THE NEW ECONOMICS
A Bigger Picture

David Boyle and Andrew Simms

‘Provocative, timely and incisive, *The New Economics* exposes the failures of conventional economic thinking with humour and wisdom, and sets out the essentials of a vibrant new economy for a just and sustainable 21st century.’
Oliver Tickell, author, *Kyoto2*

‘Through the use of engaging stories and analysis, *The New Economics* shows how we can, and must, look at the world in a very different way centred on people, not profit, if we are to create a sustainable future for us all.’
Jessica Fries, Project Director, Accounting for Sustainability, The Household of TRH The Prince of Wales and The Duchess of Cornwall

‘By twisting together the green shoots of economic unorthodoxy, *The New Economics* points the way to a more sensible way of doing things... I enjoyed it immensely.’
Christian Hunt, lead author of the Climate Safety report and Managing Director of Cheatneutral

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There is no wealth but life.
John Ruskin, *Unto This Last*

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Writing a book about the emergence of the new economics is often a business of collecting, from the range of new insights, ideas and inspirational projects that are emerging all over the world, those that put people and planet first. It is about shaping an argument around them.

That is difficult enough at the best of times, but we started this book at an unprecedented moment of crisis for the financial system – the emergence of what was then referred to as the 'sub-prime crisis'. We finished it at an even bigger moment: what will undoubtedly become known as the Crash of 2008. The continuation of the financial system in its present form is now in doubt. We have adapted the message to suit the times, as they changed, and can only apologize if that adaptation has not taken into account some new, unknown twist in the story just over the horizon.

This book is also a collection of the work of, and a tribute to, the founders, trustees, staff and supporters of the New Economics Foundation (**nef**), the E. F. Schumacher Society in the USA and our other allied think tanks around the world. It is intended as a statement of where the new economics now stands, and it would not be possible without their pioneering endeavour.

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David Boyle
Andrew Simms

List of Acronyms and Abbreviations

CDCU	community development credit union
CDFI	community development finance institution
CDO	collateralized debt obligation
CEO	chief executive officer
CHP	combined heat and power
CND	Campaign for Nuclear Disarmament
Democs	deliberative meeting of citizens
DIY	do-it-yourself
DTQ	domestic tradable quota
EBCU	emissions-backed currency unit
Escos	energy service companies
GDP	gross domestic product
GM	genetically modified
GPI	Genuine Progress Indicator
HPI	Happy Planet Index
IMF	International Monetary Fund
IP	intellectual property
ISEW	Index of Sustainable Economic Welfare
km	kilometre
Lets	Local exchange and trading systems
LM3	Local Money 3
m	metre
MDGs	Millennium Development Goals
MDP	Measure of Domestic Progress
MDR-TB	multi-drug resistant tuberculosis
mph	miles per hour
nef	New Economics Foundation
NHS	National Health Service
RESOLVE	Research Group on Lifestyles Values and Environment
SDRs	special drawing rights

SERs	special emission rights
SIV	structured investment vehicle
SROI	social return on investment
T-bills	Treasury bills
TEQ	tradeable emissions quota
TOES	The Other Economic Summit
TRIPS	Trade-Related Aspects of Intellectual Property
WEEE	Waste Electrical and Electronic Equipment (Directive)

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The Economic Problem

Man talks of a battle with nature, forgetting that if he won the battle, he would find himself on the losing side.

E. F. Schumacher, *Small is Beautiful*, 1973

Industrial humanity is behaving like King Midas. He turned his daughter into gold before he realised the limitations of his own conception of wealth.

Paul Ekins, *Wealth Beyond Measure*, 1992

What can Walt Disney teach you about financial crises? When the sub-prime mortgage crisis took hold in the spring of 2007, with the big financial players desperately beginning the search for exactly what lay in those structured debt investments they had believed were assets, the front line investigators were employed by a company in Connecticut, outside New York City, called Clayton Holdings. Clayton specialized in checking out risky mortgage loans for the big Wall Street firms, before or after they had been bundled up into the notorious structured investment vehicles (SIVs) that they were buying. It was at this point, checking one mortgage portfolio, that they found one that had been signed by the borrower simply as 'M. Mouse'.

This was a symbolic moment. If Mickey Mouse can take out a mortgage, then the system is revealed to be without any of the checks and balances that are supposed to safeguard us all. Especially in the UK, people still believe that the great institutions that underpin our lives, known as banks, are dedicated to careful scrutiny and prudent lending: in practice, these institutions – like so many others – have been hollowed out, removing those checks, as well as those bank managers who might once have scrutinized Mr Mouse's mortgage application and rejected it earlier.

