Chapter One: Economics for Sustainable Prosperity

Introduction - Searching for a New Economics

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I arrived as a student at the *London School of Economics*, nearly four decades ago, full of enthusiasm and idealism, wanting to learn how to make the world a better place. I had already done 'Advanced' level economics at school, and read a little bit of Keynes, without properly understanding what I was reading. I believed, in 1981, as he had written, in 1935, that 'the outstanding faults of the economic society in which we live are its failure to provide for full employment and its arbitrary and inequitable distribution of wealth and incomes'. This seemed obvious, and under the Prime Ministership of Margaret Thatcher, it was only getting worse.

I had at least taken in Keynes' statement, made in the final sentence of *The General Theory,* that 'soon or late, it is ideas, not vested interests, which are dangerous for good or evil', although this is in part because I have always had a tendency to read the final sentence in a book before reading what goes before it. Like many of my contemporaries, I wanted to learn

about how the world worked. I wanted a set of ideas which would help to bring about a better society.

What I got, from lecturers who were, in many cases, among the leading economists of the day, was a training in pure mathematics, and particularly in the fruits of the rational expectations revolution in macroeconomics of the previous decade. By the time I left university, I knew a great deal about the work of Robert Lucas, whose name will crop up in chapter two of this book, and of his colleagues. I knew they had built on earlier work by Milton Friedman. I was vaguely aware of a debate between Friedman's monetarists and James Tobin and his fellow Keynesians, which it seemed the monetarists had won. I was thoroughly taken in by the notion that macroeconomics had progressed to be a genuine science; that my job was to learn to use the tools of this science; that no serious alternative existed; and that Keynes, and anyone who had ever worked with him, was out of date. Keynes had been dead for more than thirty years, and economics had moved on. In the apparently triumphant words of the economist David Laidler (1981, 7), 'we are all monetarists now'[1].

Like many of my generation, and of the next, I had been sold a pup. Macroeconomics had not moved forwards, and the whole discipline of economics was not progressing. It was regressing. It was already in a muddle, and sadly since then the muddle has only got worse. I did not learn what I had expected to learn, in my naivety. I learned an economics which normally serves powerful vested interests, albeit often without economists realising being aware this was the case. It is an economics resting on a set of assumptions which, though

demonstrably invalid, are convenient both for the development of particular types of mathematical models, and as a justification for the neoliberal transformation, which followed not only in the USA and the UK, but across much of the world.

I was never exposed to the work of Post-Keynesians, like Michal Kalecki, Joan Robinson, Nicholas Kaldor, Abba Lerner, Hyman Minsky, Paul Davidson or Wynne Godley. I never did understand Keynes, or at least not until many years later. We did not so much as mention the ecological limits to growth, as discussed in the 1972 Club of Rome report. There was nothing from the then newly emerging literature of behavioural economics. We certainly did not discuss Karl Marx. This is not to say that there were no electives available, where Marx might at least have got a look in. However, by the time you had taken your macro, micro and econometrics subjects, in my masters degree, there was no room for more than one elective. I chose development economics, and swallowed even more neoclassical dogma as a result. By then, I had been so badly misled, that I would have objected to anything else.

It took me many years, before I understood that I had been misled. I began to develop an interest in behavioural economics, after the 1987 stock market crash, which undermined my faith in the previously all-conquering efficient markets view of financial markets. Over time, during a career spent training accountants and bankers, I met the odd banker who suggested to me that the orthodox description of monetary policy could not possibly be correct, and gradually the significance of this began to sink in. Financial crises seemed to be happening

more and more frequently. Inequality kept rising in many countries, and trickle-down economics began to seem absurd.

Then in 2002 I started teaching at the University of Adelaide, which at the time, in Colin Rogers, had a head of school who was a prominent Post-Keynesian. I barely knew such economists existed. I read some of Colin's work, which led me on to that of Geoffrey Harcourt, the most famous economist ever to work at the University, and to what was for the first time a correct understanding of Keynes. Forgive me for the religious reference, but I felt like a born-again economist. This was what I had wanted to know in 1981, and had lacked both the maturity to discover for myself, and the encouragement to do so from those who were my educators.

