Critical Realism and the *Sun Paradigm* an essay on The Nature and Logic of Critical Realism as a New Socio-Scientific Paradigm

Notes

When reality is accurately understood, new policy proposals easily arise

Meaning of 'paradigm'

A 'paradigm' is a mindset based on interconnected assumptions and underpinnings which appear to be self-evident truths. It is thus an intellectual structure founded on connected components while being, at the same time**,** *an understanding of reality*.

NB. *Paradigms decide what does, or does not, happen.* A shift to accurate paradigm opens the way for much positive and beneficial change.

A new paradigm cannot be understood by using the analysis and understandings of the old paradigm. It can only be understood in terms of its own new analysis and understandings.

People say that they "don't understand economics"

People often say that they "don't understand economics". This is NOT because they are stupid! Rather it is because mainstream economics is full of contradictions and false assumptions which make understanding impossible.

However, when the false assumptions are reversed, people become joyful as they suddenly realize that they ***do*** understand.

JOCRISE

Critical Realism and the *Sun Paradigm*

Rodney Shakespeare
Formerly Visiting Professor of Binary Economics, Trisakti University, Jakarta, Indonesia.

Abstract

Critical Realism looks into the depths of reality to explore the mindsets or paradigms which decide what does, or does not, happen in society.

It discovers fifty nine assumptions constituting the mainstream economic paradigm and, on their detailed examination, finds that they are all false.

However, when the assumptions are reversed or near-reversed, *the **reversals** are found to be true*.

The reversals then form the components of the Sun Paradigm which provides new solutions for the economic, environmental – and political – problems of the world.

Keywords: Sun paradigm; paradigm; critical realism; false assumptions; reversal of assumptions; Economic Democracy; Assured Basic Incomes; homo economicus; population reduction; homo co-operans; power structures; binary economics

1. On Critical Realism and Social Science

Critical Realism sees the central aim of social science as being the provision of explanations in terms of hidden generative structures. These structures are *mindsets* or *paradigms* (i.e., ways of viewing and understanding reality) and paradigms decide what does, or does not, happen.

Over time, paradigms become outdated so that they need to be replaced. However, because many vested interests are determined to prevent beneficial change, the pressures for replacement can build so that, instead of a process of steady improvement, there is the apparently sudden manifestation of an intellectual revolution. In practice, therefore, rather than being a continuous process, the progress of science is one punctuated by periods of unexpectedly fast advance.

2. Critical Realism and mainstream economics

In the field of economics, Critical Realism does not rely on formal deductions from mathematical axioms leading to predictions (which are often inaccurate). In contrast it examines mainstream assumptions about reality to see if they are true and, when they are found to be untrue, it substitutes truer, more realistic, assumptions.

Significantly, Critical Realism does not split its analysis into discrete parts but sees the overall connections. Thus macro and micro economics are to be viewed not as separate subjects but rather as parts of a whole.

Worst of all, mainstream economics is incapable of addressing major economic and environmental problems.

In summary, Critical Realism views mainstream economics as narrow, selective, incompetently predictive and inadequate for solving problems.

3. Strong sense of possibility

Furthermore, Critical Realism has a strong sense of possibility. It is as though there is a deep underlying reality which cannot be seen. Yet, at the same time, this reality imbues everything and is everywhere. It is powerful. It is generative and fertile. It can inspire and, because the world is approaching economic, financial and environmental crisis, it *must* inspire if we are to raise our game, do better, and overcome impossible odds.

4. Naming the deep reality

We could give a name to this deep reality which imbues everything. We could call it Allah or God.

However, firstly, it is probably better to describe it as the knowledge that today's world, dominated by Western mainstream economics, is *not* an Embodiment of Perfection and is *not* the Ultimate End or Purpose of History (Fukyama, 1992) as America and its acolytes like to claim. Rather, today's world is corrupted and profoundly perverted.

Secondly, the deep reality is a revolutionary recognition that while, too often, the present world is a manifestation of evil bringing destruction to humans, fauna and flora, there also exists the possibility of a world which is different, better and – yes – more beautiful.

In short, the deep reality causes a rejection of the unsatisfactory present world while, at the same time, inspiring the desire to work for a new, responsible and truly creative future.

5. Control by the prevailing power structure

Humans naturally like to think that they understand reality. However, time and time again, history proves that their thinking is not just conditioned but *controlled* by the prevailing power structure which, intent only on preserving itself, ensures that accurate perceptions of reality are suppressed and distorted perceptions substituted instead.

Indeed, a power structure always assumes that, in the cause of perpetuating its own existence forever, anything – from lies and false propaganda to torture and killing – is permissible.

Thus Copernicus and Galileo were suppressed whilst more modern heroes – Charles Darwin (evolution and natural selection); Alfred Wegener (tectonic plates); Louis Pasteur (germs), and Barbara McClintock ('jumping genes') – suffered extreme hostility and vicious opposition or, at best, sometimes, like Gregor Mendel (genetics), were just ignored.

Consequently, the periods for implementation (or at least understanding) of new paradigm are long – fifteen years for McClintock; fifty for Wegener; and one hundred and forty four for Copernicus.

6. The crux of the matter

The crux of the matter is simply who does, or does not, have a more accurate understanding of reality and so has the greater ability, over time, to provide more beneficial solutions to the problems of the human race and the environment. Is it:-

a) the elite (only wanting to maintain its own power) OR
b) the new progressive thinkers who, in a properly scientific and meticulous manner, are revealing what is true about reality rather than what the elite says is true?

7. A challenge to the global elite

Thus the new socio-scientific *Sun Paradigm* arising from Critical Realism is not only introducing more accurate (and so more beneficial) thinking but is also making a direct challenge to today's global elite. The elite is now amassing wealth for itself on an unimaginable scale while completely failing to find a solution for global poverty. At the same time, the elite is everywhere bringing ecocide.

8. Fifty nine false assumptions about reality

Today's finance capitalism is a manifestation of the intellectual edifice constructed by mainstream economics.

Quite remarkably, *fifty nine* assumptions about reality have been identified as underlying and supporting the edifice.

Moreover, at first, most people are prepared to accept the fifty nine assumptions as true. However, on careful examination, the assumptions are then found to be at least challengeable and, often, completely *false*.

An analogy is our factual understanding of the sun which, at first sight, appears to go around the earth but, upon further consideration (including study of the movements of the planets), the situation is realised to be an ***opposite*** i.e., the earth spins around the sun.

9. The interconnection of the assumptions and their reversal

Furthermore, *all* of the assumptions are *interconnected* and the interconnection has an extraordinary consequence i.e., if only *one* assumption is found to be false, ***the whole intellectual edifice starts to crumble***.

The crumbling is astonishing enough but something even more astonishing also happens – if the false assumptions are, one by one, ***reversed*** (or near-reversed) then:-

a) firstly, the reversals will be found to be true (and in this way the component assumptions for the new socio-scientific paradigm are discovered)
b) secondly, after only a few reversals, a vivid panorama appears in which there are new solutions for economic, environmental and political problems.

