

Sustainable Growth

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Rodney Shakespeare

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

11, Charman House,
Hemans Estate,
London, SW8 4SP,
United Kingdom.

email: rodney.shakespeare1@btopenworld.com

Tel: (UK) 020 7771 1107

Website: www.binaryeconomics.net

Abstract

The phrase 'Sustainable Growth' is an apparent contradiction. This paper, however, resolves the contradiction and creates fresh solutions including:-

- a balanced, efficient and just economy ensuring *daily* economic power (in addition to the periodic vote) is widely spread
- a way of addressing environmental issues including the need for clean energy
- the possibility of reversing endless greed so that *homo economicus* becomes *homo reciprocans* – essential if natural resources are to be conserved
- the voluntary reduction of population levels
- the renewed involvement of national and international banking institutions.

In short, there arises balanced, just and sustainable growth.

JEL classification – P0, P1, P4 – Political Economy

Keywords

Sustainable growth; balanced economy; resource conservation; population moderation; economic democracy; paradigm shift

Acknowledgement

This paper contains large-scale research into the factors contributing to a major change of paradigm and so the possibility of considerable benefit for society. The research, costing millions of dollars, was done at the behest of the American government and carried out by Professor Rogers Hollingsworth and colleagues.

The research is not widely known and the author of this paper has not been able to identify its precise location. Indeed, the research may have been suppressed (and the reason is set out in section 6).

Be that as it may, it is recorded here that the author gives all credit for the research to Rogers Hollingsworth and colleagues.

Meaning of 'paradigm'

A 'paradigm' is a *mindset* with underlying assumptions and underpinnings. It is a set of connections and, in particular, *an understanding of reality*. It contains *interlinked* concepts and values which, in effect, are axioms or self-evident truths.

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1. Introduction

For twenty years or more, economists have realised that something is wrong with the basic principles of their study. They have therefore been searching for a new paradigm in the hope of establishing a balanced, efficient and just economy achieving sustainable growth. To date, they have not succeeded.

That is not to say that schools of new or 'alternative' economics, for example, are remiss in identifying imbalances, failures, contradictions and injustices. Nor are they remiss in putting forward proposals for change.

However, the proposals are certain to face difficulties or even be doomed to fail. This is because they are being implemented in present economies which are based upon false, outdated, *interconnected* assumptions about reality.

So far, *fifty eight* false assumptions have been identified – there may well be more – and their totality constitutes the edifice of the prevailing paradigm embodied in the economy together with the associated societal and political structures.

Furthermore, the falsity of the assumptions combined with their interconnection has the consequence that it only needs one or two of the assumptions to be revealed as false before the whole edifice starts to crack and soon comes tumbling down.

That is astonishing.

1.1. Result of reversals

Yet even more astonishing is what happens when each individual false assumption is fairly examined whereupon it is realised that its ***reversal*** (or near-reversal) is true (or, at the very least, truer) and so a fresh component assumption (for the new paradigm) becomes available.

Indeed, after perhaps only one or two reversals (with consequent recognition of potentially available fresh components), different possibility will be glimpsed.

Further reversals and so more fresh components then allow a fuller view, whereon, after even more reversals and more components, there appears the vividly coloured panorama of the new paradigm.

In this panorama unusual animals and plants can be seen i.e., new policy options for the solution to the world's economic and environmental problems.

2. Practical consequences of the new paradigm

The fifty eight underlying false assumptions of standard economics are set out in the Appendix.

However, for space reasons, this paper only examines, and reverses, three of the assumptions but they suffice for showing how the new paradigm is created. As each reversal is made, the new paradigm appears with increasing clarity and its practical implementation may be summarised as follows:-

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That, for the purposes of:-

- spreading the real economy to **every** person in society so as to create a balanced, efficient and just economy embodying sustainable growth and
- implementing major environmental projects

there are no intellectual or physical barriers to the creation by the national bank (or international banking institutions) of a large supply of interest-free money (administered by the private sector on wide ownership principles) as long as the money is repaid and cancelled leaving behind in existence the productive or environmental asset.

In contrast to standard economics (which continually narrows ownership), the new paradigm extends individual ownership to every person in society.

There also arises:-

- a genuine balance of supply and demand (as required by Say's Theorem)¹
- a true democracy in which daily economic power (in addition to the periodic vote) is widely spread
- a way of addressing environmental issues including the need for clean energy
- the possibility of reversing endless greed so that *homo economicus* becomes *homo reciprocans* – this is essential if the depletion of natural resources is to be prevented
- a situation in which population levels moderate themselves without coercion and
- an inspiring opportunity for national banks and international banking institutions to promote the general welfare.