There was still something missing, though. The general equilibrium approach of orthodox economics, which I will reject in chapter two, for very good reasons, at least seems to hang together. It is suggestive of the approach to economic management which the great majority of economists, politicians and pundits continue to take for granted, to this day. Post-Keynesian economics seemed to me to lack the internal consistency and power to ever challenge orthodox economics with much prospect of success. To change the direction of our societies from a path of neoliberalism towards one of equitable and sustainable prosperity, something was missing.

That something is modern monetary theory. I was originally introduced to modern monetary theory by Philip Lawn, who is Australia's leading ecological economist, and a pioneer of a metric of economic development called the Genuine Progress Indicator. Phil was a colleague of mine at Flinders University, in the middle of the last decade, and persuaded me to start reading Bill Mitchell's *Billyblog*. William Mitchell, from the Centre of Full Employment and Equity, in Newcastle, New South Wales, is not only one of the principal developers of modern monetary theory, but also a candidate for the title of the world's best living economist. However, despite reading his blog, I remained something of an MMT sceptic until the collapse of Lehman Brothers, on September 15th, 2008. It was that event, and the events that followed it, which led me to read voraciously all the modern monetary theory I could lay my hands on, as well as books and papers by Hyman Minsky and Paul Davidson, and by Michal Kalecki and Keynes himself.

As you can see, I am a slow learner. It took years for me to think about and understand the main elements of an economics for sustainable prosperity. Modern Monetary Theory is central to such an economics. It is, in my opinion, a genuinely beautiful set of ideas, concepts and principles; elegant in its simplicity; powerful in its validity; profound in its significance; revolutionary in its implications; and for many people, transformational in its impact on their thinking. For me, it lies at the centre of a broader set of ideas, arguments and discoveries, drawn from a variety of disciplines and perspectives, which hold out the hope that we can harness this inter-connected knowledge to deliver a future economy characterised by sustainable prosperity. We can do much better in the future than we have ever done in the past.

Escaping from the Old Ideas

More and more people are learning about modern monetary theory; asking questions about it; discussing it with others; using it to distinguish truth from fallacy in a variety of economic debates; and applying it to make sense of the appropriate role for governments to play in pursuit of genuinely sustainable and equitable prosperity. It is close to a tipping point, beyond which it will become impossible to ignore. There is a great deal of momentum behind it.

This is just as well, as the dominant, orthodox wing of the economics profession stands in the way. The barriers to fundamental change in the economics profession are very high. Heterodox economists have been trying to challenge the prevailing orthodoxy for many years, with little practical success, even when the evidence has been clearly in their favour. They have often been sidelined and ignored.

It seems, then, that a large part of the impetus for any such change has to come from outside the economics profession, so that the mass of the profession is eventually forced to wake up and think again about much that has long been taken for granted. This book is meant to be a small push in the direction of change. While I hope it is a good read for economists, of both the heterodox and the more open-minded orthodox varieties, it is intended just as much for

activists and policy makers with an interest in economics I hope for some people it will be a short-cut. I would not like you to have to go through such a long process of transition as I have done. I hope it is accessible to all, useful to many, and I hope it doesn't make economics seem like brain damage.

That is exactly how economics was described by the environmental activist, David Suzuki, in in a 2011 documentary movie[2]. Economics, however, is obviously just the study of the economy. The economy is the set of natural and fabricated resources, institutional arrangements, organisations and markets which are available to meet our needs and to influence our current and future well-being. It is something which we have created and which we can and will change, for better or for worse. Like all institutions, it evolves over time, and not necessarily in ways which are conducive to genuine progress. It has evolved, and been managed, in such a way as to push us beyond our planet's ecological frontier, while at the same time in many countries failing to provide the social foundations for shared prosperity.

You could say the same thing about economics as a discipline. It has evolved in a way which has not been conducive to the well-being of people and the planet. To state that millions have been lifted out of extreme poverty is not much of a defence for economic orthodoxy. Many millions still live in want and insecurity in a struggle for survival, in a global economy with the technology to make this unnecessary. And all the while we are using, according to the Global Footprint Network, such a high level of ecological resources that we would need 1.7 Planet Earths for this to be sustainable in the long term. If every individual on the planet consumed

resources at the rate of the average American or Australia, we would need 5 Planet Earths. We have, since the 1970s, unnecessarily gone well beyond our planetary boundary for resource use, partly because orthodox economics has encouraged our leaders to concentrate on goals which are largely irrelevant to human welfare, and to ignore those things which really matter. Even in American and Australia, relative poverty has increased, as inequality has been allowed to rise to levels not seen since before the Second World War. Many of the changes which have happened in the USA and elsewhere over the past 30 years have been destructive rather than progressive, and for that the economics profession shares a great deal of the blame.

