

Money, Finance, Reality, Morality

A New Way to Address Old Problems

By

Edward Hadas

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Preface

What is different: This is a book about money and finance. It is also a book based on an understanding of economic activity in which finance, money, and even barter are completely optional. In turn, the understanding of the economy is based on a fundamental judgement about the right way to approach economics, the academic study of some parts of the human experience. I do not believe that a model of the economy can be valid unless it is fully applicable to all communities – not only the complex, money-filled national economies that economists typically study, but also much simpler ones, all the way down to the now vanished hunter-gatherers, who mostly laboured and consumed together and who had neither money nor more than minimal trading relations with other groups. The paradigm presented in Chapters One and Two satisfies my standard of validity.

My description of economies is quite different in several fundamental ways from those commonly taken for granted in university economics departments. The difference that is most relevant to this book is not actually that the professors generally approach the economy as a monetary thing, while I do not. It is that they assume that the study of economics is essentially numerical, while I do not. For them, the only good explanations and analyses are either abstractly mathematical, something like the laws of physics, or statistical, like the patterns discovered in biology or much contemporary sociology. For me, economics is primarily a moral, social, and qualitative discipline. I recognise that some economic numbers can be informative, but I have found that even the helpful ones often bring more false certainty than true understanding. In my judgement, it is almost self-evident that economic systems and the people who constitute them do not follow rigid mathematical laws, whether simple or complicated. People are just not like that. Their behaviour can sometimes be described statistically, but those patterns and tendencies generally conceal far more than they reveal.

How this book came to be: Considering my distrust of the conventional numerical approach to economics, the choice to write about the essentially

numerical domains of money and finance may seem strange. It sometimes seems strange to me. Indeed, I was proud of having written a book on economic theory (Hadas, 2007) that hardly mentioned either money or finance. Before the 2008-2009 financial crisis, I firmly intended to continue to stay away from both. The crisis and the subsequent slow economic recovery changed my mind. At the time, I could not explain to my satisfaction why the world's financial system came so close to collapsing, why it was so hard for the global economy to recover from the damage done by a brief financial crisis, or why so little changed in the global financial system after governments rescued it from the results of its obvious errors.

After several years, I came to understand that my approach to economics, to study it as a moral discipline, was the hermeneutic key to the crisis. Several more years were required to grasp firmly that finance's ethical troubles sprung from a faulty popular (and professional) misunderstanding of its proper economic role. Delving into this misunderstanding, I thought more deeply about what money could and should do. Once this conceptual framing was clear, I set out to explain not only the 2008-2009 crisis, but the nature of the entire "financial exception" that I discuss in Chapter One. In effect, removing economists' numerical blinkers allowed a clearer vision of the underlying moral drama of this seemingly number-filled crisis. As a sort of grim bonus, the dozen or so years it took to think through these ideas and turn them into a book were enough for yet another possibly serious problem in the money-financial system to roll around, this time a sudden rise in consumer price inflation. The latest troubles support this book's basic thesis: the cavalcade of financial crises will continue until the system's rules and customs become reality-close and ethically sound.

No policy recommendations: This book lacks one of the common features of post-crisis books, a collection of pragmatic proposals for avoiding future troubles. An earlier draft did have a list of that sort, but I decided not to include it after noticing that none of my fifteen big suggestions could currently gain any significant political support. I decided that a collection of apparently unrealistic proposals was less likely to win over sceptical readers than to persuade waverers that I am a utopian dreamer. I am still

confident that these proposals, or something like them, could work well in the real contemporary world of complex economies and the sempiternal world of morally weak humanity. However, nothing will work at all without a new, or perhaps a revived, social consensus about financial greed. That, I am sorry to say, looks like a distant prospect.