3. Paradigm shift

It should be remembered that a major new paradigm can only appear as the result of a *paradigm shift* which, as Thomas Kuhn pointed out, must be a total revolution because any new paradigm is *incompatible* with the old one i.e., it completely replaces it.²

Without a revolution, schools of alternative economics will never succeed in overcoming the huge intellectual and political inertia occasioned by society's outdated and inadequate comprehension of reality.

4. Aspects of failure and impending collapse

The global economy is failing and, in various ways, on the verge of collapse. Yet, according to standard economics, a collapse is impossible because, it claims, the

¹ JB Say's Law is usually stated as *Supply = Demand*. However, a scientific Law is something fairly deduced from the facts of reality whereas, in today's reality, supply and demand are most certainly not equal because ownership of what creates most, or a large part, of the output (i.e., the capital instruments) is not widely spread. So it is better to refer to Say's Theorem that *When Supply = Demand, There is a Balanced and Just Economy*.

² Kuhn, T. (1962). *The Structure of Scientific Revolutions*.

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'free market' is always in balance and, if sometimes a little out of kilter, will soon return to equilibrium.

Standard economics further claims that the 'free market' has maximum efficiency and, with egregious self-righteousness, states that 'free market' outcomes are always *morally* fair and just – i.e., all people get what they deserve.

However, brief consideration reveals that, far from being in balance or efficient, let alone being just, the 'free market' is **un**balanced, **inefficient**, and **un**just. It is, moreover, destroying our environment. For example, today's economies exhibit:-

- *Preposterous accumulations of wealth*

The combined wealth of the top ten richest people in the world is greater than the GDP of *eighty five* of the world's poorest countries.³ These accumulations of wealth do NOT 'trickle down' (as standard economics presupposes) because it is impossible for the very rich to spend all their money, even if they wanted to (which they do not).⁴

- *Widespread poverty*

Half the world has to survive on *less than \$5.50 per day*.⁵ Given the huge productive potential of modern technology this is shocking.

- *The blanking of women*

Or is it even more shocking that standard economics thinks that a woman who does caring 24/7 (often without sleep) is doing no work at all because she is not part of the formal economy? Standard economics blanks the work of the world's women yet, without that work, the human race would not exist.

- *A hollowing-out of the middle classes*

In America, real middle class incomes have been going *backwards* for twenty five years.⁶ The exportation of jobs is one reason but a bigger one is that the huge benefits of technological advance are now going into the hands *of the few rather than into the hands of the many*.

- *Ever-increasing debt – personal, corporate and governmental*

Globally, debt levels are *higher* than those of 2008 and much debt is now un-repayable. The average American owes around \$90,000.⁷

The debt difficulties of China's *Evergrande* are a portent.

- *Inability to address the great technological shift*

The shift is massively increasing potential output while smashing out traditional jobs and replacing them with temporary, part-time, zero-hours-contract 'gig economy' jobs which are not really jobs at all.

3 <https://www.dailymail.co.uk/news/article-7995785/Ten-wealthiest-people-richer-poorest-85-countries-combined.html>

4 NB. This paper provides a solution *without* taxation or expropriation.

5 World Bank (2018). *Piecing Together the Poverty Puzzle*.

6 <https://www.brookings.edu/blog/up-front/2019/12/20/middle-class-incomes-have-fallen-behind-and-not-set-to-catch-up-says-cbo/>

7 <https://www.experian.com/blogs/ask-experian/research/consumer-debt-study/>

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True unemployment in the USA is around 25%. Governments falsify the figures. Real figures can be obtained from the website of John Williams.⁸

- *Failure to build homes*

Why does homelessness increase when building materials are widely available? Why are there 'tent cities'?

- *Huge environmental pollutions and depredations*

These include everything from plastic in the oceans and the destruction of pollinators to global warming and resource depletion. Standard economics views environmental matters as extraneous and imposing unnecessary cost.

- *Inadequate water supplies and sewage*

Many water and sewage situations are disgraceful. Globally, *five thousand* children die per day from the effects of dirty water.⁹

To all of which may be added:-

- *The endless 'printing' of fiat currencies*

Unless money creation is directly related to the real economy and its spreading to every person in society a great imbalance is created.

- *Stock market mania*

The mania results from market participants assuming endless money printing.

- *Sharply rising inflation*

There are lies, damned lies – and government inflation statistics. We would be wise to prepare for a general inflation of at least 25-30%.

- *Housing bubbles everywhere*

House prices no longer have any sane relation to average incomes.

- *Signs of an unravelling social order*

E.g., trespass in the Capitol Building; and shops shut because of shoplifting.¹⁰

- *A continuing migration from South to North America and elsewhere*

The failure of 'free market' capitalism to build fair economies for the many rather than the few is exemplified by the continuing migration from the global South to North America and elsewhere.