So it is understandable that a lot of people have lost faith in economics, and might echo Suzuki's words. Much of the economics done over a long period has been, if not brain damage, at least a form of brain washing, and this is true of virtually all the work done within orthodox macroeconomics since about 1980. The good news is that this brain washing is not irreversible. If you have had too great an exposure to it, and feel yourself to have been damaged as a result, then this book is offered as a remedy. If you have so far avoided being damaged, then please see the book as a form of inoculation. Once you have read it, you will be able if you wish to read a wide variety of mainstream texts, or to engage prominent conservative economists in debate, with no fear of being misled. Instead, you will be amazed that they could have been so wrong on so much that matters over such a prolonged period. You will wonder how this is even possible.

To describe all economics as ‘brain damage’, though, is silly and potentially self-defeating, whatever your form of activism. To quote John Maynard Keynes, once again from the last page of *The General Theory*, ‘the ideas of economists and political philosophers, both when they are right and when they are wrong, and more powerful than is commonly understood’. Now, as much as at any time in history, it is important for as many people as possible to engage with economic ideas, and to identify which seem to be right and which are wrong. At the very least, we can then, as Joan Robinson put it, ‘avoid being deceived by economists’ - by the wrong sort of economists, in any case. Because the right sort of economics, and the right sort of economists, can be a force for good, and help to deliver a genuinely sustainable prosperity.

In his brilliant popular science book, *A Short History of Nearly Everything*, Bill Bryson described the reluctance of leading geologists over many years to accept, or even to take seriously, the notion that the continents are not fixed in place, but drift and collide over time. It took more than fifty years for plate tectonics to be accepted as valid, despite the fact that generations of children had by then noticed that the continents in places seem as if they would fit together like pieces in a jigsaw, and that there was overwhelming scientific evidence of continental drift. For half a century, plate tectonics was not something in which a respectable geoscientist could believe. It is not only in economics that the great majority of the supposed experts in a field can be badly wrong about fundamental issues over a long period.

Imagine that the economic well-being of billions of people had relied on the theory that the continents are fixed in place. The consequences could have been disastrous. They might have included growing inequalities and insecurities in many countries; long term unemployment and underemployment; rising household indebtedness; financial fragility; and dangerous climate change. All this may have gone along with growing political unrest, terrorism, the rise of the alt-right, and public disillusionment with mainstream politicians and their advisors. David Suzuki might have described the work of these scientists as 'brain damage'. He would of course have been wrong to describe the whole of geoscience in those terms.

It will be obvious once you have read this book that for more than fifty years the majority of economists have doggedly maintained and built upon a core model of the economy which has been no more reliable than the theory that the continents are fixed in place, but far more difficult to displace, and with precisely the consequences described above. So dominant is this orthodoxy that David Suzuki might imagine it to be the only approach to the study of the economy in existence. Fortunately, it isn't. There is a better alternative.

My purpose is to identify and explain the main elements of a new approach to economics which will help us to achieve sustainable prosperity, allowing 'all individuals a decent quality of life with dignity and the opportunity to be a member of an inclusive, participatory and just society'[3]. This approach has different roots, different characteristics and suggests radically different policy options to the economics which has dominated global discourse in recent history. Inequality, insecurity, poverty, unemployment, financial instability and ecological

crisis, have multiple causes, but an important contributory factor to them all, and to the social problems which are derived from them, has been the discipline of economics as practiced by the great majority of the profession in recent decades. Economics can be a force for good or ill, and has too often in the past been the latter, acting as a barrier to genuine and widespread progress. The book is a search for an economics which will contribute towards, rather than frustrate, sustainable prosperity, and so be a force for good.

Two Traditions

Let us begin with a distinction between two very broadly defined approaches to doing economics. We might regard them as traditions. They are so broadly defined that it has been possible for the entire economic debate that many outside the profession, including David Suzuki, and even some within it, have ever been exposed to, to fall entirely within the first of them.

According to the first of these traditions, the economy revolves around and is controlled by you and people like you. What is produced is what you want to consume. It is produced, before being traded in markets, using your labour and using capital goods, or machines. Natural resources, including energy, are either ignored, or treated as a form of capital good. There is very little discussion of ecological sustainability. Growth is good – it means there are more goods and services for you to consume.