It was a serious crisis, but it wasn't exactly unprecedented. The Wall Street crash followed the great radio stocks boom. The 1987 crash followed the junk bond boom.

The dot.com 'bust' followed the dot.com boom. Now the 2008 crash has followed the property and credit boom. Although it always comes as a surprise to the people the novelist Tom Wolfe dubbed the 'masters of the universe', financial panic follows financial over-excitement, as surely as night follows day.[1] A handful of sacrificial lambs are blamed and sometimes even gaoled; regulations are tightened and loosened again. But the fundamental problem that the financial markets are the epicentre of a massive system, the main purpose of which is to make its key players unimaginably rich, is never properly addressed. Nor are the other structural problems of the economic system, which forgives the powerful their mistakes, and which cushions them against the hard times, and provides them with enough money to achieve their dreams, but exhausts the rest of us and punishes and corrodes the lives of the poorer two thirds of the world. 'The economic problem', as John Maynard Keynes put it, has not been solved, and there sometimes seems to be little prospect of solving it – even when its institutions suffer the kind of catastrophic collapse they suffered in 2008.[2]

The crucial fact is that the collapse of the financial markets is only a small part of the problem. It is simply the visible part of an iceberg that represents those crises the world faces which are driven by economic assumptions that no longer work. This latest unravelling – and there have been more than 40 currency crises since the Second World War – is the beginning of the end of the flawed dream that a handful of us could consume our way to economic nirvana. The planet can't take it; the human psyche can't take it; but economics seems to insist that we do it anyway. That looks increasingly like an impossible contradiction. Is there a way out?

This book suggests that there is: a 'new economics' approach, or to be more accurate, a bundle of approaches, that values real, rather than illusory wealth, and puts people and planet first. The good news is that there have been symptoms now for decades of the seeds of this new economics, which sets out to organize the muscles of the world differently. It is there in the emergence of local and ethical food, the rise of people's demand for authenticity, in the rise of ethical business, ethical investment, fair trade and the massive growth in 'downshifting', in everyone from architects to economists learning from nature, of people deliberately earning less to have a better life. This new economics is based on a different framework: it recognizes a different yardstick of success. It is aware of the gap between money growth and real wealth. Its basic tenets are accepted in communities and in business alike, but have barely filtered into the ivory towers of government and their orthodox economic thinking.

The idea is not new. Books on the new economics have been written already, even if they did not use that term. But what was urgently needed was a book, written as much for non-economists as for the experts and specialists, which could set out the tradition, parameters, practicalities and claims of this new economics, and set these out in terms that policy makers can understand and use. We have tried to do that here by looking at the way the world works through the lens of the new economics, and finding there some bizarre questions that seem to fly in the face of orthodoxy. Why do we work longer hours than some medieval peasants? Why are the best mechanics in the world Cuban? Why do we export as many chocolate waffles out of the UK as we import? Each one of these serves as an introduction to a different aspect of the new economics, whether it is the critique of the idea of wealth that lies at the heart of new economics, or whether it is the implications of that critique for money, trade, work or resources.

Those bizarre questions overlap, but they broadly cover the basic issues of the new economics, with a chapter of the book devoted to each – measuring wealth, money, markets, work, resources, trade, community and debt.

***

The sheer diversity of the immediate crisis – in credit, climate and energy – is also, paradoxically, an opportunity. Its sheer seriousness compels some response. The crunch is a combination of a credit-fuelled financial crisis, accelerating climate change and volatile energy prices underpinned by the encroaching peak in oil production. These three overlapping events threaten to develop into a perfect storm, the like of which has not been seen since the dustbowls, bankruptcies and unemployment of the Great Depression and quite possibly never before.

These immediate crunches are underlain by three fundamental crises: ecological, human and spiritual. These are not usually understood as economic problems, but that is exactly what they are: a by-product of faulty measurement and misleading values pedalled by an ill-directed economic system. These central crises are as follows:

The ecological crisis

The rising temperature of the biosphere is being caused by human economic activity, burning fossil fuels to drive the growth economy. As a result, the year 2005 was the hottest year ever. Carbon dioxide is at its highest level in the atmosphere for the last 2 million years, predominantly driven by industrial and human use of fossil fuels: the destruction of our natural capital for economic reasons, leading to climatic upheaval, more extremes of weather including increasingly severe droughts and floods, species loss and a real threat to the viability of the human food chain. If all the ice in the world melted, the sea would rise by up to 70 metres (m). But even a single metre will displace tens of millions of people in a country like Bangladesh, slightly more will be catastrophic for many parts of the world, flooding major cities and large parts of certain countries. Estimates also suggest that in the foreseeable future we are going to lose a quarter of our mammalian species, 12 per cent of our bird species and something like a third of our amphibians. The future for polar bears is bleak.

