A Free Lunch

How to really prosper after capitalism's closing down sale

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For mum and dad, who kept me going,
& for Anika, who made it worthwhile

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Prologue

> *"I am inclined to think that neither the stereotyped conservative nor radical conceptions of capitalism shed light on the economic and political reality that surrounds us".*
> *– Robert L.Heilbroner*[1]

It seems that Utopia has grown unfashionable of late—perhaps because, as social and ecological woes continue to escalate, it looks an ever less likely destination. Whatever the reason, we are increasingly exhorted to eschew idealistic utopianism, and embrace hard-nosed realism. The world 'is' as it 'is', we are told (redundantly), and we must work within that reality, find solutions that improve current arrangements without attempting wholesale change. Yes, of course, we have problems, but history has clearly left us with the most practical, the most successful, the very best set of systems and institutions for progress and achievement, so any proposal of an alternative to the status quo must not only reek of simple-minded idealism and/or hubristic utopianism, but necessarily suffer undermining flaws that render it inferior. No, we need—at most—only realistic incremental change, not idealistic and impossible transformation.

I don't buy any of that for a moment. Proceeding on the basis that we just need to tweak things a bit to make everything all right, while ignoring the inherent contradictions and destabilising, unsustainable, problem-*causing* dynamics of current arrangements, is not realistic at all—it seems more like denial. Similarly, idealism not realism best describes the assumption that the status quo represents a superior, even optimal, system, rather than a flawed, problematic, cumulatively accrued, almost accidental outcome of various historical processes—one among numerous *possibilities*.

This book attempts a realistic appraisal of the *causes* of the major problems besetting modern civilisation: it explains how they arise unavoidably—or, in some cases, all but unavoidably—from the inherent dynamics of our economic system, and why they cannot be adequately addressed without fundamentally changing that system. Incremental change within the straitjacket of continuing the status quo offers only futility, disappointment, and more of the same problems. Instead, we need to design a better economic system, one able to avoid the present's failings. The attempt I make will almost certainly be criticised as utopian or idealistic. Of course, any proposal faces difficulties of implementation, and these have to be assessed, but rejecting alternatives out of hand—by simplistic labelling—without fully considering them or why the inbuilt flaws of the status quo make them so desperately needed, misses the point entirely.

The first version of this book was completed after six years of private study in 1995, but rejection by publishers and the onset of parenthood left it unpublished and indeed unknown to any but myself and close friends. Although the book was left to languish, not so its ideas—I have contemplated them frequently, and gradually (I hope) improved them.

In this revised version (completed in 2011, then updated minimally in 2020), the original material has been trimmed but the central ideas have been retained, developed and refined. I have also retained most of the references used in the original version, adding only a few more recent citations for occasional support or clarification. Alas, while much has happened since 1995, the theory, practice, substance and intent of economics and politics have barely altered—

[1] Robert L.Heilbroner, *Business Civilization in Decline* (Marion Boyers, London, 1976), p.21

the names may have changed, but the game remains the same. Indeed, the various crashes, crises, busts and debacles since 1995, as well as the orthodox responses to them, follow the same patterns as those that preceded them, even if additional layers of creative complexity have been added. So nothing of significance has occurred to alter my original analyses and proposals, only to confirm them.

The book has two parts: the first critiques competitive profit-based market economies, the second mostly concerns proposals for a cooperative alternative economic system without profit or interest, but begins with a brief critique of modern democracy and a proposal for replacing it with a pluralist participatory version.[2]

Part one explains how market economies function, and how economic 'science' misconceives it, with particular emphasis on the distortions caused by, and ramifications of pursuing, profit. Because the forest can so easily be lost for the trees, each chapter of part one begins with an 'executive summary', the counterpart for all of part one being as follows…

By adopting many unrealistic assumptions, neoclassical economists have claimed that market prices function as accurate signals which ensure the most efficient use of resources and the most optimal of all possible economic outcomes, including 'full' employment and trickle-down income equalisation. But even putting aside the unrealistic assumptions, this ignores the inherent inaccuracy of prices… their exclusion of many relevant costs (such as ecological, social, government)… their inclusion of many other unwarranted costs (mostly waste and excess)… the delusional manipulations of financial flows which cause money to be mistaken for real wealth… and how the pursuit of profit causes work of great need to be ignored unless it looks lucrative. Because of all this, and because the unrealistic assumptions do not hold (as even a few economists admit), prices need not function as accurate or even meaningful market signals, resources need not be used efficiently, and outcomes need not prove optimal—the 'market' need *not* provide the best solution. Instead, market competition usually misleads, wastes time and energy, creates unnecessary work, ensures instability, guarantees loss for some, ignores and aggravates the needs of the poor and the environment, futilely pursues continual expansion, and leads to many other inefficient unwelcome outcomes. Indeed, the ecological and social problems besetting the world can all be traced back as mostly unavoidable *symptoms* of the real problem: market competition for profits.

The five chapters of part one spell out the details. Chapter 1 begins with an overview of doom-laden claims and optimistic counter-claims about widespread ecological and social damage. To better comprehend how such opposing views can co-exist, various barriers to human understanding are discussed. With these in mind, it becomes apparent that each side of the debate usually ignores or else blithely assumes the indefinitely continued if not expanded functioning of competitive market economies. Accepting as very real the *symptoms* of ecological and social damage, they are assessed as incapable of being properly addressed without focussing on the underlying *disease* of market competition. An overview of market competition demonstrates that not only does it depend on and compel the impossibility of continuous economic growth, associated rising debt, and ever more work, but it also inevitably fosters poverty and inequality, and generally causes rampant ecological degradation. Competition for profits also ensures loss for some players sooner or later, and incessant instability. Loss cannot be avoided, not even by steadily increasing debt (because interest functions as another form of

[2] For those interested in less formal explanations, I have also written a novel called *A Switch In Time*, which provides (I hope) a more entertaining backdrop for descriptions of my essential critique of competitive market economies and, especially, the merits and workings of the alternatives I propose in part two. *A Free Lunch* was the first to be written, but the novel complements it by concentrating more on how people would be beneficially impacted by different economic and political systems, and their effects on day to day life.

profit) or by economic growth (which only provides more of the same)—at best, loss can only be diverted by exports and government spending, or delayed by credit.

Chapter 2 begins a more detailed examination of market competition by first explaining how prices cover costs of waste, duplication, ego gratification and high living, yet do *not* include considerable social and ecological costs, nor take into account the direct and indirect savings to businesses that result from work done outside the official market economy, or the public-funded bailouts, subsidies and other assistance provided by governments—overlooked factors which sometimes exceed reported profits. Attention is then given to how a plethora of unrealistic assumptions are required for economic theory to treat prices as being set by the 'Law' of Supply and Demand, and to conclude that, when markets are left to regulate themselves, prices function as accurate and meaningful market 'signals' which lead to 'optimal' prices and outcomes, efficient use of resources, and trickle-down wealth creation. Rejecting the unrealistic assumptions forces the conclusion that market competition resembles a lottery, with success not necessarily following from efficiency, discipline, skill, or any other advantage, nor failure from their lack, and with no guarantee of even efficient let alone optimal prices, outcomes, resource allocation, or trickle-down wealth creation.

Chapter 3 examines the difficult task facing economic 'science' and the extent to which it fails. Attention is first given to how economic activity depends on too many subjective evaluations to expect predictable behaviour bound by rigid 'laws', how economists can only posit 'laws' after making overly restrictive assumptions that leave out significant details, and how those laws are generally based on explicit or implicit assumptions which rest on value judgements about goals and ends that support the status quo (in particular, the *assumption* that 'optimal' outcomes follow if markets are left to themselves). Even worse, economists generally fail to treat their assumptions as working propositions capable of refutation, but instead defend them against all contrary evidence, tweaking models as necessary to retain the assumptions. This is exemplified by two fundamental economic models—optimisation and equilibrium—as well as the standard treatment of international trade, and the underlying assumption of scarcity. The poor predictive powers of orthodox economics is also detailed, before the chapter concludes with an explanation of why, when economists call for 'sustainable development', most really mean the oxymoron of sustainable growth—a hopeless attempt to run in two different directions at once.

Chapter 4 explains how money further destabilises and undermines market competition. A brief historical overview of the many forms money has taken makes obvious how its successful functioning requires widespread agreement or belief—but, too often, money is confused with wealth, which further corrupts the market's flawed price signals, encouraging even less optimal results including the frittering away of energies on money-making yet wealth-destroying goals. The mere symbol of wealth takes over the game and becomes its end rather than its means, with ownership allowing, and competition compelling, the charging of interest for borrowing money—but, as a consequence, lending is restricted to ventures expected to make profits, not efforts that satisfy more pressing needs, such as homes for the homeless. Confused beliefs also lead to financial practices that can look like sleight-of-hand or, particularly regarding banks and speculative markets, like delusion, with money conjured out of thin air, incessantly being bet upon, for and against, its value constantly shifting based on *perceptions*. The constant turmoil of our confused monetary beliefs also lead naturally to frequent and often undesirable changes to the prices assigned to real wealth, their inherent inaccuracies and flawed functioning as market signals corrupted further by inflation.

Chapter 5 looks at the 'macro' effects of market competition, beginning with how the compulsion to grow motivates the creation of an endless amount of frequently unnecessary, often counter-productive, even self-destructive activity: only about thirty percent of paid work in modern economies produces real wealth, while forty percent cleans up the mess made by the rest. And yet, despite their compulsive need to grow, and the efforts made to try to ensure this, market economies periodically contract into recession, casting many participants aside in the wake. Indeed, business cycles of boom and bust cannot be avoided as long as we compete economically. Governments try to play the role of the market's fuse-like optimiser, going to considerable lengths to keep them growing, but they frequently fail because they remain *part* of the market, inextricably tied to the private sector by mutual self-interest, and because the regulatory methods they use—fiscal and monetary regulation of aggregate demand—not only have little suitability for the task, but also require a series of often contradictory juggling acts. The chapter concludes by reiterating that economic competition has no way of avoiding its unwelcome outcomes, because they follow irrevocably from its game rules. As a result, despite claims of orthodox economic theory, market economies do not involve equilibrium and have no neat circular flow. Instead, their interdependent parts engage in a perpetual contest to direct onto themselves as much as possible of a complex and turbulent, yet coagulated, eddy-filled flow of liquidity—a contest which invariably leaves some fully immersed if not drowning but others bone dry.

Part two proposes a new economic system, *and* a better form of democracy. Chapter 6 briefly describes the failings of modern democracy, and why it needs replacement with a properly functioning system capable of allowing the economic proposals to be used to their full potential, before detailing a decentralised and participatory version of democracy. Chapter 7 sets out the economic proposals, while chapter 8 looks at some additional options available if both the economic and political proposals are adopted. The final chapter considers the practicality of all proposals, first summarising their pros and cons, then discussing what motivates and facilitates widespread social change, and the resistance likely to be met in moving from our competitive growth-based present to the proposed future, before finally offering a few ideas on navigating a transition.

Understanding the proposals of part two probably won't be easy because they will almost certainly seem alien. One read of them might allow the parts to be understood, but probably a second read (or more) will be required to see the big picture to which the parts sum. With that in mind, the main features of the proposed economic and political system, which I call 'a free lunch', can be broadly summarised as:

- A decentralised, self-governing, pluralist, participatory, bottom-up political structure called 'plurocracy', underpinned by small self-governing electorates arranged into progressively larger associations, whose decisions require the majority agreement of constituent groups for any proposal that would impact them. 'Representatives' with mostly delegated coordinative roles, subject to permanent electronic elections. Each electorate with the right to secede from any 'parent' group.
- Decentralised economic arrangements based on plurocratic nomination of work requirements, wages, and prices that reflect need not money-backed demand.
- 'Cost And Price Equalisation' (CAPE) to ensure balance between total prices of all goods and total costs of all wages. Avoidance of business cycles and protection of purchasing power by periodic adjustment via CAPE of all prices, by the same proportion as changes to average working hours and total costs caused by altered productivity and/or consumption.

- People paid for hours expected to be needed, even if improving productivity and working less, thus allowing the saving of work without fear of losing income. Consequently, an eventual (within a decade or so) one-day working week.
- Free land, housing, and fixed capital—stewarded (not owned) by local residents and workers, instead of distant corporations and owners, leading to greater ecological care. No rent.
- 'Public' expenditure and construction costs of houses and fixed capital 'absorbed' into prices of consumables; likewise for free or discounted essentials such as staple food, basic clothing, health care, education, or anything plurocratically deemed appropriate.
- Foreign trade without balance of payments problems via an international account-money based on 'labour standard' currencies.
- Discounted exporting of appropriate technology from rich to poor nations.
- No profit, interest, debt, financial speculation, direct taxation, or unwanted unemployment; no possibility of losing savings and retirement funds.

Although many of the proposals have few if any precedents (those known to me are indicated as the proposals are explained), even the most original have been heavily influenced by ideas from other aberrant—sometimes flawed—thinkers, such as Henry George's single tax,[3] Silvio Gesell's Free-Money[4] (money that *loses* a thousandth of its printed value per week), C.H.Douglas's national dividend,[5] even Milton Friedman's negative income tax,[6] and Robert Anton Wilson's various eclectic proposals based on all of the above.[7]

In the years since the first draft of this book was completed, I've also found two other independent and very detailed proposals that have many parallels with each other and with my ideas, such as the absence of profit and interest, and a reliance on participatory decision-making and planning (they also have enough differences to lead to vigorous debates between proponents). Although each has its own idiosyncrasies, emphases, and justifications, both *Participatory Economics*[8] and *Inclusive Democracy*,[9] like my own proposals, aim to provide workable alternatives to market economies. However, both go beyond my proposals by rejecting money itself, instead advocating 'personalised vouchers' (or 'credit points') that serve a similar role as money but with the important distinction that they cannot be exchanged more than once (in contrast, section 7.8 below suggests retaining money in a familiar form, but defines it and its usage in ways that should avoid its long associated pitfalls).

A thorough explanation or critique of either Participatory Economics or Inclusive Democracy is not within the scope of this book, but although both have much more to recommend than to fault, I will briefly mention what I see as their main weaknesses. To me, Participatory Economics has unnecessary and to some extent impractical complexity, particularly in regard to its 'job-complexes'; and although it has begun to incorporate ideas about political reform, they seem to have been welded onto it as an afterthought. In contrast, Inclusive Democracy's ideas about returning decision-making and power to 'the people' serve as the bedrock for all of its

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[3] Henry George, *Progress and Poverty* (Condensed Edition, Hogarth Press, London, 1966)

[4] Silvio Gesell, *The Natural Economic Order* (Free Economic Publishing Company, San Antonio, 1929)

[5] C.H.Douglas, *The Monopoly of Credit* (Bloomfield Books, Sudbury, 1979). Note that Douglas's 'A+B theorem', on which many of his ideas were based, does not bear up to close examination; however, if it is redefined so that B equals profit, it *does* make sense—section 1.5 develops this idea and explains its consequences, albeit without reference to Douglas.

[6] Milton & Rose Friedman, *Free to Choose* (MacMillan, Melbourne, 1980)

[7] Robert Anton Wilson, *The Illuminati Papers* (And/Or Press, Berkeley, 1980), p.148 & *Schrodinger's Cat* (Dell, New York, 1979), pp.255-7, 311-2, 452

[8] See http://www.zcommunications.org/znet/topics/parecon

[9] See http://www.inclusivedemocracy.org/journal/pdf%20files/Multidimensional%20Crisis%20Book.pdf

proposals and seem far better considered than the counterparts of Participatory Economics, although the structure of the proposed political system seems less rigorous and complete than my own proposals; however, Inclusive Democracy's approaches to setting prices and wages and dealing with exchange via what it calls an 'artificial market', although fairly consistent with my own approach, look perhaps unnecessarily complex and may lack enough flexibility to work properly. The transitions required for both systems, at least economically, also seem more immense than that of my own proposals, which I believe provide greater capacity for a gradual but brief shift, and therefore a less alienating, more accessible alternative.

Remarkably, both Participatory Economics and Inclusive Democracy were first proposed in the same decade as I developed my own ideas—the 1990s.[10] Three independent proposals with so much in common being developed more or less simultaneously may suggest that very few options exist for alternative economic-political systems, or else none of us have imaginations up to the task. Nevertheless, I can't help but wonder if some combination of the best ideas from all three proposals might provide the ideal approach for arranging a better and distinctively different future…

[10] As far as I can tell, the first account of Participatory Economics was given in Michael Albert & Robin Hahnel, *Looking Forward: Participatory Economics for the Twenty First Century* (South End Press, Boston, 1991); and of Inclusive Democracy in Takis Fotopoulos, *Towards An Inclusive Democracy* (Cassell/Continuum, London/New York, 1997)

Part One

There Ain't No Such Thing As…

"*…the economic problem… the problem of want and poverty and the economic struggle between classes and nations is nothing but a frightful muddle, a transitory and an* unnecessary *muddle. For the western world already has the resources and the technique, if we could create the organisation to use them, capable of reducing the economic problem, which now absorbs our moral and material energies, to a position of secondary importance… [after] our real problems – the problems of life and of human relations, of creation and behaviour and religion.*"

John Maynard Keynes
Essays in Persuasion
(Volume 9 of The Collected Writings, MacMillan, London, 1972), p.xviii

Chapter 1

Symptoms & Disease

"Convictions cause convicts" – Gregory Hill[11]

Recipes for cooking our own goose abound: industrial-exhaust-led greenhouse steaming, deliberate or accidental nuclear barbecuing, chemical stewing, Peak-oil sautéing, population-bombed curing, ozone-depleted ultraviolet baking, and a host of other family favourites…

This chapter begins with an overview of the widespread ecological and social damage on which most doom 'n' gloom scenarios and predictions are based, before considering more optimistic views (section 1.1). To better comprehend how such opposing views can co-exist, various barriers to human understanding are discussed (1.2). Revisiting the arguments with those barriers in mind, a usually ignored or else blithely assumed central issue to both sides of the debate is highlighted: the indefinitely continued if not expanded functioning of competitive market economies. Accepting as very real the *symptoms* of ecological and social damage, they are assessed as incapable of being properly addressed without focussing on the underlying *disease* of market competition. (1.3). An overview of market competition is then given (1.4), including an explanation of why it compels ever more production, distribution, exchange, and consumption (which, in turn, require ever more work), how it inevitably fosters poverty and inequality, and how it generally causes rampant ecological degradation. Section 1.5 outlines a fundamental systemic flaw of market economies: how competition for profits sooner or later ensures loss for some players, and incessant instability. Loss cannot be avoided, not even by steadily increasing debt (because interest functions as another form of profit) or by economic growth (which only provides more of the same)—at best, loss can only be diverted by exports and government spending, or delayed by credit.