It is assumed that you choose how much to spend and save out of your current income, or how much to borrow, based on your well-established preferences and well-informed foresight as to your future needs, opportunities and risks. You are free to choose[4] how much of your time to use for leisure, and how much time to spend in paid employment, again based on your preferences. The amount you earn depends entirely on how productive you are and on the number of hours you choose to work. You love to consume, but you hate to work. If you are unemployed, at least for longer than the time it takes the economy to recover from occasional random shocks, this is your choice.

There are a few frictions[5] and so-called externalities[6], including pollution and the emission of greenhouse gases, disturbing what would otherwise be a perfectly efficient economy, but otherwise a free and competitive market economy provides the best of all possible worlds[7], given the behaviour of people like you. If there are things about the world you don't like, that is the fault of people like you. You have all the power. There isn't very much that governments need to do.

According to the second tradition, if you are a typical worker, people like you have very little control over the way the economy works. Entrepreneurs and corporations might hire you if they are confident they will be able to make enough profit from doing so to make it worth their while. Those entrepreneurs and corporations are operating in an uncertain economic environment. The amount you earn is largely dependent on the bargaining power you possess, rather than on any measure of productivity. Whether you have a job, and how secure that job appears to be, is something over which you probably have no direct control. What is

available for you to buy in the shops is what those corporations think they can persuade you to buy.

The pursuit of a standard of living comparable to those around you, and you do tend to compare yourself with people living around you, can lead you into debt. Involuntary unemployment can have severe and long-lasting psychological effects. The economy can be a very unequal place. Growth has benefits, but it also has potential costs, and it is potentially unsustainable if it pushes economic activity beyond our planetary ecological boundary. Governments have a responsibility to keep the economy close to full employment, to limit inequalities of income and wealth, to ensure everyone can meet their basic needs without being forced into debt or exploited, to maintain the natural environment for current and future generations, and to work towards some form of sustainable prosperity.

It is the first of these traditions which has up to now been dominant. It is often labelled as mainstream, orthodox or neoclassical economics. If you have been an economics student at any point since about 1980, then unless you are very lucky, virtually everything you were exposed to in what passed for your education came from within this tradition. It includes what many people call Keynesian economics[8], though not, as we shall see, the economics of Keynes, as well as including Monetarism. It includes Neo-Keynesians, New-Keynesians, New-Monetarists and Real Business Cycle Theorists. It includes those who have advised Republican presidents and those who have advised Democrats. They are all from the same tradition, and have far more in common than what divides them, at least in so far as their views on the correct way of doing economics is concerned.

At least on average over time, they all agree the economy will be close to its full employment level of activity. They all believe governments should balance their budgets in the long run[9]. They generally think that if you are on a low income, while this is unfortunate, it is a reflection of your low productivity, and the only solutions are to train you to a higher level, or to find ways to motivate you to be more productive. If you have a low wage or are unemployed, it is a problem with you. The economy revolves around you. It must be your fault.

In chapter two, for reasons which will be explained there, this dominant tradition will be labelled real analysis, despite its lack of realism. For the moment, I will call it *soft economics*[10]. Soft economics will play no role in our foundations of an economics for sustainable prosperity. Those who practice soft economics, however, remain at the helm of central banks and finance departments worldwide. Their grip on power is perhaps very slightly looser than it was before 2009, but they still dominate the overwhelming majority of university economics departments; control leading academic journals to the exclusion of work of those from outside their tradition, and act as gate-keepers to careers in economics within major policy institutions. They normally hire people just like themselves, and so are self-perpetuating and self-reinforcing. They are usually defensive of their tradition and dismissive of those working outside their tradition.

But there is another tradition, and there have always been some economists working wholly or largely within the other tradition. It goes by the name of heterodox economics, and

includes people who call themselves Post-Keynesians, and a variety of others who fall outside what remains at the moment the orthodox approach to doing economics. In chapters two and three, we will give it the label of 'monetary analysis', but for the moment it can be called *hard economics*[10]. Sustainable prosperity will be built on 'hard' foundations, and not on 'soft' ones, with a recent contribution to hard economics known as modern monetary theory playing a central role in the new economics for sustainable prosperity for which we are searching. In chapter three, we will see that Keynes is a central figure within this tradition, and that those who call themselves New-Keynesians have little or nothing in common with the economics in Keynes.