10. Starting point

So where can a start be made? Because of the interconnection between the false assumptions there is no obvious starting point. Rather than a linear progression from one starting point, there is a *network* of false assumptions underpinning the mainstream structure and so a number of possible starting points.

That said, five of the false assumptions are particularly pernicious and therefore should be identified early on.[17]

11. First false assumption – Human labour creates all, or most, of the output

What creates the output – the goods and services – upon which all humans depend? Mainstream economics (deriving from Adam Smith) assumes that, in any task, human labour does all, or most, of the work in creating the output.

However, that is false. The truth is a near-opposite i.e., in a task, human labour:-

17 The other fifty four false assumptions are set out in Appendix One. There could be as many as one hundred false assumptions underlying mainstream economics and readers are invited to try to identify some of them.

a) sometimes does all, or most, of the work in creating the output
b) sometimes does a percentage, ranging from large to small; and
c) sometimes does none

11.1. A thought experiment

A thought experiment is helpful. Think of a fully automated factory with continuous output remembering that the first automated factories were constructed over sixty years ago. The factory smoothly gets on with its work without lunch breaks or, for that matter, a good night's sleep. It simply does production without rest or complaint.

Then notice that, because their work is finished:-

a) the designers of the automated factory have been paid
b) the engineers and builders who constructed the factory have been paid.

Of course, the maintenance team is still being paid because it is on standby. Maybe doing little or nothing most of the time (however, when necessary, capable of very quick, high quality action), the maintenance team remains just that – the maintenance team. It is like your doctor who, it is hoped, does a good job of maintaining your health but who is most certainly ***not*** part of your production.

In sum, in a fully automated factory, *there are **no** humans involved in producing the output*. **NONE!** Yet mainstream economics defines productivity as total output *divided by* total labour input. Thus productivity is:-

total output ÷ total labour input

This claims that ***ALL*** the output is done by human labour!

However, in the automated factory, ***no labour is involved*** and so productivity has, at the same time, either risen to infinity *or* collapsed to nought! Which is impossible!

11.2. The productive contribution of animals, plants – and the sun

Not understanding automated factories is bad enough. Yet even worse is the inability of mainstream thinking to comprehend the large contribution to production made by animals and plants. In fact, it is incredible that mainstream economics thinks that humans (and not chickens) do the work of producing eggs; and that trees never grow by themselves until, at the very least, a human starts looking at them!

In short, mainstream thinking is unable to properly comprehend the various contributions to output which are made by non-human things (and further examples include the pavements which help humans to walk easily

and the air which gives us oxygen).

NB. Never forget that ***non***-human things – the ***capital instruments***– do ***work*** e.g., a keystone bridge does work in providing a service (enabling the crossing of a river); and a donkey does the work of carrying a load (and, if that is not believed – ask the donkey!) A capital instrument is any ***non***-human thing involved in production e.g., a seed, a chicken, a tree, scissors, machinery, a building, technology, land, a ship or an automated factory.

Worst of all, (being self-centred, controlled by outdated dogma and unable to use its own eyes), mainstream thinking ignores the contribution to output of the sun upon which all life ultimately depends.

11.3. Historical, technological and holistic ignorance has negative consequences

This historical, technological and holistic ignorance has serious negative consequences one of which is a total inability to grasp the true causes of persistent poverty.

Thus half the world's population lives on under $5.50 per day (for everything including accommodation, travel, food and dentistry) and the mainstream explanation is that labour creates all or most of the output and people are poor because they are unwilling to work hard and become educated.

Yes, mainstream economics – with extreme self-righteousness – thinks billions of people are layabouts and good-for-nothings!

Which is an insult because, right the way around the world, people are willing to work hard and be educated but, even when educated, are still unable to get a job.

Moreover, even when they do have jobs, people are low paid and insecure. Furthermore, they are without protection against environmental hazard or natural disaster. Above all, they are indebted to usurious money lenders and have no hope of ever saving enough money to start their own businesses. Most of the time, their lives are some form of desperate attempt to avoid falling back into penury with consequent risk of starvation and death while women are in a particularly precarious position – in many countries today, gleaning women can be seen.

Clearly, since people are willing to work and be educated, the false assumption of laziness as the cause of the persistent poverty is an outrageous slur.

11.4. The reason why mainstream economics makes the false assumption

So why does mainstream economics make the false assumption? The answer is that the assumption is designed to disguise the contribution to output of the capital instruments and so is part of a gigantic connivance which:-

a) asserts that it does not matter who owns the capital instruments
b) ensures that the ownership of the capital instruments is narrowly, and not widely, held (as is essential for achieving a spreading of the real economy to every person in society so as to create a true balance of supply and demand)
c) claims that egregious accumulations of wealth do not matter because wealth always 'trickles down' from the rich to the poor. (NB. This is completely untrue – the rich do not, and cannot, spend all their wealth.)

By so conniving, mainstream economics and politics can, and do, avoid any demand for the widening of capital ownership!

11.5. True reason for persistent poverty

Moreover, the mainstream explanation for persistent poverty (i.e., people are unwilling to work, or do not work hard enough, and/or are unwilling to get themselves educated) obfuscates the true reason for persistent poverty.

That reason is ***a lack of access*** to what:-

a) really does create the wealth i.e., technological productiveness
b) finances the acquisition of technological productiveness i.e., low cost capital credit
c) legally consolidates technological productiveness i.e., capital ownership together with:-
d) the burden of compound interest and
e) a thoroughly outdated understanding of economic reality

12. Second false assumption – Banks lend existing money

The second false assumption of mainstream economics is that banks today lend existing money.

This is *false*.

Long ago, money was *not* created out of nothing (as happens today). Rather, money was something with a tangible existence e.g., copper, silver,

gold or even stone disks. Thus, in some form or another, money was *commodity* money.

Of course, governments – and bankers – then realised that they could create more money for themselves through debasement e.g., by lessening the amount of copper, silver or gold in a coin, or by printing more banknotes.

However, although in practice there was debasement, *in theory* (and in the widespread propaganda) the principle of commodity money – that money should be a real thing – was widely upheld and believed (as most people still believe today).

Nevertheless, the modern truth is an opposite – the banks do *not* lend existing money. Instead the lent money is ***created out of nothing*** by pressing computer buttons!

Thus the Bank of England says:-

> *'In the modern economy, most money takes the form of bank deposits. But how those bank deposits are created is often misunderstood:* ***the principal way is through commercial banks making loans****. Whenever a bank makes a loan, it simultaneously creates a matching deposit in the borrower's bank account, thereby creating new money' (*McLeay et al., 2014.)

In the UK, for example, 95% or more of new money is created out of nothing by the banking system which does it very simply ─ by pressing computer buttons. (The other 5% or less is created by the government.)

Indeed, all around the world today, money is *created out of nothing* by the banking system which creates most of the money as loans to which a demand for interest (beyond justifiable administration cost and any other essential charges) is attached.