5. No quick solution but recovery is possible

In sum, there is widespread failure and, after some precipitating "black swan" event, a collapse is now likely.

Is there a solution?

No – not in the sense of a quick fix today immediately creating a hunky-dory world tomorrow. The problem is that the mal-structure, deformation and deep-rooted inefficiencies of present economies have to be first addressed before there can be any permanent solution.

⁸ <http://www.shadowstats.com/>

⁹ United Nations Development Programme (2006). *Human Development Report*.

¹⁰ <https://californiaglobe.com/local/san-francisco/exclusive-iconic-target-store-in-mission-district-to-close-amid-a-shoplifting-tidal-wave>

That said, however, recovery *is* possible if it is first understood how *difficult* it is to effect major paradigmatic change. Indeed, without that understanding, no fundamental change is possible.

6. The difficulty of effecting paradigmatic change – the Hollingsworth research and the three factors in the creation of big, new paradigm-changing ideas

The difficulty becomes apparent by considering the remarkable large-scale research of Professor Rogers Hollingsworth and colleagues. It was done at the behest of the American government over twenty years ago. Furthermore, it cost millions of dollars and its purpose was to discover the factors contributing to a major change of paradigm and so the possibility of immense benefit for society.

The research is not widely known. Indeed, it may have been **suppressed** because it implies that American society, for example, is NOT the End of History i.e., at some point in the future, American global power and influence will come to an end.

The researchers found that *three* factors contribute to the creation of big new, paradigm-changing ideas:-

6.1. First factor – deep, widespread, conservative knowledge of the main subject

The first factor contributing to the creation of big new ideas is deep, widespread, conservative knowledge of the main subject embodied in assumptions about reality.

An example is the old Ptolemaic belief system putting the Earth at the centre of the universe and therefore God having appointed all the rulers on Earth. It logically follows that democrats, for example, are attempting to overthrow Divinely-appointed rulers and so should be killed....

6.2. Second factor – tension between conservatives in the centre of the subject and progressive thinkers on the edge

The second factor is tension between conservatives *in the centre* of the subject and progressive thinkers *on the edge*. This tension is essentially a life-or-death struggle between conservatives upholding the existing social order on the one hand, and progressives who, in practice, want to change it for the better on the other.

It is therefore inevitable that conservatives strive to defeat progressives. Thus the conservative upholders of the geocentric Ptolemaic belief system were determined to forcibly suppress Copernicus and Galileo (whose observations and analysis of planetary motions revealed that the Earth is not the centre of the universe and so the rulers were not God-appointed).

Furthermore, in addition to suppression, the conservatives had a theory of 'epicycles' which said that the planets revolve in tiny circles while also going around the Earth. This theory was totally false but *the falsity kept the Earth at the centre of the universe* and so served the purpose of defending the narrow interests of the rulers.

Thus falsity was the weapon used to maintain autocracy thereby demonstrating a salutary lesson – existing power structures will do anything (e.g., maintaining false, dishonest beliefs) to stop a new paradigm coming into existence.

6.3. Third factor – force or opposition, powerfully present, coming from outside

So what is the third factor discovered by the researchers?

It is **some force or opposition, powerfully present, coming from outside which interacts with progressive thinking on the edge of the subject to create the new paradigm.**

But what force? What opposition? And how can it come ‘from outside’? After all, ideas arise inside people’s heads!

The way to understand this force or opposition is to remember that, in the Ptolemaic belief system, God had put the world at the centre of the universe and therefore had appointed the world’s rulers. This meant that any re-thinking of geocentric theory was certain to be of revolutionary consequence and so anybody doing that re-thinking would be tortured and killed. Copernicus and, later, Galileo knew only too well the lethal purpose of the Inquisition.¹¹

6.4. Radical willingness to challenge

Thus the ‘force or opposition, powerfully present, coming from outside’ can only be a deep-seated, radical willingness to challenge everything about a society at its root even though death would be the penalty. So it was a combination of radical cast of mind, intellectual courage and immense physical bravery which was the third factor leading to the paradigm shift of the Copernican Revolution. The result led to modern rocketry as well as the overthrow of the power of kings and autocrats without which there would be no political democracy today.

And the bravery tells of the difficulty in ever achieving major paradigmatic change because, unless those proposing and explaining the change are prepared to put their careers, even their lives, at risk, *nothing positive will happen*.

Indeed, time and time again, history demonstrates that conservative forces always attempt to strangle big, new ideas at birth so that their originators despair of ever being understood within their own lifetimes. In addition to Copernicus and Galileo, Louis Pasteur, Charles Darwin, Barbara McClintock and Alfred Wegener all faced vicious, diehard opposition.