Soft and Hard Economics

The words 'soft' and 'hard', in this context, have nothing to do with how difficult the approaches are to learn and to apply, or how harsh the policies advocated by economists from within each tradition might be. Instead, the words refer to the realism, or lack of it, of the assumptions on which economic theories and models are built. Their use, in this context, is drawn from a recent book on neuro-economics (Glimcher 2011).

In soft economics, realism is ignored, and the only concerns of model builders are whether the predictions of their models appear to them and their colleagues to have value, and the conformity of their methods with the currently dominant view of the correct way to do economics. If the techniques are standard and the predictions are seen as useful, the realism

of the assumptions used to build the model are of no consequence. The soft tradition lends itself to mathematical theorising, and so attracts to the profession people who are easily impressed by mathematics, and less interested in realism. In turn, this biases the profession towards a model of the economy which tends to be supportive of a laissez-faire approach to economic management. Those doing soft economics typically deny that ideology has any role to play in their theorising, seeing themselves as objective scientists, but they abuse the scientific method, albeit unintentionally, and are wrong to argue that economics can ever be a values-free discipline.

Those doing hard economics take an interest in how and why real people behave the way they do, and how economic institutions and processes actually work and evolve over time. Hard economics is ‘because’ economics. It is not just about making predictions, but about building a useful map to guide policy makers through a complex economic landscape. Those doing hard economics make regular use of insights from a wide variety of other disciplines, within the other social sciences and outside them. Psychology, sociology, anthropology, history, law and even neuroscience are among those disciplines which are potentially important to hard economics.

Conversely, soft economics is ‘as if’ economics, where a set of often wildly unrealistic assumptions are accepted, and it is then standard practice to explore mathematically how the world would work if those assumptions applied, and to imagine that such predictions have relevance to a world where those assumptions clearly do not apply. Nobel-prize winning economists from within this tradition, and the great majority of Nobel-prize winning

economists come from within this tradition, have dismissed disciplines like neuroscience, and issues like the limitations a decision maker with a human brain might face, as being irrelevant to an economist[11]. At best, there is a grudging acceptance that other disciplines might sometimes have relevance to economics, but not where they contradict axioms economists hold dear. There have been some changes for the better, but not so as to fundamentally threaten the way macroeconomics is done.

I want us to go on a journey from the economy we have today to an economy of sustainable prosperity. Economic models and theories which are fit for purpose should provide us with a map to help guide us to our destination. Useful maps are not completely realistic reproductions of the regions they are supposed to represent. In a similar way, economic models can never include every detail of what influences human behaviour, or of the structure of the economy and its institutions. All models and all maps must be 'wrong', in the sense that they are not identical to that which is being modelled or mapped[12]. Those who practice soft economics take comfort in this fact, and sometimes claim on this basis that a search for realism is misplaced.

Advocates of hard economics can only agree that models require simplifying assumptions to be of any use. However, as my former head of school Colin Rogers says, if you are trying to find your way across New Zealand, what you want to guide you is a simplified representation of New Zealand, and not a map of Tolkien's Middle Earth[13]. Don't expect to find your way across New Zealand using a map of Middle Earth. Don't expect to anticipate a global financial

crisis and a great recession, or to plot the best path out of that recession, or to achieve sustainable prosperity, using soft economics.

In other words, for a model to be useful, it must share at least some of the characteristics of what it is supposed to represent. In a hard economic model, any assumptions you make must be justified. They may be assumptions which could be relaxed without changing the predictions of the model; they may be assumptions which specify the precise circumstances under which the model is useful to policy makers; or they may be assumptions which exclude factors playing no significant role in the processes the model describes[14]. If they are none of these things, you are not doing hard economics.

It comes as a surprise to a lot of people that there are these two very different approaches to the study of how economies work, what drives their evolution over time, and what role, if any, government policies can play in ensuring economic outcomes serve the public purpose. It should be a greater surprise that the dominant tradition is that of soft economics, for no better reason than it is more susceptible to mathematical theorising and to ideological bias.