12.1. Getting away with counterfeiting

So how does it happen that the banks are able to do what is essentially criminal counterfeiting usually punishable by long prison sentences? How is it that the banks can misappropriate *society's* money supply for their own narrow, elitist purposes?

Firstly, the answer is that the public is not generally aware that the banking system creates lent money out of nothing. Other people's deposits are *not* used for the lending but the public usually believes that they are and, all the time, various sorts of subtle propaganda are used to maintain this belief.

Secondly, mainstream propaganda *claims* that the purposes of the economy are being properly served because the (created-out-of-nothing) lent money is being directed at productive capacity (it *claims*) in an efficient and just way which creates growth from which all fairly benefit.

That is the *claim*. So, according to mainstream propaganda, bank money (created out of nothing with interest added – all for its creator's benefit) is the magic element in the (*claimed*) successful operation of the 'free market' because the new money is serving the needs of the real economy, efficiency and justice.

12.2. Bank loan money does NOT serve the needs of the real economy, efficiency and justice

Yet today's bank money does ***not*** serve the needs of the real economy, efficiency and justice.

For a start, the *claim* of efficiently allocating resources is untrue – only 2% or less of the money supply goes into new productive capacity (Lietaer, 2001) and instead goes into-

a) the gargantuan casino of derivatives
b) the bidding up of the price of existing assets (e.g., stocks, shares, houses)
c) the narrowing of ownership
d) consumer credit (which lessens the capacity of borrowers to consume)
e) putting individuals, companies and societies into un-repayable debt
f) humungous accumulations of wealth by the elite which do NOT 'trickle down' to ordinary people.18

Indeed, the bank money, created out of nothing, goes into anything ***<u>except</u>*** the productive economy and the spreading of the real economy to every individual in society.

And remember – *unless productive power is widely spread, there can never be a true balance of supply and demand.* When there is no spreading, the rich get richer; most people become insecure; and the rich-poor gap increases.[19]

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18 Billionaires increased their wealth as much in the last two years as normally happens in twenty three! During the pandemic their collective wealth increased by $12.7 trillion (42%). The richest ten men possess more wealth than the poorest 40% of humanity combined. Oxfam Report, *First Crisis, Then Catastrophe*, 2022.

19 In 2017, billionaires increased their wealth by *$2.5 billion <u>per day</u>*. This was an increase of 12% while the poorest half of humanity saw its wealth decline by 11%. The top twenty six wealthiest people owned as much as the 3.8 billion poorest. *Oxfam Report*, 2018.

13. Third false assumption – Interest is necessary

Mainstream economics claims that, when money is lent, interest is necessary. This is **false**.

The truth is an ***opposite*** – genuine administration cost is necessary (as are repayment of principal and, sometimes, provision for collateral), **but interest is *not* necessary** because it is an imposition put *on top* of administration cost.

The imposition of interest *on top* of administration cost is outrageous because, at the same time, the lent money has been *created out of nothing.*

(**NB.** Banks charging interest on money *created out of nothing* is outrageous but they can charge interest **IF** they are lending *their own* money or, with permission, that of depositors.)

13.1. Conflation of interest with administration cost and repayments of principal

So how did this deceptive situation come about? It happened because, in order to hide the true amount of the interest, bankers long ago conflated (i.e., mixed together) the interest with administration cost and principal repayments so that they could not be distinguished from one another. Bankers have always been able to do this because of their negotiating power. Thus any distinction between necessary administration cost, principal repayments and interest was obscured and, in practice, lost forever.

13.2. Diminution of ability to repay

The requirement to pay interest, particularly compound interest:-

a) *greatly diminishes the capacity of borrowers to repay* ***and*** *diminishes their capacity to consume*.

Indeed, interest is a gigantic mechanism which sucks up wealth from the poor and transfers it to the rich. Generally, interest causes 80% of the people to pay out more than they receive; 10% are in balance; and the last 10% receive much more than they pay out.

In Aachen, Germany, interest is 12% of the cost of rubbish collection; 38% of drinking water; 47% of sewage; and 77% of public housing.

Moreover, over the period 1950-1989 German GDP increased twenty two times, but interest on the National Debt increased *seventy five* times!

It is also estimated that 50% of the price of *all* goods and services relates to borrowing costs. (Kennedy, M. 1995)

b) stops needed capital investment

Consider the UK Humber Bridge. Starting at £28,000,000, compound interest (with some price rises) took the cost to £439,000,000. That's *fifteen times* higher!

Yet the Bridge is profitable! Its operating costs – repair, maintenance and salaries – are *less* than the fees received from travellers. In short, it is a money-maker but, because of compound interest, it makes a continuous loss. (Humber Bridge, 2019.)

Because of compound interest the cost of capital projects is doubled or trebled and clean water and electricity generation are prevented. The consequences are often disastrous. Thus, every day in the world, *ten thousand* people die from the effects of dirty water. (Dirty water.) Yet clean water supplies and effective sewage systems use well-established technology.

And it is the same with clean electricity generation. In the UK one project alone ─ tidal lagoons in the Severn estuary ─ would generate 10% of the UK's electricity needs. Existing technology could be used and the project has a long life and excellent physical viability. Yet, because interest-bearing, rather than interest-free, loan money would be used, the Severn estuary project is not financially viable.

13.3. Colonisation – $5 billion becomes $44 billion

Moreover, internationally, the effects of compound interest are such that whole countries are trapped into an ever-increasing debt which they can never repay and so their assets are sold off to predators.

For example, in the year 2000, Nigeria's debt to international creditors had increased from $5 billion to $28 billion even though $16 billion (i.e., over three times the original loan) had already been repaid. In this way, $5 billion had become $44 billion in total and *even more in the future*. President Obasanjo said:-

> *'That $28 billion came about because of the injustice in the foreign creditors' interest rates. If you ask me what is the worst thing in the world, I will say it is compound interest.'*

13.4. Deleterious social consequences of interest

The social consequences of interest can be horrific. Thus in India 200,000 farmers committed suicide between 1997 and 2010 (Rupee News, 2010). *That's 15,000 each year*. Many farmers who do not kill themselves have no choice but to sell one of their own kidneys. The major factor in

this disaster is debt at excessively high interest rates and, unlike American farmers, Indian farmers do not receive large subsidies or forms of income support.

13.5. Interest puts the whole world into ever-increasing debt

Banks create out of nothing the money they lend and the creation is sufficient to allow for the repayment of the principal. However, *banks do not create enough money to repay the interest* (el-Diwany, 2003). The system as a whole therefore requires that ***overall debt should continually increase*** but that, of course, means that the level of debt has to increase to a level where it cannot be repaid. At which point debt is repudiated, confidence collapses, and 'bust' replaces 'boom'.

On top of which, the global financial system puts individuals, corporations, towns, cities and countries into ever-deepening debt because mainstream economists claim the debt is necessary if there is to be prosperity. Unfortunately, the prosperity is only for some, and never for all.