Moreover, it took 144 years before the Copernican Revolution was accepted at the highest levels.¹²

Thus those attempting to introduce new paradigmatic thinking for the benefit of society might well be forgiven for thinking that the game is not worth the candle....!

¹¹ Copernicus was dying when he received the printer’s proofs of *On the Revolutions of the Celestial Spheres* (1543). Galileo was forced to recant and would have been killed but, after the intervention of the Pope (who probably knew the truth), was sentenced for life to house imprisonment.

¹² From Copernicus (1543) to Newton (1687).

7. The telling question

The telling question therefore arises – Are today's economists prepared to adopt new paradigmatic thinking? Or do they prefer to continue with the falsities of the past?

Let us hope that they wish to:-

- be honest about their assumptions
- recognise that untruths are maintained by power structures and
- be courageous remembering, of course, that when the time has come to throw out the old, *personal advantage can be gained by being among the first to welcome the new.*

8. The first false assumption about reality – that human labour creates all or most of the output

Since the fifty eight assumptions are interconnected, discussion of one leads to discussion of the others.

That said, however, three of the assumptions are particularly pernicious and the most pernicious (and possibly the most difficult to eradicate) is the false assumption that human labour creates all, or most, of the output while the capital instruments embodying technology create little or none. The assumption stems from Adam Smith whose *Wealth of Nations* (1776) says that labour (in particular, specialized labour) creates all wealth.

8.1. The truth is a near-opposite

The truth, however, is a near-opposite i.e., in a task, labour *sometimes* creates all the output; *sometimes* creates a percentage, ranging from large to small; and *sometimes creates none* with everything being done by the capital instruments. Nowadays, with computers and automation, the latter is increasingly the case.

The false assumption is pernicious because it hides the true contribution to output of the capital instruments. Thus standard economics is able to make the outrageous assertion that it does not matter who owns the capital instruments and, even if it does, says there is no need to worry because wealth always 'trickles down' – which is simply untrue....

8.2. A thought experiment – productivity collapses to nought

A thought experiment is helpful. Consider a fully automated factory. The designers have been paid. The engineers and builders who constructed the factory have been paid. And the maintenance team (always on standby to ensure a continuing output) is just that – the maintenance team. The team 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 short, the truth is that, in a fully automated factory, the *factory* does 100% of the output and so, because there is no human input, standard calculations of productivity (which divide output by labour input) *collapse to nought*.¹³

Indeed, the usual definition of productivity is the most fundamental aspect of what is in effect a gigantic connivance to ensure that the ownership of the capital instruments is narrowly held and not widely spread (as is essential for achieving a true balance of supply and demand).

9. The second false assumption about reality – that commercial banks lend existing money

The second false assumption is that the commercial banks lend existing money.

However, the truth is the opposite – they do *not* lend existing money. The lent money is *created out of nothing* by pressing computer buttons! Nobody's private money – not yours, not mine, not even the bank's – is being lent. New money is created. Depositors' and bank capital money act as a reserve and the newly-created money is many times the reserve amount. 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.*

*The reality of how money is created today differs from the description found in some economics textbooks – Rather than banks receiving deposits when households save and then lending them out, bank lending creates deposits.'*¹⁴

Nothing could be clearer – by pressing computer buttons the banks *create* the money that they lend and the economics textbooks tell untruths.

Furthermore, the famous American economist J.K. Galbraith wrote:-

*'The process by which banks create money is so simple that the mind is repelled..... It is, moreover, one that is almost breathtaking in its audacity.'*¹⁵

This quotation is significant because J.K. Galbraith, perhaps the world's greatest economist, was never awarded a Nobel Prize. The reason is simple – he blazoned out the truth ('....so simple that the mind is repelled....breathtaking in its audacity....') and so the Western power structures would never forgive him.

9.1. Getting away with counterfeiting

So how is it that the banking system is able to get away with what is essentially counterfeiting, usually punishable by long prison sentences?

¹³ Thus it is wise instead to use definitions of *Productiveness* which attribute capital and labour contributions to output in a much more accurate way. See www.binaryeconomics.net Ashford, R. and Shakespeare, R. (1999). *Binary Economics – the new paradigm*.

¹⁴ McLeay, M., Radia, A. and Thomas, R. (2014). *Money Creation in the Modern Economy*, Bank of England, Quarterly Bulletin, Q.1.

¹⁵ Galbraith, J.K. (1975). *Money: Whence it came, where it went*.

The first answer is simply that the public is not aware that the banking system creates lent money out of nothing.

Secondly, propaganda *claims* that the purposes of the economy are being properly served because the 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*. Thus, according to the propaganda, bank money (created out of nothing *with interest added* for the benefit of its creator) is the magic element in the (*claimed*) successful operation of the 'free market' because the new money is directed at, and serving, the needs of the real economy, of society and of justice.

