”

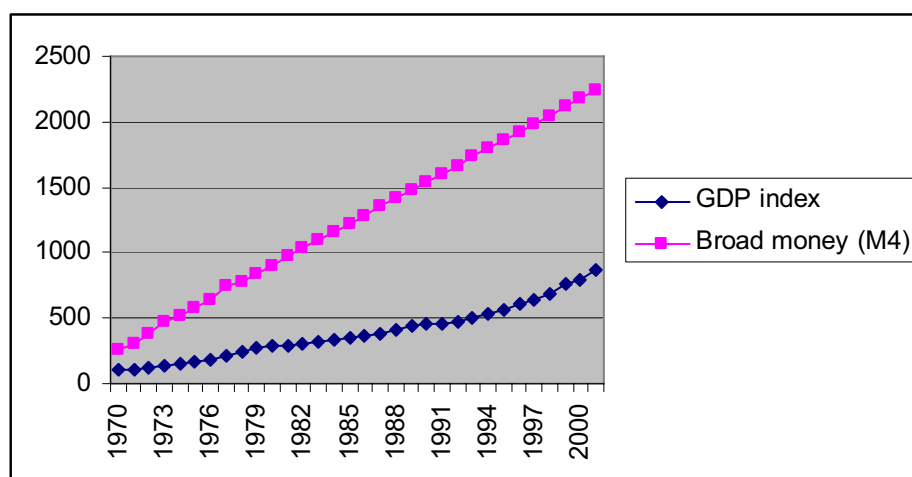
The global economy has become—increasingly rapidly since the total deregulation of financial markets in the 1980s—dominated by finance rather than production (Hutchinson *et al.*, 2002). The gap between real physical value and monetary value creates instability and this is the cause of the failure of the financial system labelled ‘credit crunch’. Although lending has become increasingly reckless, when the distance between the known value of assets held by a bank or building society and its nominal monetary value becomes unfeasibly large, other financial institutions become unwilling to lend to it. Once this happens the upward spiral of bank lending goes rapidly into reverse: financial players call in their debts and refuse to lend. In a global economy where almost all money is created as credit/debt, once confident in the banking system vanishes and the ability to create more money in this way goes with it, the amount of available money rapidly shrinks, making economic activity impossible. This is the credit crunch, and it is difficult to see a way out of it that does not involve major revisions to the global financial architecture. Evidence that this is so can be found in the desperate strategies being pursued by (especially) US and UK politicians to prevent the collapse of the system—if things were not terminally serious we would hardly expect to see a Republican President pouring \$1trillion into the financial system (Milmo, 2008) or the UK trying to sell nearly £150bn. worth of gilts in just one year compared with an annual average of around £20bn (Field, 2008).

So the first step towards stabilising the financial system will be a rebalancing of the nominal value that financial institutions, businesses and



households have on their balance sheets, i.e. accounted value, with the real value they hold in terms of assets. This is similar to the gap between money and GDP, which has accelerated as the bubble has expanded (see Figure 4). Of course, this is always a fluid picture, since at present the value of assets themselves is declining rapidly, but some attempt to bring the lines illustrated in Figure 4 closer together will reduce the financial instability. How can this be achieved? Historically, when governments still ran economies rather than leaving them to their own devices, they would have had tools at their disposal to begin to manage the domestic financial system. There are two approaches that can be taken directly to close the gap illustrated in Figure 4: reducing the value of money via a managed deflation and increasing the value of goods via inflation. A third possibility is to reintroduce some form of credit and exchange controls so that government intervene directly rather than relying on market mechanisms.

**Figure 4.** *Growth in Broad Money (M4) Compared with Growth in the Economy (GDP), UK, 1970-2001*



Source: Author's graphic: GDP data from UK Office for National Statistics; M4 data from Bank of England.

A direct means of closing the gap would be a 'managed monetary deflation'. There is little experience of such a process in developed Western economies in recent economic history, although both France and Italy experienced serious dislocation between their monetary and real economies in the period immediately following the Second World War. Casella and Eichengreen (1993) explain this inflation as a consequence of the struggle over value in the economy between labour and capital, which also resulted from the dislocation between productive capacity and the monetary capacity of the economy that arising out of the War. Its solution was effected by a *deus ex machina* in the form of the US government and its Marshall Plan goods, which soaked up the excess demand, on condition that Communist parties were excluded from government in the two countries. Such a solution seems implausible today, when the US is suffering as badly as the other developed economies, and when the problem has been an excess rather than a dearth of cheap consumer goods.

If there were international agreement between the main global players in the world economy, or even those countries that control the reserve currencies (perhaps excluding the US, which seems destined to follow its own route and has

most to lose) it might be possible to introduce a co-ordinated deflation—in effect all the countries eliminating their mutual debts and downgrading the nominal value of monetary assets in their economies. In the past the practical problems this has presented have mainly been because of large cash holdings (as, for example, the problems faced by the French in their revaluation in 1960) but in an era of computer-based money this would be much simpler. However, any proposal of deflation automatically leads to the question, relative to what? In the world of floating exchange rates there is no fixed standard to adjust to. This is part of the reason for the suggestion of neutral international standard currency, which is made in the following section.

The political problems are another matter. The key point about a deflation is that people will lose apparent value. The advantage of a politically managed deflation rather than a market free-for-all is that politicians will have some ability to control who loses. Just as the UK government guarantees individual savings of £50,000 in any one building society, so it could guarantee to exchange savings in pounds sterling up to a certain value and exchange these for a similar value (to the extent that this could be defined) in the new currency. Holders of larger quantities of cash might be recompensed only in some proportion, say 75% between £50,000 and £200,000; 50% up to £500,000 and 25% up to £1m. Beyond that money holdings would be lost. The problem with such a scheme is that the wealthiest (and hence most powerful) would lose most; the reverse of this is that the scheme would be equitable in that the poorest would be protected. And since there are many more in lower asset brackets (only 6% of estates reach the threshold of £312,000 for payment of inheritance tax (O'Neill, 2007) the majority of citizens would gain from such a policy.

In spite of what Stiglitz (2003) has called 'inflation paranoia', there may be a possibility of allowing a steady but significant inflation in the price of goods to rebalance the real and nominal economies. We are suffering from what we might term an excess of 'the wrong kind of money'—debt money that is owed by people who cannot afford to pay it back. We might also argue that the use of reserve currency power to exert a downward pressure on the price of imports during the boom years of globalisation may have created 'repressed inflation': letting this pressure for increased prices express itself might help to rebalance the real and nominal parts of our economy. In a paper that discusses the Russian financial crises of the 1990s, Lines (1998) quotes Hedlund and Sundström (1996: 895) with the inflation anxiety typical of academic economists: 'Wilfully unleashing inflation, in the hope that one will subsequently be able to contain it, may be likened to starting a controlled brush fire'. Their caution is justified in normal circumstances, in that price inflation and wage inflation can easily create a destructive and uncontrollable feedback loop, but in a time of impending slump, inflation does not seem as threatening as it once did. Some inflation may also be unavoidable in the near future, as the depletion of oil supplies leads to an increase in the price of all goods in our heavily oil-dependent economy.

The third possible route for managing the rebalance is credit controls: a tool of monetary policy that has fallen into disuse and almost out of memory, although until the 1970s they were used alongside interest rates as a means of controlling the amount of borrowing taken on by a nation's citizens in most developed economies. The last significant attempt to use such controls to influence economic policy was undertaken by President Carter in 1980 as an

attempt to deal with the combination of high inflation and high interest rates. The author of a negative review of the experience concludes thus:

Although no legislative authority now exists for credit controls, the U.S. experience with such controls probably has not come to a close. This experience suggests that in times of rising prices and interest rates, there are always voices advocating the use of credit controls. And in such times, Congress grants the authority for such controls, despite its own earlier recognition of the ineffectiveness and economic harm that credit controls have caused. (Schreft, 1990: 49)

Interestingly, we have yet to hear such calls during the current crisis. Even were such controls to be introduced, they would do nothing to deal with the historic inflation of money value relative to real value in the economy.

Credit controls are incompatible with a system of free capital movements, and therefore need to be combined with exchange controls. Sweden was the last of the developed European economies to fully manage its national monetary system under a policy which lasted for 50 years and represented a time of stability and prosperity for the Swedish people. The system was based on 'exchange and capital controls that isolated Sweden from the outside world financially, allowing the monetary authorities to establish a structure of interest rates and a distribution of credit according to political preferences, not according to market outcomes.' (Jonung, 1993: 347) During this period the Swedish government was able to maintain low interest rates enabling cheap borrowing for socially important investment, especially in housing.

The argument for a reintroduction of political management of credit in the UK today appears strong. Policies that are attempting to provide incentives to the credit market to function effectively, primarily the swingeing cuts in interest rates, are failing to be effective. The market is not responding to price signals—interest rates being effectively the price of money—and therefore is not functioning as a market in the classical sense. The reintroduction of some form of credit management by the government would be an admission of this fundamental market failure and a political commitment to prevent failure in the financial market destroying the real economy.

Jonung identifies the political and ideological conditions that were present in Sweden during the pre- and post-war years to support the political management of the monetary regime. The presence in the government of leading economists of the pro-Keynesian Stockholm School, especially Gunnar Myrdal, was a crucial component of the policies' success. The pro-market ideologues in power in the leading economies today represent a major block to any implementation of similar policies, no matter how effective they might be in practice. The end of the regime of monetary stability in Sweden (and elsewhere) can be traced back to Nixon's decision to cut the link between dollars and gold and the oil prices rises of the early 1970s, which created global turbulence that Sweden could not insulate itself from. This led to the abolition of credit controls selectively through the 1980s, until by 1989 Sweden opened its economy up to the world by removing exchange controls. As Jonung's concluding quotation suggests, Sweden's history may have something to offer us, if we feel the time is right: 'The life-cycle of credit controls has been described here. This description also suggests that the present monetary regime, based on a market oriented approach, may

change again in the future. This will occur is and when the present regime is regarded as unsustainable.' (Jonung, 1993: 368).

This section has suggested three means by which politicians might seek to manage the rebalancing of the nominal and real value in our economy. Without such an intervention, and assuming that the policy being followed currently, according to which taxpayers subsidise large financial institutions and use their deposits to support a banking system that does not serve their interests, can only work in the short run, we face a future of disorganised adjustment, where inflation and bankruptcy cause a shrinkage of the real as well as the monetary economy—the opposite of what we want to achieve. This would share the pain very unequally, since those who earn less or are no longer earning would rapidly lose purchasing power. The distortions that would be caused in the real economy during the transition would create social and political crisis that could not be tolerated by democratic policy-makers.