Soft economics, as it is taught in the majority of universities around the world, and practised in governments, central banks, and international agencies, limits the range of economic policy proposals which can be given serious consideration, and consequently biases policy outcomes. Paul Samuelson was one of the founders of modern-day soft-economics, as well as the author of the best-selling economics text-book in the history of the discipline, and the

intellectual father or grand-father of almost all the texts used in universities and colleges around the world subsequently. He said, ‘I don’t care who writes a nation’s laws — or crafts its advanced treatises — if I can write its economics textbooks.’[15]

Hyman Minsky, who made major contributions to hard economics, once wrote that “The game of policy making is rigged; the theory used determines the questions that are asked and the options that are presented. The prince is constrained by the theory of his intellectuals.”[16] The options that are presented to ‘the prince’ almost always exclude policies which would contribute to sustainable prosperity, because of the soft economics being used. The game is rigged, and has been rigged for a long time.

Ronald Coase, like Samuelson a Nobel-prize winner, said that ‘knowledge will only come if economics can be reoriented to the study of man as he is and the economic system as it actually exists’[17]. Soft economics is neither the study of people as they are, nor of the economic system as it actually exists. It is for the most part fake knowledge. The increasing softness of macroeconomics over the past 40 years has been a collective intellectual failure with profound consequences. This is why we need to search for a modern version of hard economics to replace the modern-day orthodox macroeconomics which is still today being used to rig the game. Economics as a profession really does need to undergo a revolutionary change, and the evidence of this need is not hard to find. It lies in the multitude of false and misleading statements of advisers and policy makers in all major economies in recent years, and also in the acquiescence and often endorsement of neoliberal ideology by orthodox economists.

The recent record of soft economics, and especially soft macroeconomics, is so poor and its implications so misleading, that it is hard to know where to begin, but given its disastrous last decade, the central bank of the euro-zone is as good a place as any.

In 2010, the then Chairman of the European Central Bank, along with a number of leading American and European economists, claimed that austerity could not cause a recession, and that a fiscal stimulus could not bring about economic recovery in an economy with high unemployment. This was classic soft economics, in that there is no credible evidence for either statement, and they are both based on a logical outcome within a model based on completely unrealistic axioms. In other words, these statements are nonsensical. And yet these were the words of Jean-Claude Trichet –'the idea that austerity measures could trigger stagnation is incorrect'[18].

Subsequently, the European economy as a whole stagnated for years, and in those countries forced into the most severe forms of austerity, as a condition for remaining in the euro-zone, there was worse than stagnation. Even the International Monetary Fund has now accepted that, when used, fiscal policy has in recent years been shown to be more powerful than it had expected[19].There was an entirely unnecessary depression in the euro-zone, from which Greece, in particular, may never properly recover. The scars are permanent.

The USA, unlike Greece, or Spain, or Italy, or France, is a monetary sovereign. Its currency-issuing government can never be forced into insolvency. Nevertheless, the most recent

Federal Reserve Chair Janet Yellen has said that the government's debt 'should keep people awake at night'[20]. Only if they are badly misinformed should they lose any sleep. The scale of the government's debt, which can equally well be seen as a safe financial dollar asset for the private sector and the rest of the world, will never lead to a financial crisis. Soft economics misleads you into the trap of seeing the government as facing essentially the same financial constraints as a household. If it misleads the Chairman of the Federal Reserve, it is no wonder hardly anyone else understands the vital difference between being a currency issuer and a currency user.

The Congressional Budget Office, which is full of orthodox economists, uses phrases such as 'the challenges posed by the amount of federal debt held by the public', as if the savings of the public in US dollars are a challenge, rather than a good thing, and in 2016 published '115 options for reducing the deficit'[21]. The Office did not describe these options as '115 options for reducing the private sector surplus', even though that is what they are. The government's deficit, like its debt, has nothing in common with the debt of a household, and cannot be interpreted to be good or bad, taken out of context. However, governments normally run deficits. Without them, everyone else cannot run surpluses. Looked at in this way, the aim of a monetary sovereign government should be to run as large a deficit as is consistent with non-inflationary full employment. This is a notion that many a modern orthodox economist finds as easy to accept as a 1950s geoscientist confronted with the statement that the continents drift. Yet it is the truth.

There are many other examples we could list, such as the complacent words of Robert Lucas that 'the central problem of depression-prevention has been solved, for all practical purposes'[22]; Olivier Blanchard's ill-timed statement that 'the state of macro is good'[23]; or Ben Bernanke's description of the US economy not long before the crash of 2008 as the result of a 'great moderation'[24], oblivious of a gathering financial storm.