Not much visible philosophy: The book has few explicitly philosophical discussions, but my agenda is deeply philosophical. In the most general terms, I want to replace the naïve utilitarianism, reality-blind methodological individualism, and pseudo-non-normativity that underpin academic economics with a much more solid foundation, one drawn from the great Western traditions of philosophy, social thought, and philosophical anthropology. In more detail, the book includes a refinement of Aristotle's discussion of money, an almost scholastic effort to show that what we call "money" is actually two different substances, a firm rejection of the Locke-Hume-Smith effort to separate the money from government and the economy from society, an effort to demystify Karl Marx's claim to have demystified money, a Durkheimian identification of a dual sociology of finance, and an understanding of time that is influenced by both Augustine and Heidegger. Most important, the moral analysis of finance has been informed by a Thomistic understanding of the good life.

Not much Catholicism: Between my first book on economics and this one I published a book on Catholic Social Teaching (Hadas, 2020). The economic aspects of that teaching helped shape the current work. In particular, Pope John Paul II's encyclical on labour (John Paul II, 1981) is the foundation for the Great Exchange paradigm that I present in Chapter Two. More generally, the subsequent pope, Benedict XVI, summarised the moral framing that is the foundation of all my economic thinking: "The economic sphere is neither ethically neutral, nor inherently inhuman and opposed to society. It is part and parcel of human activity and precisely because it is human, it must be structured and governed in an ethical manner" (Benedict XVI, 2009: 36). Since quotations from papal texts are far more likely to repel than attract potential readers, that is the only one in the book.

Not much debate with economists: This book also includes a number of skirmishes with various conventional ideas about economics. As with

philosophy and theology, I have avoided both polemics and details that would only interest specialists. I particularly want to spare readers who are unfamiliar with mainstream or Marxist economics from having to wade through detailed condemnations of unfamiliar bad ideas. Readers more versed in economic theory might have preferred more fighting words, but I do not think that knowledgeable and thoughtful doubters will be persuaded by being told that much of their thinking is crude, immoral, inaccurate, and incoherent (although I do think that those adjectives describe the basic principles of mainstream academic economics). I am humble enough to recognise that far more intelligence than I could ever hope to muster has gone into the many debates on, for example, capital theory, the effect of policy interest rates, and the quantification of investment risk. However, I am confident enough, or perhaps foolish or arrogant enough, not only to dismiss most of those efforts as fundamentally misguided, but largely to ignore them in presenting my own understanding. Still, I do provide a few detailed refutations, which readers with less economic training can skim over without great loss.

I have provided only schematic and geographically limited discussions of economic, financial, and monetary history. The justification for this undesirable brevity, as for the cursory discussions of the penumbra of symbolic and social meanings that surround money and finance, is that the alternative – careful and nuanced analysis – would have been even worse. I decided that the hundreds of pages, not to mention the years of study, needed to do justice to these topics, would have added more confusion than insight to an argument that is essentially conceptual.

Not many references: The decision to concentrate on my own ideas explains the paucity of references in the text. I have only sourced facts, quotes, and direct references to relatively obscure works. The intellectual self-centredness might excuse the relatively brief bibliography, which should be read as a sampling of the many broad thinkers and narrow specialists who have influenced and informed my thinking about the topics in this book. My hope is that the parsimonious approach to citations and sources, while rather unscholarly by today's academic standards, allows this book's novelties to stand out. I am arrogant enough to claim that much of what I say about money and finance in this book is in many ways new.

Summary: *Money, Finance, Reality, Morality* is a simple but accurate summary of this book. After a first, introductory chapter, there are single chapters on each of the title's words. There are a few wrinkles, though. I deal with monetary reality in Chapter Two, so Chapter Four is entirely dedicated to the mostly dangerous reality-distance of contemporary finance. The morality in Chapter Five is mostly limited to a single sin, greed, although there is an implicit sociology of the virtues of generosity and justice.

Both Chapters Two and Four have some fairly detailed discussions of financial instruments and practices. Less technically informed or interested readers are welcome to skim over those sections. More informed or interested readers can also look at the Appendix, which goes into further detail.

Acknowledgements: The gestation of this book took decades, the writing several years. Over that time several institutions and many people have helped me in various ways: with suggestions, debates, friendly support, and hard questions. I am in (non-financial) debt to more organisations and people than I can hope to list, but here are the ones that it would be shameful not to mention.