1.1 Half Empty Or Half Full?

> *"…the modern industrial system, with all its intellectual sophistication, consumes the very basis on which it has been erected…: fossil fuels, the tolerance margins of nature, and the human substance."– E.F.Schumacher*[12]

We have been advised repeatedly for decades how we may be running out of arable soil, forests, food, water, fossil fuels, minerals, energy, living space… Our agricultural habits erode and cripple soil, and render rivers fit only for algae because of run-off from artificial fertilisers and other chemicals. Annually, we extract and process billions of tonnes of minerals, using methods which inject toxic metals, powders, liquids and gases into earth, water and air. Our cars and refrigerators belch greenhouse and ozone-depleting gases. Most forms of electricity generation, manufacturing, and mining fester with manifold pollutants. Chemical industry products infiltrate isolated waterholes and all levels of the food chain—toxic dioxins have been found, courtesy of humanity, even in polar bears. We pump raw or barely treated sewage into oceans, suffocating coastlines… litter the planet with tar, asphalt, cement, mountain ranges of

[11] Gregory Hill (from *Principia Discordia*), cited by Robert Anton Wilson, *Cosmic Trigger* (Falcon, Phoenix, 1986), p.58

[12] E.F.Schumacher, *Small is Beautiful* (Sphere Books, London, 1983), p.16

throwaway plastic, old newspapers, discarded toys, construction rubble, and obsolesced machinery… make rain acidic, and now even risk an unstable climate. Other life wilts under our impact, whether cohabiting our cities or isolated in difficult and hostile terrain. Indeed, we plunder other life-forms not only for food, clothing, fuel and shelter to help us survive, but often more or less for the hell of it. Baby seals die so a rich few can pursue fur-lined ego gratification. Whales vanish to satisfy a few cultures' parochial tastebuds; rhinos, so their horns can provide imaginary medicinal effects. Forest the size of small nations disappears every year,[13] partly to create throwaway chopsticks. So extensively do humans exploit other life that, if present trends continue, in about a hundred years, some estimate that as much as half the animal and plant species currently alive will have been wiped out.[14] Not all those that disappear will do so because of direct exploitation—many will simply get in our road.

While our activities undermine the earth's capacity to sustain life, this of course has no advantage for us. Indeed, if we keep on doing what we are doing, we could put mother nature's supermarket out of business, and starve ourselves to death. So, if we continue to act as though we own the planet, ownership must eventually have no value.

Our apparently rampant ecological problems are compounded by poverty and often widening inequality. While a minority in the developed world own and consume the vast majority of everything of value,[15] the least fortunate contend with hunger, homelessness, plague, or a zero or minimal income, resulting in tens of thousands of children dying each *day*[16] mostly from hunger and disease, and a *billion* or more landless.[17]

Yet inequality occurs not just between, but also *within*, nations: "Almost nowhere do the poorest fifth of households collect even 10 percent of national income, while the richest fifth commonly receive half."[18] Even in many of the most developed nations, official poverty rates usually exceed one in eight (up to one in four) individuals.[19] For many poorer nations, the poor sometimes form a majority of the population.[20] Furthermore, the gap between rich and poor generally continues to widen, again both between and within nations.[21]

Ironically, poverty often prompts theft and other unlawful acts aimed at the relatively wealthy, adding to their worries: obesity, mortgage rates, health insurance premiums, job security and promotion or the constant potential threat of the dole. Meanwhile, rich and poor

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[13] In the 1980s, the size of the British Isles, according to Jim MacNeill, "Strategies for sustainable economic development", *Scientific American*, September 1989, p.107. Rates have reduced since then according to http://www.fao.org/forestry/30515/en/ but the comparison would still work if leaving out Ireland.

[14] Jeremy Leggett, "The biggest mass extinction of them all", *New Scientist*, 10 June 1989, p.44. More recent estimates, cited regularly in the media, look equally if not more alarming eg. http://www.guardian.co.uk/environment/2010/mar/07/extinction-species-evolve cites an International Union for the Conservation of Nature estimate of "100-1,000 per million species annually" as possibly an *under*estimate.

[15] According to Paul Gilding, *The Great Disruption: How the Climate Crisis Will Transform the Global Economy* (Bloomsbury, London, 2011), p.216: "In 2000 the top 1 percent of the world's population owned around 40 percent of the world's wealth, with the top 10 percent owning 85 percent. At the other end, the bottom half of the world's people share just 1 percent of the world's wealth among them." Similarly for income, with "the top 20 percent of people" taking home 74 percent. Consistently, MacNeill, "Strategies for sustainable economic development", p.106 claimed: "one quarter of the world's population… consume about 80 percent of the world's goods". The rise of China, India and some other developing nations may have reduced consumption inequality since MacNeill wrote this in 1989, but still a minority own and consume the vast majority.

[16] Over 22,000 in 2009 according to http://www.unicef.org/sowc2011/pdfs/SOWC%202011%20Table%201_Basic%20Indicator_110410%20FINAL.xls, but over 40,000 back in 1990 according to Lester R.Brown et al, *State of the World 1990* (W.W.Norton & Co., New York, 1990), p.11

[17] About one and a quarter billion "landless and near-landless" in 1990 according to Brown et al, p.140.

[18] Brown et al, *State of the World 1990*, p.137.

[19] Estimates and their definitions differ considerably, but various USA poverty rates between 1999 and 2009 range from 11.3% to 17.3%, and average 13.3%, according to http://www.census.gov/hhes/povmeas/data/nas/tables/2009/web_tab4_nas_measures_historical.xls. For Britain in 2008/9, http://www.poverty.org.uk/summary/key%20facts.shtml gives a figure of 22%.

[20] Many examples at http://data.un.org/Data.aspx?d=MDG&f=seriesRowID%3A581.

[21] For instance, according to Gilding, *The Great Disruption*, p.216: "Whereas the average African was almost eleven times poorer than the average North American or Australian/New Zealander in 1950, they were over nineteen times poorer by 2000." More recently and generally, national Gini inequality indices, graphed at http://en.wikipedia.org/wiki/Gini_coefficient, show that income inequality within many nations has worsened since 1990, yet improved significantly in few if any.

alike are beset by often escalating rates of violence, mental illness, stress, suicide, alcoholism, drug abuse, bigotry, intolerance, alienation, loneliness, civil disorder, and social disintegration.

Compounding our problems, poverty and ecological damage feed each other. Desperately poor people, especially the landless of the Third World, unable to look beyond day-to-day survival, often have no choice but to exploit their environment in unsustainable ways. Such behaviour can provide short-term success, but in the long run it perpetuates poverty by removing the land's capacity to support life. And the effects spread beyond the poor. For instance, overgrazed land absorbs less water because of absent vegetation, and so erodes and floods more easily, passing the problems downstream to often richer landowners.

To many, these problems look if not insurmountable, then at least extreme, and warranting tough measures—or at least tough rhetoric.

Others, meanwhile, are not convinced. After all, doomsayers have often got it wrong…

For instance, early in the nineteenth century, Thomas Malthus expected population growth to soon outstrip food production, resulting in mass starvation—yet his predictions have been mostly thwarted (so far at least) because he did not anticipate many ingenious methods of food production developed subsequently.

More recently, in 1972, the famous *Limits to Growth* report[22] claimed that a continuation of trends then occurring would cause oil and copper to run out in a few decades, coal in two centuries, gold some years ago now, and almost all else within the next century or so—yet none of those forecasts so far have been borne out. The computer model used has been severely criticised for obscuring and excluding many factors and interrelationships, such as subtle economic feedbacks, unforeseen technological breakthroughs, even the resilience and fortitude of human nature. Quoting the computer maxim 'garbage in, garbage out', some suggested the model was based on inaccurate underestimates about existing resources, which consequently pre-determined gloomy but erroneous conclusions. For instance, one response stressed that: "Published estimates of [fossil fuel/mineral] reserves usually relate to *proven* quantities, recoverable under existing economic conditions. As more information becomes available the estimates for a particular reservoir are revised. In the past, a significant increase in reserves has occurred as initial estimates have been revised upwards. In addition to the geological uncertainties, conservatism in reporting initial discoveries has often been reinforced by commercial considerations."[23]

So, maybe we shouldn't panic after all. Maybe the doomsayers have it wrong. Or maybe they have exaggerated our glaring ecological and social problems: one recent and wide-ranging if hotly disputed assessment of mostly ecological indicators[24] claimed all sorts of *relatively* optimistic trends, even suggesting species extinction has been over-estimated by perhaps a hundred-fold. So maybe our problems aren't as bad as we thought and they can be fixed with suitable efforts. Certainly, some have tremendous optimism.[25] For example, on the subject of hunger, according to Medard Gabel: "If the potential for multiple cropping in the tropics is tapped, world output of cereal crops could increase five or six times above its present level."[26] According to Ted Trainer (though not an optimist), "one-third of the world's grain production

[22] Donella H.Meadows, Dennis L.Meadows, Jorgen Randers & William W.Berens III, *The Limits to Growth* (Universe Books, New York, 1972)

[23] The Science Policy Research Unit of Sussex University, *Thinking About the Future: A Critique of the Limits to Growth* (Chatto & Windus for Sussex University Press, London, 1973), p.94

[24] Bjorn Lomberg, *The Skeptical Environmentalist: Measuring the Real State of the World* (Cambridge University Press, 2001)

[25] For example: Lester R.Brown, *Plan B 4.0: Mobilizing To Save Civilization* (W.W.Norton & Company, New York, 2009); Paul Hawken, Amory B.Lovins and L.Hunter Lovins, *Natural Capitalism* (Earthscan, London, 1999); Medard Gabel, *Ho-Ping – Food for Everyone* (Anchor Press/Doubleday, New York, 1979); Medard Gabel, *Earth, Energy & Everyone* (Anchor Press/Doubleday, New York, 1974).

[26] Gabel, *Ho-Ping – Food for Everyone*, p.214. Rather than this conclusion and Gabel's similar optimistic findings about energy production being invalidated in the decades since they were published, it seems just as likely that unforeseen innovations and ideas developed since then will have rendered them overly conservative.

and half its fish production are fed to animals in rich countries… *The entire problem of hunger in the world could be eliminated by the diversion of less than 3% of that grain*."[27] Food crisis? What food crisis? And what energy crisis? According to Gabel, "all the energy needs of the world could be met from non-depletable energy sources."[28] The same or similar conclusions have been reached more recently by others.[29] We won't run out of minerals either because, according to Buckminster Fuller, "metals once mined go into eternal recirculation… All that is needed is energy and knowhow to free them in pristine purity for further tasks. The United States has no tin mines, yet it has a tin reserve in aircraft and rocket production's soft tools greater than the ore reserve in Bolivia's great tin mines."[30] Even the population explosion could be avoided if we developed quickly enough, because "populations tend to stabilize as industrialization increases. As a region's life-support capabilities go up, the need for more people goes down."[31]

Most who see the future optimistically rely on technology and ephemeralization—the doing of more with less, or raised productivity—to save the day. These 'techno-optimists' stand in stark contrast to the 'neo-Malthusian' doomsayers. Yet even some of those most convinced of looming eco-disaster claim it can be averted: for example, the Worldwatch Institute estimated in 1988 that reforesting, protecting topsoil, slowing population growth, moving to efficient renewable energy, and retiring Third World debt "could be achieved with [worldwide] annual expenditures approaching $46 billion by 1990 and increasing to $145 billion in 1994 and $150 billion in 2000"[32]—a tiny fraction of the world's then annual $1 trillion defence budget. The 1992 Earth Summit reached similar conclusions. A 2009 update of the Worldwatch Institute approach estimated an annual expenditure for "social goals and earth restoration… of $187 billion, roughly one third of the current U.S. military budget or 13 percent of the global military budget."[33]

But all this begs the question: how can doomsayers and techno-optimists examine the same situation and reach such widely divergent conclusions about the potential for ecological and social disaster, or its avoidance? Who should be believed—the pessimists or the optimists?

I suggest neither side should be believed. Both sides have valid concerns but both rely on extrapolating short-term trends—usually very short-term downwards trends of a few years in the case of some doomsayers, somewhat longer upward trends of decades for most optimists. This assumes a continuation of a single pattern, not a possible cycle or chaotic sequence from which a short-term trend has been isolated. Just because a crop yield fell for a few years, or rose

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[27] F.E.Trainer, *Abandon Affluence!* (ZED Books, London, 1985), pp.142-3 (my italics). Again, the calculation was made decades ago, so the figure of three percent would not suffice now—yet clearly a current figure would not be so much higher as to invalidate the conclusion that world hunger could be eliminated.

[28] Gabel, *Energy, Earth & Everyone*, p.246

[29] For example, Mark Z.Jacobson and Mark A.Delucchi, "A Plan to Power 100 Percent of the Planet with Renewables", *Scientific American*, November 2009. This involves "3.8 million large wind turbines, 90,000 solar plants, and numerous geothermal, tidal and rooftop photovoltaic installations worldwide. The cost of generating and transmitting power would be less than the projected cost per kilowatt-hour for fossil-fuel and nuclear power." The cost involved is estimated at "$100 trillion worldwide, over 20 years, not including transmission. But this is not money handed out by governments or consumers. It is investment that is paid back through the sale of electricity and energy." They estimate it would take 20-50 years to complete, depending on the level of political will to accomplish it.
A less audacious plan to power the USA from mostly solar power by 2050 is detailed in: Ken Zweibel, James Mason and Vasilis Fthenakis, "A Solar Grand Plan", *Scientific American*, January 2008. This would require a 'mere' $420 billion in solar subsidies until 2020.
Other similar grand plans for solar and wind power can be found at http://zerocarbonbritain.com/, http://repoweramerica.org/, and http://beyondzeroemissions.org/zero-carbon-australia-2020 (the last ignores geothermal power—for Australia, a surprising omission).
Each of these plans make various assumptions that could undermine their conclusions—but so do *any* plans, whether they depend on renewable energy or fossil fuels or nuclear reactors, or indeed whatever their subject. The point being made is not that such plans may or may not work, but rather that they exist at all—that gloom 'n' doom scenarios do not have a monopoly on our thinking.

[30] Buckminster Fuller, *Utopia or Oblivion* (Bantam, New York, 1969), p.215

[31] Gabel, *Ho-Ping: Food for Everyone*, p.229

[32] MacNeill, "Strategies for sustainable economic development", p.112

[33] Brown, *Plan B 4.0*, pp.262-3

for a longer period, does not mean either 'trend' will continue—too many complex factors interplay for simplistic trends to be assumed.

Consequently, I think both sides of the debate have only partial understandings. Both have some things right, and some wrong—and always will. The reasons for this abound…

1.2 Forests Of Trees

> *"…what are the criteria for the validity of any statement, of right and wrong, of true and false, of good and bad? There are none, independently of certain arbitrary points of reference, assumptions, or premises. And we can never be sure whether our arbitrary points of reference, assumptions, premises, or ends are actually valid." – Michael Wertheimer*[34]

Human understanding rests on precarious foundations. Not only do our senses apprehend the world imperfectly, but our brains process the sensory data we receive in ways prone to misinterpretation and dependent on previous experience and habit.

The sensory information and stimuli received by the brain affect its growth and development. At birth, a young immature brain receives much novel sensory information which prompts trial-and-error reactions. Some 'work', others don't. Hence, at first, babies try to touch fire. But when stimuli grow familiar through repetition, the brain 'knows' how to respond—with tried-and-proven semi-automatic reactions. Babies stop trying to touch fire. 'Knowing' appears to correspond to particular structural arrangements of the brain—specific circuits of, or associations between, neurons. Different lives, and thus different stimuli, lead to different brain structures. The most memorable or impressionable experiences imprint onto the brain in all but permanent, static, embedded structures. More flexible brain circuitry can be built onto imprints via conditioning (repetitious or otherwise significant experiences), and a third, very adjustable circuitry results from learning (each newly acquired fact or opinion probably corresponds to some small, newly adjusted brain circuit).

Thus, experience shapes the brain, but response to further experience is shaped *by* the brain. Indeed, experience can imprint brain structures and brew personal viewpoints so fixed that we sense only what supports our beliefs, ignoring the rest or excluding them as mistaken. Even when it grows obvious that our chosen reality no longer exists, if it ever did, our fixed brain circuitry can force us to refuse to admit it and continue to perceive only what we believe. Alas, it seems that the "human brain, which loves to read descriptions of itself as the universe's most marvellous organ of perception is an even more marvellous organ of rejection."[35]

The misperceptions of reality to which we stubbornly cling—our 'tunnel-realities'—may satisfy us for a time, but eventually they can seem absurd. People once believed in a flat earth, round which the sun revolved. Until the nineteenth century, nearly all scientists—supposedly the most adept conceptualisers and most rigorous perceivers and measurers of reality—refused to believe rocks could fall from the sky, against much evidence for meteorites.

But we don't just *deny* perceptions that fit poorly into our tunnel-realities, we also *fabricate* others to suit. Biologists, peering through early microscopes, thought they saw miniature people inside spermatozoa. Physicists, for a while, saw N-rays, even when their detection equipment had not been turned on. Our past is strewn with various 'experts' who fervently believed what later proved false: that humans could never fly, or travel to the moon; that continents do not drift; that bacteria do not cause stomach ulcers; that stock markets would

[34] Michael Wertheimer, *A Brief History of Psychology* (Holt, Rinehart & Winston, New York, 1979), p.15

[35] Robert Anton Wilson, *Prometheus Rising* (Falcon, Las Vegas, 1989), p.209

continue to rise. As a result of both intentional and unintentional indoctrination by such experts, as well as by parents of babies, teachers of students, peers of adolescents, social leaders of followers, media of users, and so on almost ad infinitum, the tunnel-reality we each permit ourselves to perceive is largely shaped *for* us, by others.

As a result, each society develops an overall 'consensus tunnel-reality', carved by social, political and economic conventions and structures, moral codes, religious beliefs, and various other habitual practices. Christian Capitalism. Atheistic Communism. Islamic Fundamentalism. Pagan Hedonism. Local Currentism.

Tunnel-realities, personal and consensus, are further reinforced by language. For instance, people who habitually use the word 'businessmen', rather than 'businesspersons', tend to feel surprise or shock upon meeting businesswomen. Similarly, repeated use of the word 'housewife' tends to cause us to disregard, or view as abnormal, househusbands. But sexist language only comprises the tip of the iceberg.

Alfred Korzybski explained in the 1920s that when words are identified with each other, in the manner of 'A is B', labels for one perception become associated with those for others, and emotional associations linked to one word transfer to the other. We perform these 'identifications' frequently—in common everyday exchange, heated arguments, simplistic slogans, political speeches, advertising—and each time, perceptions, descriptions and inferences merge into confused creeds…

He 'is' a bastard. She 'is' a slut. You 'are' wrong. The real problem 'is' unemployment (or inflation or global warming or immigration or whatever's fashionable). The current USA president 'is' an imperialist dog. The nation currently number one on our country's hate list 'is' an evil empire (or a pack of butchers or something newer, nastier and catchier than what was last said of them or their predecessors). With this drink, the opposite sex 'is' easy meat.