The key point to notice is that all three scenarios are deeply unpalatable to those within our economy who control large amounts of capital. The abandonment of economic management since the 1980s has led to the interests of capital being assigned power in the market, at the expense of the interest of 'labour'—or people. Since what we are talking about here is, essentially, a mechanism to close the gap between the nominal value claimed by capital (bank deposits, shares, bonds, and so on) and the real value of what people can create with their work using genuinely valuable resources such as land and plant, this will lead to a major shift in value from investors to ordinary people. It will thus inevitably precipitate a deeply political struggle.

#### *4. The Importance of Balance in Global Trade*

The international financial system is complex and closely interrelated with the system of global trade (for a detailed account see Rowbotham, 2000; Pettifor, 2006). The relationship revolves around the system of reserve currencies—the dollar, euro, yen and pound sterling—which countries are prepared to accept from one another, or from third countries outside the charmed circle, in settlement of external trade balances. This system clearly gives the countries that control these currencies a huge advantage in trade terms, especially the US, which negotiated that its currency should have the supreme advantage of being acceptable alongside gold as the international reserve asset, in face of opposition from the British delegation, at Bretton Woods. Although at that time the US undertook to maintain gold reserves to support the dollar, this agreement was unilaterally suspended by President Nixon during the Vietnam War in 1971, meaning that since that time, the US has been in a situation where it can print dollars and then exchange them for imported goods at virtually no cost (see Rowbotham, 2000).

In the global trade system as currently structured there are winners—those countries which control reserve currencies—and losers—those that do not. According to Rowbotham:

Allowing the free market to determine the price of surplus goods, offered to corporate monopoly buyers based in powerful industrial nations, produced by underdeveloped nations, carrying massive debts, under pressure to export—this is bound to lead to low prices. In economists'



jargon, instead of being a process involving mutual gain and 'equal exchange', there is 'unequal exchange' with the benefits accruing principally to commerce based in the wealthy nations (Rowbotham, 2000: 75-6).

The system has not worked entirely to the advantage of the US, since it is the explanation for that country's vast and growing debt. However, for US consumers it has been a bonanza. This is one side of the critique, since the ability to suck in consumer goods has led to unprecedented levels of consumption at huge environmental cost—a level of consumption that has then been followed by the other countries of the world. The other side of the critique is the poverty generated in the countries which are forced to sell their labour and their resources to support this level of consumption by the citizens of the countries with power within the global financial system. The only way they can finance their own development is through borrowing from Western institutions and then repaying these loans, increasing yet further the gap between rich and poor countries. From the perspective of green economics, we can never 'make poverty history' without renegotiating the terms of the Bretton Woods settlement. It is for this reason that writers such as Ann Pettifor (2006: 118) have turned their attention from campaigns like Jubilee 2000 to an intellectual critique of the global money system:

IMF and creditor-led policies . . . encourage low-income debtor nations to export raw materials, undermine subsistence agriculture and local businesses, and turn their societies into markets for imported food and irrelevant consumer goods.' A managed system for global trading would be based around attempts to ensure balanced budgets, so that countries could neither run large-scale surpluses or deficits. (Rowbotham, 2000).

Rowbotham (2000) calls for a return to the policy of the Bancor, proposed by Keynes on behalf of the British government at Bretton Woods. Such a system would create a new non-aligned currency (Keynes called it *banc-or* or *bank-gold*) to be used for settling external debts. The trade system should be established with the aim of achieving balance between nations, with fines for those displaying trade balances or trade surpluses. That the currency should not be the preserve of a single country, or a small group of countries, is a basic requirement. A similar proposal for updating Keynes's plan for a neutral clearing system has been made recently by Davidson (2008), but this does not take account of the fact that Keynes was living in an intellectual world that predated the ecological crisis and the recognition of the need to end economic growth. We can build on Keynes's design but include in it a pressure to push the global economy in the direction of lower-carbon production and global equity if we tie it to the C&C proposal.

The C&C proposal is a good basis because it is absolutely clear about the two criteria for a policy response to climate change: global equity and a serious cap on emissions. However, it is rather vague about the mechanism by which those who are producing too much CO<sub>2</sub> exchange this with those who do not use their full quota, and what is exchanged. The reason for the vagueness is that, while the proposal has the benefit of simplicity and political appeal, it does not have a sophisticated approach to economics. As is explained below, if the C&C proposal were introduced into the globalised economy as it operates today, the USA would simply create enough dollars to buy the right to emit CO<sub>2</sub> as it



currently does. For this reason, Richard Douthwaite proposed the creation of a new global currency he called the Ebcu—environment-backed currency unit (Douthwaite, 1999). This is the link between the two halves of this paper. At the policy level, the need for a new, neutral global currency gives us the opportunity include carbon reduction as a design feature of that new currency. At the conceptual level we can identify the ecological crisis and financial crisis as two sides of the same coin, which represents the way money is created through debt.

The Ebcu might be the ideal design for the neutral, global currency that Keynes was seeking at Bretton Woods. As already proposed by Douthwaite (1999, ch. 4), this currency will, over the 30-year period of its phase-in, become the only currency which is acceptable in exchange for the CO<sub>2</sub> emissions permits that regulate emissions under the Cap-and-Share scheme. The fact that the new currency is the only currency acceptable in exchange for CO<sub>2</sub> permits will give it real value. Countries might also decide to transact their external trade balances in Ebcus, rather than choosing between the dollar and the euro, as they tend to do now. But what does it mean practically to have a currency that is backed by the environment? Like all currencies, this one would be issued by fiat and accepted by agreement. Nations that chose to sign up to significant CO<sub>2</sub> emissions reductions would agree to meet the rules of the new global trading system and use the Ebcu as their sole trading currency.

Without such a currency, as argued earlier, the US and other holders of reserve currencies would not face real restrictions on their CO<sub>2</sub> emissions, since they could simply run larger trade deficits and create money to buy up an unfair share of permits. So long as there was an enforced limit on CO<sub>2</sub> emissions then the new currency would have real value since it would be linked to something of real value and that was scarce, i.e. the right to pollute the Earth's atmosphere.<sup>3</sup> Proponents of the Ebcu propose it as a neat solution to two problems in one. The need to create a new global currency creates an opportunity—to use the moment of currency creation to introduce a new pressure to reduce carbon dioxide. It is straightforward at the level of theory to argue that 'energy' in the global economy is presently measured in terms of money but should, because of the climate crisis, be measured in terms of carbon instead. Linking the new global currency to carbon emissions would enable this to be made a reality. In future the global economy would operate to support the planet rather than being in conflict with it. This would be infinitely more powerful than merely trading the right to produce carbon dioxide.

The new currency needs to be stable, that is to say it needs to be issued by a neutral and responsible authority, rather than created against debts by a small number of countries. The issuing authority (we might call it the International Reserve Bank) would be the first of the new triumvirate to replace the international organisations created at Bretton Woods: it would be responsible for global banking and currency issue. The second body, the International Clearing Union, would be responsible for monitoring and policing the exchange of CO<sub>2</sub> rations and Ebcus between nations. The third body would be the General Agreement for Sustainable Trade, as proposed by Hines (2000; see also Woodin and Lucas, 2004); its primary role would be to ensure trade balances between nations (as proposed by Keynes for the GATT at Bretton Woods), although it would also have a role in managing the decline in the volume of global trade that a serious response to climate change requires in a way that best supports the poorer countries and the global ecosystem.

5. *Conclusion: Moving Towards a Stable Foundation*

There are interesting times in the global economy, and interesting times offer interesting opportunities. The first conclusion is that the credit crunch has resulted from the creation of too much distance between the nominal monetary value and the real asset value of companies, countries and the global economy as a whole. While there appears to be plenty of money out there, this is actually just a reflection of excessive debt. Rather as our trains cannot run because of the 'wrong kind of snow', our economy cannot run because of the 'wrong kind of money'. This dislocation has allowed those controlling paper assets to inflate their value but then use this value to negotiate themselves an unfair share of the real assets, whether in the form of land or goods. Since in a recession, capital loses more seriously than labour, I can only conclude that the reason there has been no policy proposal to take us off the path towards recession is that the interests of capital cannot find such a policy that does not accept my first conclusion. *In other words, solving the crisis must require the rebalancing of the interests of capital and labour.*

But the environmental crisis has made this a game with even higher stakes, and greater opportunities to be fought for. The global economy is suffering from two shortages at present: of money and of energy. One of the aims of green economists is to create an economy where energy, rather than money, is the main accounting unit. Creating a proposal where the introduction of a new global currency achieves this aim might garner sufficient political support to sideline the sectional interests of the minority of owners of capital. In a sense, the global financial crisis offers a wonderful opportunity for us to replace a monetary system that is unstable, creates injustice and drives the destruction of our global environment with one which is stable and just. The challenge will be how to move from one to the other with the minimum amount of pain—and without the massive power blocs with interests vested in the current system blocking the path of human development. The main problem that needs to be addressed—whether we are dealing with radical or orthodox solutions—is how to reinstate the balance between the artificial 'value' of the debt-based money that exists in the world economy, with the value of actual stuff that is out there. The more important question is how to build political support for a proposal along these lines.

The first question posed by this paper is whether the system proposed is logical and practical. But the more important question is whether it is politically achievable. In a situation where taxpayers have shown little concern that they are paying to save the fortunes of the super-rich this seems questionable. However, the experience of the credit crunch is bound to be a radicalising one. If we have an agreed system of radical proposals now would be a good time to argue for them. The politically astute way to introduce the system might be, as Douthwaite proposed, to begin with a 'club' of concerned nations. Since the Ebcu is based on per capita emissions it is a scaleable solution. Nations within the club might agree to reduce their emissions, share the proceeds via a C&S system and trade in Ebcus. They could then charge external tariffs on countries which were still over-emitting CO<sub>2</sub>.

The main advantage of the proposed system is that it is fair; the converse of this is that, in a global economy which is deeply unfair, some players will lose out very significantly, and these are powerful players. This is a political problem

that usually remains unexpressed in discussion of climate change. If nothing else, the proposals outlined here help to make that problem explicit. But it is more than a management school platitude to say that a threat is also an opportunity, and the threat of lasting and global recession—not to mention growing tensions within and between countries—might be expected to focus the minds of our politicians on political solutions to what are, essentially, political problems.

We have a generation of politicians who have grown up with the mantra that ‘there is no alternative’ ringing in their ears. They have believed their own mythology about the pre-eminence of markets to such an extent that, when those markets fail, they are powerless to act. The expansion of the G7 to G20 is a signal that there is recognition that major shifts of power at the global level are an essential part of tackling this crisis. The next step is to design a system which would offer sufficient advantages to all nations to encourage them to negotiate over a global financial architecture for the 21<sup>st</sup> century. Here, the prospects are not as bleak as we might imagine. If the settlement works as proposed here, all countries would gain economic stability analogous to that of the 1950s to 1970s and we would stand a far stronger chance of surviving as a species. Beyond that countries gain and lose in different proportions and different ways (as indicated in Table 2).