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Chapter 1. The problem with money and finance

In praise of the modern economy

The modern economy is a wonder of coordination. The diverse labours of billions of people are meshed together to provide an incredible range of goods and services to the same billions of people.

Each person contributes only a tiny portion of the labour required for the production of almost anything that is consumed. The assembly line worker depends on the other workers on the line, the product's designers, the factory builders, the maintenance experts, the contract-protecting lawyers, the driver who takes the product to the retailer. Builders, engineers, drivers, and retailers all have their own long chains of dependency, creating a myriad of interlocking contributions and relationships. The teacher who provides education directly in person is delivering a personal service, but she could not work without the labour of all the people who provide the books, the buildings, and the bureaucracies of a school. It is not just material that is passed through the economy. All workers also draw their own tiny portions from the modern world's great treasuries of knowledge, trust, and ethical expectations. Many workers also contribute little bits of the labour needed to keep those treasuries well-stocked.

Exactly as the modern economy unites the products of many people's labours, it divides the labour itself. Specialisation allows people to be more productive in their labour, largely by encouraging the exploitation and expansion of the just mentioned treasuries. The treasury of trust is especially important for the specialisation of labour. Expertise has no appeal without confidence that each sliver of expert labour will be fitted into the whole of the economy. This scale and density of economic trust is a wonder of the age. It is also relevant to the role of money in the economy.

I will come back to that role in the next chapter. For the moment, I want to point out that the complexity of the production system – the coordinated

efforts of so many labourers engaged in so many diverse tasks – ensures that there are great distances of time and place between most people's actual labour and the ultimate, consumable fruits of their efforts. The result is the direct opposite of self-sufficiency. Each individual's labour is likely to have almost no direct ties with her consumption. Her job might contribute to the production of the clothes on her back, the electricity in her house, the schooling of her children, or the mobile phone in her pocket, but none of those would be possible without the labour of numerous strangers, many of them living and working in distant places.

This complex economic system has various disadvantages, but at least one great virtue. It is well on the way to accomplishing what was considered impossible for almost all of human history: the end of absolute poverty. There are richer and poorer people in every society, but fewer and fewer people who lack the necessities of life. Actually, the interdependent economy does far more than prevent the worst sort of deprivation. For most of the people in the world, and there are far more people than ever before, the complex mixing and allocating of modern labour and production also provides such basic economic goods as long lives, education, electricity, and mobile phones.

Where the economies are most developed, the range of goods and services produced and the division of labour used to produce them are tremendous. The labour in these economies is not all wonderful, far from it, but the specialisation has many advantages. In comparison to the largely agricultural past, far more labour now requires skill and imagination and a far higher proportion of the population has the opportunity to find a true vocation, a spiritual meaning, in their labour.

The good economic news is not likely to stop with the current accomplishments. With a bit more social and political work, the coordinated modern economic system can undoubtedly reduce the difference between the world's rich and poor. Everyone in the world should be able to consume roughly the same goods and services. It is more controversial to suggest that universal consumption prosperity can be maintained without destroying the environment or running out of raw materials, but at least some experts think that is possible. Over the last two

centuries, technical innovations and social reorganisations have belied all pessimistic predictions about the limits to growth.

I am not claiming that modern prosperity has created a new paradise of labour or consumption, let alone of the human relationship with the natural world. There are numerous profound problems, from the persistence of dreadful poverty to the more spiritual disorder of consumerist frenzies. Still, among the many dramatically new things of the modern world – the unprecedented changes in families, sexual roles, religion, politics, social organisation, and art (just to name the most prominent) – the economy stands out for its accomplishments. From a moral perspective, the near-elimination of absolute poverty is probably the most significant mark of progress, but there are many others, from the increase in creature comforts to the decreases in the physical stresses and strains of the life of labour in the home, field, factory, and office, from the added years of education to the increased variety and time for leisure, from the shrinking of effective distances to the expansion of diets.