All identifications, even those based on seemingly indisputable observations such as 'grass is green', mislead to some extent (in a drought, grass 'is' yellow, brown, even white, but rarely green). According to Korzybski, even 'John is a carpenter' comprises an identification—not normally emotive, but still misleading because "the characteristics of a class [carpenter] are *not* the 'same' as nor identical with the characteristics of the individual [John]."[36] Although John might now work as a carpenter, come the next recession, he might not; to then say that John 'is' an unemployment statistic, or a dole-bludger, would likewise oversimplify and misrepresent him. Korzybski argued that we *can* say 'John *is not* a cat' because this states difference not sameness. But "whatever one might *say* something '*is', it is not*",[37] because the 'something'—the reality—changes over time, and remains much more than any sounds we use to very roughly categorise our brief subjective imperfect perceptions of it. The map is *not* the territory.[38]

According to Korzybski, identification works against understanding so effectively as to produce "results [which] are semantically and structurally far-reaching and are found to

[36] Alfred Korzybski, *Science & Sanity* (International Non-Aristotelian Library Publishing Company, Lakeville, 1980), p.409

[37] Korzybski, *Science & Sanity*, p.409

[38] Korzybski did not object to all forms of 'is' (and grammatical relations like 'be', 'being', 'am', 'are', and so on). While he entirely rejected the 'is' of identity (*Science & Sanity*, p.93), he accepted the use of 'is' as an auxiliary verb (as in "is doing"), and also the 'is' of existence (which helps state that something exists, as in "there is a belief that..."). But he did not accept the 'is' of predication. In subject-predicate sentences, such as "I read the book", the predicate ('read') provides information about the subject ('I'). The predicate normally consists of just a verb—but not for 'is' (and its relations). In "John is president of the firm", the last five words comprise the predicate. Korzybski believed that "the 'is' of predication also expresses a sort of *partial identity*" (p.202) and, except when dealing with so-called 'symmetrical relations', misleads as much as the 'is' of identity (p.93). Although some post-Korzybski semanticists now regard any use of 'is' as a source of confusion, this book tries to follow Korzybski's views—except necessarily when quoting from others' writings, and very occasionally, if alternatives seem more misleading, for predication (though with the offending verb highlighted by quotation marks).

underlie modern mythologies, militarism, the prevailing economic and social systems, the control by fear (be it 'hell' or machine guns), illusory gold standards, hunger etc."[39]

So, casual identification augments our brain-structured tunnel-realities, personal and consensus, to make us creatures of habit, devoted to fabricating and defending our personal 'truth' and denying that of others, committed to our ideologies and dominant paradigms. Or as an old saying puts it, you can't teach old dogs new tricks—at least not without a lot of work.

No wonder we suffer from what has been called 'confirmation bias', by which we "seek out and believe evidence that fits with our preconceived ideas while ignoring or dismissing the rest."[40] We confirm what we think we already know, and discount what we don't. Thus we resolve—in an illusory way—a natural urge for certainty in an uncertain world. Even supposedly objective scientists are not immune. In the words of two physicists: "Paradigms, especially after they have been established for some time, hold the consensual mind in a 'rut' requiring a revolution to escape from. Such excessive rigidity amounts to a kind of unconscious collusion, in which scientists unconsciously 'play false together' in order to 'defend' the currently accepted bases of scientific research against perceptions of their inadequacy."[41]

In social sciences, the behaviour studied has less orderliness and predictability than that dealt with in 'harder' sciences. But social scientists can be thwarted less by the inherent difficulties of their field than by their own tunnel-realities. One social scientist, an economist, wrote: "Hidden valuations and normative judgements which parade as analytical… statements, the tendency to put one's conclusions into definitions and assumptions, reasoning by analogy and by past experience, wishful thinking and self-deception, deliberate suppression and manipulation of information by interested groups, preconceptions including distorted time-perspectives and, last but not least, elements in the personality structure of the investigator—these are some of the obstacles which tend to defeat social inquiry by subverting the required critical and dispassionate attitude of the social scientist."[42]

Another economist, a 'Nobel' Prize winner, explained it in different terms: "Ideology provides a lens through which one sees the world, a set of beliefs that are held so firmly that one hardly needs empirical confirmation. Evidence that contradicts those beliefs is summarily dismissed. For the believers in free and unfettered markets, capital market liberalization was *obviously* desirable; one didn't need evidence that it promoted growth. Evidence that it caused

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[39] Korzybski, *Science & Sanity*, p.202

[40] Jim Giles, "Living in denial: Unleashing a lie", *New Scientist*, 21 May 2010. This article explains a research experiment where "students read news stories that included a quote stating, incorrectly, that George W. Bush had banned all stem-cell research. Some stories also included a correction. As expected, students who read the second version were less likely to come away with the belief that Bush had banned stem cell research—but only if they were already sympathetic to Bush. Liberal students were impervious to the correction."

[41] David Bohm & F.David Peat, *Science, Order and Creativity* (Bantam Books, New York, 1987), p.61. "Rut" and "unconscious collusion" may well be involved in the always hot topic of climate change. To me, the 'debate' seems more a competition than a dispassionate search for truth, more hypothesis-driven than evidence-based, a sort of Anthropogenic Global Warmongering. While it seems almost certain that the CO2 greenhouse effect does indeed operate, and that therefore human activities are contributing to a warming of the planet, my understanding of the theory, its computer-based models, and the long-term temperature records, suggests to me (though notable others would disagree) that the 'consensus' models over-estimate feedbacks and climate 'sensitivity', and underestimate natural cycles. Consequently, I believe future warming will likely be less than the current 'consensus' forecasts, and also almost certainly less affected by attempts to limit AGW than is predicted. For these reasons, although going renewable makes sense to me, AGW is not the only, the best, or possibly even a sound, reason for doing so. Furthermore, whatever the degree of warming, carbon taxes and emissions trading schemes won't work nearly as well to combat AGW as more direct, less market-based approaches for replacing offending technologies with better ones. A fairly short yet particularly clear explanation of the inadequacies of both carbon prices and emissions trading schemes, and why relying on them to prompt the market to finally get it right has little chance of success on its own, is given in Raj Patel, *The Value Of Nothing: How To Reshape Market Society And Redefine Democracy* (Black Inc, Melbourne, 2009), pp.158-163. For further details about the difficulties facing 'objective' science, see Jonah Lehrer, "Accept Defeat: The Neuroscience of Screwing Up", *Wired*, December 2008 (available at http://www.wired.com/magazine/2009/12/fail_accept_defeat/all/1), David H.Freedman, "Lies, Damned Lies, and Medical Science", *Atlantic Monthly* , November 2010 (http://www.theatlantic.com/magazine/archive/2010/11/lies-damned-lies-and-medical-science/8269/?single_page=true), and Jonah Lehrer, "The Truth Wears Off", *The New Yorker*, 13 December 2010 (http://www.newyorker.com/reporting/2010/12/13/101213fa_fact_lehrer?currentPage=all).

[42] K.William Kapp, *The Social Costs of Business Enterprise* (Spokesman, Nottingham, 1978), p.1

instability would be dismissed as merely one of the adjustment costs, part of the pain that had to be accepted in the transition to a market economy."[43]

Tunnel-reality, paradigm, ideology, preconception, confirmation bias, even cognitive dissonance—call it what you will, but it poses an enormous barrier to understanding anything other than what we already believe, which may or may not be based on repetition of errors or outright lies. Ultimately, it all depends on who you believe, who you trust.

1.3 Second Opinions

> *"…were the current orthodoxies reliable and the policies they advocate applicable, we wouldn't be in the trouble we are in. We have seen the present and it doesn't work."– John K.Galbraith*[44]

So, because of tunnel-reality dominance, neither the neo-Malthusian doomsayers and eco-worriers nor the techno-optimists should be believed as having the full truth. We may desire black and white, but reality has far more shades of grey.

Given the complexity of ecological systems, we can probably never have complete certainty about the extent to which they have been damaged, or why, or their capacity to recover. Even so, because damage can be clearly seen all about us, it can't be dismissed as negligible.

Looking as dispassionately as I can at the evidence and conflicting opinions about it, I'm forced to conclude that humanity is having a marked deleterious effect on its environment, one which *could* reach perilous extremes sooner or later, and almost certainly has in some regions of the world already. Malthus and other doomsayers may have got it wrong in the past, but maybe their predictions have not been thwarted, instead merely delayed.

Undoubtedly, optimists would counter that humans have capacities to overcome all threats, that practices we have adopted and which have previously delayed the worst Malthusian fears can be enhanced, augmented and continued indefinitely. Perhaps best summing up this view, Buckminster Fuller wrote: "There is no energy crisis. There is a crisis of imagination."[45] But the crisis works in both directions—too little imagination for some, too much for others…

The what-looming-disaster school don't have their heads stuck in the sand, but maybe they have them too firmly wedged in economics textbooks and operatic science-fiction novels. To some techno-optimists, like Herman Kahn,[46] Gerald O'Neill[47] and Daniel Bell,[48] not only can humanity avoid disaster but it can grow indefinitely. Automation, information technology, biotechnology (genetic engineering), nuclear fusion and/or some other hi-tech power, and the final frontier of space, will all allow the limitations of a finite planet to be transcended. No limits to growth in an infinite universe. New industries will take us on and on, expanding forever with no strain too much for our economic system to handle. All problems will be sorted out on the way by science and the purported common-sense of the market. Indeed, according to proponents of this view, most problems that look like looming disasters "are more the growing pains of success (often accentuated by ill-timed bursts of mismanagement as well as the needlessly dire prophecies of doomsayers) than the inevitable precursors of doom."[49]

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[43] Joseph E.Stiglitz, *Globalization And Its Discontents* (Penguin, London, 2002), p.222

[44] John K.Galbraith & Nicole Salinger, *Almost Everyone's Guide to Economics* (Houghton Mifflin, Boston, 1978), p.viii

[45] Cited in Gabel, *Energy, Earth & Everyone*, p.1

[46] Herman Kahn, William Brown & Leon Martel, *The Next 200 Years* (William Morrow & Co., New York, 1976)

[47] Gerald K.O'Neill, *2081: A Hopeful View of the Human Future* (Simon & Schuster, New York, 1982)

[48] Daniel Bell, *The Coming of Post-Industrial Society: A Venture in Social Forecasting* (Harper Colophon Books, New York, 1974)

[49] Kahn et al, *The Next 200* Years, p.4

At the very base of their beliefs, most techno-optimists rely on the market to move us forward and beyond, trusting in its purported wisdom to cure all problems. But then many doomsayers also ultimately assume much the same, albeit usually with some additional government regulation of markets. For instance, the Worldwatch Institute's aforementioned estimate of the money needed to avert disaster assumes the continuance of market economies.

Of course, who could fail to notice the achievements of market economies? Even allegedly communist China has hopped onto the bandwagon. No wonder. Through market competition, successful nations—their most profitable competitors at least—have raised their standards of living sky-high, and faster than a speeding bullet, in the process doing away with many of the hardships that have defined human existence since we dwelt in caves.

And yet, despite the avowed superiority of market economies, despite them being constantly touted as successful beyond peer, and admired with not merely religious but often fanatical devotion, occasionally they are acknowledged as also sometimes failing abysmally—even by their most ardent defenders. When the 2006 Stern Report called the threat of climate change "the greatest market failure the world has seen", the then Australian Federal Treasurer would not agree, pointing out that "we have seen market failures that have led to wars and famine and global poverty".[50] With market enthusiasts like this, who needs critics?

At least one noted techno-optimist did *not* think the market could be relied upon to solve our problems. Buckminster Fuller long claimed that the ecological and social problems we face stem not so much from ephemeralized technology, as many neo-Malthusians suggest, but from its subservience to market competition, from the continued insistence that we compete rather than co-operate for wealth—a primary issue that the standard techno-optimist stance, and the typical neo-Malthusian, ignores. Convinced that if nations stopped concentrating on weaponry for the defence of competitively won advantages, and instead poured the same energies into "livingry", Fuller maintained that within a decade or so, abundance could be shared worldwide—whereas continued competition would guarantee oblivion for all. Thus, to Fuller, the market offered not the means of eternal beneficial growth favoured by most techno-optimists, nor even a hope for averting neo-Malthusian disaster if suitably regulated, but rather ultimate doom.

I agree with Fuller on this crucial point. As the next section will outline, and the rest of part one of this book will detail, the very rules of market competition inevitably cause and perpetuate widespread, often increasing, poverty and inequality, and all but inevitably cause ecological degradation. Hence, as long as most doomsayers and techno-optimists alike assume market competition, they deal with *symptoms* not the *disease*. And as any half-decent medic knows, a cure depends on treating the disease not the symptoms.

Warning: cognitive dissonance ahead.

[50] http://www.treasurer.gov.au/DisplayDocs.aspx?pageID=&doc=transcripts/2006/160.htm&min=phc

1.4 The Economy & Other Disorders

> *"…modern capitalism is absolutely irreligious, without internal union, without much public spirit, often, though not always, a mere congeries of possessors and pursuers. Such a system has to be immensely, not merely moderately, successful to survive."*
> *– John Maynard Keynes*[51]

Two economic systems have dominated the last century or so: capitalism and socialism. The latter has been largely abandoned as a failure, while the former has been adopted by more and more nations—apparently, a big winner (or is that 'wiener'?).

Capitalism, also known as free enterprise and private enterprise, has been defined as "an economic system in which the means of production are privately owned and operated for profit."[52] Although accurate, this leaves out something crucial: owners of the means of production (a minority of the population) *compete* with each other to make profits, just as those they pay to work for them (the majority) compete for jobs and wages. Fundamentally, capitalism revolves around competition—more generically, 'market competition'.

To profit from market competition, a business must gain more money from sales than it spends during production of its goods or provision of its services. More pedantically, when costs include payments for labour of business owners roughly equal to those that would be paid to anyone else for similar labour, profit goes by the official name of economic profit—"the difference between revenue and economic cost".[53] Although owners are often rewarded more lavishly than this, the discussion henceforth treats 'profit' and 'economic profit' identically.

Businesses who use more efficient methods, or cheaper resources such as labour, can sell for lower prices than their competitors, and because lower prices generally attract more consumers, these businesses tend to make more profits. But, unsurprisingly, *not all can win at market competition*. Although, theoretically, every individual can own something and thereby manage and control it for his/her own reward, market competition always results in some ('winners') owning and controlling a lot, and others ('losers'), next to nothing. In the words of one of the most famous and eloquent twentieth century economists, John Maynard Keynes, capitalism constitutes "a method of bringing the most successful profit-makers to the top by a ruthless struggle for survival, which selects the most efficient by the bankruptcy of the less efficient. It does not count the cost of the struggle, but looks only to the benefits of the final result which are assumed to be permanent. The object of life being to crop the leaves off the branches to the greatest possible height, the likeliest way of achieving this end is to leave the giraffes with the longest necks to starve out those whose necks are shorter."[54] In other words, losers and therefore *poverty and inequality follow inevitably from market competition*.

Textbooks claim that no-one can keep making profits for long, that a firm's profit now balances with a loss later, and that in "the long run, economic profit for any firm in a competitive industry is zero… due to downward pressure on product price and upward pressure on factor prices".[55] But in fact, profits for some industries do not average zero, they

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[51] John Maynard Keynes, *Essays in Persuasion* (Volume 9 of The Collected Writings, MacMillan, London, 1972), p.282

[52] http://en.wikipedia.org/wiki/Capitalism#cite_ref-0. A similar definition is cited from Samuel Bowles & Richard Edwards, *Understanding Capitalism* (Oxford University Press, New York, 1985), p.4, in James Gustave Speth, *The Bridge at the End of the World: Capitalism, the Environment, and Crossing from Crisis to Sustainability* (Yale University Press, New Haven & London, 2008), p.58: an "economic system in which employers hire workers to produce goods and services that will be marketed with the intention of making a profit."

[53] Jack Hirshleifer, *Price Theory & Applications* (Prentice Hall, London, 1976), p.230

[54] Keynes, *Essays in Persuasion*, p.267

[55] Hirshleifer, *Price Theory & Applications* , p.2

instead remain positive for substantial periods of time,[56] because, *in this game, winning increases the chances of continuing to win, and likewise losing fosters more losing—hence, wealth tends to concentrate, and inequality generally increases.*[57]

Market competition's inherent tendency to widen the gap between rich and poor can be offset by altruism or government intervention, but neither follow naturally from the economic game rules. Nevertheless, recent research suggests that it doesn't pay to have too much inequality, even for the rich: "even those at the top are better off if their society is more equal, regardless of their relative level of actual wealth. Studies… consistently show that greater equality improves wellbeing even for those in the top 25 percent."[58] Factors of well-being consistent with this finding include "life expectancy, obesity, imprisonment rates, teenage pregnancy, mental health, levels of trust in the community, education performance, status of women, and [more]… most of the indicators being three to ten times worse in more unequal societies. This applied even when none of the subjects in the group being researched were anywhere near what could be considered poor. So, for example, among U.K. civil servants in Whitehall, all well paid by global standards, the bottom of the group had a death rate three times as high as the top of the group, of which only a third could be explained by other causes like obesity and smoking (and some of those were perhaps driven by inequality anyway)."[59]

Given capitalism's inherent tendency towards widening inequality, it naturally didn't take long for it to inspire the development of 'socialism', first as theory in the mid nineteenth century, and then in the next century as practice. Socialism advocates not private but social ownership and control of the means of production, distribution and exchange. Yet 'social ownership and control' has considerable ambiguity. In every nation so far to have attempted socialism, ownership and control have largely or entirely resided with the state—the various levels of government, and the military, judicial, police, administrative and other groups in their employ. Alas, centralised control of economic activity by distant bureaucratic overlords has mostly proved destructive to both the environment and to the general population. Saved from competing for profits, people suffered instead from a lack of incentive and involvement, which dissuaded innovation and ultimately led, in most cases, to the jettisoning of socialism in favour of capitalism. China, Cuba, Venezuela and some other South American nations still claim socialism, but all have a degree of private ownership of the means of production and market competition for profits, which leaves them socialist in little more than name only.[60] More accurately, they have adopted merely a more government-regulated form of capitalism rather than the pure unregulated 'laissez-faire' version (which, strictly speaking, no nation practices).

So, capitalism dominates today. And yet, it is compelled by its own game rules to dominate even further—to grow, relentlessly, perpetually. *If* it can…

A growing economy, by definition, spends more money. For all the talk about, and priority given to, economic growth, it consists of nothing more than increasing expenditure (adjusted for inflation). Competition for profits compels it, because businesses that gain profits are

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[56] See Howard J.Sherman, *Stagflation: A Radical Theory of Unemployment and Inflation* (Harper & Row, New York, 1976), pp.148-9, for supporting statistics, or peruse the media for frequent reports of inevitably record profits of large corporations, especially banks.

[57] See footnote 21.