13.6. Interest creates inflation

At present, two lots of financing are required — one for production and one for consumption. Western double financing (i.e., one lot for production and another for consumption), requires more and more money to be created and so is the main factor causing the insidious creep-creep of inflation.20

Furthermore, the present system creates sufficient money for the principal (i.e., the original borrowed sum) of a loan to be repaid, but does not create sufficient money with which to repay the interest. Thus more money must be created.

13.7. Interest causes environmental depredation

In the present system more and more interest-bearing money has to be created with consequent inflation, indebtedness, greed and endless frenetic activity in the endeavour to try to make repayment. Worse, the system favours the short term destruction of natural wealth rather than its long term maintenance.

13.8. National Debt rises to astronomical levels

Compound interest-bearing debt is also the basic mechanism which causes the National Debt of most countries to rise to astronomical levels. A

20 In the *Sun Paradigm* only ***one*** lot of financing is necessary**.** The one lot finances both production and consumption ***at the same time***. This is called *simul-financing*.

nation's interest-bearing Debt is a continual, grossly enervating burden for which there is no need and it massively defeats the purpose of the efficient allocation of resources.

14. Fourth false assumption – Population levels should not, and cannot, be voluntarily reduced

Mainstream thinking assumes that population levels should not, and cannot, be voluntarily reduced. The assumption happens because of the belief that humans do all, or most. of the work in creating the output and therefore the larger the population, the better.

Moreover, in the past, starvation and disease only too efficiently reduced a population and, consequently, at the very least, replication of the population was always essential. Furthermore, the past was a time when, generally, the world's natural resources were not being strained.

But nowadays, (and even more so in the future when computers and wonderful technology will be doing more and more of the work), a burgeoning population is not required for the production of sufficient wealth.

Thus the truth is an ***opposite*** – if desired and if it is possible, population levels can be voluntarily reduced.

And it ***is*** possible if it is first noticed that, in the circumstances created by Critical Realism and the S*un Paradigm,* a lot of production will be coming from the capital instruments and so there will be a huge potential for the global development of balanced, efficient and just economies giving ***a reasonable standard of living for everybody***. Yes, **everybody**.

Secondly, it is a fact, observable today, that when a society has:-

a) a reasonable standard of living
b) education
c) good health, water and sewage systems
d) provision for old age ***population levels tend to stabilise, even decline***.

This happens because, in the above circumstances, people do not need large numbers of children to ensure that at least some survive: nor are children needed to provide income for the senior generation.

Thus the tendency of the *Sun Paradigm* is to encourage societies ***voluntarily*** to have smaller numbers of people with benefits for the planet as a whole.

The *Sun Paradigm* therefore gives hope that the world's population (burgeoning at present) will trend towards levels more in harmony with resources, fauna and flora and that all individuals will begin behaving in more responsible ways.

However, **NB**, only by ensuring that ALL individuals have a secure, adequate income can the circumstances be created for moderating excessive consumption and allowing a voluntary reduction of population levels.

15. Fifth false assumption – (The concept of) a selfish homo economicus is a fair characterisation of human psychology which cannot be changed

If the world is to be saved from environmental collapse there is a need to challenge *homo economicus*. This is the concept of psychology which lies at the heart of mainstream economics and which sees all humans as 'rational' meaning 'self-interested'.

And so, in practice, 'rational' means 'endlessly selfish' i.e., wanting more and more material possessions and never, ever, being satisfied.[21] In a sentence, mainstream economics sees greed as the impetus behind human behaviour. Alas! This greed means that persistent poverty, strife and war are inevitable as also is the depredation of resources and the environment.

15.1. Implications of home economicus are often disguised

It is important to understand that the implications of *homo economicus* are often disguised. Thus an economics text book may open by saying that economics is about scarcity. This means that, while some people are able to get most (but not all) of the things they want, the rest of humanity does not, cannot, and *never will*, get what it wants. The text book is essentially saying that nobody is ever satisfied (not even the very rich!) and, as for the poor, well, too bad – *they will always be poor*....

15.2. Mainstream economics cannot be changed

Unfortunately, since *homo economicus* is claimed to describe basic human nature, mainstream economics is also saying that nothing (*including itself*) can be changed. The result is that, in mainstream economics, it is impossible to conceive of moderating the desire for material accumulation which, at present, is having negative consequences for fauna, flora, resources and the environment.

15.3. The cause of greed is insecurity

And who is to say that the mainstream view of greed is unreasonable?

21 The 2020 *Oxfam Report* says the world's richest 1% has more than twice the wealth of 6.9 billion of the world's population. Furthermore, the twenty two richest men have more wealth than all the women in Africa.

Indeed, *at present,* ***the mainstream view is reasonable*** – yes, reasonable – because greed is essentially caused by a mixture of:-

a) actual insecurity
b) fear of potential insecurity
c) aspiration to the condition of those who undoubtedly do have security.

Thus, when there is a lot of insecurity in the world (as is the case today), there is certain to be a lot of greed.

The greed, moreover, means that all humans (at least via their governments) will naturally be aggressive. Thus the prospects for permanent peace are weak.

15.4 But what happens when everybody's basic needs are met?

But what happens when (as in the *Sun Paradigm*) ***everybody*** has their basic needs – for comfort, food and shelter – being consistently, independently and securely met so that they need never fear penury?

In that situation, people will begin to question if selfishness and greed really are unalterable human qualities or whether, in positive, new circumstances, they can reasonably be expected to change.

15.5. Greedy homo economicus to be replaced by responsible homo co-operans

Indeed, after considering the question, people might then begin to perceive the activities of the very rich (who think it clever to flaunt their wealth) as grossly immature and selfish.

People might further conclude that, whereas greed is worshipped today, in the *Sun Paradigm* future (when *every* person will have security), greed could suddenly become ***un***fashionable and so sensible living (i.e., living without excess) could become the fashionable norm for those wishing to lead valid, accountable lives. In short, social status will become associated with living responsibly.

In those circumstances, ***homo co-operans*** will come to prevail and so changing attitudes towards consumption will combine with more accountable attitudes towards irreplaceable natural resources and the glories of fauna and flora.

Thus a greedy and aggressive *homo economicus* will gently evolve into a responsible, environmentally-conscious and friendly *homo co-operans*.

16. The creation of the Sun Paradigm

The *Sun Paradigm* is created by reversing, or near-reversing, the fifty nine false assumptions of mainstream economics. The reversals (or near-reversals*)* are seen to be true (or, at the very least, truer) and so fresh component assumptions (for the new *Sun Paradigm*) become available.

The fresh components, together with facts and insights, then begin re-arranging themselves in unusual and original ways.

16.1. Latching on

At first, the fresh components shift around as they look for something onto which they can latch. Quite remarkably, they have a tendency to want to latch onto ***all*** the other components and, for a while, there is a kaleidoscopic situation of changing colours and patterns.

16.2. The fresh components then interact with one another

It then becomes apparent that some of the fresh components are easily interacting and interconnecting with one another.