This is not a book about the whole economy, so there is not space for a full inventory of pluses and minuses. My point is simply to provide some background for the weaknesses of the money-financial system. That system's strengths and weaknesses should be compared to the economy which it is supposed to support.

One achievement of this modern economy is particularly relevant to the comparison with finance – its resilience. The labour-production-consumption system shifts fairly easily and quickly in response to many sorts of pressures. When tastes change or technology advances, the supply of newly desired goods and services quickly catches up with demand, often in no more than a few months. Not only are manmade economic calamities, such as exploding factories or mass poisonings, very rare, but when they do occur, they rarely disrupt the relevant parts of the economy for more than a few months. The same is true for natural disasters and lesser manmade difficulties, such as aeroplane crashes, tainted food, corporate chicanery, raw materials shortages, and faulty product designs. After such events, the return to normal rarely takes more than a few weeks. In general, as the economy has become more complex, it has become more resilient.

One basic reason for this resilience is the redundancy which economic complexity both allows and supports. When things go wrong, there are almost always alternative sources of whatever is wanted, inventories to be drawn down, factories that can be expanded without too much difficulty, and reasonably attractive alternative products. Even when the system slows down, as it did during the anti-Covid-19 restrictions on production and after war and sanctions reduced exports from Russia and Ukraine, the problems almost never last more than a few years.

The Berlin International Airport is a good example of the economy's resilience, redundancy, and helpful interdependence. By the standards of the modern economy, the project was a debacle (Airport Industry Review, 2020). Faulty design led to a multiplication of the initially planned time and hours of labour needed for construction. However, the delay did little noticeable damage to the Berlin economy and none to the regional, let alone the global, air transport system. The local airport authority managed to keep old airports working reasonably well. The difficulties created by the construction delays were divided into morsels so tiny that they were hardly noticed by the people who endured them. Without doubt, an "on time and under budget" airport would have provided much earlier improvements in transport and efficiency as well as allowing better uses for the labour and energy which was actually used to keep the old system going. However, the modern economy is astoundingly good at finding second-best solutions, even to relatively large problems.

Or consider the Covid-19 pandemic of 2020. The headlines described a gigantic recession in all developed economies, but almost the entire decline in activity was simply the mechanical result of official restrictions. As a whole, developed economies showed their usual resilience in response to unprecedented and largely unexpected challenges. With only a few glitches, food retailers were able to meet the additional demand created by the sudden ending of most institutional food service and restaurant meals. The telecommunications system absorbed a massive shift to working from home with equal ease. The medical systems were initially overwhelmed in several places, but within a few weeks all developed economies were able to deal with the shift in required services quite well. Research and knowledge were coordinated globally, and production of needed medical

supplies and tests increased rapidly. New software was developed to track contacts, and massive numbers of skilled people were quickly given the resources needed to work on cures and vaccines. The damage to poorer economies were more severe, because the more developed a production economy is, the better it resists stress.

The financial exception

Now comes the comparison, the one glaring exception to the pervasive pattern of economic competence, redundancy, resilience, and trustworthiness. The systems of money and finance both play vital roles in the astounding economic coordination of labour, production, and consumption. However, unlike almost everything else in the economy, both are plagued with a daunting list of persistent and pervasive problems. The economies have to deal with an unstable supply of money, unwanted changes in prices, excessive financial gains, unevenly spread financial losses, political tensions over financial obligations, and recurrent financial crises. The money-finance problems and crises are not new. The money problems have been present for as long as money has played a central role in economies and the finance problems for as long as finance has existed. The money-finance troubles may be getting less severe, but if so, not at a very impressive rate. Although the financial crises in the 1920s in Europe and the 1930s in the United States remain the most economically destructive in the last century, in more recent years there has been a long series of similar, quite serious, and long-lasting crises in many countries around the world. Many of these financial breakdowns have caused years of serious economic difficulties.