The largest winners are those who lost most from the Bretton Woods negotiations: the former colonies which are now the poorest nations in the world. The Contraction and Convergence model requires the wealthier nations that emit more CO<sub>2</sub> to make significant transfers to these countries, either in terms of resources or technology, and so they would gain significantly. The countries that presently control reserve currencies would lose significantly in terms of their ability to extort cheap goods from the rest of the world but they would be enabled to extricate themselves from the impossible situation they find themselves in with regard to unpayable debts. The newly powerful nations commonly referred to as BRICs (Brazil, Russian, India and China—although other nations that are succeeding in the global competition can also be included in this group) would have to agree to forego their right to reclaim their ownership of the ‘richer’ countries, which they have accrued by holding considerable stocks of national bonds, but in return they would not face a catastrophic loss of their export markets. The biggest losers would probably be the oil-rich nations which, as is evident from Table 1, would be paying the proportionately largest share of the C&C transfers. But even they would gain from the neutral global trading currency and the higher oil price that would result from a revitalised global economy.

**Table 2.** *Gains and Losses to Various Countries from the Proposed Financial Architecture*

<i>Country/group</i>	<i>Gains</i>	<i>Losses</i>
USA	Debt forgiveness; stable trading in the global economy; avoidance of recession.	Reserve currency privilege with dollar premium, lower consumption because of reduced CO2 emissions, cost of C&C transfer payments
UK	Debt forgiveness; stable trading in the global	Reserve currency privilege, cost of C&C

	economy; avoidance of recession.	transfer payments
BRICs	End of reserve currency disadvantage	Smaller but stable export markets
Poor countries	C&C transfer payments	None
Oil-rich countries	Higher oil price, end of reserve currency disadvantage	Lower income from oil? Major cost of C&C transfer payments
<b>Planet</b>	Survival	None

*Notes*

1. The ‘commons’ is a term used by economists to refer to resources that are owned by the community at large and are outside the realm of standard property agreements. Examples might be land, urban roads, the electromagnetic spectrum, and so on. Green economists argue that, as they are ‘common wealth’, any value derived from them should be taxed heavily: see e.g. James Robertson, ‘Using Common Resources to Solve Common Problems’: <http://www.feasta.org/documents/review2/robertson.htm>.

2. The present limit according to the proposal on GCI’s website is 450 parts per million volume of the global atmosphere. This is now considered too high by some authorities, but given that we are not yet seeing significant reductions it is a reasonable starting point. The IPCC process has also been criticised for its compromises to reflect political pressure from the powerful nations of the world, especially the USA. Trainer (2008), amongst others, considers that it relies too heavily on economic modelling and does not suggest the fundamental changes to lifestyle and economic structure that would be necessary for an effective climate-change mitigation policy.

3. James Robertson argues that there is no real need to link the currency to something of value: an international agreement would be enough—‘an international currency specifically linked to the value of carbon emissions is a distraction from the need for an all-purpose new genuinely international currency for use in international transactions.’

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*References*

Barnes, P. (2001), *Who Owns the Sky? Our Common Assets and the Future of Capitalism* (Washington DC: Island Press).



- Böhringer, C. and Welsch, H. (2004), 'Contraction and Convergence of carbon emissions: an intertemporal multi-region CGE analysis', *Journal of Policy Modeling*, 26/1: 21-39.
- Casella, A. and Eichengreen, B. (1993), 'Halting Inflation in Italy and France after the Second World War', in M. D. Bordo and F. Capie (eds.), *Monetary Regimes in Transition* (Cambridge: University Press).
- Cazorla, M. and Toman, M. (2000), 'International Equity and Climate Change Policy', Climate Issue Brief no. 27 (Washington: Resources for the Future).
- Galbraith, J. K. (1994), *The World Economy Since the Wars: A Personal View* (New York: Houghton Mifflin).
- Jonung, L. (1993), 'The Rise and Fall of Credit Controls: The Case of Sweden, 1939-89', in M. D. Bordo and F. Capie (eds.), *Monetary Regimes in Transition* (Cambridge: University Press).
- Davidson, P., 'Reforming the World's International Money', *real-world economics review*, 48: 293-305; available online at: <http://www.paecon.net/PAERreview/issue48/Davidson48.pdf>
- Douthwaite, R. (1999), *The Ecology of Money* (Dartington: Green Books), chap. 4: [www.feasta.org/documents/moneyecology/pdfs/chapter\\_four.pdf](http://www.feasta.org/documents/moneyecology/pdfs/chapter_four.pdf)
- Dresner, S. and Ekins, P. (2004), *Green Taxes and Charges: Reducing their Impact on Low-Income Households* (York: Joseph Rowntree Foundation).
- Feasta (2008), *Cap and Share: A Fair Way to Cut Greenhouse Gas Emissions* (Dublin: Feasta).
- Field, F. (2008), 'Face up to the guilt', *Guardian*, 8 December.
- Hines, C. (2000), *Localisation: A Global Manifesto* (London: Earthscan).
- Hutchinson, F., Mellor, M. and Olsen, W. (2002), *The Politics of Money: Towards Sustainability and Economic Democracy* (London: Pluto).
- Jonung, L. (1993), 'The Rise and Fall of Credit Controls: The Case of Sweden, 1939-89', in M. D. Bordo and F. Capie (eds.), *Monetary Regimes in Transition* (Cambridge: University Press).
- Lines, T. (1998), 'The Price of Failure: Money, Prices and Economics Reform in Russia', *IDS Bulletin*, 29/3: 18-25.
- Long, S. (2006), 'Market "Solutions" to Climate Change: A Far Cry from Climate Justice', *Chain Reaction*, 28.
- Meyer, A. (2000), *Contraction and Convergence: The Global Solution to Climate Change*, Schumacher Briefing no. 5 (Totnes: Green Books).
- Milmo, D. (2008), 'After \$1tn. Cost of housing collapse, America is now bracing itself for the credit card bill', *Guardian*, 3 December.
- O'Neill, M. (2007), 'Death and taxes', *New Statesman*, 8 October.
- Pettifor, A. (2003), *The Coming First World Debt Crisis* (Houndsmill: Palgrave Macmillan).
- Pettifor, A. and Bush, J. (2003) (eds.), *Real World Economic Outlook: The Legacy of Globalisation: Debt and Deflation* (Houndsmill: Palgrave Macmillan).
- Porritt, J. (2006), *Capitalism as if the World Matters* (London: Earthscan).
- Robertson, J. and Huber, J. (2000), *Creating New Money: A Monetary Reform for the Information Age* (London: New Economics Foundation).
- Rowbotham, M. (1998), *The Grip of Death: A Study of Modern Money, Debt Slavery and Destructive Economics* (Charlbury: Jon Carpenter).



- Rowbotham, M. (2000), *Goodbye America! Globalisation, Debt and the Dollar Empire* (Charlbury: Jon Carpenter).
- Schreft, S. L. (1990), 'Credit Controls: 1980', *Economic Review*, Nov./Dec. 1990 (Federal Reserve Bank of Richmond).
- Stiglitz, J. (2003), 'Inflation paranoia', in A. Pettifor and J. Bush (eds.), *Real World Economic Outlook: The Legacy of Globalisation: Debt and Deflation* (Houndsmill: Palgrave Macmillan), pp. 42-4.
- Trainer, T. (2008), 'A Critical Discussion of the IPCC Analysis of Carbon Emission Mitigation Possibilities and Costs', University of New South Wales website: <http://ssis.arts.unsw.edu.au/tsw/IPCC-CRIT.html>.
- Tran, M. (2008), 'Climate change: EU leaders reach compromise deal on emissions', *Guardian*, 12<sup>th</sup> Dec.

**5. Mary Mellor: The politics of money and credit as a route to ecological sustainability and economic democracy\*** {this paper was first published in *Capitalism Nature Socialism*, Volume 16, Issue 2 June 2005 , pages 45 – 60, and should be cited accordingly}.

Abstract: In recent years the role of money in society has been raised by ecofeminists, greens and ecosocialists and the current global financial crisis makes it more pressing than ever. Ecofeminists have pointed to the gendered dimension of money systems which reward male-dominated and ecologically destructive activities, while much of women's work and lives is marginalized or excluded. Ecological economists have criticized money accounting systems for externalizing environmental damage and treating nature as a free good. Although anti-capitalist critics have long explored the role of finance capital, this paper asserts that money and credit have played a stronger role in all economic systems, but particularly capitalism, than has been previously acknowledged. As Davies has argued, 'our lack of mastery of money is in large part the cause of widespread relative poverty and mass unemployment.'<sup>1</sup> While not supporting the implicit assumption in Davies's statement that controlling money could of itself ameliorate the problems of capitalist economic systems, understanding the role of money and credit could provide a possible route to an ecologically sustainable and just society through a democratized and socialized money system.

1. Glyn Davies, *A History of Money* (Cardiff: University of Wales Press, 2002), p. 17.

Full paper available from the *Capitalism Nature Socialism* Journal at:

<http://www.informaworld.com/smpp/content~content=a714023087?words=politics%7cmoney%7ccredit%7croute%7cecological%7csustainability%7ceconomic%7cdemocracy&hash=3880376786>

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**Mary Mellor – additional material to accompany CNS/ 'Politics of Money' paper**

This paper was written in 2005 but anticipates the financial crisis. It argues that the privatisation of money issue and circulation which accompanied the market triumphalism of the late twentieth century held the seeds of its own destruction. It is well recognised that during the latter part of the twentieth century there was a profound shift from a balance between the issue of bank credit through the privatised banking system (augmented by demutualised building societies) and money issue by the state as notes and coin. This balance had held from the origins of the modern banking system but the massive shift to debt based money put a driver into the economy that had to be self defeating. If all money is issued as debt it demands two things, increased economic activity to enable repayment and

a new issue of debt to enable that repayment to be made with interest and profit. As the century drew to its close the search for profit saw almost unlimited issue of credit that was mainly invested in money assets. Their consequent huge levels of inflation were gleefully celebrated as capital growth by bonus driven city traders. In Britain and the US in particular the economy became both a casino and Ponzi scheme where the only source of growth was new debtors. As we know it ground to a halt on the backs of the American poor.