Then there is the inappropriately named 'positive feedback', when these changes cause knock-on domino effects. As the ice melts, there are less reflective surfaces, so less heat is reflected back. As more carbon dissolves in the sea, its ability to absorb carbon goes down, besides becoming more acidic and destroying coral reefs. As the sea warms, other greenhouse gases trapped in the sea bed stand to be released. As the tundra melts, it gives off methane and carbon dioxide. As the Amazon rainforest is destroyed, there is more drought, more fires, more destruction, less carbon absorbed and more released. These and many effects are described in the last report of the Intergovernmental Panel on Climate Change.[3]

The human crisis

This is the crisis of distribution. Despite two centuries of economic expansion and unprecedented growth in recent decades, around 1 billion people are going to bed chronically malnourished every night and 30,000 children are dying every day of preventable diseases. Behind those statistics lie individual stories of human tragedy all over the world. Worse, the inequality between those people and the wealthy has actually been increasing. In the late 19th century, the ratio of the richest 20 per cent in the world to the poorest was somewhere between 3:1 and 10:1. By 1960, the ratio between the richest and the poorest had grown to 30:1. By 1997, that had grown to 75:1.[4] These are accelerating figures: now the richest 1 per cent of the world earn as much as the poorest 57 per cent of the world combined. At the same time, the poorest 5 per cent of the world actually *lost* a quarter of their real income.

The spiritual crisis

Yet even those who are among the winners under the current system are largely failing to benefit. Although gross domestic product (GDP) in the UK has doubled over the last 30 years, most measures of well-being have remained steady or dipped down. Similar studies are showing even some decline in well-being in most developed countries. The winners in the system are suffering from rising debt, rising stress, rising depression and mental ill health.

At the same time, the social glue that holds our lives together, and makes the economy possible, is also unravelling: families, neighbourhoods and relationships are fracturing under the pressure of high mortgages, benefit regulations and the kind of monoculture that drives out local enterprise, institutions and community life from many areas in the name of efficiency, centralization and corporate success.

When 12 million people in Europe are involved in some way in downshifting – earning less money for greater well-being – then you know the mainstream, which demands we should constantly accelerate our earning and spending, has a problem.[5] Downshifting is incoherent in conventional economic terms, where people are assumed to maximize their income at all times. It is also evidence that high growth economics does not necessarily produce greater well-being even for those who benefit financially.

* * *

Major change tends to emerge with the aid of economic catastrophe, though that is a depressing conclusion. Even so, it would have been hard to imagine, when the property boom was still at its height in the spring of 2007, that, within 18 months, governments would have been dusting off economic ideas that had been rejected for a generation or more, and would be desperate for new ones. The crash was predictable; the scale and speed of collapse was less so.

The immediate cause of the great unravelling was the so-called 'sub-prime' market, which was in itself nothing new. It was one aspect of the market that lent money to poorer people, at higher risk of default, in return for higher rates of interest. It had previously been a whole industry carved out between door-to-door loan sharks, shunned by the mainstream lenders. The big banks had been criticized on both sides of the Atlantic for failing the third of the population they considered unworthy for credit. But instead of expanding their own operations to cover them, they invested in 'sub-prime' companies to mop up the marginally bankable instead, and foremost among these was HSBC.

So it was hardly surprising that it was HSBC that revealed, in February 2007, that they were setting aside extra funds to cover bad debts in their American sub-prime lending portfolios. On the same day, one of the biggest sub-prime lenders in the USA, New Century in California, experienced a catastrophic loss of confidence after revealing a quarterly loss. Its senior executives were away in Ireland planning future projects: another metaphor for the faults of the system as a whole.

What had happened was that the investment banks believed they had discovered a way for mortgage lenders to lend money to poorer people at high rates of interest, but at negligible risk. What they did was to bundle the loans they had made together with a range of other loans from other markets, with varying degrees of risk, and sell them as safe investments. Then they could lend money from the sale to more investors and so on.