[58] Gilding, *The Great Disruption*, pp.228-9, referring to research detailed in Richard Wilkinson & Kate Pickett, *The Spirit Level: Why more equal societies almost always do better* (Allen Lane, London, 2009)

[59] Gilding, *The Great Disruption*, p.228, again referring to Wilkinson & Pickett, *The Spirit Level*. Note that neither source makes the claim that inequality *solely* determines variations, merely that "most of the important health and social problems of the rich world are more common in more unequal societies" (Wilkinson & Pickett, *The Spirit Level*, p.173), and that "the effects of inequality are not confined just to the least well-off: instead they affect the vast majority of the population." (Wilkinson & Pickett, *The Spirit Level*, p.181) The explanation offered seems plausible: "Greater inequality seems to heighten people's social evaluation anxieties by increasing the importance of social status." (Wilson & Pickett, *The Spirit Level*, p.43) And the more anxiety, the greater the ill-health and social problems.

[60] Some might think China at least retains a socialist political structure, but socialism does not require centralised or non-democratic polities, even if most attempts so far have involved them.

obliged to invest much or all of them in new ventures intended to *increase* their profits, thus boosting production and spending, which equates to economic growth. If businesses don't reinvest, they risk shrinking profits and ultimate loss, because either their markets will become 'saturated' with too many consumers already having purchased their goods, or newer products will supersede theirs, or they will be out-competed eventually by other businesses that do grow.[61]

So, *the compulsion to grow is built into the game rules of market competition*.

But not only businesses have compelling reasons to want economies to grow, so do wage earners. If an economy does not grow, if instead its spending reduces, it has less need for production and work—and because less work almost invariably means less income, this causes obvious problems, not only for those whose income reduces, but also for the producers of the goods that might otherwise have sold if income had not reduced. Failure to grow thus encourages more of the same. Or, as Tim Jackson succinctly put it: "Growth is necessary within this system just to prevent collapse."[62]

The same undesired effects follow even if an economy's spending somehow stays static, neither growing nor contracting: in this rare situation, efforts to maximise profits still unleash productivity improvements that reduce the need for workers, meaning less income and spending, and a conversion of no growth to reduced growth, with all its associated problems. Hence, a no-growth or 'steady-state' economy, though increasingly advocated, cannot be maintained if profit maximisation is pursued.[63]

Clearly, profit-driven market economies are compelled to grow. No surprise then that growth is widely promoted as a cure-all. We are constantly told how growth, a simple easily digestible measure of national success in a complex hard-to-fathom world, bakes a bigger economic cake, so providing more to eat for the same share. Yet market competition's steady churning of winners and losers actually causes the various sizes of slices of the economic cake to constantly change, usually resulting in widening gaps between rich and poor, within nations *and* between them. So, rather than growth causing everyone to eat more because of a bigger economic cake, instead it tends to result in winners eating more but losers less.

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[61] Speth, *The Bridge at the End of the World*, p.59—again citing Bowles & Edwards, *Understanding Capitalism*—describes the compulsion to grow similarly, using terms such as "compels", "no choice", and "must". His conclusions are summarised most neatly by two sentences: "In a capitalist economy, survival requires growth, and growth requires profits" (Bowles & Edwards, p.149); "the capitalist economy, to the degree it is successful, is inherently an exponential growth economy." (Speth, p.59)

[62] Tim Jackson, *Prosperity without Growth? The Transition To A Sustainable Economy* (Sustainable Development Commission, 2009, available at http://www.sd-commission.org.uk/publications/downloads/prosperity_without_growth_report.pdf), p.8

[63] The idea of a steady-state economy, though usually associated with Herman Daly's work of recent decades, has a long heritage. Adam Smith described a 'stationary-state' in 1776 as an eventual outcome of markets, as did John Stuart Mill in 1848, and John Maynard Keynes in the 1930s (Gilding, *The Great Disruption*, pp.194-5). But in each of these cases, market economies were assumed to continue in some form, just without more accumulation of capital or economic growth. Even now, steady-state proponents assume much the same, their arguments often focussing on balancing productivity improvements with increased leisure time. However, this approach begs the question of how it could maintain the spending required to even sustain let alone increase or maximise profits. For instance, Jackson, in *Prosperity without Growth* (p.46), identifies that "The capitalist model has no easy route to a steady-state position. Its natural dynamics push it towards one of two states: expansion or collapse." I would agree with this completely if the word "easy" had been left out. But Jackson later (pp.79-81) cites a model by Peter Victor which gains a roughly steady-state after 25 years, by shifting "investment from private to public goods", redistributing income to reduce inequality, sharing work, and lowering working hours as productivity increases (as it is assumed to do). These seem worthwhile goals, but hardly natural outcomes of market competition (even with the role of government clearly expanded to make for a more regulated economy than today's). Even so, after 25 years the modelled steady-state still retains 60% of initial unemployment, 50% of initial poverty levels (for the last 15 or more of its 25 years), and slowly mounting government debt, all of which strike me as inadequate outcomes. More crucially, while Victor's model is tailored to achieve no growth, it does so without including "a monetary sector", and without addressing the consequences for business profits: with higher productivity still leading to less income (albeit more evenly shared) to afford the same output, spending must *reduce*, which, along with less business investment, must decrease profits—an outcome directly opposed to standard business goals, and, as previously explained, encouraging collapse, *not* a steady-state. Jackson rightly suggests that the model's results should be viewed "with caution" (note 28, p.81), but the failure to include profits in the model puts its results in doubt. While I couldn't agree more with the burgeoning call to move beyond growth, I cannot see how this can be done at all in a competitive market economy, predisposed by its own rules to either "expansion or collapse". As long as businesses must compete for maximised profits, a steady-state is not possible—indeed, as will be explained, a steady-state economy requires the abolition of both profit *and* interest.

Just as importantly, a bigger cake is not necessarily tastier or more nutritious: widespread growth since World War 2 has seen unpaid social and ecological costs poison many slices of the economic cake. No wonder: because growth concerns only quantity not quality, perhaps forty percent of all money spent cleans up the mess made by the rest.[64]

Yet it is not growth per se that causes ecological degradation—rather, it follows, like poverty and inequality, from market competition itself. But *whereas poverty and inequality follow inevitably in principle from market competition, ecological degradation follows from it 'merely' generally in practice*. As the next chapter details, profits can be maximised by minimising or avoiding costs, which often involves using production methods that erode, deplete, pollute and/or in some other manner degrade the environment. Unless governments decide to try to regulate ecologically damaging practices, most businesses continue to use them because doing so maximises their profits. Growth 'merely' compounds the extent of the damage, by involving more expenditure and more production.

The environment, clearly, is not the economy's first priority—nor that of governments. Profits and growth take precedence. So, for example, various corporations keep pumping out greenhouse gases as they amass profits and help sustain growth. They are exonerated by widespread and dominant faith that 'the market knows best', that some of the profits gained will fund investment to eventually discover new ways to operate without the alleged ecological costs (such as by developing renewable alternatives). Some governments might try to hasten market progress by imposing carbon taxes and emission trading schemes[65] which increase costs and add layers of complexity but do not directly change the methods in use nor the message: keep operating in ways seen as dangerous and damaging until you can eventually afford to figure out how to operate safely. Keep doing things wrong until you can afford to do them right. Profit and growth first, all else second. If the same approach was taken towards thieves, they'd be allowed to keep stealing until they could afford to go straight.

So, with growth and profits the priorities, competitive market economies require ever more activity, ever more building, extracting, transporting, generating, producing, all to spend ever more money, in order to buy more, to use more, to make more, to spend more to buy more to use more to make more to spend more… ever more… whatever the associated costs. Not mere compulsion, but obsessive-compulsion.

And yet, however much we single-mindedly pursue our arrested adolescent idée fixe about the size of our spending, and however much social and ecological damage we cause in the process, the goal of ever more growth remains elusively out of reach, interrupted irregularly by recession and depression. These occur when an economy spends less, even the tiniest percentage less, for just six months or more—which happens frequently: most countries experience at least one recession every decade (see section 5.2).

The inevitability of recessions indicates the obvious: despite market economies being compelled to grow, perpetual growth is simply not possible. This can be seen most glaringly by considering natural resources: if we keep increasing our extraction of the top ten minerals by the modest three percent growth rate economies usually aspire to as a bare minimum, then in a thousand years we'd need to be digging up an amount weighing more than the entire earth.[66] Talk about digging your own grave.

Some optimists suggest we can grow eternally, without ever more resource extraction, by recycling, ephemeralization, and/or expansion of service and information industries. In other words, some constant or declining amount of energy and materials could sustain ever more

[64] Trainer, *Abandon Affluence!*, p.241

[65] As per footnote 41, see Patel, *The Value Of Nothing*, pp.158-163 for a persuasive critique of carbon taxes and emission trading schemes.

[66] Heilbroner, *Business Civilization in Decline*, p.104

information processing and service provision. Although possible in the short-term (*if* resource use can reverse its general tendency to increase[67]), this futile hope cannot succeed in the long run, particularly if the global population stabilises, as trends suggest it will by about mid-century. Even if *somehow* involving a stable or decreasing level of resource use, for a roughly constant number of people to exchange ever more money for ever more provision of services and information, they would have to either spend more and more time in that provision and exchange, or else find ever more productive ways to provide more, or a combination of both. Yet surely, eventually, a physical limit must be reached as to how often and efficiently we can all research our family trees or have our hair cut or palms read or nails manicured or eat out—even the modern economy cannot give us more than 24 hours in each day to consume.

So, at least as long as we remain restricted to the one finite planet, it seems certain that market economies can only grow so much before they consume their natural resources and/or reach their limits, and then contract.[68] Although the methodology of the original *Limits To Growth* report can be criticised, and the forecasts from its more pessimistic scenarios have not eventuated—although other neo-Malthusian arguments may not have proved correct in detail, their forecast calamities overdue or overstated—still their fundamental argument holds true: exponential trends like *economic growth cannot be continued indefinitely* in a finite system. Yet our economic game rules compel us to try to always grow. Catch-22.

Ironically, obsessive-compulsive, socially and ecologically destructive, unsustainable, competitive market economies also suffer from a sort of split personality: their dynamics compel growth, but also work *against* growth. Businesses try to maximise profits not just by reinvestment and expansion, but also by reducing costs, either via automation, increased productivity, or out-sourcing to cheaper labour in other nations. However it is achieved, reducing costs usually causes jobs to be lost, leaving consumers with less money to spend, and hence, businesses with fewer potential buyers of their goods.[69] Thus, trying to maximise profits contradictorily risks reducing profits (and growth), *unless* replacement jobs to produce new goods and services are perpetually created. So, *competitive market economies must aim not just for more spending and more profits, but also for more work*. Ever more. In the name of the profit and the job and the holy growth.

Not just businesses and workers, but also banks and other financial institutions have a vested interest in the creation of jobs and maintenance of growth: for loans to producers to be repaid, they must finance enterprises that eventually make sufficient profits to cover the costs of servicing the loans, which means more spending. Similarly, if consumers spend less, not only do they have less need to borrow money, but also fewer sales happen, and therefore profits reduce, leaving businesses with less money to repay debts. So, like any profit-seeking business, lenders want growth.

But lending money also compounds the split personality of market economies: repaying business debt depends on growth—more spending—but consumers can only repay their debt by *foregoing* spending, by *saving*. Of course, 'too much' saving means no need to borrow money in the first place but also too little spending for an economy to grow—anathema to lenders and

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[67] Examples of recent trends for metal extraction, and fossil fuel and material consumption, are graphed and discussed in Jackson, *Prosperity Without Growth*, pp.50-53

[68] Alert readers will have noted the escape clause: *if* we remain earthbound, growth cannot be perpetuated. Conceivably, we could continue to grow if we expanded into outer space. This might happen one day, but almost certainly not in the near future—if the market could profit from space exploration, it would be doing so now. Instead, space-faring efforts have come thudding back to earth in the decades since expensive government-funded efforts put men on the moon. Even if they were suddenly to be rejuvenated via some unforeseen technological breakthrough, they would at best only provide sources of raw materials for the immediate future. They would not solve the real problems we have here and now on this planet, instead they would more likely just give us the chance to contaminate other worlds with the same problems.

[69] Businesses may be able to sell to export markets to deal with insufficient consumer funds at home, but that only works from a local perspective—looked at globally, all businesses will be trying to do the same, and not all can succeed.

business. On the other hand, 'too little' saving can mean profligate spending leading to inflation and debt bubbles.

Compounding the issues further, while lenders depend on growth to allow debt to be repaid, growth also depends on debt in order to happen at all: to spend more requires having more available to be bought, which requires higher productivity and/or more production facilities—the former usually and the latter always require investment via profits and/or debt, but because profits ultimately cannot be made in aggregate without debt, this makes growth entirely dependent on debt. To understand why net aggregate profits cannot be made without debt, some little known facts need to be detailed…

1.5 Profits Of Doom

> *"…profit earned by one capitalist* must *be at the expense of someone else—be it worker, other capitalist, or banker."– Gunnar Tomasson & Dirk J.Bezemer*[70]

As explained, economic competition has two possible broad outcomes. Either we spend more money, so we can make more profits and repay more loans and create more work to replace jobs lost because of the way previous profits were increased, in order to earn more money and make more profits and create more work and repay more loans made to allow us to spend more money, so we can spend more money and make more profits and repay more loans and create more work, so we can spend more money… spend more money… more… more… more, you can do it for me baby, keep going, keep going, aaah, aaaaaahhhhh… uhh… eh?! Or, we fail to grow: spend less, shed jobs, make fewer profits, repay fewer loans, suffer bankruptcies, financial collapse, recession, and the economy disappearing up its assets.

Yet this sad dilemma is made even more difficult by the nature of profit.

Because prices include a profit margin (an amount over and above production costs), the amount of money distributed during production of goods—the payments made to do the producing and thus made available to consumers for spending—sums to less than the total prices of those goods. As a result, not all businesses can profit: even if consumers spend all of the money paid to them by producers during production, they can buy only *some* of the goods available at their profit-inclusive prices. If some producers sell at a profit, others will *necessarily* not recoup their expenditure: either they will be forced to sell at a loss or they will stockpile unsold goods they might be able to sell later… except they face the same situation then as well. So, ultimately, some will profit, others might recoup their costs with nothing to spare, others will lose.[71]

More detailed analysis confirms that *not all businesses can sell all of their goods at profit-inclusive prices—the net profits for all businesses must sum to zero*. Figure 1 below depicts a hypothetical example which shows why. The three producers depicted can be treated as groups of different producers at the same 'stage' of production.

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[70] Gunnar Tomasson & Dirk J.Bezemer, "What is the Source of Profit and Interest? A Classical Conundrum Reconsidered" (University Library of Munich MPRA Paper #20320, 2010, available at http://ideas.repec.org/p/pra/mprapa/20320.html), p.11

[71] This seems consistent with http://www.businessweek.com/smallbiz/news/coladvice/ask/sa990930.htm, which though a decade old, mentions a study based on US Census Bureau data indicating that "over the lifetime of a business, 39% are profitable, 30% break even, and 30% lose money, with 1% falling in the 'unable to determine' category". Similarly, a simple web search found many varying statistics indicating that somewhere between 30% and 70% of all businesses close within five years, 10% to 70% of those closing because they were not making a profit.

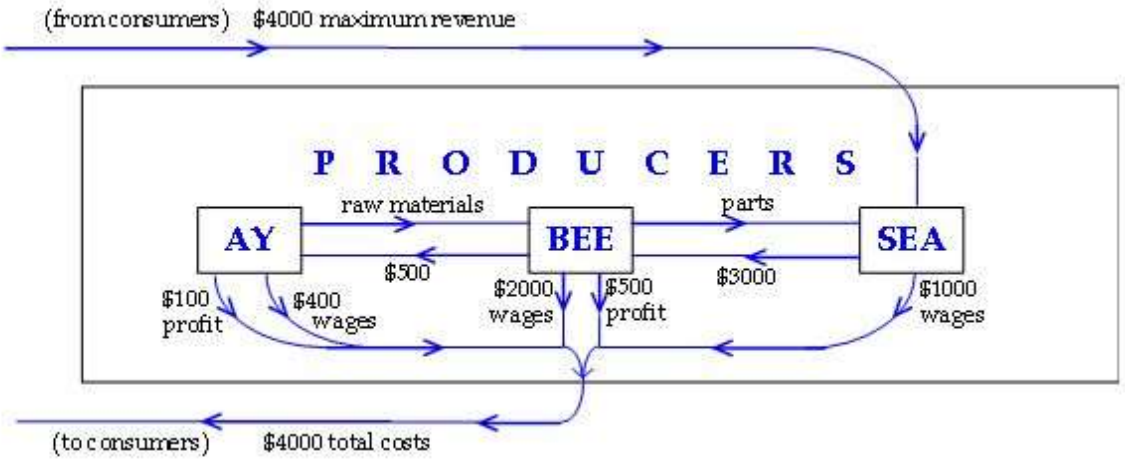

Figure 1: Zero Net Profits

For the period shown, 'Ay' and 'Bee' profit, but 'Sea', the producers of final consumable products, can at best recoup only their total *costs*—and only if workers spend all of the income they receive over the period, *and* Ay and Bee spend all of the profits they make over the period (their profits reducing to zero as a result). In this eventuality, some of Sea's member businesses might manage to profit, but others must lose by the same amount.

On the other hand, if Ay and/or Bee retain any part of their profits (for investment or other non-consumption purposes), Sea's members cannot even cover their costs—they make a net loss equal to the profits retained by Ay and/or Bee.[72]

For both eventualities, any *extra* spending resulting from investment of retained profits is balanced by the *reduced* spending caused by the necessarily accompanying losses—meaning no growth.

Of course, the 'flow' of monetary exchange in a national economy also has purchasing power added to it via exports, government spending, and credit. But even if the total of these exceed the total money leaving the flow via imports, taxes, and savings, still they do not prevent losses, they only transfer or delay them, and so, for a while, effectively hide the fact. Competitive market economies can shoot up on as many liquidity injections as they like, but still purchasing power cannot buy all goods while their prices include profits…

Exports merely redistribute between national economies, shifting the burden without adding purchasing power globally.[73] Government spending also only redistributes—within rather than between nations. Credit, a more complicated beast, *initially* adds to the economic flow, but

[72] It might be thought that if someone had earlier saved some money, this could be used to cover Sea's profits for at least the first period shown, say a week. However, savings can only be accrued from wages or profits, which means that for Sea to profit, someone would need to have earlier lost. Even if we assume enough savings by the three producers to cover a week's costs ($400, $2,500, $4,000 respectively), by the end of the week the same total would exist in a redistributed form ($500 with Ay, $3,000 with Bee, $0 with Sea, and $3,400 with wage-earners); because Ay and Bee need most of their money to cover next week's costs, still only profits and wages could be spent on Sea's products—which would still leave $4000 to chase more than $4000 in prices. Some of Ay's and Bee's money meant to cover next week's costs could make up the deficit, but this would lose someone their next week's wage. For everything to sell at a profit, someone must lose their job; for all to keep their jobs, something must be left unsold or else sell at a loss, which causes someone to *eventually* lose their job. Either way, someone loses sooner or later. It might also be thought that partly manufactured goods invalidate the analysis, because they distribute money via wages *before* they can be sold: then, at any point in time, the amount of money distributed for all previous production either equals or *exceeds* the *costs* of all goods completed. Indeed, *if* the total costs of all incomplete goods exceeds the total profits made and expected on all completed goods, then purchasing power would exceed the *prices* of all completed goods, and would cover their profits—but if it did, it wouldn't later on. Purchasing power sufficient to cover all producer profits requires the total cost of all uncompleted goods at the end of each period to exceed that at the beginning by the amount of the total profits charged for goods completed over the period. In other words, sufficient purchasing power could exist only when the total cost of uncompleted goods *continuously* rises—a somewhat unrealistic hope. But even then, incomplete goods would represent costs of production which, for all producers in total, could at best balance the profits made *so far*—which means an *overall* profit rate of zero. So, still each profit must be counterbalanced by a loss—maybe not now, so long as more and more is left unfinished, but sooner or later.