As the paper points out the privatisation of money meant that profitability became the main criterion for money issue, not the use to which that money would be put. Whoever controls money issue has the benefit of its first use. For the state this had been its own expenditure, historically often used for war, but latterly for supporting public infrastructure and welfare. For banks it was the ability to charge interest. First use now goes almost exclusively to the private sector with the state having to join the queue and pay interest like the rest. As the private sector was seen as the only source of wealth (which it confused with moneymaking) all forms of public and social expenditure were deemed parasitical on the 'wealth-creating' sector. Only the most profitable investments could be 'afforded' and these were likely to be the most socially and ecologically destructive. All ecological and social expenditure was seen as 'unaffordable'. In such a forward motion economy the idea of sufficiency could never be addressed. This is also because capitalism and particularly the turbo-charged financialised version of recent years, is also gendered. The money system and economic priorities are driven by both capitalism and patriarchy. The bodily, convivial, embedded, communal aspects of human life have no place. The old, the sick, the young, the troubled are cast aside. Equally the integrity of the ecosystem and its complexity are deemed to have no value.

As the paper argues there is space within the contradictions of financialised capitalism, particularly as they are now fully displayed, to embrace an alternative, but first it is important to understand clearly how the money and financial system works. This the paper aims to do. It looks at the theory of money and the need to see money as a social phenomenon that is underpinned by social trust and political authority. This has now become clear as the only source of security for the financial sector is seen to be the state or international authorities and the state is having to reclaim its original role of money creation. The paper explores the banking system and the way that a privatised banking sector has been able to create money out of nothing. It makes the case that money in a society must be seen as a social resource in the same way as air or water is a natural resource. It should not be privately owned, it is a Commons. In a monetised society money must be a human right as it controls access to the means of sustenance. Given that a large and complex society needs a co-ordinating economic mechanism money is a useful tool but only if it is subject to democratic control and social priorities. A sufficiency society must use the money system to meet social needs first with profit-driven economic activity (if any) as a secondary sector. It is also important not just to demand that the present capitalised money economy give way to the 'real' economy, but that the notion of the real economy is one that provisions all of human society within a framework of ecological sustainability. A socialised money system could do this and the paper describes how this might be

done. Further development of these ideas will be published as *The Future of Money: Public, Private or Social?* by Pluto later this year.

**Mary Mellor: The Politics of Money and Credit as a Route to Ecological Sustainability and Economic Democracy**

**Introduction**

In recent years the role of money in society has been raised by ecofeminists,<sup>43</sup> greens<sup>44</sup> and ecosocialists.<sup>45</sup> Ecofeminists have pointed to the gendered dimension of money systems which reward male-dominated and ecologically destructive activities, while much of women's work and lives is marginalized or excluded. Ecological economists have criticized money accounting systems for externalizing environmental damage and treating nature as a free good.<sup>46</sup> Although anti-capitalist critics have long explored the role of finance capital,<sup>47</sup> this paper asserts that money and credit have played a stronger role in all economic systems, but particularly capitalism, than has been previously acknowledged (Ingham 2004, Wray 2004). As Davies has argued, "our lack of mastery of money is in large part the cause of widespread relative poverty and mass unemployment."<sup>48</sup> While not supporting the implicit assumption in Davies' statement that controlling money could of itself ameliorate the problems of capitalist economic systems, understanding the role of money and credit could provide a possible route to an ecologically sustainable and just society through a democratized and socialized money system.<sup>49</sup>

**What is Money?**

In contemporary profit-oriented commodified economies, the socio-economic justice claims of individuals and groups are often met by the handwringing political response, "where's the money to come from?" The question is an intriguing one. Where *does* money come from? Given that money is just metal, paper and blips on a screen, why does production and circulation have to stop because somehow it is "missing." An immediate answer from both the left and right might be that it is not the physical money that is important, it is what money represents. Another intriguing question. The capitalist economist's answer would

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<sup>43</sup> Marilyn Waring, *If Women Counted: A New Feminist Economics* (London: Macmillan, 1989) and Mary Mellor, "Women, Nature and the Social Construction of 'Economic Man,'" *Ecological Economics*, 20, 2, 1997, pp. 129-140.

<sup>44</sup> Herman E. Daly, *Ecological Economics and the Ecology of Economics* (Cheltenham: Edward Elgar, 1999).

<sup>45</sup> Juan Martinez-Alier, *Ecological Economics* (Oxford: Blackwell, 1987) and Joel Kovel, *The Enemy of Nature: The End of Capitalism or the End of the World* (London: Zed Press, 2002).

<sup>46</sup> Peter Soderbaum, *Ecological Economics* (London: Earthscan, 2000).

<sup>47</sup> Rudolf Hilferding, *Finance Capital* (London: Routledge and Paul Kegan, 1981) and David Harvey, *The Limits to Capital*, (Oxford: Blackwell, 1982).

<sup>48</sup> Glyn Davies, *A History of Money* (Cardiff: University of Wales Press, 2002), p. 17.

<sup>49</sup> Frances Hutchinson, Mary Mellor and Wendy Olsen, *The Politics of Money: Towards Sustainability and Economic Democracy* (London: Pluto, 2002).

be that money represents economic activity in two senses. It avoids the need for barter by representing value in exchange, and it represents accumulated wealth.

Explorations in anthropology and the history of money indicate that it was not barter but other factors —reciprocity, tribute, bride money, retribution, and perhaps distribution—that played a key role in the origins and earliest developments of money.<sup>50</sup> According to Glyn Davies, the economist Jevons (1835-82) started the myth that money developed to replace barter. Money, as Keynes acknowledged, is as old as trade, and evidence indicates that trade could not occur without it. Money systems based on banking (e.g. stored grain) or other means of accounting (e.g. shells, camels, silver) are around 5,000 years old. Coins came later, around 650 BCE.<sup>51</sup> Davies argues that the link between money and civilization must not be ignored “money and civilization usually marched onward together.”<sup>52</sup> Herman Daly has argued that “money ranks with the wheel and fire among ancient inventions without which the modern world could not have come into being.”<sup>53</sup>

Although money has existed in some form in most societies, the most relevant for contemporary money systems are coin and banking. Banking and notional accounting emerged in Mesopotamia around 3000 BCE, as the huge numbers of cuneiform tablets found there indicates. In Babylon, as in Egypt, a sophisticated banking system developed based on grain that was stored mainly in Royal Palaces. This early banking system offered a range of recognizable services including deposit banking, foreign exchange, secured and unsecured lending. The first banking law (Code of Hammirabi) was enacted in 1750 BCE.<sup>54</sup> The Egyptian and Babylonian systems did not use specie (e.g. gold, silver) or coin until much later. Europe, on the other hand, had coin and commodity money for more than 1,000 years before it had a banking system. China also had a very ancient system of coin (cash) and invented paper money 500 years before Europe.

In Europe and the Middle East, gold and silver were the main money forms which, according to Douthwaite, led to the false idea that money was a scarce and precious resource.<sup>55</sup> Davies notes that “long run trends in depression and prosperity correlate extremely well with the specie famine and surplus of the Middle Ages,”<sup>56</sup> and “the countries which experienced the greatest economic growth were those which had indulged in the most severe debasement.”<sup>57</sup>

Anything can be money provided it is widely agreed as a means of account. Some forms of money have use value, such as camels or grain. But none of them have intrinsic value *as money*. Where money commodities have little or no utility, such as metals, shells or paper, maintaining confidence in its “value” is difficult. In our own era, “sound money” has been sought at great cost. In 1931 the United States

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<sup>50</sup> Davies, *op. cit.*, p. 23.

<sup>51</sup> Davies, *ibid.*

<sup>52</sup> Davies, *ibid.* p.47.

<sup>53</sup> Daly, *op. cit.*, p. 135.

<sup>54</sup> Davies, *op. cit.*

<sup>55</sup> Richard Douthwaite, *The Ecology of Money* (Totnes: Green Books, 1999), p. 33.

<sup>56</sup> Davies, *op. cit.*, p. 646.

<sup>57</sup> Davies, *op. cit.*, p. 647.



and France had 75 percent of world gold stocks but couldn't stabilize their currencies. Money is not a "thing;" it is a purely social construct.<sup>58</sup> What is important about money is that although its value is totally socially constructed, whoever finds it, steals it, or issues it has first call on the real resources of a community. Holding money is a debt on society.<sup>59</sup> States have been built on the accumulation of specie money, the issue of coin or paper notes or through raising money as debt. The power of the issuer is not limitless, the form of money must inspire public confidence.

It is ironic that something so fundamentally social should be given such a tangible role in human societies. Despite this, money in all its forms has played a key role in human development. It is a defining feature of social and national identity. From the early days of the Greek city states, the use of coin has been a symbol of the power and reach of the state. Money is a symbol of nationalism; the national currency with the flag and anthem represents the nation state. It is also an agent of imperialism. In the third century BCE Alexander's gold and silver money enticed or cajoled new populations into his empire in the same way as did the pound sterling for Britain or the dollar for the U.S.

It is odd that radical theorists have ignored the role of money when it is such a totalizing phenomenon in modern societies. The core feature of "total" money economies is that they have no self-provisioning sector—people have no choice but to engage in labor or trade. They have to work for wages if they want to eat. As Marx pointed out, money is not just a medium of exchange or a store of value, it enables the basic circuits of economic life. Wealth is defined by accumulation of money or goods measured in money values. While economists of all persuasions would argue that "real" wealth rests in land/resources, capital assets and labor, it is money that enables the realization of that wealth.<sup>60</sup> Contemporary capitalism celebrates risk-taking entrepreneurs who are seen as using their own, or other people's savings (usually represented as "hard earned money"), in speculative ventures to make profits. The savers and investors are rewarded with profit (or if it is loan capital, interest) and the workers with wages. For capitalist economists wealth can only be created in the private entrepreneurial sector. The only way it can be transferred or distributed is through higher wages, taxation or philanthropy. It is implicitly (or explicitly) assumed that there is a fixed amount of "investment" capacity, that any money extracted through taxation is seen as a "drain" on future investment, and that higher wages means lower profits. Within a capitalized money economy therefore, access to money becomes crucial. Money is no longer dug out of the ground or collected as shells, it is issued into a society in various ways as coins, notes, debts and credits. This paper argues that money issue and circulation is not the by-product of the productive interaction of resources and labor, but the engine of the capitalist economy. It is not by mistake that capitalism uses the words money-making and wealth-creation interchangeably.

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<sup>58</sup> Geoffrey Ingham, *The Nature of Money* (Cambridge: Polity, 2004).

<sup>59</sup> L. Randall Wray, ed., *Credit and State Theories of Money: The Contributions of A. Mitchell Innes* (Cheltenham: Edward Elgar, 2004).

<sup>60</sup> Ingham, *op. cit.*

A major error is to confuse money-based exchange systems with “the economy.” The former covers only those things that are exchanged for money. The latter covers all the goods and services human beings need to attain their full potential as well as all the impacts they have on society and the environment. It is well known that money/market economies “externalize” domestic life, social and neighborly activities, the remnants of subsistence, and costs and damage to the environment. This is because the money economy represents the priorities of those who have historically controlled its designation, from dominant social groups to traders and workers—nearly all men. However, even as money systems create boundaries around aspects of human societies they recognize and value, they can also transcend boundaries of oppression and discrimination. Many marginalized social groups, particularly women, have gained social status by moving into trade or paid work. What is important is to identify the progressive aspects of money while eliminating its exploitative and destructive uses. For the latter Marx is an excellent starting point.