The disastrous model used by so many lenders meant bundling up their mortgages and selling them on, then using the proceeds to lend more. It meant that banks and other investors would buy the SIVs, getting the full value of the repayments over the years. The SIVs were then taken apart and reassembled into parcels called collateralized debt obligations (CDOs) and sold to hedge funds, which sold them on all over the world. Because these CDOs included debts from a range of different markets, they were believed to be insulated against risk: the mortgages might cause problems, but the other loans would offset the risk. That is how the credit ratings agencies Moodys and Standard & Poor saw it, giving them AAA ratings.

The trouble was that, once the truth about the sub-prime loans – M. Mouse and all the rest – became clear, this very safety aspect of the CDOs became their undoing. They could all rely on safe loans being in the package, but it also meant they could also rely on unsafe sub-prime loans being in there as well, and, as the default rate began to rise, that rendered them of doubtful and uncertain value.

By July 2007, Standard & Poor was threatening to cut its ratings on $12 billion of sub-prime debt. A month later, the European Central Bank was pumping €95 billion into the money markets, as the flow of interbank lending, which banks need to deal with day-to-day withdrawals while their deposits are out on loan, all but dried up. A month after that, reports that Northern Rock was looking for emergency financial support from the Bank of England led to the first run on a British bank for over a century, with the alien sight of savers queuing for hours in the rain outside branches.

Since then, as we know, the crisis accelerated until most of the investment banks on Wall Street had disappeared, and – spurred by the bankruptcy of Lehman Brothers – most of the banks in Europe and North America were forced to accept state bail outs and partial state control, or went cap in hand to the sovereign wealth funds in the Middle East, to avoid bankruptcy. The economic assumptions of the past generation lay in ruins, the advice provided by the best financial minds had been disastrous, and occasionally fraudulent, and the architecture that runs the world's economies was broken beyond repair.

The epicentre of the disaster on the ground was by then the city of Cleveland, Ohio, where one in ten homes was repossessed and vacant, nearly every street blighted by boarded up properties and street gangs.[6] With one in five US mortgages now sub-prime, many of them facing major hikes in the repayment rate after two or three years, more than 2 million foreclosure proceedings began in the USA in 2007 alone, many of them against people sold mortgages where the terms and interest rates were misrepresented to them, which is what happens when products are believed to be risk free by those selling them. Especially when those selling them are often paid on a commission basis, and are normally rewarded for the number of sales they achieve.

These sales were complicated by the bizarre packaging and repackaging of the actual mortgages into SIVs, and many families have been rescued by the fact that the final owner of their mortgage has, not surprisingly, mislaid the relevant paperwork, without which they are powerless to foreclose. The less fortunate mortgage payers found that huge unexplained fees had been added once they asked for help to delay payments, putting them even further in debt.

By October 2008 – financial crashes usually take place in October for some reason – the real question was whether not the financial system could survive. One estimate puts the total value of credit default swaps in the system, most of which include risky sub-prime loans, at as much as $45 trillion: twice the total value of the

US stock market and three times the GDP of the US.[7] The veteran investor Warren Buffett has already described derivatives, and other investment vehicles used by hedge funds and others, as 'financial weapons of mass destruction', and he may well be proved right.[8] Certainly the events of the autumn of 2008 implied that something more serious was happening, as a series of major names – HBOS, Lehman Brothers, Merrill Lynch and all the others – were wiped off the map, driven out of business as much by the hedge funds as by any other mistakes they might have made. Governments have run up huge deficits propping up a banking system that may or may not be able to deliver any kind of recovery, except for itself.

The collapse of the New York and London economic model in 2008 may turn out to be as significant as the collapse of the Soviet model in 1989. If the financial system survives the crisis – and it usually does survive, despite the upheaval – it may briefly focus the minds of policy makers worldwide on the problems that lie behind these activities. As we write, the minds of most policy makers are obsessed with how to return to what they might call 'business as usual', but the sheer intractability of that – and the inevitability of another bust not far off when they do – might allow them to consider how self-destructive the system is and to ask themselves what kind of alternatives there are.

When, in February 2009, the bankers who were at the helm of the big UK banks gave evidence to the House of Commons select committee, they were unanimous that 'nobody' at the time had pointed out the risks. This was nonsense, of course, and evidence of the ivory tower where the masters of the universe have their dwelling. But if they had peered out of the window of that tower, and if the politicians do now, they might be forced to ask themselves why the system requires huge indebtedness, from rich to poor, just to chug on. Nearly all the money in circulation was created in the form of bank loans: under the current system we need these loans in order to have the money to exchange goods and services. And since most of that money began as mortgages, we need them – in this sense at least – in order to survive.