[73] As Stiglitz, *Globalization And Its Discontents*, p.200, put it: "It is an unbreakable law of international accounting that the sum of all [trade] deficits in the world must add up to the sum of all surpluses." Exporting to avoid local losses might seem a successful strategy from a purely national perspective, but the modern world's interdependence no longer allows such self-absorbed buck passing.

repayment of the debt *with interest*—by which lenders profit—ultimately siphons more back than went out, which deprives other competitors of their chance of profiting…

When credit is provided to producers, they must set prices high enough to cover their costs, make a profit, and repay their debt and its interest. Hence, producer credit can be treated as one of the 'raw materials' of Ay or 'parts' of Bee, necessary for Sea's production, and profit-seeking lenders can be treated as 'just' another type of producer. But then, producer credit does not change the dynamics of Figure 1: still, *whether funded by credit or not, businesses who profit (whether by making goods or by lending money) deprive others of doing so*.[74]

Credit provided to consumers, however, works differently: in Figure 1, it would add extra money, originating from lenders 'outside' the producers' box, to the flow passing to consumers. If spent on the products of Sea, consumer credit could allow Sea to profit—*initially*. But because borrowers must eventually repay their debt with interest, an amount over and above that previously added by the loan to the economic flow ultimately must be *subtracted* from the flow. This again denies others of their chance of profiting, as an example best demonstrates…

Assume in Figure 1 that Ay and Bee spend rather than retain their initial profits (meaning they end up with zero profits), and that $500 credit is leant to other consumers, making a total of $4,500 available to buy Sea's products—this would allow Sea to make $500 profit. But for consumers to repay the $500 loan, plus interest of say $50, they must subsequently save a total of $550—this cannot be spent on consumption, it requires foregoing some other purchase(s). If, for simplicity of explanation, the savings are accrued in the next period, then Sea can at most receive $3,450 for its products by the end of that period, making a loss of $550 for the period (or delaying it by retaining unsold goods), and a total loss over both periods of $50—the amount by which the lender profits. In other words, lenders' profits, if realised, must eventually ensure a corresponding loss for others.[75] Alternately, if consumers default on any part of their loans, lenders suffer losses equal to the total profits made by Ay, Bee and/or Sea over the periods in question. Either way, over time, for producers and lenders together, profit and loss must still balance.[76]

Conceivably, consumer credit could be injected into an economy more quickly than debt repayments siphon it back out. As long as this was kept up, as long as consumer debt mounted, producers could keep making net aggregate profits.[77] And debt does indeed increase in modern economies, at least as long as they are growing.[78] No wonder: *it's all intertwined, profits, growth, debt, each feeding on and dependent on the other*. The end of the last section explained how lenders depend on growth to allow debt to be repaid, and how *growth requires profits and/or debt, but because net aggregate profits cannot occur unless consumer debt mounts, growth depends ultimately just on debt*.

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[74] Michael Rowbotham, *The Grip of Death: A study of modern money, debt slavery and destructive economics* (Jon Carpenter, Charlbury, 1998), p.39, explains it this way: because of interest, "prices are being set which are higher, in total, than the wages and salaries being distributed for the purchase of those goods. … goods and services cannot be bought with the money being distributed for their purchase!"

[75] Bernard Lietaer, *The Future of Money: A new way to create wealth, work, and a wiser world* (Century, London, 2001), p.52, puts it thus: "when you pay back interest on your loan, you are using up someone else's principal. … increased interest results automatically in a proportional number of increased bankruptcies in the near future."

[76] The same conclusion is reached by Gunnar Tomasson & Dirk J.Bezemer, "What is the Source of Profit and Interest? A Classical Conundrum Reconsidered". Bezemer put it succinctly in an email to me: "Where someone profits financially, another *must* lose financially. Starting from zero financial balances, profit can only exist in the aggregate if and only if someone goes into debt." Another email exchange led to Dan O'Neill of The Centre for the Advancement of the Steady State Economy (CASSE, see http://steadystate.org) also agreeing with this conclusion.

[77] With sufficiently mounting debt, *every* producer could profit—but credit so supplied would not be spent evenly enough for this to happen.

[78] Bezemer stated by email that "What we observe in the data is indeed continuing growth of debt as the economy (and profits) expand." The *mostly* steady rise of debt in recent times is also detailed in 'Adam Smith', *Paper Money* (G.K.Hall, Boston, 1981), p.292, & Buckminster Fuller, *Critical Path* (St. Martin's Press, New York, 1981), p.115. For more recent data, see http://www.rba.gov.au/speeches/2010/sp-dg-150610.html, http://www.debtdeflation.com/blogs/2010/11/05/solving-the-paradox-of-monetary-profits-2/ and http://yellowroad.wallstreetexaminer.com/blogs/?p=32

Unfortunately, not only does saddling consumers with mounting debt in order to enable net aggregate profits seem a dubious tactic for achieving economic growth, just as importantly, it does not work for long. Alas, *debt does not always mount*, just as economies do not always grow. When recessions strike, as they inevitably do, debt usually dips or at least stops growing, and the postponed losses occur. Indeed, sometimes, as for the Great Recession, debt mounts too quickly to be sustained and its sudden dip *causes* recession via a calamitous surge of losses. Obviously, consumers unable to repay their debts suffer—adding to problems of poverty and inequality—but so do producers who depend on them to consume. So even a mounting level of debt has an actual outcome of merely *delaying* not preventing inevitable loss, of putting off the day of reckoning via a precarious and ever-mounting stack of cards prone to eventual collapse when one decent economic sneeze causes the lenders themselves to lose.

Now *if* economies could *always* grow, the delaying tactic of mounting consumer debt might be made to work: perpetual growth, the spending of ever more money, would not obviate the dynamics that ensure loss—still some would lose—but it would postpone many losses by allowing consumer debt to ever mount, which, in turn, would allow the economy to ever grow (and vice versa). Even so, like the mounting debt itself, an economy would have to always grow *at just the right pace*. Too much growth yields inflation (see section 4.5), too little and jobs are not created quickly enough to compensate for those lost to rising productivity or cheaper competitors—with either outcome, debt is prevented from mounting at the required rate.

In practice, history attests that economies rarely grow at just the right pace, and never for long—so, clearly, an optimum level of growth cannot be maintained indefinitely.[79] No wonder: as the last section explained, competitive market economies constantly try to run in two different directions at once. Repaying business debt depends on consumers spending more, but consumer debt can only be repaid by saving—spending less. Likewise, trying to maximise profits by cutting costs means shedding jobs and distributing less money to the very consumers whose spending enables those profits, so it contradictorily risks reducing profits and growth.

These opposing tendencies, like all of the problems and difficulties associated with growth, ultimately stem from the fundamental driving force of market economies: competition. To make this clearer, a brief summary of the foregoing details about profit and debt follows…

Competing capitalists try to profit, but only some can succeed: in the absence of mounting consumer debt, profits balance losses. Winners can reinvest their profits, thus boosting spending and growth, but losers have the opposite effect: their diminished expenditures, like those of any employees they consequently shed, reduce potential profits for others, retard growth and encourage recession—which makes life more difficult even for winners. To achieve *net* growth, either debt or net aggregate profits are required, but the latter can only happen via mounting consumer debt. So, growth and net aggregate profits depend on continuously creating more debt than is repaid—on debt always mounting, and at just the right pace. When this does not happen, as inevitably occurs because of the aforementioned contradictory impulses at work and the sheer impossibility of indefinitely maintaining the necessary rate of increase while simultaneously repaying ever more, growth falters, profits slump, losses mount, and the processes collapse.

Hence, *directly and unavoidably because of the nature of profit and interest, the dynamics of competitive market economies make them inherently unstable*, prone to fall over sooner or later.

[79] At http://www.debtdeflation.com/blogs/2011/08/01/high-noon-tuesday-at-the-rba/, Steve Keen claims that constant economic growth actually requires not simply mounting but *accelerating* debt, which definitely cannot be maintained forever: "Accelerating debt is thus necessary for a constant rate of growth of aggregate demand, but if debt continually accelerates, it must ultimately grow faster than GDP." (GDP stands for 'Gross Domestic Product', the total monetary 'value' of all goods and services produced by a national economy over a period. 'Gross National Product' (GNP) differs by including goods and services produced by national businesses located in other countries. GNP and GDP roughly measure the amount of money an economy spends, and when rising equate to economic growth.)

Those dynamics and their consequences cannot be thwarted by either mounting debt or the obsessive-compulsive disorder of growth—only revising the economic game rules offers any hope.

In essence, capitalism's fundamental processes force it to operate as a sort of grand Ponzi scheme (a fraudulent investment fund which pays dividends to members from their own invested funds). Ponzi schemes 'work' as long as a sufficient number of new investors continue to be found, but when this fails to happen, or when enough investors for whatever reason decide to withdraw their money, the process falls apart and losses ensue. With capitalism, just as for a Ponzi scheme, many or most players aim or expect to get more money back than they put in—not just businesses via profit and banks via interest, but also investors via their invested money. Via credit, the semblance of profit is gained, but repayment of debt with interest must ultimately spoil the illusion. Just as Ponzi schemes eventually unravel, so too must capitalist expectations be disappointed: *to have more returned than is contributed cannot be maintained, indeed, ultimately makes no sense*. Loss is guaranteed, sooner or later.

The inevitability of loss should not surprise: whoever heard of a competition in which everyone wins? Competition means someone *has* to lose.

Yet most economists pay little attention to loss, or even to profit. Indeed, although the significant question of how producers can possibly obtain net profits in aggregate—now known as 'the paradox of profits' or 'the profit puzzle'—was raised in the nineteenth century, and prompted many attempts to resolve it, it has been largely ignored since the Great Depression.[80] Karl Marx believed his concept of 'surplus value' allows net aggregate profits to be gained, and so solves the puzzle, whereas Keynes reached the same conclusion via what he called 'user cost'. Both solutions have been criticised as inadequate.[81]

More recently, the 'Circuitist' school of economics concluded that producer profits in aggregate must sum to zero, though they seem split as to whether they have reached a valid conclusion or have analysed erroneously.[82] However, recent work by Gunnar Tomasson and Dirk J.Bezemer reached the same conclusion as my own: that only mounting consumer debt can allow net aggregate profits to be realised.[83]

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[80] A history of the issue is discussed in Tomasson & Bezemer, "What is the Source of Profit and Interest?", & Charlotte Bruun & Carsten Heyn-Johnsen, "The Paradox of Monetary Profits: An Obstacle to Understanding Financial and Economic Crisis?" (available at http://www.economics-ejournal.org/economics/discussionpapers/2009-52).

[81] Tomasson & Bezemer, "What is the Source of Profit and Interest?", pp.8 & 15-16; Bruun & Heyn-Johnsen, "The Paradox of Monetary Profits", Abstract. Bruun & Heyn-Johnsen offer their own explanation of how producers can profit in aggregate (quotes that follow are from a brief email exchange with Bruun). Although believing that "Capitalists as a whole can at most get from workers, what they already paid out in wages", Bruun asks: "why would anyone ever endeavour in capitalist production? A producer must really be self-confident if he knows he is at best playing a zero-sum game". She rejects my explanation, that some profit but others necessarily lose, as not explaining "why capitalist production takes place". Instead, she posits that "monetary profit is not derived directly as a flow magnitude, but is derived as a difference between two stock magnitudes—the [financial] market value of stock before and after production". The hope of rising stock prices certainly provides one motivation, yet much production takes place by companies not on the stock market, so their motivations must differ. I think "why capitalist production takes place" can be explained much more simply: most producers simply do not know they are "at best playing a zero-sum game". Such awareness, and that of the profit paradox, is restricted to arcane academic circles, with most 'practical' business people having no knowledge of these subjects. Instead, they are motivated by the allure of gaining similarly high profits as those being made by some established businesses, and thus they optimistically proceed, blithely unaware of their real chances for success. Tomasson & Bezemer indicated in an email exchange that they agree with me on this, that most businesses proceed without knowledge of the profit paradox, and so further explanation is not required for "why capitalist production takes place". Some will succeed, sometimes very profitably, which in turn will spur others, whereas those that lose will be disregarded as 'not up to the task' or will have much less visibility (despite their numbers, as footnote 71 detailed).

[82] Steve Keen, "Keynes's 'revolving fund of finance' and transactions in the Circuit" (available at http://www.debunkingeconomics.com/Papers/Money/KeenKeynesCircuit60YearAnniversary.pdf), pp.4,6. Keen himself believes that the Circuitists (and I) have it wrong because of a confusion between stocks and flows (p.10), and that his model based on differential equations proves that producers *can* profit in aggregate. However, although Keen's model requires that "the firms' debt remains constant" (p.8) or "grow[s] exponentially" (p.15), it does not include *consumer* debt. I believe this makes it an unrealistic model, as does its incorrect definition of profits as a proportion of net output rather than of net sales (p.12), and therefore that conclusions drawn from it are not reliable.

[83] Tomasson & Bezemer, "What is the Source of Profit and Interest?", pp.21-28. Bezemer admitted by email that mounting consumer debt involves "enormous risks", but he believes "[w]e must learn how to live with it. … Rising debt is not a problem, as long as debt does not rise too much in proportion to the economy—which of course is just what happened over the last decades" … and earlier decades… and sooner or later, inevitably, because, as explained, the dynamics of market competition involve contradictory compulsions that make it impossible to always

Yet because debt *cannot* always mount at just the right pace, *the goal of profit*, however it might motivate innovation, productivity and activity, *guarantees loss for someone, somewhere, sometime or another, and thus ensures economic instability*. Remember, too, as the last section explained, that market competition for profits also *guarantees poverty and inequality, and all but assures ecological degradation*.

One might think all of this would make for not just an unstable system but a very inefficient one as well, yet economists have long argued the opposite: orthodox economics claims that market economies allocate their resources so efficiently that they enjoy *optimal* outcomes. The next chapter examines this dubious claim, and shows that in order for it to hold, prices must function as accurate 'market signals' for resource allocation, an *assumption* invalidated by many considerations, especially the extent to which businesses leave out many relevant costs and subsidies when setting prices. The reality of not optimal but very imperfect prices instead results in *meaningless* profits: as the next chapter details, profits are often (if not generally) exceeded not only by the costs of social and ecological damage inflicted by businesses, but also by the government subsidies they receive. If properly and fully accounted for, perhaps no business would truly profit.

In addition to the inherent inaccuracy and sometimes just plain meaninglessness of prices and profits detailed in the next chapter, other problems inherent to both the theory and practice of competitive market economies will be discussed in the rest of part one. These further details reinforce the conclusion forced by what has been explained so far: that competitive market economies have fundamental dynamics that compel inevitably thwarted attempts at ever more producing, distributing, exchanging, consuming and debt, with individual profit as the first priority, perpetual invention of work as a necessary accompaniment, instability, inequality and poverty as inevitable consequences, and ecological damage as an all but inevitable consequence—all symptoms that cannot be cured without tackling the disease, without moving beyond market competition for profits.

increase debt at just the right pace (especially if Keen's claim of footnote 79 proves correct). Therefore, we need a more reliable—and probably simpler—system, free of this one's "enormous risks" and harmful compulsions.

Chapter 2

Costs & Prices

"No other civilization has permitted the calculus of selfishness so to dominate its lifeways, nor has any other civilization allowed this narrowest of all motivations to be elevated to the status of a near categorical imperative."– Robert L.Heilbroner[84]

Market economies play the game of competition, but prices yield the scores. This chapter discusses the scoring process, with particular attention to economic theory's claim that prices function as accurate and meaningful market 'signals' which lead to so efficient an allocation of resources as to provide optimal outcomes.

Prices are said to serve this role even though they do *not* include considerable social and ecological costs that can exceed reported profits. Nor do prices take account of the direct and indirect savings to businesses that result from unpaid work done outside the official market economy by members of households and by volunteers, and from much else paid for by governments, including public-funded bailouts, and subsidies that again sometimes exceed reported profits. But although many costs are excluded from prices, many others of waste, duplication, ego gratification and high living are inappropriately included. (Section 2.1)

Prices, according to economic theory, are set by the '*L*aw' of *S*upply and *D*emand (LSD),[85] at least when a plethora of unrealistic assumptions hold: uniform market prices for identical goods, no expenses for tracking down or delivering them, and 'perfect' competition (2.2)—the last requiring not just enough buyers and sellers to avoid any having enough market power to set prices, but also rising costs with the scale of production. Only by assuming perfect competition can economists claim 'optimal' prices, efficient use of resources, and trickle down wealth creation. In practice, however, common situations where prices fall with the scale of production give rise to widespread dominance by oligopolies and, to a lesser extent, monopolies, which makes competition much less than perfect and thwarts the rosy outcomes it is alleged to provide. (2.3) Equally crippling to the concept, perfect competition also requires what economists call 'rational' behaviour but which more closely resembles 'perfect foresight'. (2.4)

Economists nevertheless retain their horde of unrealistic assumptions because of allegiance to the idea that the general interest is achieved best by leaving people to pursue their own interests. Yet this mistaken dogma requires not just perfect competition and other unrealistic assumptions, but also scrupulous behaviour, and governments to perform crucial functions that don't provide market players with maximised profits. Meanwhile, in the real world, imperfect market competition resembles a lottery, with success not necessarily following from efficiency, discipline or any other advantage, nor failure from their lack, and with no guarantee of efficient let alone optimal prices, outcomes, resource allocation, or trickling down of wealth. (2.5)

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[84] Heilbroner, *Business Civilization in Decline*, p.122

[85] LSD also stands for pre-decimal British currency—Pounds (L), Shillings (S) and Pence (D)—and even more aptly, as should become obvious as this chapter progresses, for *l*ysergic acid *d*iethylamide-25, a popular though illegal psychedelic drug which either produces extreme hallucinations or (according to its fans) tears away the masks from reality to allow perception of underlying 'truth' (or both).