The more recent the historical comparison with the rest of the global economy, the worse it looks for finance. Since the Second World War, extreme poverty has diminished sharply, average life expectancies have risen remarkably, rich countries have reduced pollution significantly, education has expanded dramatically in rich and poor countries, the introduction of computers and mobile telephones has created what can be called an industrial revolution ... and the money and finance systems continue to generate cycles of boom and bust, often distorting and

damaging the rest of the economy for prolonged periods. In other words, the money-finance exception has become even more glaring.

Professionals in the businesses of finance mostly admit that there is a serious problem. So do economists and regulators. This acknowledgement has led to recurrent actions, to what are called, again and again, vast efforts at reform. The waves of change have probably helped reduce the damage done by monetary and financial inadequacy. Still, the global financial crisis of 2008, an obvious and clearly destructive example of systemic failure, showed that something is still fundamentally wrong. In that crisis, the financial troubles were monumental, they infected the rest of the economy, and the economic damage was long-lasting. Arguably, the German economy recovered faster from the physical and psychological devastation of the Second World War than the developed world economy recovered from the financial crisis (Eichengreen and Ritschl, 2008).

Some of the economic problems and many of the subsequent distortions of the financial system have not been cleared up fully as I write, more than a full decade later. Also as I write, there are signs that the developed world may be entering into another period of serious monetary-financial disorder – uncomfortably high rates of retail price inflation without much reversal of the socially troubling results of years of price inflation of the financial assets that I will call money-things. Even if the worst is avoided, the flirtation with a new financial crisis before the mess from the last one has been fully cleared away is a sign of a badly functioning system. Meanwhile, I think it is safe to predict the economic effects of months of tight anti-pandemic restrictions and the economic effects of the first large war in Europe in decades will almost certainly be invisible in two or three years – or a decade if post-war reconstruction is included in the measure.

When an important system in the modern economy has so many persistent problems, it is safe to say that something is profoundly wrong. What is it with money, and especially with finance? Why is there this financial exception?

Perhaps such problems are unavoidable in capitalism, as Marxists claim. Perhaps it is foolish to dream of an economy in which money and the

intertemporal monetary arrangements of finance work as smoothly as the production of coal, semiconductors, or education. Such dreams are not actually foolish, as I will explain shortly. The cause of this exception is a deep misunderstanding of how these monetary things do and should work. More profoundly, the problem is in what philosophers of science call the existing paradigm. A large part of the money-finance system is faulty because of the inadequacies of the basic operating model of how money works, what finance can and should do, and how the whole system does and should fit into the rest of the economy. More specifically, my list of mistaken ideas includes the generally accepted notions of what money is, how interest rates work, the role played by financial arrangements in the economy, the design of the most commonly used financial arrangements, the operation of banks, the monetary operations of government, the structure of financial markets, the pricing of commodities, the complexity of monetary policy and financial regulation, and the refusal to consider the social danger caused by the acceptance of financial greed. All of those claims will be justified in the course of the book (and all those terms will be explained). The last claim, about greed, may be the most surprising. It is, in my view, the most important.

Just as I am well aware that not everything in the real economy of labour, production, allocation, and consumption works well, I am well aware that not everything in the world of money and finance works badly. Indeed, for most people in most of the economy most of the time, the money system performs its primary tasks pretty effectively. It lubricates and helps to organise the almost incredibly complex chains of production and distribution that I described earlier. The money-transaction business has become more efficient, like a normal part of the economy. The finance business also sometimes helps the economy work well.

While the good done by the money-financial system is substantial, the overall judgement of it has to be overwhelmingly negative. The reasons for that judgement will be developed over the course of this book, as I explain what money is by nature, what finance is by nature, and why the current money-finance arrangements are inappropriate to these natures.