### **Money and Credit in Marx**

In *Capital*, Marx briefly acknowledges the important role of money in capital formation and its elusive origin:

From our present standpoint it therefore seems likely that the capitalist, once upon a time, became possessed of money, by some accumulation that took place independent of the unpaid labor of others, and that this was, therefore, how he was enabled to frequent the market as a buyer of labor power.<sup>61</sup>

As Harvey points out, Marx’s analysis of money was incomplete, and Engels had great difficulty putting together Marx’s notes. For Harvey, what Marxism brings to the theory of money is the differentiation between money and money capital and its role as a source of social power.<sup>62</sup> Marx opens *Capital* with an analysis of money and commodification. He sees money as the “Strange God” that “proclaimed surplus-value making as the sole end of humanity.”<sup>63</sup> Marx’s key insights were to identify the role of money in the capitalist exploitation of labor and to see that the use of money destroyed utility. The first is well known, I want to pay more attention to the second, as it explains the destructiveness of money-value.

For Marx, the elements of capitalism are in the trade process itself, such that the “simple commodity form is the germ of the money form.”<sup>64</sup> Marx’s discussion of the process of exchange shows clearly how money is central to the construction of value-as-price but also to the destruction of value as anything other than price. He uses the example of comparing the value of 20 yards of linen with a coat. To say

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<sup>61</sup> Karl Marx, *Capital Vol. I* (London: Lawrence and Wishart, 1954), p. 534.

<sup>62</sup> Harvey, *op. cit.*, p. 241.

<sup>63</sup> Karl Marx, *op. cit.*, p. 706.

<sup>64</sup> Karl Marx, *ibid.*, p. 75.

20 yards of linen is “worth” one coat establishes a relative value for linen expressed in terms of another commodity, the coat. Equally, the coat could be expressed as relative to the value of the linen. This is not a simple equivalence, one is being expressed relative to the value of the other,<sup>65</sup> but the value of the equivalent in each case cannot be established. The value of the linen cannot be expressed in terms of linen, any more than the value of the coat can be expressed in terms of the coat, or a dollar in terms of a dollar.

Whatever takes the role of money in this context can now move to the “general” form of value by expressing the value of all commodities, such that 20 yards of linen could be “worth” one coat *or* 10 lbs of tea *or* 2 oz gold *or* 1 ton of iron *or* ... x commodity A.<sup>66</sup> Marx says this general form of value has no basis other than social convention, because it:

results from the joint action of the whole world of commodities, and from that alone. A commodity can acquire a general expression of its value only by all other commodities, simultaneously with it, expressing their values in the same equivalent; and every new commodity must follow suit. It thus becomes evident that since the existence of commodities as values is purely social, this social existence can be expressed by the totality of their social relations alone, and consequently that form of their value must be a socially recognized form.<sup>67</sup>

In being socially identified as money a single commodity (e.g. the linen) effectively becomes value-less in itself as it cannot be the measure of its own value. Twenty yards of linen could only be valued as twenty yards of linen. Similarly today the worth of a dollar cannot be defined by itself. The dollar therefore is essentially value-less unless another money equivalent defines its value, which in turn becomes intrinsically value-less. A dollar is worth a euro, but what is a euro then worth?

Within bourgeois economics price value appears to be natural, but Marx argues that value is a social construct, as is its symbol—money: “a particular commodity cannot become the universal equivalent except by a social act .. thus it becomes—money.”<sup>68</sup> Since Marx’s overall aim is to challenge the “naturalism” of classical economics and of the economic system it represents, he asks: “Whence arose the illusions of the monetary system? To it gold and silver when serving as money, did not represent a social relation between producers, but were natural objects with strange properties.”<sup>69</sup> Marx certainly didn’t think there was any inherent money-value in gold and silver but argued that they were very useful as money, although not both at once. Gold and silver are not useful as money if they have a commodity value, particularly in terms of each other, as there must be only one universal equivalent form of value, because “money itself has no price.”<sup>70</sup> Marx says:

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<sup>65</sup> Karl Marx, *ibid.*, pp. 55-56.

<sup>66</sup> Karl Marx, *ibid.*, p. 68.

<sup>67</sup> Karl Marx, *ibid.*, p. 71.

<sup>68</sup> Karl Marx, *ibid.*, p. 90.

<sup>69</sup> Karl Marx, *ibid.*, p. 86.

<sup>70</sup> Karl Marx, *ibid.*, p. 98.

the enigmatical character of the equivalent form...escapes the notice of the bourgeois political economists, until this form, completely developed, confronts him in the shape of money.<sup>71</sup>

A key to Marx's analysis of commodification is the way in which exchange value destroys use value. For Marx, use values "constitute the substance of all wealth."<sup>72</sup> Unlike exchange value, use values can vary qualitatively in terms of use and labor input. Use-value has a "plain, homely, bodily form."<sup>73</sup> In a very green-sounding phrase, Marx quotes William Petty who sees for use value "labor as its father and the earth its mother."<sup>74</sup> On the other hand, Marx says, "exchange values ...do not contain an atom of use-value."<sup>75</sup> This does not mean that commodities' exchange-values have no meaning but that their valuation in markets (e.g. their price) is not based on use-value. Two things can be valued the same in a market, such as a car and life-saving equipment, but their use is very different. This is ironic when we know that under the capitalist market system a car is seen as a wealth creator whereas the life-saving equipment will be seen as a drain on wealth creation unless it is used within a market-based health service.

However Marx goes further than to say that exchange value replaces use value. He shows how the "form of the value" destroys the intrinsic value of things.<sup>76</sup> Commodity value is always relative to the equivalent, which has no value in itself. Everything then becomes valued in terms of something that has no value other than its social existence (a dollar is worth a dollar), so that anything valued as a commodity ceases to have value as itself or as anything else other than the value-less money price. Therefore use-value is destroyed as resources and labor are poured into the bottomless chasm of money-value.

In all economic systems directed by capitalized money, there is an economic incentive to transfer utility into the money form. Forests are cut down to "earn" income, land is sold or mortgaged. To sell a forest for money is no more logical than native Americans selling Manhattan for a string of beads (wampum at that time was highly valued money and used by settlers). Both are equally sensible or stupid depending on the logic from which it is addressed. If the money form is able to store value (purchasing power), then the trade may, temporally, be a good one. However, something of inherent utility has been traded for something of no inherent value. Money, therefore, destroys utility but is also a means of accumulating future buying power, i.e. it is a credit upon society, providing the money form retains its socially constructed value and there remains anything of utility to buy. Money as a credit is therefore a future debt on society.

In a fully commodified economy, money reaches both its zenith as capital and its most contradictory position. Marx described the development of a capitalized money economy. Money in a trading economy is largely a means of trade

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<sup>71</sup> Karl Marx, *ibid.*, p. 63.

<sup>72</sup> Karl Marx, *ibid.*, p. 44.

<sup>73</sup> Karl Marx, *ibid.*, p. 54.

<sup>74</sup> Karl Marx, *ibid.*, p. 50.

<sup>75</sup> Karl Marx, *ibid.*, p. 45.

<sup>76</sup> Karl Marx, *ibid.*, p. 54.

C(ommodity) – M(oney) – C(ommodity). Capitalism begins where commodities are sold purely to make money, that is to increase the value of money invested  $M - C - M+$ . For Marx, commodification (the categorization of “things,” including labor-power, as exchangeable units of economic wealth) begins when people produce goods specifically for the market. Hence the

division of a product into a useful thing and a value becomes practically important, only when exchange has acquired such an extension that useful articles are produced for the purpose of being exchanged, and their character as values has therefore been taken into account, beforehand, during production.<sup>77</sup>

With the emergence of finance capital, the link with the productive economy becomes gradually lost. Stocks and shares become the item of wealth, not the share of the factory they represent. In contemporary society, the link with real commodities is so detached that we see a sequence where Money is invested in Money to make more Money ( $M - M - M+$ ). This is unsustainable for three reasons: First, since money is a debt upon society (i.e. a call upon goods and services), piling up mountains of money produces unredeemable demands. Second, because there is no “real” investment in goods and services to be consumed, investment in money just breeds more money, which requires more money investments to be found. Third, as in any crisis of overproduction, the system collapses when there are no more purchasers—that is, when stock market or house prices move beyond the ability of new people to enter the market.

In modern economies, failures in purchasing power are temporarily overcome through credit; in fact, debt becomes the major form of money creation. As Harvey notes, Marx identified (but did not elaborate) the role of the credit system:

the credit system appears more and more as a complex centerpiece within the Marxian jigsaw of internal relations ... the credit system is a product of capital's own endeavors to deal with the internal contradictions of capitalism.<sup>78</sup>

### **Debt-based Money**

Historically, money has been found (shells), mined (gold, silver) or been socially identified (cattle). Money today is issued as coin, paper or an electronic record, most of it as debt. Debt-money is nothing new. Money has been lent at interest throughout history, as rules about usury in most religions indicate. Richard Douthwaite sees the laws on usury as being linked to the shortage of metal currency.<sup>79</sup> If gold has to be paid back with additional gold, then this must be achieved by extracting it from someone else, which is an incentive to unfair trading. What is notable about modern money systems is how reliant they are on debt-based money issue.

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<sup>77</sup> Karl Marx, *ibid.*, p. 78.

<sup>78</sup> Quoted in Harvey, *op. cit.*, p. 239

<sup>79</sup> Douthwaite, *op. cit.*



Modern accounting and banking developed in Italy and Holland following the acute shortage of gold before 1492. Credits were issued in paper form, and over time the amount of paper circulating expanded in relation to the amount of commodity money. This evolved into the system known as fractional reserve banking. Marx noted the importance of the “international credit system” that spread from Italy through Holland to England and on to the U.S. He argued that the credit system “conceals one of the sources of primitive accumulation” and represents “the capitalized blood of children.”<sup>80</sup> One of the main borrowers was the state, which Marx saw as a key to capitalist development: “The national debt has given rise to joint-stock companies, to dealings in negotiable effects of all kinds...in a word to stock exchange gambling and the modern bankocracy.”<sup>81</sup> For Marx, public credit becomes the “credo of capital” where “the only collective possession the people has [sic] of the national wealth is the public debt.” Public debt becomes “one of the most powerful levers of primitive accumulation. As with the stroke of an enchanter’s wand it endows barren money with the power of breeding and thus turns it into capital.”<sup>82</sup> However, as destructive to the public good as the role of money and credit is, Marx argues that the process of industrial labor and the extraction of surplus value remain the “fundamental cause of misery.”<sup>83</sup>

Over the years three things have happened within the money system in modern economies. First, the myth that there was ever intrinsic value in money has finally been abandoned. In Britain the idea of intrinsic value was a philosophical invention of John Locke, and the actual value of gold was “divined” by Isaac Newton. Second, the concept of a fractional reserve has become meaningless given the huge amount of credit in circulation. Third, issuing cash has virtually ceased in favor of electronic “sight” accounts. In Britain in 1990, total notes and coins were calculated as £320 per head, while M4 (all money sources) was £8,000 per head.<sup>84</sup> In the 1960s, around 30 percent of money issued in Britain was in notes and coins; today it is 3 percent. In the absence of issuing coins and notes the only way left to create money is by debt. Currently, 97 percent of all money is borrowed into existence by governments, companies and individuals. In recent years mortgages have been a source of money issue as the same houses are bought over and over again at ever increasing prices. Mortgage borrowing in the U.K. accounts for approximately 60 percent of credit money and 80 percent in the U.S. In earlier eras it was agricultural and industrial borrowing; today consumer (and student) debt is a growing sector.