Very soon things settle down. New ways of understanding begin to emerge as do the possibilities for new policies. It is as though, in a panoramic landscape, new life forms – new animals and new plants – are appearing.

16.3. Examples of new interactions and interconnections

Here are some examples of the new interactions and interconnections:-

a) The understanding that the larger percentage of output is done by capital instruments (rather than by labour) ***interacts with*** the recognition that there can only be a balanced economy ***IF*** there is a spreading of ownership of what creates the wealth i.e., the capital instruments (which have an associated income).

When the spreading is done the result is that, in addition to jobs, *everybody owns something* (and has the associated income). This contrasts with today's situation in which most people are confined to their labour (if possible) and/or welfare benefit (if available – and in many countries welfare benefit is not available).

b) The recognition that interest is ***not*** necessary ***interacts with*** the fact that money is created out of nothing.

This then makes available a huge supply of national bank interest-free money for spreading the real economy and addressing environmental problems in a counter-inflationary, justice-enabling way.

c) The understanding that, in the economy, there can be a true balance of supply and demand ***interacts with*** the need for Inclusivity, efficiency and justice.

16.4. The Sun Paradigm manifests itself

Soon there is a healthy, overall connectedness extending far beyond the economy to encompass the attitudes of humans about themselves and their environment whilst everybody becomes aware that they are seeing the beginning of:-A Justice which creates the Efficiency and an Efficiency which creates the Justice. This is the *Sun Paradigm* manifesting itself in practice.

17. The Sun Paradigm in practice

While restricting the present ability of the banking system to create money out of nothing (by a gradual rise to 100% banking reserves), the *Sun Paradigm* opens up a large supply of interest-free loans. This supply is locally administered by public banks and the private banking system on wide ownership, real economy and environmental principles) **AS LONG AS** the money is repaid and cancelled leaving behind in existence the productive or environmental asset.

NB. The money is initially created by the national bank and then lent to the private banking system or public banks which locally administer it (charging a reasonable administration fee but no interest).

17.1. Micro-credit

Micro-credit is the key method for empowering the world's women. In some countries a woman may never have travelled more than five or six kilometres from her matrimonial home, be regularly attacked by her husband and fail to get her children educated.

However, with interest-free micro-credit (which includes training) she gets a chance to:-

a) learn a commercial skill
b) own a small business
c) pay for the basic education of her children

Crucially, she becomes the family bread-winner and, over time, the power imbalance with her husband and men in general becomes corrected.

In contrast, the present reality is horrible. Thus Asian commercial banks charge an outrageous 60% per year while rural lenders can charge

200% or 300%!

And even the famous Grameen Bank necessarily averages 34%. The reason is that half (17%) is for borrowed money and half is for administration cost which is high because of the costs of training borrowers in their commercial skills as well as making personal weekly visits to check progress and collect small repayments.

Yet Grameen and similar organisations have a 98% repayment rate and so there is no reason why they cannot receive interest-free money, lend it to their clients at 17% (thereby *halving* the usual cost) and then repay it to the central bank. And at 17% there would likely be a 100% repayment rate.

17.2. Start-ups, small businesses and small farms

When start-ups, small businesses and small farms have to borrow interest-bearing money, the chances of their survival considerably diminish. Indeed, they are usually crushed by debt. But *interest is **not** necessary* when money is put into productive capacity, as in a small business. As long as there is a viable proposal with provision for collateral and administration cost, there is no reason at all for interest.

17.3. Medium-size businesses

Interest-free loans are also available for medium-sized businesses ***IF*** the loans are associated with the widening of ownership.

However, unlike large corporations, medium-sized businesses would not be required to make a full payout of earnings so that they would have the option of expanding via retained earnings.

Once the interest-free loan is accepted, however, full payout of earnings (except for reserves for research and depreciation), would be required in future.

17.4. Large corporations

Large industrial corporations are essentially concentrations of wealth-creating capital instruments and they need loans for their expansion. However, if the loans are interest-free, the result would be a much greater concentration of ownership in existing shareholders. That is undesirable.

It is therefore *Sun Paradigm* policy that interest-free loans for large corporations should be allowed only **IF**, on the principles of Binary Economics, ***new*** shareholders are created i.e., all individuals, over time, on market principles, are enabled to become owners of substantial amounts of productive capital paying out its true, full earnings (Shakespeare & Challen,

2002).

The assets pay for themselves *out of what they will earn in the future*. (See Appendix Two. Kelso & Hetter Kelso, 1990.) In contrast, mainstream economics says investment only comes from what has been saved in the past.

17.5. Full payout of shares

All large corporations would be required to pay out ***all*** their earnings ***all the time*** except for reserves for research and depreciation. In practice, full payouts would be five to eight times existing payouts. (See Appendix Two. Kelso & Hetter, 1990.)

This requirement is necessary to ensure that:-

a) corporations are encouraged to accept interest-free loans with the associated responsibility of widening ownership in the economy
b) the loan is repaid at a competitive rate over a reasonable period of time
c) the beneficiaries receive all the income coming from capital productiveness
d) the entire economy is able to achieve sustainable aggregate growth and distributive justice on market principles.

Of the many advantages, the main one is that productive (and associated consuming) capacity will be spread throughout the economy thereby enabling a balance of supply and demand (as required by Say's Theorem) and, at the same time, a forwarding of social and economic justice.

Indeed, with a basket of full-payout shares, ALL individuals can have a substantial income because they are being directly connected to the capital instruments of the big industrial corporations and the real economy.

This is important because the spreading of capital ownership and its associated income enables all members of society to have a basic income *independently of whether or not they are in the conventional labour market.* Thus *all* people become productive through, at the very least, their ownership of capital instruments.

17.6. Assured Basic Incomes

If a person has a job – that's good. However, computers and incredible new technology are destroying secure well-paid jobs and replacing them, if at all, with temporary, insecure, low-paid, 'gig economy' ones. Mainstream economics has no way of ensuring that, in future, everybody will be directly involved in the real economy with a steady, reasonable income.

Nevertheless, the *Sun Paradigm does* have a way. Indeed, using the practical mechanisms of Binary Economics, it is possible to achieve wide

capital ownership not only for employees, but also for those who are *not* employees. Whereon, from the capital ownership (in the form of a basket of shares), come the *Assured Basic Incomes.*

NB. *In a world of increasing automation, spreading capital ownership is the only way of ensuring that all people have income from real production so that, in the society as a whole, there is a true balance of supply and demand.*

17.7. Mothers with children

Mothers with children are therefore able to bring up their children without financial pressure. Even small children have an income, sufficient for basic need. At the age of five (if education is not free) the income increases to allow for payment of basic school fees, with increases at eleven and sixteen. Thereafter the income stays with the child (now an adult) as part of the increasing adult modern *Competence* which comes from an independent capital estate.