Rescuing Macroeconomics

Something is up with economics, and especially macroeconomics, as it is has long been taught and practiced within the dominant tradition. As Paul Krugman said in his New York Times blog, in response to Blanchard, 'The state of macro, in short, is not good'[25]. Willem Buiter wrote in the Financial Times, soon after the crash, of '**the unfortunate uselessness** of most "state of the art" academic monetary economics'[26]. He went so far as to argue that most Ph.D. level economic education over the previous thirty years had served to weaken the discipline, rather than strengthen it. Paul De Grauwe, in the same publication a few months later, opined that 'the science of macroeconomics is in deep trouble'[27]. Charles Goodhart, at roughly the same time, accused orthodox economists of 'a steadfast refusal to face facts', while writing of 'the continuing muddles of monetary theory'[28].

These are not obvious revolutionaries. There are few more eminent economists than Krugman, Goodhart, De Grauwe and Buiter, and with the exception of Charles Goodhart, they

are commenting on a tradition of which they are themselves in some ways still prominent members.

A dramatic shock-wave was created by Paul Romer, until recently the Chief Economist at the World Bank and for some years a strong candidate for the Nobel Prize, in his paper 'The Trouble with Macroeconomics' (Romer 2016). He argued that state-of-the-art orthodox macroeconomics has not progressed as a science over the past 40 years, but rather become more obscure, cloaked in mathematical symbols, and descended into something like alchemy or mysticism[29]. This is the economics which still guides policy-makers world-wide. It is not fit for purpose, and it is not improving over time. It is based on a mistaken philosophical approach to doing economics. It is not fit for purpose in the 21st century. We need to replace it.

The great majority of this book is forward looking and positive. It is not a long discussion of the limitations and failures of orthodox, or mainstream, or neoclassical economics. The focus is on the construction of something more useful, to put in its place. The building work has already largely been done. It is just a matter of selecting the most useful elements and bringing them all together, in a narrative, which is what I have tried to do. However, we need to understand what it is we are seeking to replace, why it has been so persistent in spite of its deficiencies, and why it is so important that it is replaced. This is the business of chapter two. It is something which we need to attend to, before we start on our path towards a modern monetary theory for sustainable prosperity.

If we do not get our economics right, we will not achieve sustainable prosperity. Getting the economics right means doing hard monetary economics, not soft economics. While there were contributions to hard economics before the 1930s, by people like Thorstein Veblen[30] and in some respects Karl Marx[31], the first serious attempt at the hard economics of monetary analysis was the work of John Maynard Keynes, particularly his *General Theory of Employment, Interest and Money* and his later writing. We will begin putting together a hard economics for sustainable prosperity in chapter three, with a discussion of what we can take from Keynes, and from his colleagues, their students, and others who developed Post-Keynesian economics, in the years following his death.

A central concern of this book is a discussion and evaluation of modern monetary theory, and its role, alongside insights derived from modern behavioural economics, in building a future offering everyone 'a decent quality of life with dignity and the opportunity to be a member of an inclusive, participatory and just society'. Chapter four provides our behavioural foundations, drawing on the work of modern behavioural economists, and contrasting this field with the inadequate psychological foundations of orthodox neoclassical economics. Chapter five is an explanation and discussion of the axioms of modern monetary theory; of the institutional realism of these laws and axioms; and of their implications for economic management. Chapter six provides a work-horse analytical macroeconomic model, within which the principles of modern monetary theory can be demonstrated, and which, it is argued should replace the orthodox models currently employed by most central bankers and treasury economists. Chapter seven is a discussion of job guarantee schemes, and of their significance to modern monetary theory, and to the construction of an economy offering everyone an

opportunity of an independent and secure life with a good standard of living, while insuring we respect our ecological constraints.

Some of the essential elements of an economics of sustainable prosperity are reviewed in my final chapter. A broadly defined, behavioural and ecological form of modern monetary theory will allow us, and even encourage us, to introduce the policies we need, and to make the necessary institutional changes, to provide everyone with an opportunity of living a full and engaged life, within an equitable and inclusive community, while defending and maintaining natural ecosystems so that today's prosperity does not threaten the well-being of future generations.

All this is possible. The future does not have to be a re-run of the past. An orthodox macroeconomics, which has been going backwards for more than three decades, is ripe for replacement. The economic policies which that failed macroeconomics has supported have undermined both social stability and ecological sustainability. We can and must replace orthodox macroeconomics, just as we can and must reverse many of those economic policies. We can – you can – play a part in building a future of sustainable prosperity.