Why the failure is surprising, and what that means

I just said that the current money-finance system works unusually badly. I also proposed, and said I would reject, the possibility that any money system must struggle with some irreparable structural flaw. In fact, not only is there no such flaw, but this system should actually be easier to control than almost any other part of the economy. Consider the differences. It takes quite a lot of skill, material, and coordination to keep up the smooth operations of the clothing trade, the education business, the air transport industry, or any other non-monetary part of the economy. There are hundreds or thousands or millions of people whose labour must be developed, divided, assigned, and supervised. The workforce must master thousands of skills, and many workers must combine a high degree of consistency and precision with at least modest degrees of initiative and imagination. Specialised facilities and equipment must be constructed and maintained. Continuing success requires unrelenting effort to master the endless series of problems caused by recalcitrant parts of both the physical world and the human psyche. Frequent, numerous, delicate, and complex alterations in the existing systems are needed to satisfy or stimulate new desires and to respond to changes in the political, social, or technological environment. Serious troubles arise almost inevitably but unpredictably. The human skills and institutional structures must be passed on from generation to generation. With all these tangible challenges, it is amazing that these economic systems work at all, let alone that they keep on working without much apparent trouble.

Money is so much simpler, and so should be much more tractable. There are almost no physical challenges, past the operating of a few relatively simple factories to produce coins and notes and the construction of an extensive and expensive but easily standardised banking network. Paper and especially electronic or digital money can be made, distributed, and destroyed almost instantaneously and at almost no cost. Far from the seemingly infinite variety of most goods and services in the economy, money comes in very few varieties (currencies), and those are largely interchangeable. In the modern information-saturated economy, everything about the monetary system can be measured with ease. Money-control fits easily into the remit of modern governments – governments

which are the best organised and most socially integrated political authorities ever seen. For example, each political authority in an advanced economy manages to follow the almost incredibly dense set of detailed rules which govern the collection of taxes and the payment of benefits to millions or tens of millions of people. It would seem that such competent governments should not have great struggles ensuring that socially desired quantities of money are steadily available at the right time to the right people.

Finance is a bit more complicated than money, basically because it involves, as I will explain, monetary promises that are far easier to make than to keep. Still, finance always exists under the tight control of custom, these days encoded into extensive laws and even more extensive regulations. The combined force of custom, law, and regulation could easily limit the terms of financial contracts to ensure they are plausible and flexible, and to limit the adverse effects of breaking them. Besides, there is no obvious reason that financial difficulties should harm the real economy of labour, production, distribution, and consumption. The breaking of financial contracts does no direct damage to people or things. Financial disorders might cause monetary strains, but, again, monetary remedies should be easy to find. After all – it is worth repeating this – money can be created, deployed, and destroyed instantaneously and at almost no cost. Again, a comparison might be helpful. The global economy supplies 1.4 billion new smartphones each year in several hundred political jurisdictions (IDC, 2022). It keeps more than seven billion mobile phones connected to each other at a cost so modest that all but the poorest fifth of the world's population has access to them (bankmycell, 2022). An economy that can do that should have no trouble organising successful monetary and financial systems.

Nor do the monetary and financial systems have to work especially well. People and organisations have shown themselves capable of adjusting well to fairly significant changes in prices, wages, and other money-numbers, to almost all levels of interest rates, and to large fluctuations in currency exchange rates. If the money and finance systems were nothing worse than fickle in these numbers, they would not be considered failures, although an impartial judge would certainly see room for improvement. However, the

system does not reach even this minimum standard of competence. The monetary system often provides either too little or too much money for the good of the overall economy. When money is created, the process is cumbersome and the new funds often end up in the wrong hands for supporting the common economic good. The finance system is in far worse shape. It more often than not fails to do what it is supposed to do efficiently and justly, and it suffers from fairly regular crises which are severe enough to do lasting damage to the rest of the economy.

Once again, these failures raise the basic question: why are these systems in such a mess? I have already pointed to my answer, an erroneous paradigm. Psychology provides a useful analogy. Sometimes people cannot manage something which should be easy – say, an educated person who is petrified of flying or a competent professional who struggles to finish straightforward work assignments. These troubled people can sometimes be coaxed onto airplanes or bullied into working, but the recurring failure is generally a symptom of profoundly disordered thinking, of putting the facts of the matter into the wrong emotional or intellectual model. The more irrational the failure, the more wrong the person's operational paradigm must be. The central argument of this book is that something analogous is happening with the monetary and financial systems. The failures of these fairly simple and easily adjusted economic sub-systems are signs of a deep intellectual-emotional-moral pathology.