There is also the peculiar irrelevance to real life of this bizarre dance in Wall Street and the City of London, justified by their occasional ability to raise loans for productive expansion, but actually leaching vast fees and bonuses from the income of savers, pensioners, insurance payers and taxpayers. And behind that, there is a more fundamental problem: this global financial system, underpinning all our lives yet increasingly disconnected from real life, accelerates $3 trillion through the system every day, nearly 90 per cent of which is speculation, mostly speculation in the foreign exchange markets.[9] We find ourselves colluding in that system through our savings, pensions and credit card debts, but it has nothing to do with the job that the financial system is supposed to do – to facilitate the exchange of goods and services, to make capital available for people so that they can create productive businesses in the future.

The money system is no longer designed for this basic work of economics. Perhaps it never was, but its power is now huge. And, those who manage the world continue to accept the enrichment of those who run the system, under the misapprehension that some of those rewards will filter down to the rest of us.

We are living through a period when the politics of money has shifted. Fewer of the electorate are prepared to accept that enrichment of others, especially when the banks have so mismanaged the world. Fewer of us are prepared to be taxed more to prop up a failing financial system. The political shock of the collapse has led more people to look increasingly closely at money and where it comes from. Many of them are surprised to find that what they had assumed was no longer true. No, money hasn't been based on gold since at least 1931. No, money is not produced at the Royal Mint (no more than 3 per cent anyway). We have comforted ourselves with these cosy myths for generations. In fact, of course, the pound is worth what it is because of millions of transactions by foreign exchange dealers around the world. Most of the money in circulation is created by the private banking system as interest-bearing debt, and has to be paid back, plus a bit. We owe more than there is money to pay it off, but we keep the dance going by pulling off the trick year after year of growing the economy a little bit more – at least until the music stops.

These revelations, and the fury at the cost of bailing out the system again, may be enough, in themselves, to justify a mainstream search for a new kind of economics. The new economics is certainly a reaction against the narrow form of globalization that has gripped the planet, a combination of global deregulation of capital, a moral vacuum at the heart of the economic system, and a process whereby the powers and resources of nation states are handed over to monopolistic global corporations. This has been described as the 'neoliberal' agenda, though there is nothing very new and certainly nothing liberal about it, and its failures are increasingly obvious. But it is not just a reaction against globalization. In practice, the 'new economics', which has been emerging over the past three decades, has been as much a reaction against the results of the previous consensus, which drew on aspects of Keynes – the inflation, centralization and narrow measurements of success – as it has been against modern corporate globalization. It has a more fundamental critique at its heart, about the distance between money and real wealth.

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'It may work fine in practice,' goes a joke the French make at their own expense, 'the trouble is, it doesn't work in theory.' Anyone who has sat through debates in Brussels or conferences in Paris will know all about the French love of theory, in contrast to the nuts and bolts obsessions of Anglo-Saxons about whether things will actually work. So it is strange that Paris became the birthplace of an unusual revolt against the pre-eminence of theory over practice, of economic abstractions over reality and of statistics over real life. What is more, the rebellion by economics students had an impact that has echoed through the French establishment. A top-level inquiry recommended sweeping changes in the way economics was taught in French universities, backed by their education minister. It was one of the most successful coups by a branch of the new economics anywhere.

Calling themselves 'post-autistic economics'– 'autistic' is intended to imply an inward-looking, disengaged preoccupation with numbers – the movement spread quickly, but more quietly, to other universities in Britain and America. The movement's leaders at the Sorbonne – Gilles Raveaud, Olivier Vaury and Ioana Marinescu – may not have had much of an impact on thinking outside academia, beyond causing mild consternation among econometricians. But their efforts may mark something more important: a growing disenchantment with the whole cult of measurement, statistics, targets and indicators, which has become such a feature of modern life, not just in the UK government, but around the world; and with the drift of mainstream economics away from the human reality it attempts to describe. As long ago as 1985, an article in *Atlantic Monthly* by Robert Kuttner suggested that universities were churning out economics students who were 'brilliant at esoteric mathematics yet innocent of actual economic life'.[10] The post-autistic campaigners were determined to do something about it.