2.1 Rubbery Figures

> *"Traditional definitions of wealth and production, of productiveness and efficiency in terms of market values… , are among the most important obstacles to an understanding of… socio-economic issues" – K.William Kapp*[86]

In the 'free market', everybody pays. Money is exchanged for goods (like food, clothes, paperweights) and for services (like psychoanalysis, accountancy, babysitting), manufactured and distributed by producers (individuals and business firms) for sale to consumers (purchasers). For convenience, orthodox ('neoclassical') economic theory splits the free market into two parts: in the 'factor' market, producers exchange money for factors, such as labour and equipment, that are needed for production of goods and services (often just called 'goods'); while in the 'product' market, producers receive money for their goods.

Economists depict the process of exchange in a free market as a circular flow, between producers and consumers, through the factor and product markets (see Figure 2):[87] businesses pay money to their workers, who use their earnings to buy the goods and services produced. The money that flows out from producers to consumers returns (unless some of it is saved). However, the depiction comprises a gross oversimplification, in particular because, as discussed in the last section, it ignores the effects of profit. It also ignores how producers' non-wage costs—such as for raw materials, parts, equipment, advertising, office rental, furniture, electricity—constitute revenue for other producers, and so cause the economic flow to also circulate *within* the producers box; and how second-hand sales, gifts, and so on flow *within* the consumers box. More significant omissions, and the full extent of the depiction's oversimplification, however, will take most of the rest of part one to detail.

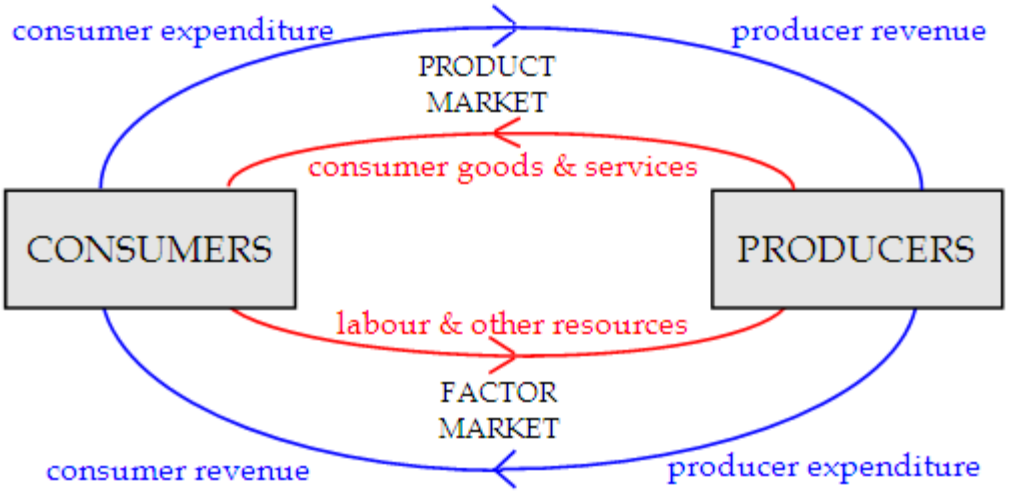

Figure 2: The Circular Flow of Free Market Economic Activity

Winning or losing at the game of competition depends on how one fares at each exchange, of money for goods, or vice versa. No goods or money are created by an exchange, merely swapped in what is consequently called a 'zero-sum game' (whereas positive-sum games involve a net gain for at least one player, and negative-sum games, a net loss). Yet frequently,

[86] Kapp, *The Social Costs of Business Enterprise*, p.289

[87] Based on a similar diagram in Hirshleifer, *Price Theory & Applications* , p.17

both parties to an exchange believe they have gained by it—a zero-sum game thus worth playing (at least in moderation).

Treated by economists as voluntary and mutually beneficial, exchange does not produce only winners, however. Because we *compete* to exchange, always winners are balanced (somewhere) by losers. As section 1.5 explained, each profit is counterbalanced by a loss for someone else sooner or later. Similarly, for some producers to win higher profits, their competitors must lose profits, and/or their customers must pay higher prices, and/or their employees must lose jobs or income due to cost-cutting changes such as automation. If employees win pay rises, either their employers lose profits, and/or consumers pay more. If consumers win with lower prices, uncompetitive producers lose business, and/or employees of competitive producers lose jobs or income. Even the discovery of an abundance of natural resources creates winners *and* losers: an oil strike, for example, can keep prices low for consumers, create jobs, and keep oil companies afloat, but it can also lose business for gas companies and alternate fuel and/or energy suppliers. In the game of competition, there really ain't no such thing as a free lunch—*you* mightn't pay for it, but someone does, beforehand, during, and/or afterwards. For losers, an unrewarding zero-sum game.

But no matter who wins or loses, market competition, as section 1.4 explained, compels producers to aim to maximise profits, because otherwise they risk shrinking profits and ultimate loss. Hence, producers constantly seek new profit-maximising opportunities. If, say, oil producers consistently make an average of a dollar in profits for every minute worked, but vinegar producers make profits of only ten cents per minute, then vinegar producers have an obvious motivation for abandoning their business and moving into oil production (if they can).

Profit maximisation and cost minimisation usually go hand in hand. But *cost minimisation—sometimes deliberately, sometimes inadvertently—often takes the form of cost avoidance*. Techniques employed in mining, forestry, agriculture, and many other economic sectors, often minimise 'official' costs in ways that erode, deplete, and/or in some other manner degrade the environment—degradation which may (and usually does) soon create costs for others to meet.[88]

For instance, without sufficient enforcement of government regulation, to pollute usually costs less for firms than not to pollute—so, many do. But because other people suffer from, and pay for dealing with the effects of, pollution—even, in some cases, those living far away, as when it induces acid rain—Barry Commoner's conclusion on the matter seems unavoidable: "A business enterprise that pollutes the environment is… being subsidized by society; to this extent, the enterprise, though free, is not wholly private."[89]

Costs avoided by being effectively transferred to others to pay are called 'social costs', or (more frequently) 'externalities'. Neither voluntary nor mutually beneficial (unlike exchange), externalities "arise when the voluntary economic activities of economic agents—in production, consumption, or exchange—affect the interests of other economic agents in a way *not* setting up legally recognized rights of compensation or redress."[90] Much rarer than negative externalities like pollution, positive externalities also occur when people's economic activities benefit others without cost, as when a farmer cultivates a natural predator of pests that spreads to neighbouring farms.

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[88] For details about the nature of the damage caused by many economic practices devoted to resource extraction, production, distribution, consumption and disposal, see Annie Leonard, *The Story of Stuff: How Our Obsession with Stuff is Trashing the Planet, Our Communities, and our Health—and a Vision for Change* (Free Press, New York, 2010)

[89] Barry Commoner, *The Closing Circle* (Jonathan Cape, London, 1972), p.268

[90] Hirshleifer, *Price Theory & Applications* , p.449

Negative externalities typically involve ecological degradation: soil erosion and/or salinity… reduced biodiversity… desertification… air, water, soil and any form of pollution, including consumer litter, traffic din, and the often emetic audiovisual assaults of advertising, even "the noise generated by a new factory or the view spoilt by its construction [which] are real costs that should be taken into account in determining whether it is *worth* building."[91]

For some industries, the most easily quantified externalities can comprise about fifteen percent of total costs.[92] *If producers had to increase the prices of their goods* by fifteen percent (or more) *to pay for the externalities they create, many might find themselves uncompetitive and unprofitable*. This is overwhelmingly confirmed by another estimate of "only those costs which had been properly established by authoritative studies" which indicated that "in 1994 corporations in the United States were permitted to inflict $2.6 trillion-worth of social and environmental damage, or *five times the value of their total profits*."[93] This does not even take into account K.William Kapp's suggestion "that at least some of the much-taken-for-granted economies of large-scale production and many of its apparent advantages would be partly if not wholly offset by the tangible and intangible social costs of over-concentration",[94] such as urban congestion, gridlock, peak hour pollution, and diminished physical and mental health from over-work, under-work, and other stresses of economic competition.

It must be emphasised that externalities are not caused by lack of efficiency or productivity: higher productivity—increased output for the same or decreased input—can be achieved by adopting quicker but *more* sloppy, dangerous, and/or polluting methods. Rather, *ecological degradation follows all but inevitably from the rules of the game*: through the market's profit-dazed eyes, screened by its single-minded, aggressively competitive tunnel-reality, mother nature seems to shamelessly flaunt her alluring 'free' spoils and promise quick and easy profit—so she can hardly avoid being gang-raped and left to rot.

Yet producers do not just exclude many costs of externalities from prices, they also exclude many other contributions to production. To function in the manner to which they have become accustomed, businesses depend on much activity performed 'outside' the market economy which, because it costs them nothing, is not included in their prices. For instance, in households with only one wage earner, the partner, usually for free, often performs most or all housework, home maintenance, child-minding, pseudo-psychological counselling, shopping, and various other duties, without which the average money-earner would have less time to spend either at his/her job or at leisure; with either option (because reduced leisure-time often results in stress and lowered efficiency), businesses would suffer—and not just to a minor extent. According to Trainer: "Some have estimated that as much as half the work or production that takes place in our society is in this non-commercial category… [T]he domestic work of housewives [may have an unpaid value of]… 25% of GNP."[95] Almost priceless. Other unpaid formal volunteer work similarly adds to society's direct and indirect discounting of business costs.

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91 Trainer, *Abandon Affluence!*, p.239

92 Commoner, *The Closing Circle*, p.256

93 George Monbiot, *The Age Of Consent: A Manifesto For A New World Order* (Flamingo, London, 2003), p.231 (my italics), citing David C.Korten, *The Post-Corporate World: Life After Capitalism* (Kumarian Press, West Hartford, 2000), citing Ralph Estes, *Tyranny of the Bottom Line: Why Corporations Make Good People Do Bad Things* (Berrett-Koehler, San Francisco, 1996). Along similar lines, a more recent UN study "suggested the economic costs of the environmental damage caused by the top three thousand companies in the world were around $2.2 trillion for the year 2008. This represented about one third of all their profits." (Gilding, *The Great Disruption*, p.183, citing http://www.guardian.co.uk/environment/2010/feb/18/worlds-top-firms-environmental-damage) Note that, unlike Estes, the UN study concerns only environmental, not social, damage, which goes some way to explaining the different profit ratio it claims.

94 Kapp, *The Social Costs of Business Enterprise*, p.262

95 Trainer, *Abandon Affluence!*, p.239

Producers also avoid costs through their use of goods and services paid for by society and provided by governments. Costs of production and distribution would invariably rise without roads, railways, ports, police, free or subsidised education, and other goods and services useful to business. While some might argue in response that business pays for its use of these items through taxes, the evidence indicates that it receives more than it gives.

Bernard Lietaer has made the sweeping claim that "American corporations pay less in US taxes than they receive in public subsidies from US taxpayers."[96] More specifically, a Congress report from the 1970s estimated that the USA federal government then annually spent $100 billion on direct subsidies to business, more "than the total yearly corporate profits of all American business."[97] Reported *profits are at least sometimes exceeded by government grants*, tax breaks, incentive schemes, loan guarantees, investment rebates, and wage and other subsidies. For instance, according to Trainer, the British government's direct subsidies to business, and its indirect payments in the form of research funding, "in 1973 came to a far higher total than the 1,650 million pounds figure for profits made by private firms… [I]t would seem that business in Britain could not have made a net profit had it not received these huge transfers. One single tax write-off scheme introduced by the British government in 1974 gave 3,800 million pounds to business."[98] Companies in most nations probably benefit from similar government generosity.[99]

Government support of business does not stop there, however. Sometimes governments fund research and development of their own, only to hand over the results to private industry gratis or heavily discounted. For example, "$155 billion of the American people's money… went into developing atomic energy",[100] yet in 1953, apparently satisfied with the results of its efforts, the USA government handed over the fruits of its labour to free enterprise, and atomic energy—funded by all—became another means of generating private profit—for a few.

Let's also not forget publicly funded bailouts of 'too-big-to-fail' corporations—even, or especially, of those who most ardently chant that the market knows best and must not be regulated or otherwise interfered with by governments. Most recently, governments came to the rescue of numerous teetering financial institutions when the Great Recession began in 2007 (no wonder with "the finance sector… making 40% of [all] corporate profits"[101]), as well as effected corporations such as major USA auto companies. But the precedent was set long ago: Lockheed Aircraft in 1971, Chrysler Corporation in 1980, and too many banks and financial institutions in the years in between and since to list here.[102]

But if, because of all this, the costs, prices, and profits of producers, though often claimed to the exact cent, seem almost arbitrary, then other factors make matters even worse.

Many costs are excluded from prices, but many others are inappropriately included. Especially for firms with market control, production need involve payments not simply for wages, equipment, transportation, and other unavoidable costs. Production 'costs' can also include those of advertising, public relations, political lobbying, glittery excessive packaging (discarded immediately upon unpacking to usually then turn into garbage or pollution), and much else

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96 Lietaer, *The Future of Money*, p.93

97 Kirkpatrick Sale, *Human Scale* (Secker & Warburg, London, 1980), p.112

98 Trainer, *Abandon Affluence!*, p.237

99 Trainer, *Abandon Affluence!*, p.237

100 Fuller, *Critical Path*, pp.106-7

101 Ted Trainer, "De-growth—is not enough", available at http://www.inclusivedemocracy.org/journal/vol6/vol6_no4_trainer_degrowth_not_enough.htm#_ednref9. A similar figure of 41% for the USA in 2007 is cited by Satyajit Das, *Extreme Money: the Masters of the Universe and the cult of risk* (Portfolio, Camberwell, 2011), p.321, with 27% of all profits made that year by S&P500 firms (500 large companies that trade in USA stock markets) made by "finance companies".

102 A long list is available at http://www.propublica.org/special/government-bailouts

thought by business as essential for successful competition but which necessarily raises prices.[103] Consumers also have to ultimately pay through prices (and/or taxes) for even more unnecessary unjustifiable business 'costs', such as payments for unduly lavish office furniture and equipment… prestigious petrol-guzzling company cars… exorbitant business lunches and dubious client entertainment expenses… jobs for the boys… Picassos and weekly lock-changes for executive washrooms… million-dollar consultancy fees for five minutes of pre-determined discussion with self-styled authorities long past their use-by dates… 'brainstorming' retreats and overseas 'business' trips that include five-star accommodation, century-old brandy, and Kama Sutra instructors… mega-tonnes of smooth marble floors and walls conspicuously adorning skyscraper lobbies of corporate headquarters… and various other forms of waste, duplication, ego gratification and high living. Let's not forget plain incompetence either. For Big Business at least, gambles that don't pay off, and other miscalculations, can often be covered simply by raising prices. For instance, when nuclear energy went out of fashion after the Three Mile Island accident, many plants under construction in the USA were abandoned at a total cost to energy companies of $900 million—which they then retrieved by raising electricity prices.[104]

Given that prices do *not* include many costs avoided while pursuing profit maximisation, but do include many unnecessary and/or unjustifiable costs, it seems ludicrous to regard prices as accurate or meaningful. Yet economic 'science' doesn't settle for doing just that—it elevates prices to lofty heights of reverence usually reserved for gods…

2.2 The 'Law' of Supply & Demand

> *"The avowedly straightforward theoretical determination of price by the intersection of the two lines expressing the hypothetical possibilities of the effect on price of changes in supply and demand… does not turn out to be so simple." – Thomas Balogh*[105]

Because of the way markets compete to sell and profit, prices depend, to some extent, on both the *supply* (market availability) of goods and services, and their *demand* (the financially-backed desire to purchase them): as soon will be demonstrated by examples, if demand for a good (or a specific type of labour) rises (or falls), its price also tends to rise (or fall); whereas if its supply increases (or decreases), its price tends to fall (or rise).[106]

So, plentiful supply and demand—as for water in a river district, iron ore, unskilled labour—result in low prices. Plentiful demand but little supply—as for water in a desert, diamonds, skilled labour—result in high prices. Plentiful supply but little demand—as for salt water, mud, proficiency at snoring—rarely result in market exchanges, but always at very low prices.

These *tendencies*, however, were elevated long ago by economists to the status of 'law'—the so-called Law of Supply and Demand (LSD). For about two centuries, most economists have claimed not simply that LSD sets prices, but that it determines, in an orderly straightforward fashion, stable and 'optimal' prices. This follows, according to a textbook because: "Price is determined by the intersection of market demand and market supply. It is only at the intersection of the market demand and market supply curves that an equilibrium exists."[107] To explain…

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[103] Sale, *Human Scale*, pp.310-3, lists many more big firm inefficiencies eg. higher distribution costs (to serve bigger markets), energy profligacy.

[104] Buckminster Fuller, *Grunch of Giants* (St. Martin's Press, New York, 1983), p.44

[105] Thomas Balogh, *The Irrelevance of Conventional Economics* (Weidenfeld & Nicolson, London, 1982), p.17

[106] Hirshleifer, *Price Theory & Applications* , p.26

[107] Roger Leroy Miller, *Intermediate Microeconomics* (McGraw-Hill Kogakusha, Tokyo, 1978), p.89

The amount that people buy of any good depends partly on its price. As an example, consider a small town in which, if bread cost two dollars a loaf, 500 loaves would sell, but at three dollars a loaf, only 300. Plotted on a loaves-versus-price graph, this and additional data might suggest a line or curve; economists call it a 'market demand curve', and it represents the total quantity of bread that all buyers in the market would demand depending on its price (see Figure 3). Note that to plot such a curve requires assuming, in the words of a textbook, that "the same price… is being charged to every individual in the market. Where this assumption is not appropriate, a market demand curve in the ordinary sense cannot be constructed."[108]

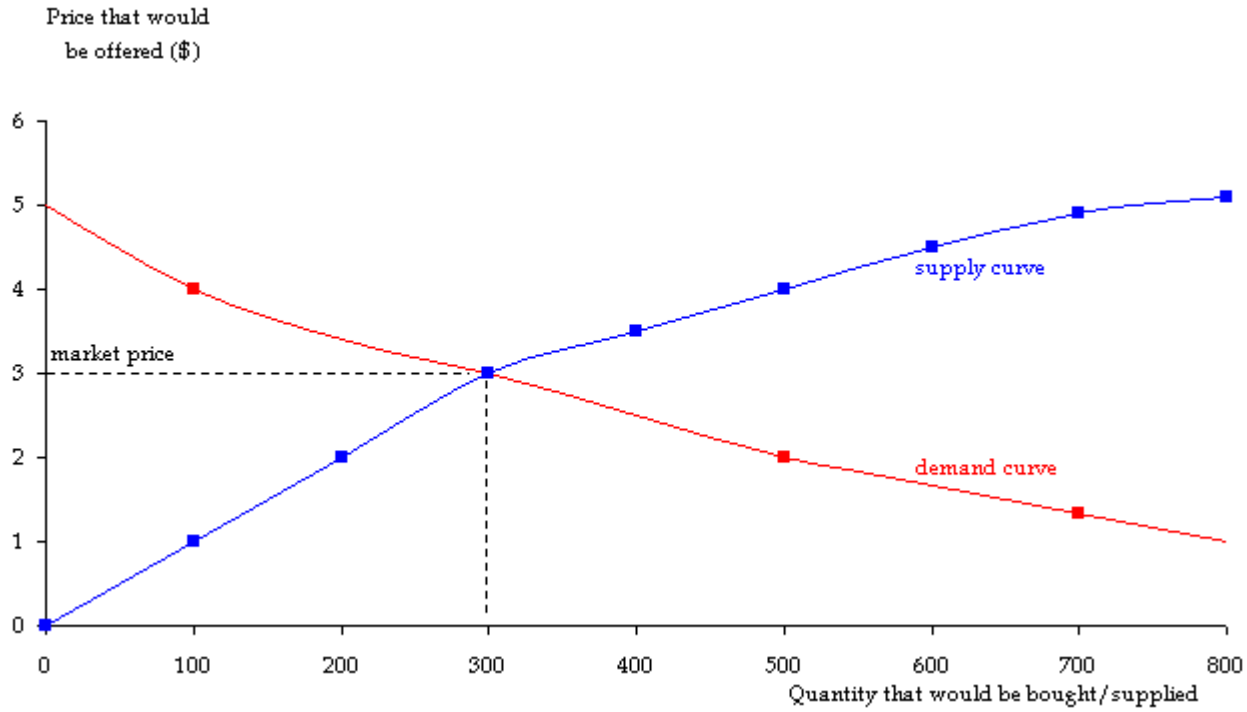

Figure 3: Price Establishment by Supply and Demand

In a similar fashion, because competitive producers alter their production rates depending on what prices they can obtain in their markets, a 'market supply curve' represents the quantity of a good that all sellers in a market would supply depending on its price. Continuing the example, at two dollars a loaf, the town's bakers might supply 200 loaves, but at three dollars a loaf, 300 (also see Figure 3).