17.8. The Competence

The *Competence* (the word can be traced back to Jane Austen, Alexander Pope and William Shakespeare meaning 'property' or 'means sufficient for the necessaries and conveniences of life; sufficiency without excess') is defined as:-

> *A capital estate large enough to supply sufficient current consumer income to support at least one half of an affluent life style (measured in the context of what society as a whole can efficiently produce).*

Research – a 1998 study by Kent State University, Ohio and a 2005 study by CESJ, Washington, D.C. – indicates that, aged sixty five, an adult would have an *Assured Basic Income* of (2005 figures) $26,000/year **AND** a *Capital Accumulation* of $200,000 with both figures continuing to increase after the age of sixty five (Kurland, Brohawn & Greaney, 2005),

NB. The figures would be *very* much higher today.

In practice, the *Competence* means that not only employees but people not in formal employment (e.g., women, unpaid carers and children) may have an income because they have been connected to what truly creates wealth — the productive capital instruments of large corporations, for example.

17.9. Position of retirees

Those who, like retirees today, receive interest from their savings will still be receiving interest from their savings. Furthermore, they will also have *Assured Incomes* coming from their *Competences* and also have *Capital Accumulations*.

17.10. Housing

17.10.1. Private

A house is a remarkable capital instrument – *it continuously provides accommodation* (Kelso & Hetter, 1990). It is thus eligible for an interest-free loan if, in the case of private housing, the loan is:-

a) 80% of valuation (with criminal penalties for deliberate false valuations and declarations of income)
b) properly related to income
c) not at the expense of home ownership for others

17.10.2. Public

Furthermore, interest-free loans for public housing can halve or more the cost. It is disgraceful that, right the way around the world, there is massive homelessness – and slums and favelas – yet the materials for building are widely available.

17.10.3. Production of food and energy

In addition to providing accommodation, homes and villages can incorporate production of food and energy when, for example, they are constructed using SolaRoof technology.

17.11. Public capital projects

These projects include roads, bridges, sewage and water works, hospitals, ports, railways etc.

Financing is simple – the national bank lends interest-free money for the project to the government. (**NB**. The projects need not be built by the government. If wished, they can be built and managed by the private sector.) As is the case today, money for repayment is collected out of fees and taxes but the amount required would be a half, or even a quarter, of the usual amount.

Guernsey (which has minimal debt) has used the loans and so has Malaysia. Over the prosperous period 1939-1974, Canada used the loans and, today, many Canadian municipalities are demanding their use to upgrade infrastructure. After 1935, New Zealand used the loans – for hydropower schemes, railways, state housing etc. – and had a prosperous period. In the late 1940s Taiwan used the loans to spread ownership of farm land without harming the rich.

17.12. Clean electricity, greenery and soil conservation

Interest-free money is important for the generation of clean electricity e.g., from **geothermal power, hydroelectric schemes, windmills, underwater turbines, wave machines** and **tidal lagoons.** Tides rise and ebb twice a day(and in the UK the tides do not come in and out at the same time so that, in practice, a continuous generation of clean electricity is possible) and tidal lagoons use old technology – concrete and slow-moving turbines. Lagoons are easily constructed *but compound interest stops them being built!* .

Many countries are suitable for **solar electricity** and coming along are extraordinary **new technologies** such as **bio-oil from algae** and **SolaRoof technology**. These are important for the ***local*** generation of energy and necessary to end our losing battle with nature and, instead, turn to life-science for critical solutions. Interest-free loans can also be used for **mangrove-crested barrages**. Annually, millions of tons of valuable soil are lost because of erosion.

Moreover, each year, over the last forty years, 12,000,000 hectares of arable land have been lost to drought and desertification. During the same period, a third of the arable land has been lost to erosion or pollution (TriContinental, 2022). A catastrophe is building. **S.O.S. – Save Our Soils!** Soil conservation, reversal of desertification and provision of habitat for flora and fauna are essential and must always be done with **multi-species planting** of trees and other vegetation.

18. The intellectual foundations of the Sun Paradigm

It can first be said that a set of opening assumptions upon which something is founded is likely to require further assumptions to prove the opening assumptions. Indeed, in any system of mathematics there will always be truth statements which are impossible to prove.

In other words, there are problems with the completeness of intellectual structures (such as that which underlies mainstream economics).

Secondly, mainstream economics has little understanding of Chaos Theory and so does not realize that, rather than everything being in happy balance for evermore, there is the possibility of a complete – and very sudden – collapse.

Thirdly, mainstream economics essentially uses axioms from which it deduces its conclusions without ever asking if the conclusions are desirable or even if they actually reflect reality.

All these things are why it is preferable to concentrate on the *outcomes* of an economics structure rather than assuming (as does mainstream economics) that the outcomes must be splendid because the assumptions upon which the economics is based are (it is claimed) splendid as well.

Put shortly, we should examine the present facts before agreeing to worship somebody's theoretical, elaborate, deductive, intellectual construction based on false assumptions about reality.

Economic theories which do not properly encompass the facts (e.g., half the world living on under $5.50 per day) are completely useless.

18.1. A new methodology

Fortunately, the *Sun Paradigm* contains a new methodology. Rather than rely on mathematical constructions or a range of outdated assumptions, it:-

a) Examines reality e.g., deciding exactly what creates output, what are the reasons for poverty and what are the basic facts
b) Detects the assumptions about reality made by mainstream schools
c) Checks to see if the assumptions are accurate and what actually happens in practice
d) Reverses inaccurate assumptions (whereon the reversals or near-reversals are seen to be true)
e) Deduces new, beneficial policies from the reversed assumptions.

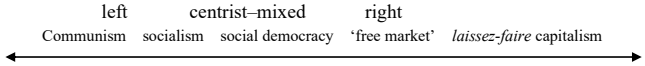
By examining reality, then checking if mainstream economics accurately understands it (and, when it fails to do so, substituting a more accurate understanding), C*ritical Realism* and the *Sun Paradigm* are following in the footsteps of Copernicus and Galileo who used scientific induction.

The induction method contrasts with mainstream economics which, like the Ptolemaic system of old, deduces its policies from false assumptions.

18.2. Outside and beyond the linear paradigm

Mainstream political economics and ALL present political economics

exist somewhere along a line going from far left to far right of a spectrum. At one end of the line is extreme Communism while, at the other, is some form of extreme *laissez-faire* capitalism.



The reason why they all lie somewhere along the same line is that **ALL** of them, in some way or another, are based upon a similar, ***and now profoundly outdated***, view of reality.

Thus they all assume that:-

a) human labour always does all, or most, of the work in creating the output
b) it is impossible for everybody to own substantial amounts of productive capital.
c) the poor are poor because of lack of effort, lack of skill and lack of education.

All three of the above assumptions are false. In contrast, *Critical Realism* and the *Sun Paradigm* are based upon a more accurate and comprehensive view of realty and so it is impossible to place it anywhere along the linear spectrum.

Indeed, the*y* are simply outside and beyond (*and beyond the comprehension of*) the linear paradigm.

18.3 A new definition of economics

Mainstream definitions of economics are typically narrow and ultimately based upon *homo economicus*. Thus a text book might open by saying that economics is about scarcity.