9.2. Bank loan money does NOT serve the needs of the real economy nor of justice

However, bank loan money does *not* serve the needs of the real economy, nor of society, nor of justice. The *claim* of efficiently allocating resources, particularly for productive capacity, is particularly untrue – only 2% or less of the money supply goes into new productive capacity.¹⁶ Indeed, today's banking system instead allocates money to:-

- the gargantuan casino of derivatives and the speculative trading of currencies now dominating the world's money exchanges¹⁷
- the bidding up of existing assets (such as stocks, shares and houses)
- the *concentration* of ownership
- consumer credit (which *lessens* the capacity of borrowers to consume)
- putting individuals, companies and whole societies into un-repayable debt.

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 and the rich-poor gap increases.

10. The third false assumption about reality – that interest is necessary

The third false assumption is that interest is necessary. However, while genuine administration cost (which is small), collateral and business plan are necessary, interest (imposed *on top* of genuine administration cost) is NOT necessary.

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

In Aachen in Germany interest on capital is 12% of the cost of rubbish collection; 38% of the cost of drinking water; 47% of the cost of sewage; and up to

¹⁶ Lietaer, B. (2001). *The Future of Money*.

Korten, D. (2001). *When Corporations Rule the World*.

¹⁷ Meera, K.M. and Larbini, M. (2004). *Seignorage of Fiat Money and the Maqasid al-Shariah: the Compatibility of the Gold Dinar with the Maqasid*, in *Harmonising Development and Financial Instruments by Shariah Rules for Ummatic Integration*,

77% of the cost 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.¹⁸

10. 1. Compound interest – the Humber Bridge

Compound interest:-

- puts the world into ever-increasing debt
- prevents clean water
- stifles green electricity and
- trebles or more the cost of a capital project.

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

Yet the bridge makes an operating profit! Every year, its operating costs – repair, maintenance and salaries – are *less* than the fees it receives from travellers. In short, the bridge is a money-maker but, because of compound interest, it makes a continuous loss.¹⁹

11. The creation of the *New Paradigm*

The *New Paradigm* is created by reversing, or near-reversing, false assumptions about reality. The reversals or near-reversals then interact with each other.

Thus the understanding that, nowadays, the larger percentage of output is done by capital instruments (rather than by labour) interacts with the recognition that there can only be a truly balanced economy *IF* there is a spreading of ownership of what really does create the wealth – the capital instruments. When the spreading is done the result is that, in addition to jobs, *everybody owns something* (and has the associated income) rather than, as is the situation today, the bulk of the population being confined only to their labour (if possible) and/or welfare benefit.

Furthermore, the recognition that interest is *not* necessary interacts with the fact that money is created out of nothing. This then establishes a huge repayable interest-free money supply for spreading the real economy to everybody and addressing environmental problems in a counter-inflationary, justice-enabling way.

11.1. Banks will still charge interest

¹⁸ Kennedy, M. (1995). *Interest and Inflation-Free Money*.

¹⁹ In 1981, when the bridge opened, the original figure of £28,000,000 had spiralled to £98,000,000 (because of compound interest, inflation and cost increases). By 1992 compound interest had taken the figure to £439,000,000 whereon the UK government took the debt obligation away from the citizens of Humberside and put it onto the National Debt. <https://www.humberbridge.co.uk/wp-content/uploads/2019/08/HUMBER-BRIDGE-BOARD-ACCOUNTS-FINAL-1718.pdf>

NB. The new paradigm will NOT stop banks charging interest. *Therefore a large pool of money for conventional lending at interest will remain.*

The new paradigm only stops the banks from creating new money and does this by a gentle rise to 100% banking reserves – an idea long promoted by economists Simons, Fisher, Friedman and even Mervyn King (ex-Governor of the Bank of England).²⁰

However, none of them ever proposed the key new paradigm aspect – the use of the interest-free loan supply for the development and spreading of productive (and associated purchasing) capacity to every individual in society.

12. The renewed involvement of national and international banking institutions

It will now be clear that the *New Paradigm* provides a splendid opportunity for national and international banking institutions to address the world's economic and environmental problems.

However, in order to so, they will need to reject false fundamental assumptions underlying present practice e.g. that wealth 'trickles down'; and that capital markets are open to all.

Above all, given the present global situation, they will need a sense of urgency to accept, and develop, the new thinking.

13. The many uses for the interest-free money supply

The uses for the interest-free (repayable and cancellable) money supply include:-

13.1. Micro-credit

Asian commercial banks charge an outrageous 60% per year while private lenders in rural areas can charge 200% or even 300%.