More specifically, I will argue in this book that the money-finance system, in particular the financial part, suffers from two basic errors: first, the acceptance of arrangements that are unnecessarily and dangerously detached from reality and, second, an anomalous, widespread, and unchecked enthusiasm for morally bad behaviour. Behind the bad behaviour is greed, a vice that is pervasive, promoted throughout the financial system, and deeply pernicious. The two problems are, in my view, intimately related. Greed excites the emotions and distorts judgements, so the relevant authorities and participants in the money-financial system tolerate or even encourage reality-distant arrangements and systemically disruptive behaviour. The results include an inefficient monetary system and financial arrangements and expectations that are clearly not in accord with the limits to human knowledge, the common good of society, or the

most basic standards of justice. In other words, greed blinds the critical faculties that would otherwise tether money and especially finance more closely to reality and that would submit both to the standards of social justice.

Slaves to bad old ideas

Paradigm shifts are very difficult, because they require radical change in the thinking of people whose judgements, expectations, and instincts are well settled in a comfortable and apparently sensible routine. Shifts are especially hard when, as often happens, almost all respected experts reject the new analytic framework as senseless, trivial, incomprehensible, wrong, or reprehensible. Full conversion requires a total absorption of the new approach, training in new analytic instincts, experience with the results of the new thinking, and a deep cleansing of the residues of old ideas. In any academic discipline, the shift will almost certainly be gradual – one funeral at a time, as is said – so early adapters are likely to face years of professional snubs and bitter discord.

Despite these great difficulties, there have been many paradigm shifts in many fields of study, for example from Aristotelian to Newtonian and then to relativistic physics, from primarily trusting and theological to more sceptical historical-critical biblical exegesis, or from a Christian to a secular framing of history. I hope to encourage a similarly profound change in economics. I would love to see university departments and consulting firms hesitating to hire people who did not accept this book's paradigm. I can dream of a department chair or a recruiter explaining, "Oh, you think that the economy is fundamentally mathematical and that economic activity is not always deeply and self-consciously moral. You deny that this activity is fundamentally non-conflictual, non-optimising, non-utilitarian, non-individualistic, and non-materialist. I'm sorry, I'm not sure you would fit in here." I can dream ...

I can dream, but the long road of evangelisation lies ahead of me. It is a hard road to travel. I can offer no experiments that can discredit the old approach, because both paradigms can provide explanations for everything. Numerical proofs cannot demonstrate that economics is

essentially non-numerical. I have to rely on the traditional technique of intellectual evangelisation: trying simultaneously to uproot old assumptions and to sow the seeds of the new approach. The rest of this chapter is dedicated primarily to the first part of the mission – the turning over of the intellectual soil. I will discuss three widely held but deeply erroneous ideas about money. (Money comes before finance, because the latter cannot be understood without a firm understanding of the former.) The explanations of these confusions should also serve as a teaser for the next chapter's positive agenda, a more analytically rigorous description of what money really is and does.

Money is a scarce commodity

The first wrong belief is that money is essentially a durable and scarce commodity. Until less than a century ago, that statement would have been expressed slightly differently: money is essentially a tangible and scarce commodity. In practice, the tangible money-substance was usually gold or silver, but theoretically (according to this wrong theory) it could be anything that was fairly hard to obtain and that could be touched, stored indefinitely, and retrieved at any time without any change or decay. The more modern version of the belief eliminates the “touched”, but retains the other features of durable value.