In contrast, the *Critical Realism* and *Sun Paradigm* definition is modern, empathetic, inclusive and holistic:-

Economics is a science of production, distribution and consumption of wealth always ensuring a truly balanced economy and taking into account wellbeing and responsibility towards ecosystems and the environment. It works towards homo economicus evolving into homo co-operans.

18.4. Expansion of domain – a new wholesomeness

Critical Realism and the *Sun Paradigm* expand the domain of economics to include ***all*** humans and ***all*** aspects of the environment thereby creating a new wholesomeness and global connection.

Making an epistemological challenge and particularly including ethics, the *Sun Paradigm* is holistic, positive as well as normative, and empirical.

19. Finally

Readers might reflect that Critical Realism and the *Sun Paradigm* enable:-

> A Justice which creates the Efficiency and an Efficiency which creates the Justice

They might also reflect that, with the *Sun Paradigm*, the impossible becomes possible and the intractable becomes tractable.

Thus they may begin to have hope.

Appendix One

Fifty Nine False Assumptions Underlying Mainstream Economics

Below are fifty nine assumptions about reality underlying mainstream economics and the associated politics. The assumptions are *interconnected* and accepted as true (or taken for granted as inevitable or sensible) but, in fact, they are *false*.

The interconnection is of considerable importance because if only ***one*** assumption is false (or, at most, two or three are false) then *the whole structure of mainstream economics (and the associated politics) starts to crumble.*

However, the *Sun Paradigm* becomes easily understood if the fifty nine false assumptions are one by one, and simply, ***reversed*** or near-reversed (as briefly seen in the italicised text in the brackets).

Indeed, after only two or three reversals, it becomes brightly clear that a totally new panorama – the *Sun Paradigm* panorama –is emerging.

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1. Human labour creates all, or most, of the output while the capital instruments create little or none. *(This is a pernicious false assumption. Labour **sometimes** creates all the output; sometimes creates a percentage, ranging from large to small; and **sometimes creates nothing** with everything being done by the capital instruments as in an automated factory.)*
2. Banks lend existing money. *(No. The money is created **out of nothing**.)*
3. Interest is inevitable and necessary. *(No. Administration cost, collateral, principal repayments and a business plan are necessary, but interest is not.)*
4. Scarcity is inevitable. *(No. Not when there are homo co-operans, an efficient implementation of modern technology, responsible attitudes and reducing population levels.)*
5. High taxation is necessary. *(No. High taxation results from the need to redistribute money to those without earning power and to repay interest-bearing debt. The Sun Paradigm redistributes earning power and greatly diminishes the effects of interest.)*
6. The 'free market' of finance capitalism is free. *(It is **un**-free. Most people are blocked from entering the markets for productive capital.)*

7. The 'free market' consists of states of equilibrium i.e., when there is disequilibrium there will always be a return to equilibrium. *(Nonsense! Crashes occur and, afterwards, there is a long build-up to the next crash.)*
8. The 'free market' allocates resources efficiently. *(It allocates **in**efficiently. Rich-poor division is hugely increasing.)*
9. The outcomes of the 'free market' are always just. *(They are **un**just.)*
10. *Homo economicus* is an accurate description of human psychology. *(It is outdated and must evolve. Homo co-operans will be better.)*
11. Mainstream economics is an all-encompassing science of objective process and universal value and further improvement in economics is impossible. *(False – further improvement **is** possible. Indeed, it is time to replace mainstream economics (and the associated politics) before it destroys our planet.)*
12. It is a matter of small importance that the banking system creates money out of nothing sufficient for the repayment of a loan's principal but not for the interest. *(It is of **huge** importance because it causes an endless need for **more** money creation as interest-bearing debt.)*
13. There Is No Such Thing As a Free Lunch (i.e., any improvement for the poor inevitably involves a detriment to the rich). *(False – the Sun Paradigm is **not** a zero sum game. Technological advance massively increases potential output and enables improvement in the position of the poor.)*
14. The 'free market' upholds private property for all. *(Wrong. The 'free market' always narrows ownership, in particular, of what truly creates the wealth i.e., the capital instruments.)*
15. It does not matter who owns the capital, particularly productive capital. *(It matters hugely because, nowadays, productive capital creates the wealth.)*
16. The 'free market' implements JB Say's market Theorem that producers and consumers should be the same people. *(It does **not** implement the Theorem.)*
17. Somebody who voluntarily looks after a sick person 24/7 does no work in the economic sense. *(Outrageously untrue!)*
18. Ethics/morality is not part of economics. *(This is madness!)*
19. The poor are poor because of lack of effort and lack of skill. *(False. They are poor because of lack of access to productive capital, lack of access to cheap capital credit and suffering from compound interest.)*

20. Inflation is not caused by the banking system. *(Inflation is largely a monetary phenomenon caused by the system of finance capitalism.)*
21. Financial savings are necessary before there can be investment. *(Nonsense! Nowadays, money is created out of nothing!)*
22. Physical savings are necessary before there can be investment. *(This is generally untrue because materials, or substitutes, are available. Prices for things can rise but that only increases cost.)*
23. Labour income and welfare payment always suffice. *(They do **not** suffice. Wide capital ownership is necessary.)*
24. Wide ownership is not necessary. *(It **is** necessary to spread productive capacity and the associated purchasing capacity.)*
25. It is not necessary for every person to have an independent income. *(Untrue. Without independent incomes people are controlled by others.)*
26. The level of interest rates is all that is necessary to manage an economy. *(What matters is who or what creates the output and who gets the benefit of the creation.)*
27. Student loans must bear interest. *(Why? The taxation system collects repayment and so acts as collateral.)*
28. Public capital projects should be funded by interest-bearing money. *(Interest-free loans **halve**, even quarter, the cost.)*
29. Micro-credit lending should bear financial interest. *(Why? Collateral and repayment are required, but why interest?)*
30. Environmental capital projects should bear interest. *(No!)*
31. An economy requires **two** lots of financing – one for production and one for consumption. *(Not true. Only **one** lot of financing is necessary if it is **simulfinancing** as in the Sun Paradigm and Binary Economics.)*
32. There Is No Such Thing As Society. *(Oh please! Why don't these people grow up?)*
33. Personal and national interest-bearing debt is healthy for an economy. *(Nonsense! Because of the need to repay interest, indebted people (and nations) have less purchasing power than those without debt.)*
34. There is no power imbalance between actors (participants, including individuals) in an economy. *(Whoever first thought of this has never lived an ordinary life e.g., the rich have collateral and can easily borrow cheaply whilst the poor do not have collateral and so must borrow at extortionate rates.)*
35. Social and economic justice on the one hand and economic efficiency on the other are incompatible. *(Wrong! In the Sun Paradigm the justice*

and economic efficiency create each other and are compatible.)