Given the size of most markets, the numbers and variety of people involved, and the changing conditions each must face, rarely can market supply and demand curves—also called 'schedules'—actually be measured, or even estimated. Thomas Balogh, a not so orthodox economist, went so far as to call schedules "figments of the imagination".[109] In his view: "The only observations we have… relate to price, demand and output at different historical points of time. How they are connected with each other, if they are so connected, is a Gestalt in the beholder's eye… The shape of the curves… might in fact be so intricate as to defy mathematical handling. Their shape and position will in all probability change in time. And they are by no means necessarily independent from one another—if they are important, quite the contrary. Indeed they might be better represented by discontinuities rather than smooth curves. They are

[108] Hirshleifer, *Price Theory & Applications* , p.103

[109] Balogh, *The Irrelevance of Conventional Economics*, p.27

most unlikely to be linear."[110] Despite these objections, however, schedules are usually depicted as straight lines.

Economists inevitably draw demand curves (as in Figure 3) with a negative slope (downwards from left to right) so as to agree with the alleged Law of Demand: "The quantity demanded varies inversely with relative price, other things held constant."[111] But the law of demand "does *not* follow from the pure logic of choice. Its justification is empirical observation of the world";[112] that is, in any market: "Buyers are willing to purchase more, the lower the price".[113] Of course, small price differences may encourage no changes to buying habits, so at least parts of demand curves—to the extent that they mean anything at all—can have flat slopes.

On the other hand, supply curves are drawn positively sloped to agree with the so-called Law of Supply: "the quantity supplied is directly related to the price."[114] While the Law of Supply seems oddly incongruous with LSD's ruling that if overall supply increases, prices fall, it is said to be justified because "sellers will offer more the higher the price."[115] Yet this is not always true. In much modern industry, technology works most cheaply and efficiently at certain optimum levels—producing less (or more) than the optimum amount then actually costs more. Hence, producers may offer lower prices to encourage demand up to the optimum level of production, and so break the law of supply in the process. The law, broken when costs fall with the scale of production, can also fail if one producer's actions unintentionally benefit others. For example, if one farmer cultivates a natural insect predator that feeds on plant pests, then as the predators thrive and spread, nearby landowners most probably reap some of the benefits and produce more for the same or reduced cost. They could then offer more for a lower price. But although textbooks admit that "[i]t is possible… to generate a negatively sloped supply curve",[116] they nonetheless treat it as exceptional.

When supply and demand curves are plotted together, as in Figure 3, they intercept at a point said to represent market 'equilibrium'; the price corresponding to that point is said to equal the actual market price. Thus, Figure 3's market equilibrium would see 300 loaves of bread supplied and bought at three dollars each. If bakers chose to charge more than the equilibrium price, they would be left with much unsold stock, prompting discounts and a lowering of the average price. For example, the supply curve of Figure 3 indicates that if bakers charged four dollars a loaf, they would have to make 500 loaves, but the demand curve shows that only 100 would be bought at that price—hence, the 400 leftover loaves would soon go cheaply. Likewise in reverse: a price lower than the equilibrium price would lead to less loaves produced than demanded, so some people would bid up the price in order to get what they wanted in an undersupplied market. Only at the equilibrium price would the quantity supplied equal that demanded, and so only the equilibrium price is regarded as stable and able to arrange 'optimal' production and distribution.[117]

That two mostly guessed estimates of probably unconstructable curves allow economists to conclude that a single stable optimal market price operates should not seem surprising—as

110 Balogh, *The Irrelevance of Conventional Economics*, p.17

111 Miller, *Intermediate Microeconomics*, p.53

112 Hirshleifer, *Price Theory & Applications* , p.97

113 Hirshleifer, *Price Theory & Applications* , p.22

114 Miller, *Intermediate Microeconomics*, p.7

115 Hirshleifer, *Price Theory & Applications* , p.23

116 Hirshleifer, *Price Theory & Applications* , p.262

117 Hirshleifer, *Price Theory & Applications* , pp.23-24

pointed out earlier, to construct the curves, a single price must be *assumed*. Even so, the tautological conclusion still cannot be reached without assuming zero 'transaction costs' (no expenses for tracking down or delivering goods), otherwise "information concerning prices and quantities will not be readily available."[118] Even disregarding this impossibility, single stable optimal market prices cannot occur unless markets practice what is called 'perfect competition'—a notion which requires not only "a substantial number of potential and actual buyers and sellers",[119] but also rising costs with the scale of production, and either perfect foresight or no change.

Each of these assumptions will be examined in more detail soon, and found wanting. As they seem unlikely to be realised in the real world—as instead more often individuals and businesses alike must make mistakes, must under- or over-estimate supply and/or demand—it follows that supply and demand often can be mismatched, and numerous prices may apply for any one good, none of which need be considered 'optimal' or remain stable. Many factors besides supply and demand—even the mood of the day—can influence prices. For instance, "a decline in price may cause panic selling and drive the price still further down, or the reverse."[120]

So while LSD has an influence on prices, the 'law' can be bent by market power or occasionally annulled by mass hysteria, leading to flawed and frequently delusionary market signals more aptly called *LSD-prices*. Revolving round these often misleading market signals, the frantic chaos of free enterprise's imperfect competition—however ordered it might seem to economic theory—also seems better described, along with capitalism itself, as *LSD-competition*.

2.3 'Perfect' Competition

> *"…an impersonally determined price which applies to all and which no single seller can influence or control [is] the kind of market which the neoclassical system assumed and in substantial measure still assumes. As a rough guess, around half of all economics lectures begin with the statement, 'Let's assume competition.'" – John K.Galbraith*[121]

Early classical economists assumed the existence of 'perfect' (or 'free' or 'pure') competition: each market served by numerous small firms usually producing easily substitutable goods such as food and fibre, and with few businesses requiring any specialist skills to work for or to own. With perfect competition, no individual or business, however advantaged, could take charge of the market more than any other. If any tried, the market would adjust to thwart them. As John K.Galbraith explained: "If prices and profits and therefore income were exceptionally favorable, some or all producers would be induced to expand production. Some others… would be induced to enter the business, and since it was assumed that the firms were generally small and the required capital [ie. physical productive assets or money required to obtain them] of manageable size, this would be practical. The expansion in output would [via LSD] lower the market price—the price that none controlled—and therewith the resulting profit and income. This, in turn, would reduce the power, i.e., the purchasing power which the producer deployed as a consumer. Thus not only was the consumer ultimately in control, but built into the system was a powerful force, that of competition, which acted to limit or equalize income and thus to democratize that control."[122]

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118 Miller, *Intermediate Microeconomics*, p.90

119 Miller, *Intermediate Microeconomics*, p.90

120 Balogh, *The Irrelevance of Conventional Economics*, p.18

121 Galbraith & Salinger, *Almost Everyone's Guide to Economics*, pp.31-32

122 John K.Galbraith, *Economics and the Public Purpose* (Deutsch, London, 1974), pp.14-15

Treating consumers as in charge of the market—thus enabling the market to 'regulate' its prices via competition—naturally leads to the conclusion that the market works efficiently and beneficially. Indeed, perfect competition, mediated by LSD, was thought to cause prices to fall as riches accumulated; rewards of capitalists would reduce, and those of workers increase, as wealth gradually 'trickled down' from rich to poor.[123] It was even believed, at least before the Great Depression, that perfect competition was able to ensure (almost) full employment, because anyone out of work could compete with those employed by lowering his/her wage demands.

The wondrous tonic of perfect competition (it even made the coffee) may have seemed plausible in the days of classical economics. At the time, most markets *were* served by small business firms, and many "goods were also easily substitutable. The yarn from one mill or the cloth from one loom was much the same as that from another. So the competitive ideal was closely approximated. Applying the test, if one producer disappeared, the effect on price was not noticeable. But even then there were always exceptions. In classical and neoclassical economics there was always the flawing case of monopoly."[124]

The market does not regulate the prices *set* by a monopolist: someone with a backyard containing the only mineral spring for miles around has little or no competition, and can charge more or less any price desired.

Neither is the game of perfect competition played among oligopolies. An oligopoly consists of a market dominated by a small number of producers of similar products—such as cars, chemicals, pharmaceuticals, rubber, steel, aluminium, electrical goods, computers, oil, airlines, communication, banks, insurance, and supermarkets—who together hold an effective monopoly between them. Whenever new technology or other techniques allow costs to *fall* with increasing scales of production, oligopolies have tended to form…

Perfect competition requires costs to always *rise* with increasing scales of production[125]—for example, a baker who makes 500 loaves of bread each day would have to charge more per loaf to produce 1,000 loaves—so that producers cannot try to corner a market without their prices losing competitiveness. *Some* costs certainly do rise as production mounts: for instance, as the area of still available unfarmed land decreases, its cost (and consequently that of farming it) rises. But if costs fall as the scale of production increases, those first to expand can undersell their smaller competitors, and eventually control their markets, so ending any hope of perfect competition in them. And of course, most technological advances do allow more to be done with the same amount of land, or labour, and so do often cause costs to fall with increased production, thus giving rise to oligopolies, which clearly do not engage in perfect competition.

Sometimes, just two or three oligopolist companies provide half or more of all business in their field. Oligopolist firms have no need to try to become monopolists, even if able to avoid anti-monopoly government actions,[126] and even if seeing the inherently high risks and costs as worthwhile. Instead, as Galbraith put it, they "will see the common advantage in the most profitable price and the common disaster in price-cutting. So the resulting price will be much the same as with monopoly. The sense of the common or group interest allows firms, usually without any formal communication, to find the best price."[127] Meaning best for themselves.

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123 Balogh, *The Irrelevance of Conventional Economics*, pp.141-3

124 Galbraith & Salinger, *Almost Everyone's Guide to Economics*, p.33

125 Balogh, *The Irrelevance of Conventional Economics*, pp.111-2

126 Balogh, *The Irrelevance of Conventional Economics*, p.116

127 Galbraith & Salinger, *Almost Everyone's Guide to Economics*, p.34

Once oligopolies gain control of a market, nothing is served by losing it. Producing goods with built-in obsolescence—those with limited lifetimes, which soon stop working well or at all and require replacement—helps keep business booming, especially if newer, revamped, slightly different, more 'feature-loaded', but at least equally obsolescent versions of the same goods are continually made available. Many oligopolist firms not only prevent their privileges from slipping, however, they often enhance them by buying out raw material suppliers, distribution and retail firms, and any other group depended upon during production or which limits control. The USA car manufacturer, General Motors, provided an extreme example of an oligopolist expanding its power: "By 1949,… [it] had been involved in the replacement of more than 100 [public transport] electric transit systems with GM buses in 45 cities."[128]

Clearly, because monopolies and oligopolies (together referred to henceforth as 'monoligopolies', a deliberately ugly word) do not engage in perfect competition, the neoclassical notion of consumers instructing and controlling the market is not valid. Furthermore, because "[a]ny non-price-taking behavior… implies violation of… efficiency",[129] monoligopolies' price-setting abilities mean that their prices cannot be optimal.

Even so, neoclassical economists, like their classical predecessors, treat monoligopolies as exceptions to the norm and thus as not significantly affecting market self-regulation by competition.[130] Since the 1920s, orthodox economists have conceded that monoligopolist control impedes free enterprise's purported tendency for income equalisation, yet they regard it as not significant enough (!) to have much effect on perfect competition. (Some have even accepted Keynes' analysis that full employment cannot be guaranteed by market self-regulation, and now advocate a *little* state regulation as the re-optimising cure.) Still they retain most classical conclusions based on the assumption of perfect competition and insist on seeing competition as maybe not absolutely perfect, but perfect enough.

Neoclassical economics' incessant commitment to a self-regulating free market seems much like a child's desperate wish to continue believing in Santa Claus. But as Galbraith put it: "when something gets fixed in the textbooks, it becomes sacred writ."[131] This is exemplified by Say's Law, a mistaken nineteenth century doctrine which claimed (unlike the analysis of section 1.5) that economies always have sufficient purchasing power to afford all that they produce. The sacredness of this particular writ was fervently passed down from one generation of economists to the next as largely unquestioned dogma, only to be over-turned by Keynes' analysis of the Great Depression. According to Galbraith: "Until Keynes, Say's law had ruled in economics for over a century. And the rule was no small thing; to a remarkable degree, acceptance of Say was the test by which reputable economists were distinguished from the crackpots. Until late in the thirties no candidate for a Ph.D. at a major American university who spoke seriously of a shortage of purchasing power as a cause of depression could be passed. He was a man who saw only the surface of things, was unworthy of the company of scholars. Say's law stands as a most distinguished example of the stability of economic ideas, including when they are wrong."[132]

Because of the stability of economic ideas, neoclassical economics also ignores how, even if numerous small firms did serve most markets and costs always did rise with the scale of production, still one other significant factor would stop competition from 'being' perfect.

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128 Barry Commoner, *The Poverty of Power* (Jonathan Cape, London, 1976), p.190

129 Hirshleifer, *Price Theory & Applications* , p.446

130 See, for instance, Bo Sodersten, *International Economics* (MacMillan, London, 1981), p.32

131 Galbraith & Salinger, *Almost Everyone's Guide to Economics*, p.41

132 John K.Galbraith, *Money: Whence It Came, Where It Went* (Penguin, Harmondsworth, 1975), p.231

2.4 God-like Rationality

> *"…even if the survival of the small firm were not made difficult or impossible by the conditions of production, by the possibility of reaping high rewards through mass production and mass advertising, it would not necessarily follow that production would be, in the jargon of the economists, 'optimal'." – Thomas Balogh*[133]

Perfect competition requires not only that prices not be controlled, but also that they act as market 'signals' which reflect competitors' responses to consumer demand. For prices to act as accurate market signals, the market must behave in an orderly, easily assessed, and fairly predictable fashion, thus allowing people to communicate their desires to it. This, in turn, requires people to behave rationally, to take "action well-suited to achieve… [their] goals."[134] Indeed, according to one textbook, the "essence of the assumption of free competition is… that it is an assumption about rationality."[135] If we assume enough rationality, we can even treat economies as ordered and predictable, a notion that led Kapp to claim that "practically the whole system of theoretical conclusions of modern economic science could be deduced from the assumption of rational economic conduct."[136] Without such an assumption, optimality would seem doubtful if not indefinable, but also behaviour would lack consistency and so could not be modelled mathematically and (hence) predicted.

The economic orthodoxy admits irrationality exists, but they regard it as too minor to have any important impact.

Perfect competition, however, requires a great deal of rationality—considerably more than some ancient cultures expected from their gods. In Balogh's words, a "consumer's behaviour must not be impulsive; he must be assumed to have considered all the possible choices open to him and to have fully understood their implication."[137] Difficult at the best of times, change makes this impossible.[138] New techniques of production or newly discovered resources, for instance, create new market signals and alter old ones, in the meantime causing (at least initially) some measure of consumer ignorance and uncertainty. As long as things change, and especially as the rate of change continues to mount, people can*not* know *all* their choices—not unless their rationality more closely approximates precognition or what Balogh called "perfect foresight". Without perfect foresight, even rational people bereft of impulsiveness can experience uncertainty, risk, or just plain ignorance about market opportunities, and so can "rationally react to the same sort of situation in different ways".[139] In which case, prices do not act faithfully as clear market signals ultimately reflecting consumer demand, but simply as the chaotic end-product of market competition.

In effect, neoclassical economic theory treats people as mechanistic and robotic, faithfully repeating the same behaviour quantified in 'economic laws'. This approach encourages the belief that people can be influenced deterministically, in accordance with those 'laws', by an adjustment of appropriate economic parameters such as the money supply. But on planet earth, as Balogh pointed out: "So far from rational expectations being the norm, undue optimism and

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133 Balogh, *The Irrelevance of Conventional Economics*, p.112

134 Hirshleifer, *Price Theory & Applications* , p.7

135 Sodersten, *International Economics*, p.32

136 Kapp, *The Social Costs of Business Enterprise*, p.10

137 Balogh, *The Irrelevance of Conventional Economics*, p.79

138 Balogh, *The Irrelevance of Conventional Economics*, pp.108-9

139 Balogh, *The Irrelevance of Conventional Economics*, p.109

pessimism alternate and cause untold harm."[140] Many examples could be given, but the unpredictable heaving and plummeting of stock markets around the world best demonstrates the considerable influence of irrational economic behaviour.

So, even ignoring its requirements of numerous small firms serving markets and costs always rising with increased production, perfect competition that involves prices which accurately reflect consumer demand requires the impossible: either rationality equal to god-like perfect foresight or an absence of change. Yet without perfect competition, full employment, trickle-down income equalisation, and other 'optimal' results do not follow.