The revision was necessary, as I will explain, to deal with the evidence. However, it rather confuses the basic idea, so I will start with the older version of this credal claim – *pure* money is pure gold, silver, or some other scarce physical thing. If the gold is minted into coins, then the *true* value of gold-backed coins is thought to be *essentially* the value of the gold that the coins actually contain. Historically, this assumption of *fundamental* value was not altered by the steady debasement of coins (coins of the same numerical value were minted with less precious metal content or “clipped” after minting) or by the subsequent increased reliance on less tangible forms of money. The true value of notes or bills of “paper money” and of account balances of “bank-money” were thought *actually* and *ultimately* to be the value of the gold (or silver or whatever) real money for which these things being used as money could hypothetically be exchanged. The actual coins, paper, and account entries were only money in some tentative or

imperfect sense. What was *really* money was the durable commodity that backed these tokens.

This definition portrayed real money as something that had transcended space and time. The precious commodity could be used everywhere that the monetary commodity was considered valuable and would last as long as that valuation did, which was likely to be forever. Until well into the 20th century, this definition of money as a tangible commodity was accepted unquestioningly by most users of money and by the vast majority of experts, both the all-purpose philosophers who wrote on the topic over the centuries and the professional economists who emerged during the 19th century with more detailed theories about the creation, circulation, purposes, and imbalances of money.

Until the development of the modern, money-saturated industrial economy, the definition appeared realistic. In practice, almost all forms of pre-modern money did rely for their value on the presence of, or some connection with, gold, silver, or some other quite concrete commodity in strictly limited supply. It seemed almost obvious that the *real* money was in fact the universal carrier of value, not the coins or other things that constituted a claim to obtain a promised amount of that *ultimate* value-carrier. These money-ish things were treated as mere substitutes for the *real* thing. Without the scarcity and the durability, how could money have any value or use?

However, over the course of the 19th and 20th centuries, the substitutes became the real thing. The history of the transition is instructive. From the invention of paper and bank-money until the 1970s, every money-issuing institution maintained the fiction that any money could be exchanged for a constant amount of gold. Even when the right to exchange for gold was suspended or limited, as it often was, the principle of a “gold standard” was maintained as sacrosanct. It had to be, because there was no alternative inside the tangible-money paradigm. Users and economists were persuaded that nothing could really be money without the promise of an eventual or potential golden exchange. However, the fiction of a purported gold value of this supposedly substitute-money eventually led to economic difficulties and banking crises. In response, the legal exchangeability

principle was abolished in the 1970s, at first tentatively but after a few years quite definitively (Federal Reserve History, 2013). Since that time, no money in the world has had any connection, not even the most tenuous, with any sort of tangible commodity.

According to the tangible-money theory, the repudiation of the golden exchange would destroy the monetary system. When the change actually came, some true believers stored up gold in anticipation of a monetary collapse. However, the removal of the supposed gold backing had no obvious effects. The system continued to function about as well as when the gold-exchange promise was still thought to be at least hypothetically valid. The new arrangement was better in some ways and worse in others, but certainly not obviously inferior overall.

This may sound like positive proof that the old definition of money and the paradigm to which it belonged were simply wrong – money is clearly not gold or gold-reliant in the way that nearly everyone had thought it was. However, as historians of science understand well, established paradigms are remarkably resilient to contrary evidence (Kuhn 1970: Chapter 8). Both the general public and the economics profession were extremely reluctant to abandon the basic idea that money is *essentially* some sort of scarce commodity which stores value. They still are. The credulous enthusiasm for crypto-currencies, which remains great as I write this book, is based on the notion that a currency which holds its value only because of its strictly limited supply will inevitably replace a currency that is protected by the imprimatur and control of a powerful government.

Economists do mostly know better than to trust bitcoin and the like, but they have been less insightful in their discussions of the nature of normal money. Many of them have resorted to a trick familiar to historians of science, broadening the definition in question, hopefully making it wide enough to catch up with reality but not so wide that it loses all meaning. The chosen modification of the definition of money was mentioned at the beginning of this section: “durable” replaced “tangible”. The redefinition has kept the old understanding of money alive (with perhaps a little tangible aid from the gold still kept in vaults controlled by governmental monetary authorities).