36. Economic history is irrelevant. *(This arrogantly assumes, for example, that past crashes will never happen again....Madness!)*
37. Economic theory (stemming from Adam Smith, 1776) suffices to guide modern theory and practice. *(Mainstream economic theory is completely outdated. Smith's theory was conceived* ***before*** *the Industrial Revolution started.*)
38. The important things in economics are anything ***except*** the development and spreading of productive capacity so as to make producers and consumers the same people thereby enabling a Say's Theorem balance of supply and demand and also enabling the forwarding of social and economic justice. *(This is a huge untruth.)*
39. Commercial banks should be able to offer interest-bearing mortgages (as distinct from administering interest-free national bank mortgages). *(The subject of housing finance needs to be reviewed.)*
40. Economic inequality is desirable – the greater the ratio between top and bottom the better. *(Another untruth – the rich do not (and cannot) spend all their money.)*
41. 'Trickle down' economics works. *(NO! The rich are incapable of spending their money (even if they wanted to, which they do not) so they accumulate it as morbid capital.)*
42. Rising house and stock market prices indicate genuinely increased wealth. *(No – these rises usually only reflect newly-created money being put into anything except the spreading of the real, productive economy.)*
43. Large economic cycles and crashes have been ended. *(They have not. They are inevitable with mainstream economics but not in the Sun Paradigm.)*
44. Individual greed is good and institutionalised greed is even better. *(This is an expression of homo economicus. Homo co-operans is needed!)*
45. Countries should raise interest-bearing money on the international markets. *(No. Interest-bearing debt cripples them forever and opens them to the expropriation of their assets.)*
46. Countries should not be independent: they should be controlled by others. *(No! Colonisation must be ended,)*
47. A country's assets should be owned by outsiders. *(This stops a nation's people owning their own assets and getting the benefits thereof.)*
48. A country's new money supply should originate in the commercial banking system rather than the national bank. *(When it originates in*

the commercial banking system it is improperly applied and interest is added. Subject to periodic checks, it must originate from the national bank but can be administered by the private banking system or by public banks.)

49. Employee shareholdings do not improve efficiency. *(Wrong!)*
50. Political democracy does not require Economic Democracy. *(All the talk about 'democracy' amounts to nothing unless the economic aspect is also considered.)*
51. There is a Time Value to borrowed money. *(NO! Since the money is created out of nothing, it has no time value.)*
52. Environmental matters are extraneous and impose unnecessary cost. *(Good heavens! These madmen (they are usually men) are destroying the planet!)*
53. Economics is a separate academic subject which needs not take account of other subjects. *(Wrong! All subjects, to the greatest possible extent, must take account of all other subjects.)*
54. Population growth is inevitable. *(It is not inevitable. When there is genuine economic security for all, population levels begin to moderate then reduce. Moreover, smaller populations do NOT necessarily have a diminished ability to create wealth.)*
55. An understanding of technology is irrelevant to economics. *(It is highly relevant.)*
56. Jobs can be exported. *(When exported, the spending power of the jobs is removed from the domestic economy.)*
57. Domestic manufacturing does not matter. *(It matters very much because it ensures local wealth creation and control. Local banking is also necessary.)*
58. Education and training suffice for economic needs. *(They do not and cannot suffice by themselves. Also necessary are wide capital ownership, access to interest-free capital credit, and freedom from usury.)*
59. Night and day, the global elite dreams of serving the interests of the mass of the world's population. (*Er.... – No comment.)*

Appendix Two

Full payout of earnings

The *Sun Paradigm* economy has a full payout of earnings from the capital of the big corporations. The earnings are conservatively estimated to be approximately five to eight times existing earnings but *may be much more* as can be seen below.

In *Democracy and Economic Power*, (Kelso & Hetter Kelso, 1990) the Kelsos put the present yield of capital as 5 - 7%. The average is 6%.

1. Removal of taxes

Taking the typical American corporation, the Kelsos propose the removal of:-

a) federal income tax
b) state corporate tax
c) employer's share of Social Security
d) municipal corporate income taxes

At a very conservative estimate this would double the yield.

NB. The Kelsos note that *half* of the federal and state income taxes and *all* the employers' share of Social Security are levied for welfare benefits (which are generally unnecessary in the *Sun Paradigm*).

2. Retained earnings

They then note that big corporations retain between half and three quarters of their net after-tax earnings. However, with exception of reserves for research and depreciation, all earnings would have to be paid out.

The Kelsos say that 1 + 2 above increases the earnings of capital by a factor of four to six times (average ***five***).

3. Substantial non-quantifiable factors

Although some things may not be precisely quantifiable, it would be dishonest to omit them from the calculation. As can be seen below, they have a huge potential for massively increasing payouts.

These non-quantifiable factors include:-

i) Overall inefficiency

Finance capitalism does **NOT** ensure that those who do the production are those enabled to consume. This breaches the basic free market principle for the efficient creation of wealth.

The breach happens particularly because of the myth of the continually rising productivity of labour rather than the continually rising productiveness of capital. This causes emphasis on jobs rather than technological development and implementation which greatly enhance productive efficiency.

ii) Work practices and rules preventing the efficient use of new technology

There are many possible examples but an obvious one is one-shift-five-days-a-week production which could change to three-shifts-seven-days-a-week production. The latter is much more acceptable to people with a stake in the capital of an enterprise.

iii) Employee time-theft

Those who do not own often have little incentive to use their work time in a full and efficient way.

Iv) Pilfering, even sabotage

When feeling unfairly treated (or just feeling capital-less), those who do not own may be tempted to pilfer or even cause sabotage.

The Kelsos say that i) to iv) above would increase earnings several times over. Other factors affecting the situation

4. Use of savings, rather than interest-free financing, for capital investment

The Kelsos describe the use of savings for investment as *'costly, capriciously allocated, irrationally expensive and always limited*.' The *Sun Paradigm* generally does not need to use savings,

5. Simulfinancing

Finance capitalism requires ***two*** lots of financing – one for production and one for consumption and ***both*** *financings are at interest*.

However, the *Sun Paradigm* only has ***one*** lot of financing – interest-free – for ***both*** production ***and*** consumption. The Kelsos go on to say that:-

capital in an economically democratized economy would be well over ten times more productive than we might suppose if we were only thinking in terms of the yields of second-hand stocks today. Their overall conclusion is that full payout would be *ten times* the present yield.

6. The Sun Paradigm property right

There is also the *Sun Paradigm* property right which, although not precisely quantifiable, would exist and an estimate must also be made for it.

The property right is the right of every person to:-

a) acquire capital assets
b) pay for those assets with the pre-tax yield of the capital acquired
c) receive ALL the net income earned by that capital (with reserves for research and depreciation) indefinitely.

7. Full payout

Without the full payout feature there can in practice be no competitive self-financing property right.

The full payout feature is also required by:-

a) the lender (to enable the loan to be repaid at competitive rates)
b) the beneficiaries (who have increasing need to have capital income earned from increasing capital productiveness)
c) the entire economy (to achieve sustainable aggregate growth and distributive justice on market principles)

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