However, the Grameen Bank averages 34%. Half of this (i.e., 17%) is for borrowed money and the other half is for administration/collection costs which are high AND include the cost of training the borrower.

Grameen and similar micro-credit organisations have a 98% repayment rate and so there is no reason why they could not receive interest-free money, lend it to their clients and then repay the money to the central bank. In this way the effective borrowing cost to the clients is halved (to, say, 17%). That would be a huge improvement.

And at 17% there would likely be a 100% repayment rate.

13.2. Start-ups, small businesses and small farms

Small businesses are often crushed by the burden of interest-bearing debt. But interest is not necessary for a small business. As long as there is scrutiny to ensure that the business has a viable proposal with appropriate provision for collateral and administration cost, there is no reason for there to be interest at all.

²⁰ The Chicago Plan.

13.3. Medium size businesses

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

13.4. Incomes for all

The *New Paradigm* opens the way for ALL individuals in society to have an independent income related in some way to the real economy.

If a person has a job – that’s good. However, computers and incredible new technology are smashing out secure well-paid jobs and replacing them, if at all, with temporary, insecure, low-paid, ‘gig economy’ ones.

In short, there is a huge technological shift destroying jobs and standard economics has no way of effectively ensuring that, in future, everybody is directly involved in the economy with a steady, reasonable income.

Nevertheless, the *New Paradigm* does have a way. Using the practical mechanisms of Binary Economics and the interest-free money supply, it is possible to achieve **wide capital ownership** in the large corporations by which *the capital pays out its full return which would be five to eight times existing returns*.²¹

With a basket of full-payout shares, ALL individuals would have a steady income because they would have been directly connected to the real economy. The full payout is the key for enabling *all* people to have an independent income. A child would have a small, independent income which would increase over time.

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

13.5. Housing

Loans for public housing can be interest-free thereby making repayment one half or less of the present cost.

In the case of private housing, again halving or more the cost, loans would be only 80% of valuation and there should be criminal penalties for deliberate false valuations and declarations of income.

13.6. Public capital projects

Public capital works include roads, bridges, waterworks, sewage works, railways etc.

For their financing the mechanism is simple – the national bank creates interest-free money and then lends it to the government for the purposes of the government’s own capital expenditure. Money for repayment is collected, as at present, out of fees and taxes with the difference being that the amount required to be collected is a half, even a quarter, of the usual amount.

Interest-free loans for public capital projects have been used by Guernsey which has minimal debt. Malaysia has used the loans and, of late, has achieved

²¹ www.binaryeconomics.net

some remarkable feats of public construction. Over the prosperous period 1939-1974, Canada used the loans and, today, many Canadian municipalities are demanding their use again to upgrade infrastructure. After 1935, New Zealand used such loans – for hydropower schemes, railways, state housing etc. – and had a remarkably prosperous period. In the late 1940s Taiwan used the loans to spread ownership of farm land without harming the rich.

13.7. Clean electricity and greenery

Interest-free money is particularly important for the generation of clean, green electricity by e.g., **vertical axis windmills, geothermal power stations, underwater turbines, wave machines and tidal lagoons**. Tides come in and out twice a day and tidal lagoons use old technology – concrete walls and slow-moving turbines. They are easily built and environmentally-friendly. *But compound interest stops them being built.*

Many countries are suitable for large-scale **solar generation** which is getting more efficient and coming along are extraordinary **new technologies** such as those of Brilliant Light Power and its Suncell.²²

Interest-free loans for **water desalination** could help transform large areas of the world and there can be **mangrove-crested sea barrages**. Every year millions of tons of valuable soil are lost because of water erosion. The solution is the planting of mangroves.

In order to limit carbon dioxide and provide natural habitats, multi-species tree-planting is essential.

With all these things there can be grounds for hope.

14. On the voluntary stabilisation of population levels

However, *more* than greenery – much more – is required if the world's problems of pollution and resource depletion are to be solved.

To that end It can be observed that when any society has:-

- a reasonable standard of living
- good health, water and sewage systems
- provision for old age

population levels stabilise, even decline. This happens because, in the above circumstances, people do not need a large number of children to ensure that at least some survive: nor do they need children to provide security for the senior generation in its old age.

Thus the natural tendency of the *New Paradigm* is to allow societies *voluntarily* to have smaller numbers of people with beneficial consequence for the planet as a whole.

Of course, old paradigm thinking will claim that large numbers of people are necessary for the production of wealth. However, this is nonsense – the future world will not need large numbers of people in order to achieve adequate output because a

²² <https://brilliantlightpower.com/>

huge proportion of production will be carried out by technologies which have an independent, or near-independent, existence.