It is up to us.

I hope you enjoy the book.

Notes to Chapter One

1 David Laidler has for many years been one of the leading monetarist economists. His words echoed the statement 'we are all Keynesians now', which have been attributed, somewhat misleadingly, to both Milton Friedman and Richard Nixon.

2 This (Canadian) movie was called *Surviving Progress.*

3 This is the definition of *sustainable prosperity* suggested by the editors of this series of books, on behalf of the *Binzagr Institute for Sustainable Prosperity*.

4 *Free to Choose* was the title of a very influential book (and television series) by Milton and Rose Friedman, published in 1980.

5 *Frictions* is a term used by orthodox economists to refer to anything they believe might prevent the economy from reaching an ideal allocation of resources and full employment. For example, Milton Friedman saw a legal minimum wage rate as a friction.

6 *Externalities* are costs and benefits due to economic activity falling on third parties. So for example if Sam produces a good, Jane consumes it, and Jean is harmed in some way by the process, perhaps due to the emission of a pollutant, then there is an externality (a negative one, in this case).

7 At least, it leads to an outcome which is *Pareto efficient*. This means a situation where it would be impossible to make one person better off without making at least one other person worse off.

8 What most people think of as Keynesian economics is what will be described as Neo-Keynesian economics in chapter two. Keynes was not a Neo-Keynesian. The economics of Keynes will be discussed in chapter three.

9 There is among orthodox economists a divide between *deficit hawks*, who believe governments should always avoid deficits, at least outside war-time, and *deficit doves*, who believe governments should run deficits during and immediately after recessions, but balance their budgets across economic cycles. Our economics for sustainable prosperity will lead us to reject both these views of fiscal policy. We will be *deficit owls*.

10 The distinction between soft and hard economic theories is drawn from Paul W. Glimcher's *Foundations of Neuroeconomic Analysis* (2011).

11 As in *The Case for Mindless Economics* (Gul and Pesendorfer: 2008).

12 The statement that "all models are wrong" is usually attributed to the statistician George Box (1976). However, he also asked "how wrong do they have to be to not be useful?" That is the question.

13 Colin Rogers' so-far unpublished paper, *The State of Macroeconomics: a post-mortem*, written in 2017, uses this Tolkien-inspired analogy.

14 The three valid justifications for incorporating assumptions in economic models are listed in Steve Keen's *Debunking Economics* (2001).

15 According to Samuelson's obituary in the *New York Times* (Weinstein 2009)

16 *Stabilising an Unstable Economy* (Minsky 1986: 110).

17 He said this very late in life, in an article entitled 'Saving Economics from the Economists', which appeared in the December 2012 issue of the *Harvard Business Review*. He also said, in the same article, that "the degree to which economics is isolated from the ordinary business of life is extraordinary and unfortunate." If only he had not waited until he was over 100 years old to say such things!

18 *Reuters Business News*, June 24, 2010.

19 Blanchard 2013.

20 In her testimony before Congress, on 29 November 2017.

21 *Options for Reducing the Deficit: 2017-2026*, Congressional Budget Office.

22 Lucas 2003: 1.

23 Blanchard 2009: 229.

24 In a speech delivered at the meetings of the Eastern Economic Association, Washington, D.C., 20 February,2004.

25 *New York Times* blog of 18 June, 2013.

26 *The Financial Times*, 3 March, 2009.

27 *The Financial Times,* 21 July 2009.

28 Goodhart 2009.

29 Delivered by Paul Romer on January 5, 2016 as the *Commons Memorial Lecture of the Omicron Delta Epsilon Society*. Forthcoming in *The American Economist*.

30 Veblen was the founder of Institutional Economics; the author of *The Theory of the Leisure Class* (1899); coiner of the term 'conspicuous consumption'; and author of the brilliant paper 'Why is Economics Not an Evolutionary Science?' in the *Quarterly Journal of Economics* in 1898, among much else. Veblen did 'hard economics'.

31 It is obvious the Karl Marx cannot be summed up in a footnote. However, it is in terms of his influence on monetary circuit theory, which is related to and consistent with the modern monetary theory approach to macroeconomics described in chapter five, and on Kalecki's theory of income distribution, which will be discussed in chapter three, that Marx is important to an economics for sustainable prosperity.

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