This situation leads us to look anew at how the banking system works as a source of money issue.<sup>85</sup> Herman Daly reminds us that until the 1920s, bankers didn’t really understand how banks created money.<sup>86</sup> Steve Keen argues that neo-

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<sup>80</sup> Karl Marx, *op. cit.*, p. 707.

<sup>81</sup> Karl Marx, *ibid.*, p. 706.

<sup>82</sup> Karl Marx, *ibid.*, p. 706.

<sup>83</sup> Karl Marx, *ibid.*, p. 708.

<sup>84</sup> Davies, *op. cit.*, p. 440.

<sup>85</sup> Ingham, *op. cit.* and Wray, *op. cit.*

<sup>86</sup> Daly, *op. cit.*, p. 142

classical theorists still theorize banking as a barter between savers and borrowers<sup>87</sup> despite the fact that no matter how much the bank lends out, individual savers can still get their money back on demand. Equally, the idea of a bank reserve is mistaken. Far from the textbook model, which says that the bank reserve system drives the level of loans, Keen argues that in practice, the state or the national reserve bank has to follow the clearing banks' lead by creating a suitable notional reserve:

Rather than the State directly controlling the money supply via its control over the issue of new currency and the extent to which it lets banks leverage their holdings of currency, private banks and other credit-generating institutions largely force the State's hand.<sup>88</sup>

Given the prevalence of debt-based money issue and the virtual non-existence of fractional reserve banking, the money currently issued into our society is effectively created out of nothing.<sup>89</sup> As Galbraith has argued "the process by which banks create money is so simple that the mind is repelled. Where something so important is involved, a deeper mystery seems only decent."<sup>90</sup> For Daly even though the mechanism of money creation is now largely understood, its impact has not been addressed.<sup>91</sup> He says this is particularly important given the fact that "money creation has become a source of private income."<sup>92</sup> The concentration of money issue in commercial banks has meant that banks have also become major owners and investors in modern society. When Enron collapses and major banks are "exposed" does this mean they are an investor or lender?

Although in practice money is issued through government and private debt, the ideological dominance has been given entirely to private capital. Effectively the modern system of money issue has left the direction of the economy in private and commercial hands. Commercial borrowing is lauded as investment, while government borrowing is decried as expenditure. In Britain this leads to contortions of public policy where investment in the public sector, such as hospitals, are funded by commercial finance which leads to increased overall costs in the long term. Which institutions have the social capacity to issue money and on what basis, is therefore a critical question. Following Weber rather than Marx, Geoffrey Ingham argues that "money is a socially (including politically) constructed promise ...money is always an abstract claim or credit." Further, "moneyness" is provided by whatever is agreed as "money of account." It is socially produced and "constituted" through the social relation of credit-debt.<sup>93</sup> Ingham goes on to point out that any scarcity of money is socially and politically determined and that conventional economics is only applicable "once money has

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<sup>87</sup> Steve Keen, *Debunking Economics: The Naked Emperor of the Social Sciences* (Annandale: Pluto Press, 2001), p. 289.

<sup>88</sup> Keen, *ibid.* p. 303

<sup>89</sup> Hutchinson, Mellor and Olsen, *op. cit.* and Wray, *op. cit.*

<sup>90</sup> John Kenneth Galbraith, *Money: Whence it Came and Where it Went* (London: Penguin, 1975), p. 29.

<sup>91</sup> Daly, *op. cit.*, p. 142

<sup>92</sup> Daly, *ibid.*, p. 141

<sup>93</sup> Ingham, *op. cit.*, p.198.

been produced.” He sees the epiphenomenal status of money as resulting from the fragmentation of the social sciences, such that the question of how money was produced and functioned was not posed.<sup>94</sup> For Ingham, money is arguably the most important institution in capitalist society. The money market is therefore the “headquarters” of capitalism that links the hierarchy of debtors from the private sector to the state through the banking system.<sup>95</sup> The “elastic creation” of credit money is the mechanism through which the capitalist system can be actualized.<sup>96</sup>

It is ironic that even the government—historically the issuer of debt-free money (coin and paper)—now borrows new money from the banking system. As bank money is effectively created out of thin air, the people, through the state, are being made to repay with interest something they could have created out of thin air themselves.

Debt-based money does, however, have internal contradictions. It requires constant growth within the productive economy if it is to be sustainable. While the debt is created out of nothing, the borrower has to engage in economic action in order to repay the debt. Money must also be paid out in advance of recoupment by the sale of the product, service or money-product. Consequently there is a need for an ever-expanding increase in debt-based money as more money must be paid back than was originally issued. In the short term this can be accounted for by faster circulation of the existing money form, but in the whole system there must be a source of expansion that can only be through more debt-based money issue. A widespread failure to borrow could at any time provoke a crisis. Hence the contradiction of current Government handwringing on personal debt alongside the fear that the consumer’s willingness to incur debt will cease. Given that the emergence of consumer debt is a way of avoiding Marx’s prediction of a crisis of purchasing power (realization of value), it is an unstable system poised to collapse.

### **Micro-Credit**

In the last decades of the 20th century, credit issue even became central to “development” policy. This reflected a shift in the approach to poverty alleviation from grant and project based initiatives to more individually based solutions that have been implemented through providing small-scale loans to stimulate or support micro-enterprise. The basic idea spread from Mohammad Yunus’s initial 1976 loan of £17 to around 40 poor people and craftworkers in Bangladesh who were forced to borrow small sums from traders and money lenders at extortionate rates in order to buy their working materials. This led to the founding of the Grameen Bank in 1982 that by 1998 had 1,112 branches employing 12,000 people lending to 2,300,000 borrowers. Loan defaults were very low—initially at around 2 percent—but rose slightly over time. In principle, micro-credit loans are very small, and borrowers are not required to demonstrate possession of large savings or securities. In fact, loans are given based on the absence of assets or banking

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<sup>94</sup> Ingham, *ibid.*, p. 197.

<sup>95</sup> Ingham, *ibid.*, p. 201.

<sup>96</sup> Ingham, *ibid.*, p. 202.

access. In many cases borrowers are encouraged to form small groups that offer a peer guarantee if any individual is unable to repay their loan, thus putting the risk and costs of default onto the borrowers themselves.

As Wendy Olsen points out, micro-finance programs remain relatively small in scope compared with the main banking system in nearly every country, yet they have come to play a large part in aid discourse and donor strategies for the poverty-alleviating impact of the aid packages. Enthusiasm for micro-credit has overtaken the previous focus on the role of state banking, the question of denationalizing or liberalizing banking or whether banks should supply subsidized credit to specific categories of borrowers. As a result, privatization and liberalization of banking now get little public attention although they remain central to structural adjustment programs. In Sri Lanka, for example, the 2001 International Monetary Fund adjustment package included specific components aimed at commercialization and denationalization of the country's two major national banks, the People's Bank and the Bank of Ceylon.<sup>97</sup>

For Olsen, micro-finance (savings and credit) projects a capitalist ideology that encourages poor people—often women—to discipline themselves in order to join the market system without tackling the fundamental question of whether poverty can ever be alleviated under the private property system. In fact, it encourages the employment and exploitation of waged labor—even by the poorest—in order to repay the borrowed finance. Drawing on Kantor's evidence of the clothing industry in Ahmedabad, India,<sup>98</sup> Olsen points out that profits were only earned if a woman hired others; sole operators had no profits to report.

There is a gender dimension to micro-credit, since it has particularly focussed on women borrowers, particularly the Grameen Bank.<sup>99</sup> Women are seen as more reliable and efficient recipients of credit. However, a linked aim is to “free” women by drawing them into the money economy. Linda Mayoux sees the development approaches to micro-finance for women as varying from neoliberal notions of “freedom” through market-oriented production and “equal” opportunities to a communitarian view of people empowering themselves, not individually but in groups.<sup>100</sup> However neither of these views explores the dynamics of gender. Mayoux argues for a feminist empowerment view that takes account of the class locations of women. Other studies have argued that taking on debt, far from liberating women, has added to their burdens in a gendered society such as Bangladesh.<sup>101</sup> Wood and Sharif also criticize the tendency towards a “micro-credit monoculture” that concentrates on the micro level and ignores

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<sup>97</sup> Hutchinson, Mellor and Olsen, *op. cit.*, p. 203.

<sup>98</sup> Paula Kantor, “Female Mobility in India: Its Determinants and Influence on Economic Outcomes,” *Conference of the International Association for Feminist Economics*, Oslo, 2001.

<sup>99</sup> Hugh Stretton, *Economics: A New Introduction* (London: Pluto, 1999), pp. 92-93.

<sup>100</sup> Linda Mayoux, “Women's Empowerment and Micro-Finance Programs: Approaches, Evidence and Ways Forward,” *DPP Working Paper, No. 41*, Open University, Development Policy and Practice Research Group, 1998 and Linda Mayoux, “Participatory Learning for Women's Empowerment in Micro-Finance Programs: Negotiating Complexity, Conflict, and Change,” *Bulletin of the Institute of Development Studies*, 29, 4, 1998, pp. 39-50.

<sup>101</sup> Geoffrey D. Wood, and Iffath A. Sharif (eds.), *Who Needs Credit? Poverty and Finance in Bangladesh* (London: Zed Press, 1997).



development at the macro level.<sup>102</sup> The poor may be able to enhance their income but cannot access wider capital and asset sources. In any event, there is limited market demand for services provided by poor people. Local markets easily reach saturation. Fisher and Sriram also argue that micro-credit has tended to become a top down policy seen as an end in itself (they subtitle their book 'Putting Development Back into Micro-Finance').<sup>103</sup> The problem of poverty cannot be solved by accessing money in a system over which people have no control. The crucial issue must be social control of money systems.