The *New Paradigm* therefore gives hope that the world's population (at present increasing) will trend towards levels more in harmony with resources, fauna and flora.

NB. Many people fear that the global elite intend a reduction of population by violence, e.g., laboratory-created viruses, electro-magnetic pulse attack or atomic war.

In contrast, the *New Paradigm* influences population levels in a gentle way.

15. An end to greed – replacement of *homo economicus* by *homo reciprocans*

At the centre of standard economics is the concept of *homo economicus* which views human beings as consistently 'rational' i.e., selfish and greedy. The concept imbues standard economics with the implication that humans have a limitless desire for material wealth.

A text book, for example, 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 rich) and, as for the poor, well, it's too bad – they will always be poor....

Put simply, according to standard economics, greed is everywhere and the concept of *homo economicus* implies that strife is inevitable as also is pressure on resources and the environment.

15.1. The cause of greed is insecurity

Furthermore, at present, there is good reason for the standard view. Greed is essentially caused by a mixture of actual insecurity, fear of potential insecurity; and aspiration to the condition of those who undoubtedly do have security.

Thus when there is a lot of insecurity in the world there is certain to be a lot of greed.

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

But what happens when, as in the *New Paradigm*, humans know that their basic needs – for warmth, food and shelter – are being consistently and securely met and so they need not fear penury?

In that situation, people will begin to question if selfishness and greed really are inherent human qualities that can never be altered or whether, in new positive circumstances, they can reasonably be expected to change.

15.3. *Homo reciprocans*

After considering the question many people might then perceive the activities of the very rich (who think it clever to accumulate and flaunt endless amounts of wealth) as grossly immature and selfish.

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Indeed, whereas greed is worshipped today, in the future (when every person could have assured basic security) greed could suddenly become unfashionable and so sensible living (i.e., living without excess) could become the fashionable norm for those wishing to lead responsible lives.

In short, *homo reciprocans* will prevail and it is likely that changing attitudes towards consumption will combine with more responsible attitudes towards irreplaceable natural resources and the glories of fauna and flora.

16. Economic democracy

It is rarely understood that Western 'democracy' is not true democracy because it only allows the exercise of a very weak power – the political vote – which:-

- is only exercised periodically
- rarely changes anything substantially
- may result in a government making your situation considerably worse.

In contrast, people need *economic democracy* i.e., a **strong, everyday power** to control their own lives which means **an independent income sufficient for everyday requirements**. It is only when such incomes exist that people will free themselves from bullying and control by others.

17. The Sun Paradigm

We should acknowledge our debt to the sun and to the new technologies welcoming the sun (e.g., Solarroof (reference) whose buildings and structures utilize sunlight for our benefit). The New Paradigm could be called the **Sun Paradigm**.

18. Finally....

Readers might reflect that the essence of the *New Paradigm* is:-

A justice which creates the efficiency and an efficiency which creates the justice.

Furthermore, they might also reflect that, with the New Paradigm, the impossible becomes possible and the intractable becomes tractable.

Thus they may begin to have hope.....

Appendix: Fifty Eight False Assumptions Underlying Standard Economics

Below are fifty eight assumptions about reality which underlie standard economics. They are interconnected and accepted as true (or taken for granted as inevitable or sensible) but, in fact, 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 standard economics starts to crumble*.

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

Indeed, after only two or three reversals a new world begins to appear.

NB. Many people say that they “don’t understand economics”. This is **NOT** because they are stupid. It is because standard economics is full of contradictions and obvious falsities which make understanding impossible. However, when the reversals are made, people begin to find that they *do* understand....

The false assumptions and obvious falsities of standard economics are:-

1. Human labour creates all, or most, of the output while the capital instruments create little or none. (*Of all the false assumptions this is the most pernicious. 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.*)
2. Banks lend existing money. (*No. The lent money is created out of nothing.*)
3. Interest is inevitable and necessary. (*It is not inevitable and not necessary. Administration cost, collateral and a business plan are necessary, but interest is not.*)
4. Scarcity is an inevitable part of the human condition. (*No.*)
5. High taxation is necessary. (*False. High taxation results from the need to redistribute money to those without earning power.*)
6. The ‘free market’ is free. (*It is unfree. Most people are blocked from entering the markets for productive capital.*)
7. The ‘free market’ consists of states of equilibrium: when there is disequilibrium there will always be a return to equilibrium. (*That is nonsense.*)
8. The ‘free market’ allocates resources efficiently. (*It allocates resources inefficiently. Rich-poor division is hugely increasing.*)
9. The outcomes of the ‘free market’ are always just. (*They are unjust.*)
10. *Homo economicus* is an accurate description of human psychology. (*It is outdated. *Homo reciprocans* will be better.*)
11. Conventional economics is an all-encompassing science of objective process and universal value and further improvement to economics is impossible. (*False – further improvement is possible.*)