Their campaign began with a web petition in June 2000 (www.paecon.net), protesting against the dogmatic teaching of neoclassical economics, to the exclusion of other points of view, and the 'uncontrolled use' of mathematics as 'an end in itself'. Within two weeks, the petition had 150 signatures, many from France's most prestigious universities, and *Le Monde* had launched a public debate. The call was taken up by students across France and, by the autumn, education minister Jack Lang had announced that he took the criticisms seriously, appointing the respected economist Jean-Paul Fitoussi to head a commission of inquiry.

He reported in 2001, backing many of the 'post-autistic' points. By then, there had also been a vitriolic exchange of articles by French and American economists, a counter-petition launched by the Massachusetts Institute of Technology, and a peculiar post-autistic petition by Cambridge PhD students in the UK – unusual in that the Cambridge signatories were too scared for their future careers to put their real names to it. There is certainly growing concern about the narrowing of economics: Cambridge economics professor Ha-Joon Chang has complained that economic history has been dropped from the curriculum.

But while post-autistic economics sprung from the economics profession, 'new economics' emerged from outside it. Both represent a critique of conventional economics – the ideas that underpin the rules by which the world is run – that is primarily critical of the way that money measures the world. Both are sceptical of the claims that economics is a scientific and accurate representation of the real world. Together, and with other strands and critiques, they are reacting against economic assumptions that work so badly for most people and the planet, assumptions that may no longer be shared by most economists, certainly not all of them, but that have long since been adopted by those who advise policy makers. 'Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist,' said John Maynard Keynes.[11] Unfortunately for us, the current batch of practical men now rule the world. And the brand of economics they use is open to the following criticisms:

It ignores the planet

Conventional economics largely disregards environmental issues, and fails to take account of the damage done to the planet and to people. It ignores those side effects of economic success, the loss of rainforest, the pollution, the crime, dislocation and depression, all of which come under the heading of what economists call 'externalities'.

It measures the wrong thing

Money measures value badly, and – to be more specific – measures of economic growth measure success badly as a result. The GDP is the money value of all the goods and services produced and exchanged in the nation in a year: it is the cornerstone of conventional economic success. Yet it is actually a means and not an end. Forgetting this skews the economic system, encouraging bad things that increase GDP and discouraging good things that don't.

It misunderstands real life

Conventional economics assumes that markets work. It assumes that people have money or assets and can operate in the marketplace. It assumes we are isolated, rational individuals with all the information we need to make free choices, and that the uneven distribution of power is not a problem. It assumes that the price is an accurate reflection of such markets. In fact, of course, those perfect conditions never exist: many people have no power or assets to operate economically, and are anyway overwhelmed by the power of others.

It encourages vulnerability

Speak to poor cotton farmers in the majority of the world, and you realize that they are dependent, not so much on their own efforts, but on what happens to the world price of cotton, and on the $4 billion of subsidies being paid to other cotton farmers, mostly in Louisiana and Texas, which allows the United States to dump cotton at virtually no price onto the world market and devastate other producers.[12] What ought to be a level playing field – and is assumed to be in conventional economics – is often an unclimbable cliff, dominated by a handful of corporate monopolists, subsidised by tax paid by poor people in rich countries.

It colludes with short-termism

Most democratic systems are highly short term, based on a short electoral cycle, which encourages politicians to trade long-term change for short-term illusions of success. Financial bonuses in the private sector also fuel a short-term cycle, trapping their employees on the business equivalent of a hamster wheel, having to produce ever greater quarterly earnings.

It overvalues owners

Ownership by individuals of their home and enough land to make them independent is some guarantee of independence. But perpetual ownership by investors of companies excludes and devalues the work and imagination of other people involved in their success, and – since ownership extends way beyond most investment horizons – means an inefficient overpayment to investors.

It remains blind to values

The pursuit of pure markets by conventional economics blinds economists to those aspects that are beyond price – the ethics behind a product or the pursuit of well-being by earning less, rather than more. There is an increasing minority of people who want to reflect their values in the way they shop, invest and work.

It encourages consumption for its own sake

Because of the design of money, which has to be paid back plus interest, and the requirement for constant growth, the economic system has to move faster and faster just to keep still, generating new desires and unsatisfiable wants, leading to depression, disaffection and environmental degradation.

It encourages and relies on debt and indenture

Most of the money that circulates around the world was created in the form of debt that must eventually be paid off by somebody, plus interest. This represents a huge demand, not just on the indebted populations of the Earth, but on the planet's ability to produce enough to meet this constantly increasing demand.

Taken together, these criticisms reveal not just an economic system that is partially blind, but one that has no moral compass and is destructive of the environmental conditions on which civilization depends. It is an economics that assumes there is no