### **The Social Control of Money**

Within the present money/credit system, most of the money issued is in the private hands of companies or individuals. This is something akin to Hayek's desire for the "spontaneous order" of privatized money issue. However, this does not represent freedom for people, because more and more people are sucked into huge levels of personal debt. What is lost in the process is what Hayek rejected as the "designed order" of money issue—that is, (democratic) control through the state. The most important aspect of the present form of money issue is that there is no social control over the economic priorities it represents. Who pays the piper (on borrowed money) calls the tune in the economy. While public debt is seen as a "drain on the economy," private debt is welcomed, even if the investment is in armaments or rainforest clearance. One way to challenge the exclusionary, exploitative and destructive effects of capitalism would be to demand that money issue and use be made subject to democratic control.

Monetary reform—finding new ways to issue and circulate money or goods and services— has stimulated a lot of current interest.<sup>104</sup> The search for social reform through new money and exchange systems has a long history. Robert Owen conceived of a labor-based National Equitable Labor Exchange in 1832-4. More recently, Owen's dream inspired the Ithaca Hours scheme.<sup>105</sup> Ithaca Hours are a paper currency issued in 1992 by Paul Glover, a community activist, in a small university town in upstate New York. Printed notes are denominated in one, two, half and quarter hours. One hour is worth roughly \$10. Ithaca Hours have been issued as loans, grants to charities, and payments to those who advertised in the publication *Ithaca Money*. Nearly 400 businesses accept them, and it has been calculated that the \$6,700 worth of hours in circulation has created \$700,000 in trade.<sup>106</sup> The system now operates in 39 communities in the U.S.<sup>107</sup> While examples from the U.S. have raised a lot of interest, it should be remembered that

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<sup>102</sup> Wood and Sharif, *ibid.*, p. 374.

<sup>103</sup> Thomas Fisher and M. S. Sriram, *Beyond Micro-Credit: Putting Development Back into Micro-Finance* (London and Delhi, Oxfam/New Economics Foundation/Vistaar, 2002).

<sup>104</sup> Bernard Lietaer, *The Future of Money: A New Way to Create Wealth, Work and a Wiser World* (London: Century, 2001), Richard Douthwaite *op. cit.*, Richard Douthwaite, *Short Circuit: Strengthening Local Economies for Security in an Unstable World* (Totnes: Green Books, 1996), Michael Rowbotham, *The Grip of Death: A Study of Modern Money, Debt Slavery and Destructive Economics* (Charlbury: Jon Carpenter Press, 1998) and James Robertson, *Transforming Economic Life* (Totnes: Schumacher Society and New Economics Foundation, 1998).

<sup>105</sup> Mary-Beth Raddon, *Community and Money* (Montreal: Black Rose Books, 2003).

<sup>106</sup> David Boyle, *Why London needs its own currency* (London: New Economics Foundation, 2000).

<sup>107</sup> Lietaer, *op. cit.*, p. 188.



Curitiba in Brazil, with 2.3 million inhabitants, has used complementary currencies for 25 years.

The classic example of using money issue to stimulate the economy was based on the ideas of Silvio Gesell (1862-1930). Gesell argued that the issue of money should be seen as a public service, and therefore a fee (demurrage) should be paid for holding it. Under this arrangement, money would always decline in value, and there would be little incentive to hoard it and prevent its circulation. The 1930s were a period of acute currency shortage, and this led to a number of monetary experiments. In 1932, Worgl, Austria, a town of about 4,500, had nearly one-third of the community out of work and an empty treasury. Mayor Michael Unterguggenberger, the mayor of Worgl, negotiated a loan from the local credit union savings bank and issued around 10,000 schillings in scrip notes that had to be stamped each month to retain their validity. The money was then used to pay the wages of city employees and could also be used to pay local taxes. The money circulated widely and was actually preferred to the national currency. It has been estimated that each note changed hands 463 times on average compared to the average 213 transactions for the national currency.<sup>108</sup> There was no risk, since the scrip was backed by the national currency loan. Major public works were carried out, and unemployment fell by 25 percent. However, within 13 months the scheme had been shut down by the national government which feared a loss of control of currency circulation as other towns prepared to follow suit.

In 1933, Yale economist Irving Fisher promoted the scrip idea in the U.S., and 300-400 experiments were launched. Most of these were seen as emergency measures which were withdrawn following the influx of New Deal money. But Douthwaite and Wagman record that many were shut down by the federal government in 1933 on the advice of Harvard Professor Russell Sprague who claimed that the U.S. monetary system was being “democratized out of its hands.”<sup>109</sup> New money issue is not a magic solution however. During its recent crisis, Argentina tried to issue a “third currency” to no effect. Scrip, non-legal tender is also not necessarily democratic. Scrip was historically issued by employers or by local landowners to control the expenditure patterns of their employees or tenants. Contemporary examples, such as air miles or internet currencies, are also socially exclusionary.

LETS (Local Exchange and Trading Systems) are another current example of new mechanisms of exchange. LETS schemes work best at a very small scale and thus are a form of community reciprocity.<sup>110</sup> In areas where people are in formal work, LETS schemes are mainly an expression of political commitment rather than an economic need, because no alternative exchange system can really work unless it brings in basic means of provisioning. LETS are rarely in this position. The main problem for alternative economic communities is having to buy in currencies from outside in order to access goods and services (e.g., resources, knowledge, technology) they don't have themselves. This raises a further problem:

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<sup>108</sup> Richard Douthwaite and Danial Wagman, *Barataria: A community exchange network for the third system* (Strohalm, Utrecht: Barataria, 1999), p. 97.

<sup>109</sup> Richard Douthwaite and Danial Wagman, *ibid.*, p. 100.

<sup>110</sup> Raddon, *op. cit.*

that initiatives such as LETS or scrip currencies often operate in conjunction with the market economy rather than replacing it. This is a problem for co-operatives too. One exception is the early British Co-operative Movement, which did extend sufficiently to embrace most of the needs of its members for more than a century. Equally, the mutual sector has historically been very large. As recently as 1970, Building Societies' deposits exceeded bank deposits in the U.K.<sup>111</sup>

Descriptions such as “complementary,” “auxiliary,” or “parallel” reveal that many monetary reform schemes are ameliorative augments to the existing money system rather than revolutionary. Bernard Lietaer, who played a major role in the development of the Euro, sees community currencies as a complement to national currency systems.<sup>112</sup> Like Robertson,<sup>113</sup> he argues for multi-level currencies which could be circulated through a growing “cyber-economy.”<sup>114</sup> Lietaer's reliance on the existing framework of economics is shown by his view that complementary currencies play a role in economic development, which he defines as “the capacity to transform resources into capital.”<sup>115</sup> For Lietaer, auxiliary currencies address the limitations of the market by balancing communal yin to the market yang, (the feminine being seen, once more, as picking up the pieces).<sup>116</sup> The limitations of many auxiliary currency proposals are that they are not framed within a fundamental criticism of market economics. It is also not clear how democratic control of money issue would connect with democratic control of resources and production. Lietaer, in fact, fears that the main area of growth will be corporate currencies which will only be issued to the rich, such as frequent fliers or web surfers, while national currency authorities will stamp out local currencies as they did in the 1930s. Douthwaite and Wagman, however, see the use of “auxiliary currencies” as “an important step in the democratization of money creation.”<sup>117</sup> While new exchange or monetary systems may be useful, they do not meet the green socialist aim of democratic control of economic provisioning and the creation of equal and ecologically sustainable provisioning systems. In such a system money issue would be under democratic control and directed to democratic and sustainable ends.

What is important, therefore, are not schemes to manipulate currencies, reform aspects of money systems, or devise local means of exchange. What is needed is ownership and control of the money system itself. The key issue here is seigniorage. Who controls the issue of money in whatever form has control over its use in the first instance. When it is issued by fiat (coin, note, without debt) then there is no penalty of repayment for the issuer. However, governments since the 17<sup>th</sup> century have allowed money issue to be privatized by building up the national debt. Borrowing has increasingly moved from bonds and the national bank to borrowing from commercial banks. Today the E.U. Central Bank cannot make loans to public bodies; money issue has become entirely commercial.

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<sup>111</sup> Davies, *op. cit.*, p. 402.

<sup>112</sup> Lietaer, *op. cit.*

<sup>113</sup> Robertson, *op. cit.*

<sup>114</sup> Lietaer, *ibid.*, p. 266.

<sup>115</sup> Lietaer, *ibid.*, p. 278.

<sup>116</sup> Lietaer, *ibid.*, p. 285.

<sup>117</sup> Douthwaite and Wagman, *op. cit.*, p. 6.

## Conclusion

What this paper has shown is that the current money/credit system plays a major role in the operation of the capitalist economy and it is not just a reflection of market relations. As Marx has argued, money and credit have played a key role in the construction of inequality in modern society, particularly in enabling both primitive and capital accumulation. As we have seen, the modern banking system is both illusory and unstable, there is no intrinsic value of money and there is effectively no bank reserve. Money systems are confidence systems, they are social systems. The danger in maintaining the illusion of money as an epiphenomenon and not openly debating its social nature is that when banks and money systems collapse anger can be irrationally turned on particular groups of people. It is important to analyze the development of debt-based banking as an historical, structural form and not as some aspect of personalised greed. Bankers may have developed interest bearing credits and fractional reserve banking to make extra profit, but also to aid trade when it was restricted by shortages of specie money such as gold. Failure to see banking as a social and historical system can lead to the development of horrendously vile politics in the wake of economic collapse as in the 1930s. It is therefore vital that Socialists have a clear analysis of how and why money systems operate and develop clearly thought out alternatives.

In a money-based society access to money must be a human right. To be denied that access is to be denied the right to sustenance. As money is created out of nothing there is no logical reason why it should be borrowed from banks, then circulated through commercial production before being taxed into social use. A more logical way would be to issue the money to the people, individually or collectively, who could then choose their provisioning priorities. When money is issued into a society how it is spent or invested directly affects all members of the society and should therefore be a matter of democratic debate. Examples of democratic approaches to social expenditure already exist as in the democratic budgeting systems in Porto Alegre and elsewhere.<sup>118</sup> Money could be issued as of right through the state (with provision for democratic control of the use of it) or directly to people as a social income. Many people have called for a universal social income as of right but often, like Hardt and Negri,<sup>119</sup> without having any theoretical analysis of the money system to underpin this demand. The most important factor for ecofeminist Socialists is that the organization of provisioning should be ecologically sustainable and under common ownership and control. The resources, goods and services of a society should belong equally to all. Harnessing the functioning of the credit money system is not a solution in itself. However, it could form a basis for organising a complex socialized economy in a flexible way, while avoiding the bureaucracy of a planned economy or the limitations of localized provisioning. In this context, exposing the vacuous and deeply exploitative reality of money issue and making proposals for putting such a simple yet sophisticated mechanism in the hands of the people would be a revolutionary act. MARY MELLOR, Northumbria University, Newcastle upon Tyne UK [m.mellor@unn.ac.uk](mailto:m.mellor@unn.ac.uk)

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<sup>118</sup> William R. Nysten, *Participatory Democracy versus Elitist Democracy: Lessons from Brazil* (New York: Palgrave, 2003).