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12. It is a matter of small importance that the banking system creates money out of nothing sufficient for the repayment of the principal of a loan 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 New Paradigm is not a zero sum game. Technological advance massively increases potential output.)*
14. The 'free market' upholds private property for all. *(It does not.)*
15. It does not matter who owns the capital, particularly productive capital. *(It matters hugely because 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 child or adult 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. The poor are poor because of lack of productive capital, lack of access to capital credit and suffering the burden of compound interest.)*
20. Inflation is not caused by the banking system. *(Inflation is a monetary phenomenon.)*
21. Financial savings are necessary before there can be investment. *(They are not necessary – nowadays, money is created out of nothing by pressing computer buttons.)*
22. Physical savings are necessary before there can be investment. *(This is generally untrue because materials are available. Prices for things can rise but that only increases cost. Also substitutes are often available.)*
23. Labour and welfare payment always suffice. *(They do not suffice.)*
24. Wide ownership is not necessary. *(It is necessary to spread productive capacity and the associated consuming capacity.)*
25. It is not necessary for every person to have an independent income. *(Untrue. Without independent incomes they 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 should bear interest. *(Why? The taxation system is used for repayment and so acts as collateral.)*
28. Public capital projects should be funded by interest-bearing money. *(Interest free (repayable and cancellable) 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 financial interest. *(No!)*
31. An economy requires **two** lots of financing – one for production and one for consumption. *(NB. Only one lot of financing is necessary if it is simulfinancing as in the New Paradigm and Binary Economics.)*

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32. There Is No Such Thing As Society. *(Oh please! Why don't these people grow up?)*
33. Personal and national debt is healthy for an economy. *(Nonsense! Because of the need to repay interest, people (and nations) in debt have less consuming 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! An example is that the rich have collateral and can easily borrow at cheap rates whilst the poor do not have collateral and so must borrow at extortionate rates.)*
35. Social and economic justice on the one hand and efficiency on the other are incompatible. *(Wrong! In the New Paradigm the justice and efficiency create each other, are compatible, and intertwined.)*
36. Economic history is irrelevant. *(This is an arrogance which assumes, for example, that crashes on the scale of the past will never happen again....)*
37. Economic theory (stemming from Adam Smith, 1776) suffices to guide modern theory and practice. *(Standard economic theory is outdated. Smith's theory was conceived **before** the Industrial Revolution got under way.)*
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 the biggest lie of all.)*
39. 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 earnings and bottom earnings, the better. *(Another lie not least because the rich do not (and cannot) spend all their earnings.)*
41. 'Trickle down' economics works. *(It does not! The rich are incapable of spending all their wealth so they accumulate it.)*
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 productive economy.)*
43. Large economic cycles are inevitable. *(They are inevitable with standard economics but not in New Paradigm economics.)*
44. Individual greed is good and institutionalised greed is even better. *(This is an expression of homo economicus. Let us have homo reciprocans!)*
45. Countries should raise interest-bearing money on the international markets. *(No. Interest-bearing debt cripples them forever.)*
46. Countries should not be independent: they should be controlled by others. *(No!)*
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 money supply should originate in the banking system rather than the national bank. *(When it originates in the banking system it is not put to proper purpose and financial interest is added.)*

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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! If the money is created out of nothing, it has no time value.*)
52. Environmental matters are extraneous and impose extraneous cost. (*Good heavens! These madmen (they are usually men) are destroying the world!*)
53. Economics is a separate academic subject which needs not take account of other subjects. (*Oh yes it does! All subjects, to the greatest possible extent, should take account of other subjects.*)
54. Population growth is inevitable. (*It is not inevitable. 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.*)
58. Education and training suffice for economic needs. (*They do not and cannot suffice – wide capital ownership is also necessary.*)

The revelation of the *New Paradigm*

The *New Paradigm* is revealed if the fifty eight false assumptions are individually reversed or near-reversed (see the *italicised* text in brackets).

It soon becomes apparent that a different picture is materializing and then, long before all the false assumptions have been reversed, it is brightly clear that a totally new landscape – the *New Paradigm* landscape – has emerged.

About the Author

For ten years Rodney Shakespeare was Visiting Professor of Binary Economics (holding the only academic post in the subject in the world) at Trisakti University, Jakarta. Binary Economics is a new paradigm economics which, among other things, addresses the technological shift now smashing out traditional well-paid jobs and substituting insecure, low-paid ones. It also upholds democratic economic rights as well as the usual political ones.

Rodney is a widower with two children and two grandchildren. He is a private tutor, Chair of the *Committee Against Torture in Bahrain* and, due to an accident, has impaired hearing.