<sup>119</sup> Michael Hardt and Antonio Negri, *Empire* (Cambridge: Harvard University Press, 2000).

## 5. Book Reviews

**The Coming First World Debt Crisis Review by Molly Scott Cato:  
Ann Pettifor: *The Coming First World Debt Crisis* (Basingstoke: Macmillan, 2006), 232pp., 0230007848.**

Ann Pettifor, writing in 2006, sets out a fascinating trail of how the world was facing a credit crunch that would match the scale and devastation of 1929. The book was written when economists across the world were basking in boom economies and were mostly unable to see an end to the prosperity around them. With superb foresight, Pettifor details how the 'debtonation' was due to happen and even suggested the likely collapse of Iceland which, of course happened just two years later.

The book shows how personal, corporate and governmental debt grew exponentially following the deregulation of banking during the 1970's and 80's. Pettifor describes a relatively stable scenario up to 1970, then rampant debt being created from then on resulting in total debt in the US equivalent to 3 times GDP. She demonstrates how the level of debt, especially debt connected with high interest rates, becomes unpayable without ecological degradation and exploitation. She describes how the deregulated economy is not backed by a real economy of production but created by those with money to the detriment of those without.

Pettifor, dwells heavily on the issue of usury, explaining how Christianity originally shunned the concept but then backed it and how Islam remains opposed to it. She brings into the discussion the concept of ethics and demonstrates how usury is wholly unethical.

With the global economic system focused on the need for rapid economic growth through deregulated debt, Pettifor demonstrates how the system works for the financiers rather than for people or for the planet. The rapid increase in money supply with little cost to those creating the money (yet large gains through interest repayments) leads to increased global trade and consumption. She suggests, however, that the ecosystem is not strong enough to allow the repayment of debt through renewable sources and therefore suffers as resources are stripped.

The 'barren' nature of money features repeatedly through the book. With money historically seen as a means for barter and store of value, Pettifor describes a major flaw in the use of money to create more money with interest – the problem of how to repay the interest. She describes how loaning land or livestock creates conditions for production that can be used to not only repay the loan but provide additional payment for the privilege of borrowing. The example of borrowing a chicken is used to illustrate this well, with the borrower being able to give the chicken back plus a couple of eggs. While money can be used to purchase means of production, in itself money is sterile and with the money being simply used to create more money it is easy to see how a mountains of unrepayable debt can accumulate.

As the book was written before the current global financial crisis, Pettifor suggests five potential triggers for the coming crisis. Starting with a climate triggered crunch, she suggests how a series of catastrophes such as Katrina could prompt the crunch. The second trigger is suggested to be a house price crash as the house price bubble bursts. Thirdly, she suggests rising interest rates could topple the economy and fourthly the US deficit and collapsing dollar. Finally an oil price shock is suggested as a trigger. Clearly predictions such as these are always fraught with error, but the range of potential for the global crisis is wide and varied suggesting an inevitability that the premise of the book is built upon.

As with all good books of this nature, solutions to the crisis abound. Starting with the personal approach, Pettifor suggests that as individuals we can simply reject the consumerism that pervades society, moving away from the need to earn more and more to a more simple life spent with family, friends and connecting with nature. Next she suggests that usury and the theft of commons be condemned, and that there is a need for a golden jubilee to wipe debt slates clean. She suggests that the creation of money and other financial powers needs to be democratised, taken away from those whose interests are in private profit and given to those serving the people and elected by the people. Finally she describes the need for International Clearing Agency, as proposed by Keynes, to resolve the problems associated with international trade.

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### **Ecology of Money: Review by Richard Lawson**

*Ecology of Money*, Richard Douthwaite, published by Green Books on behalf of the Schumacher Society, Dartington 1999 (reprinted 2007,2008) ISBN 978 1 870098 81 6

Published in 1999, *The Ecology of Money* by Richard Douthwaite is even more relevant ten years later due to the Credit Crunch, and may become yet more relevant as the effects of global heating become more apparent, and if the global monetary system collapses under the weight of the Toxic Derivatives.

Douthwaite's slim (80 page) volume does what grey economists are congenitally incapable of doing – he explains money briefly, with clarity and in plain English. The ecology in the title represents how money interacts with its environment, both human and physical. He explains how the fact that money lent out at interest by private corporations is an important driver for economic growth. This fact is of central importance to any person who claims to be 'green', and it is passing wonderful that it is so little known, even among committed environmentalists.

In the first paragraph we read 'Most people think that there's only one type of money because one type is all they've ever known.' We take the way that new money is created for granted. If only it were that simple. The book describes the wide diversity of forms of money, from the clam shell wampum currency, through the Gold Standard, to the Almighty (if illusory) Dollar. Wampum was



used from 1535 until the last clam shell drilling factory closed in 1860. It performed well, although it devalued when steel drill bits replaced stone tipped drills to drill the holes that allowed the shells to be strung together, which proves that no money is immune to devaluation.

A fascinating diversity of other means of exchange is covered: Local Exchange Trading systems, the Swiss *Wirtschaftring*, the Argentine *patacone*, gold and finally the dollar reserve system. Although wildly different, all share the common feature of a response to a crisis in the prevailing monetary system.

What is money? In addition to the three functions allocated to money by mainline economists (a medium of payment or exchange, a store of value, and a unit of account) Douthwaite gives it a fourth function – it should underpin sustainability.

Money can be produced by private institutions for their own profit, by governments, or by communities for their own needs.

Commercially produced money began with the original dishonest goldsmith who started to lend out unused money that people had deposited with him. This fraud became institutionalized as fractional reserve banking, a fundamentally unstable arrangement whose abuse is one of the problems causing the present Credit Crunch. Douthwaite shows how commercially produced money has struggled to perform well as a means of exchange, a store of value and a unit of account. Most importantly, it fails to relate to the real environmental values that necessarily underpin human life itself.

He then proceeds to examine 'People-produced money'. Notable is the Swiss *Wirtschaftring* (Economic Circle), introduced in 1934 to meet the challenge of currency shortages in the Great Depression. Businesses grouped together for the purpose of extending mutual credit to each other. It has been so successful that in 1993 its 60,000 account holders had a turnover of £1.2 billion. Our own Small and Medium Enterprises should study the *Wirtschaftring* for application in the present recession.

The Recession is likely to see a flourishing of LETS schemes, as a means of allowing those without access to the national monetary system to exchange goods and services with each other. Those setting up such schemes will find much useful information in this book, whose author has been involved in organizing and studying them himself. He is candid about their weakness, as well as what they have to offer and suggest remedies for the problems.

Next Douthwaite deals with government-produced money. This was the norm up until the modern age, so the present doubts about Quantitative Easing lack historical perspective. In many ways, it was a means to fund government spending, and as is to be expected, several governments were tempted by greed, with resulting inflation. However, even this devaluation could have positive economic results. Bracteates (coins of precious metal made during the Middle Ages) were regularly devalued, so they were a poor store of value. This caused people to spend them as rapidly as they could, which resulted in a significant stimulus to the real economy, with much improvement to the housing stock.

When gold replaced the depreciating silver bracteates, things changed. As gold was an excellent store of value, people put it under their mattresses, with the result that money became scarce, interest rates soared, and the divergence between rich and poor increased. Wages fell and unemployment rose.

Douthwaite backs James Robertson's case is that if government limited banks to their core function of credit brokering, and took back to itself the function of issuing new money, the Government could gain to the tune of £50 billion a year, about one sixth of Government spending. The huge advantage of this is that a sensible Government could direct this money into socially and ecologically beneficial projects, instead of it being loaned out on a value free basis for sole purpose of making profit, as happens when the banks create the money.

In his fourth chapter, Douthwaite sets out his blueprint for a new monetary regime. It has four components: International, national or regional, community based, and store-of-value currency. The international currency would replace the present reserve currencies, the dollar, pound, euro, Swiss franc and yen. Issuers of reserve countries gain huge advantages against smaller economies, which contributes to the unacceptable divergence that is the cause of so much misery in the world. All currencies are based on some scarce resource, be that cowrie shells, gold, or some reserve currency. Douthwaite argues that the resource that needs to be minimised is carbon dioxide emissions. He builds on the case for Contraction and Convergence, which allocates a per capita amount of CO2 emission to the whole world, an allowance that will shrink year-on-year in a way that will bring CO2 levels down to levels compatible with sustainability.

Douthwaite's plan is to give each adult in the world would be given annually an equal share of that year's declining level of emissions. These Special Emissions Rights (SERs), which can be viewed as personal energy ration coupons, would be sold at banks and post offices, who would sell them on to fossil fuel producers, who would be allowed to produce only the amount of carbon based fuel equivalent to the SERs that they held. Some of the SER funds would be held back from the producers and allocated to countries like Bangladesh to assist their climate change adaptation programme. To start the process off, the international agency (IA) would issue energy based currency units (ebcu) to every country in proportion to their populations. Energy hungry countries might need to purchase extra SERs from the international agency to satisfy their needs. In this event, the IA would annihilate the ebcus on receiving them.

In this way, the economies of the world would be constrained by carbon energy rather than credit as at present. Economies could expand in proportion to the rate at which they decarbonised their economy. Essentially, Douthwaite's proposal is a version of the gold exchange standard, in which the right to burn fossil fuel has replaced gold, and where the ebcu has replaced the dollar. At first sight, the proposal seems impossibly idealistic from the present viewpoint. However, if, as is quite possible, the prevailing global monetary system goes total meltdown due to the implosion of the Ponzi-style derivatives market, the ebcu idea will come into the frame. It is not claimed to be a perfect model (engagingly, one of his sections is titled 'Nothing is perfect').

The first problem is the assumption that governments have the power to tell energy companies what to do. At present the boot is most definitely on the other foot. However, we live in interesting times, and once mankind realises more fully that global warming is a reality, not an interesting (or contentious) theory, the situation may change.

There is a cognitive difficulty with basing money on something that is eco-toxic (carbon dioxide) rather than something that is desirable. My instinct would be to base a nation's money supply on something like the Index of Sustainable Economic Welfare, or the Happy Planet Index, rather than the non-use of carbon. However, Richard Douthwaite has placed a plan on the table, a plan that bases money on the health of the planet, and he deserves to be read and understood before he is criticised. Criticism is easy; construction is more difficult. Understanding should precede criticism, because out of that understanding can emerge a new economy and new money, based not on gold, not on greed, but on Gaia.

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