So why has neoclassical theory held onto such unrealistic assumptions? Because they have a quasi-religious faith in market competition that compels them to do so…

2.5 The Invisible Hand

> *"…the theory now called 'neoclassical''… explains how demand is determined by the urgency of consumers' wants and how land, labour, capital and entrepreneurship receive, with perfect impartiality, neither more nor less than what they have contributed to the productive process. Harmony of interests and complete social justice were thus assured." – Thomas Balogh*[141]

Economists treat the idea that market competition 'optimally' regulates prices with almost religious reverence. According to one textbook: "As astronomy has Newton's principle of universal gravitation, and biology Darwin's principle of evolution through natural selection, economics also has a great unifying scientific conception. Its discovery was, like Newton's and Darwin's, one of the most important intellectual achievements of humanity."[142] This "great unifying conception" claimed that, left to pursue their own interests, people are often "led by an invisible hand to promote"[143] the general interest.

This idea of a guiding Invisible Hand was conceived by Adam Smith who popularised it in his economic treatise, *The Wealth of Nations*, published in 1776. Smith, sometimes called the father of free enterprise, believed that, *generally*, left to themselves and the rule of "natural liberty" (meaning the freedom to pursue self-interest), people behaved in ways that improved society; the greater the effort made for self-betterment and the more competitive the striving, generally the greater (more optimal) the public good.

Smith's belief followed essentially because of LSD. Putting Smith's reasoning into what it calls "more modern language", a textbook explains it this way: "Each person will be motivated by rational self-interest to employ the resources under his control wherever he can get the highest possible price. But high prices reflect scarcity of supply relative to intensity of consumer demands. Hence the private incentives will work continuously to overcome scarcity and meet consumer demands, i.e., to direct resources to the employments most suited for satisfying consumers' desires."[144] With LSD, Adam Smith's Invisible Hand can be clearly seen (sic).

By assuming the presence of an Invisible Hand, orthodox economists can hardly avoid concluding "that *the economy is an integrated system whose behavior follows scientifically determinable laws*… We owe to Smith the conception of the market economy as a self-regulating mechanism,

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140 Balogh, *The Irrelevance of Conventional Economics*, p.22

141 Balogh, *The Irrelevance of Conventional Economics*, pp.78-79

142 Hirshleifer, *Price Theory & Applications* , p.12

143 Adam Smith, *The Wealth of Nations* (The Modern Library, New York, 1937), Book IV, Ch. 2, cited by Hirshleifer, *Price Theory & Applications* , p.12

144 Hirshleifer, *Price Theory & Applications* , p.12

harnessing as motive power the self-interest of participants, yet so integrating their activities that each is led to serve the desires of his fellows."[145]

However, although Smith "was ready in the main to allow the public good to rest on 'the natural effort of any individual to better his own condition'",[146] he qualified his claims about self-regulating free enterprise considerably more than the above suggests. As Keynes put it: "the conclusion that individuals acting independently for their own advantage will produce the greatest aggregate of wealth, depends on a variety of *unreal* assumptions… For economists generally reserve… for a later stage their analysis of the actual facts."[147]

For Smith, the Invisible Hand would bless free enterprise with optimality only if three (unreal) conditions were fulfilled.[148]

Firstly, perfect competition must rule, which the last section explained is not the case.

Secondly, an Invisible Hand requires not simply perfect but scrupulous and morally restrained competition. A sizeable requirement indeed, unless you have a tendency to believe in it beforehand. As Kapp put it, the Invisible Hand depends on Smith's "*presupposition* of the existence of a natural moral law which would induce the prudent man to improve himself only in fair ways, i.e. without doing injustice to others."[149] Keynes likewise explained that "Smith's advocacy of the 'obvious and simple system of natural liberty' is derived from his theistic and optimistic view of the order of the world, as set forth in his 'Theory of Moral Sentiments' [1759], rather than from any proposition of political economy proper."[150] In other words, neither the Invisible Hand, nor the scrupulousness it depends on, have been justified, merely postulated. Furthermore, assuming scrupulousness effectively pre-ordains the end result claimed, that competition provides optimal results. A case of circular reasoning.

Even if, for the sake of argument, we assume perfect *and* scrupulous competition, although prices might reflect consumer demand, still—and crucially—they need not express the relative urgency of needs. In the "more modern language" of the textbook, producers chase high prices—or more accurately, high profits—which reflect low supply and/or high demand; but because need is not demand unless backed up by money, producers can usually make more profits by ignoring the needs of the poor and kowtowing to the desires of the rich—by building Mercedes for the Mercedes-less rather than homes for the homeless, by pursuing medical research that panders to the vanity of the rich rather than curing diseases of the poor, by stockpiling mountains of excess food in the First World while the Third World starves. Putting it into even more modern—and more accurate—language, because market economies are hooked on LSD, they are deafened by the hallucinatory sound of money talking, and so pursue profits and cash flows, not the satisfaction of needs. Lacking money and (consequently) demand, the poor cannot offer business any chance of maximizing profits, so their needs take a back seat to the mere desires of others. Work of great need is sacrificed in lieu of work that makes great profits.

Hence, even an impossibly scrupulous, perfectly competitive market must result in a mixture of privilege and suffering—clearly not an optimal result. Furthermore, the inevitability of loss and the presence of losers adds to the pressures and stresses associated with competition, and so encourages abandonment of whatever moral restraint may operate. Even so, to talk of

145 Hirshleifer, *Price Theory & Applications* , p.13

146 Keynes, *Essays in Persuasion*, p.275 (citing Smith)

147 Keynes, *Essays in Persuasion*, pp.284-5 (my italic)

148 Kapp, *The Social Costs of Business Enterprise*, p.29

149 Kapp, *The Social Costs of Business Enterprise*, p.30 (my italics)

150 Keynes, *Essays in Persuasion*, p.279 (see also Kapp, *The Social Costs of Business Enterprise*, p.30)

optimality at all without defining it in terms of satisfaction of need (rather than of financially-backed demand) makes about as much sense as roller skates for squids. In Balogh's words, if "relative profit opportunities could not express social urgencies… [then] the 'best' or most efficient production would become uncertain if not meaningless".[151]

The failure of even impossibly perfect, scrupulous competition to guarantee optimality because of the difference between demand and need is related to Smith's third and final condition for the Invisible Hand: that governments maintain defence, justice, public works, and other economic affairs which, though desirable, do not provide commercial competitors with much or any profit. This amounts to more than might be thought. For example, imagine trying to run a lighthouse as a business. How could it be ensured that all signalled ships paid for the service? Lighthouses are traditionally used as an example of *public goods*, those that are "(or may be) used *concurrently* by many economic agents."[152] TV or radio signals also comprise a public good, but they can be 'scrambled' to exclude non-payers from receiving them; although this costs the community in resources, it does allow profits to be maximised. But many public goods do not allow profits to be maximised, and so often become the responsibility of governments. In a textbook's words: "Government provision is inevitable only for those public goods for which *exclusion* of non-payers is unfeasible."[153] Yet even with this qualification, Smith's original conception of the Invisible Hand clearly claims 'optimality' only for a limited domain involving maximised profits—elsewhere the market need not serve the community at all, let alone optimally.

Although the assumptions necessary for its existence simply don't hold, nevertheless the Invisible Hand has been retained in economics. Still the textbooks claim that "the market system… harnesses individual self-interest to achieve a kind of mutual co-operation in the face of scarcity."[154] The evidence against such a conclusion is discounted: according to Kapp, "phenomena which upset rather than furthered the assumed tendency toward balance and harmony were seen as atypical exceptions or minor disturbances… [Over time,] the scope of economic science… was more and more adapted to the original (normative) aim of demonstrating not only the existence but the superiority of the 'system of natural liberty' over alternative forms of economic organization."[155] Indeed, again according to Kapp: "There is not a basic concept of neo-classical economics which does not in one way or another reflect and at the same time serve the purpose of demonstrating the alleged social efficiency of the market economy."[156] And this has happened despite misgivings by classical luminaries like Malthus and Ricardo who thought the Invisible Hand much less than fully reliable and who eventually concluded that some people lose more than gain from free enterprise competition and technical progress.[157] Similarly, according to Keynes: "Some of the most important work of Alfred Marshall… was directed to the elucidation of the leading case in which private interest and social interest are *not* harmonious. Nevertheless, the guarded and undogmatic attitude of the best economists has not prevailed against the general opinion that an individualistic *Laissez-Faire* is both what they ought to teach and what in fact they do teach. Economists, like other

151 Balogh, *The Irrelevance of Conventional Economics*, p.109
152 Hirshleifer, *Price Theory & Applications* , p.454
153 Hirshleifer, *Price Theory & Applications* , p.458
154 Hirshleifer, *Price Theory & Applications* , p.18
155 Kapp, *The Social Costs of Business Enterprise*, pp.4-5
156 Kapp, *The Social Costs of Business Enterprise*, p.274
157 Kapp, *The Social Costs of Business Enterprise*, pp.30-31

scientists, have chosen the hypothesis from which they set out, and which they offer to beginners, because it is the simplest, and not because it is the nearest to the facts."[158]

Yet whatever capitalism's apologists insist, clearly competition is not perfect and does not produce optimal results, just winners and losers. So even some textbooks have to admit that "the Invisible Hand is too good to be true! There are many ways in which things can go wrong. Indeed, a large portion of modern economic analysis has taken the form of exploration of conditions leading to failure of the theorem."[159] Some of that analysis not only earned Joseph Stiglitz a 'Nobel' prize but forced him to conclude that "one of the reasons that the invisible hand may be invisible is that it is simply not there."[160] Consider one simple case, provided by Knut Wicksell,[161] concerning a situation where existing retail firms adequately serve consumers. If another retail firm opens, greater competition results (more numerous firms). Yet unless the number of consumers also increases, the same business must be spread across more stores. Hence, some store(s) must lose business, perhaps enough to warrant closing down. So, extra competitiveness in this example, prompted by the Invisible Hand's free pursuit of self-interest, does not increase optimality as the dogma claims should happen—instead, it *dis*advantages some people and utilises resources inefficiently.

Clearly, market economies do not engage in perfect competition or use optimal prices that ensure efficient resource allocation. Rather, actual LSD-competition instead more resembles a lottery. Because, as section 1.5 explained, the market cannot buy all goods produced for the profit-inclusive prices charged without going into more and more debt, some goods *must* at some stage remain unsold, however efficiently they might be produced. Blind faith in an Invisible Hand may suggest that efficient producers will sell their goods, and the inefficient lose, but nothing guarantees this in the real world, where hands are not only always visible but also often quicker than the eye. Efficient businesses can lose because of actions of more established, more powerful, yet less efficient competitors. Inefficient businesses can profit because of monopoly or a lack of more efficient competitors or vapid fad.

And so, economic success need not follow necessarily from efficiency, discipline, skill, or any other advantage—nor failure from their lack. The ideal that anyone with an idea and perseverance can prosper sounds enticing, but you can do everything right and still, if someone else does it with more luck, you will fail simply because not all can win. Even if you win for a while, every winner always retains a chance of joining the losers: you could fail through no fault of your own when the next recession hits—and recessions happen inevitably when the rules ensure that someone is losing and/or going into debt all the time. In economies ruled by competition for profits, there can be no security for anyone, and no guarantee of efficient let alone optimal outcomes or resource allocation.

One thing the Invisible Hand has produced: a great deal of very visible ejaculate in the form of modern economic theory. To better understand why capitalism has its own professional cheer squad, ever ready to heap praises on it for its alleged success, and to find pretexts for its frequent failures, further details about the 'science' of economics must be given.

Please prepare yourself—you are about to enter the land of extremely weak excuses…

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158 Keynes, *Essays in Persuasion*, p.282. Also, Kapp, *The Social Costs of Business Enterprise*, p.7, briefly explains Marshall's views.

159 Hirshleifer, *Price Theory & Applications* , p.446

160 Joseph E.Stiglitz, *The Roaring Nineties: A New History of the World's Most Prosperous Decade* (Norton, New York, 2003), p.13

161 Cited by Kapp, *The Social Costs of Business Enterprise*, p.216

Chapter 3

Science & Religion

"The purpose of studying economics is not to acquire a set of ready-made answers to economic questions, but to learn how to avoid being deceived by economists." – Joan Robinson[162]

The failed predictions of Malthus, that mass starvation awaited because human fertility was outpacing food production, like similar gloomy prognostications of other economists, soon prompted economics to be dubbed 'the dismal science'. Yet Malthus' predictions, originally deemed dismal because of their gloom, now also seem dismal because of their inaccuracy. In achieving this result, however, Malthus, as an economist, cannot be considered untypical.

This chapter examines the difficult task facing economic 'science' and the extent to which it fails. Whereas 'hard' sciences like physics have much scope for measurement and mathematical modelling of objective properties, economic activity depends on many subjective and changeable perceptions, evaluations and circumstances—too many to expect predictable behaviour bound by rigid 'laws'. Economists nevertheless try to deduce such laws, using mathematical models about economic data, but they must at every stage make overly restrictive assumptions that leave out enough significant details to render their results questionable if not meaningless. (Section 3.1)

Furthermore, although claiming to avoid value judgements about goals and ends, economists tend to incorporate many that support the status quo into explicit or implicit assumptions at the foundations of their models. (3.2) Many of these assumptions, often necessary to make mathematical modelling even possible, are based on the previously discussed and rejected notion of natural liberty as a source of optimality—but rather than treating their assumptions as working propositions capable of refutation, instead economists defend them against all contrary evidence, tweaking models as necessary to retain the assumptions. This is exemplified by two fundamental economic models—optimisation and equilibrium—as well as the standard treatment of international trade, and economics' underlying assumption of scarcity (3.3).

Defending their 'science' against these crucial issues, most economists skirt around them by claiming that if an economic model can be used to make accurate forecasts then this suffices. This proves a poor defence given that economic predictions too often fail—a hardly surprising outcome given that predictions can only be made by *assuming* the validity of the deduced but assumption-saturated 'laws' used to make the calculations that form the basis of predictions. (3.4)

The failures of economic science are further exemplified by its practitioners' recent call for 'sustainable development', a camouflaging phrase by which most economists really mean the oxymoron of sustainable growth—another futile attempt to run in two different directions at once. (3.5)

[162] An economist(!) cited by another economist(!!): Galbraith, *Economics and the Public Purpose*, p.10

3.1 The Dismal Science

> *"To the intellectual reputation of chemists, physicists, biologists and microbiologists, economists and other social scientists, perhaps inevitably, aspire. This requires that the ultimately valid propositions of economics be essentially given, like the structure of neutrons, protons, atoms and molecules. Once fully discovered, they are known forever. Unchanging also, it is held, is human motivation in a competitive market economy. Such fixed and permanent truths allow economists to view their subject as a science. It is the paradox of the discipline that it is the wish so to see itself that commits economics to an obsolescence in a changing world that, by any scientific standard, is to be deplored."- John K.Galbraith*[163]

Take one 'science' that has bitten off more than it can chew, add pre-disposing tunnel-realities so belief can over-ride truth, blend with vested interests, coat with a generally cautious attitude to change, and garnish with a blurred distinction between authority and ability. Salt wounds to taste. Serves several million (fails to serve several billion). Here we have economics' recipe for success.

All sciences share one common assumption: that the behaviour they attempt to understand or explain *can* be 'scientifically' described. Scientific description or theory consists of conclusions and explanations based upon invented (mostly mathematical) models which attempt to mimic or parallel the behaviour in question. Models begin with, derive from, and always incorporate certain hypotheses or postulates—working assumptions chosen because they seem to agree with, or are perceived as likely to agree with, existing knowledge about that being studied. Using models built from assumptions, scientists try to derive theoretical explanations of behaviour, and testable predictions which can be supported or contradicted by experiment. Supporting experiments do *not* prove a scientific theory correct, because later more refined experiments could prove it incorrect. But theory must be constructed in ways that allow it to be tested, and so verified or not, otherwise it makes for religion rather than science.

Most economists—as one textbook put it—regard "economics as a *science*: as a body of analytical models (theories) that yield verifiable implications about the real world."[164] Many economics textbooks even begin with, or include, a section defending the scientific status of their subject. Yet many people remain unconvinced—and for sound reasons. More detail is provided in later sections of this chapter, but for now a general overview of the problems facing economic 'science' is provided…

Economics attempts to describe and predict the 'economy'—the activity of people producing, distributing, exchanging, and consuming. Economic activity is motivated by individual evaluations, which in turn stem from received information as translated by each individual's belief-system or tunnel-reality. Economic activity is also influenced by the differing availabilities of economic resources, which are determined by environmental factors such as climate and geology, and the technological knowledge at hand to make use of those resources. Consequently, like the perceptions, evaluations and circumstances that underlie it, economic activity constantly changes. By comparison, 'hard' sciences like physics and chemistry deal with predictable behaviour bound by rigid laws. For instance, a round ball cast at a uniformly flat wall at a certain angle will always bounce back at the same angle; so will light from a mirror. People tend not to behave so consistently nor so simply, which means that economics, like all

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[163] John K.Galbraith, *Economics in Perspective* (Houghton Mifflin, Boston, 1987), p.284. Along similar if briefer lines, some wit (Joel E.Cohen or possibly Richard Rorty according to the web) suggested that social scientists such as economists often suffer from 'physics envy'.

[164] Hirshleifer, *Price Theory & Applications* , p.4

other social sciences, has 'more' to explain. Indeed, according to dissenting British economist Thomas Balogh, economists "consider… matters which one of the wittiest of their number, the late Professor Sir Dennis Robertson, once dismissed as being better suited to the divinations of prophets or priests."[165] Nonetheless, economists try.

Most sciences, including economics, make much use of mathematics. The subject or behaviour in question is modelled by appropriate equations which are mathematically manipulated to derive further equations and, from them, predictions. To be modelled by mathematical equations, however, a subject must be treated quantitatively, which is to say in terms of measurements and numbers—data. This poses few problems for a hard science. For instance, attributes of atoms, such as their mass or speed, can be represented in mathematically manipulable equations, from which predictions can be derived, which can be either verified or disproved by actual experimental measurements. But what apparatus measures economic quantities such as 'standard of living', 'consumer satisfaction', 'productivity', or even the 'value' of material goods? Where lies a 'wealthometer' or a 'progressotron' to point at or insert in an economy? And where exactly are they pointed or inserted? Without accurate and meaningful measurements, mathematics has no use, and economic science becomes a contradiction in terms. As economist K.William Kapp put it: "We defeat the purpose of scientific inquiry if we make a fetish of precision and measurement by initiating standards and procedures which may be applicable to the measurement of temperature but which are difficult or impossible to achieve in the social realm."[166] Nonetheless, economists try.

Economics actually abounds with numbers. But most economic data correspond to subjective evaluations of behaviour and performance, not measurements of objective properties. Even the simplest economic numbers like wages, costs, and prices do not come with specific values capable of being measured, but have values subjectively *assigned* to them in ways which vary depending on time, place, circumstance, and *assumptions* about what employers and consumers are willing to pay and employees willing to accept. Yet economists not only treat their basic data as meaningful and objective, they also contrive from them higher order, or *macro*, properties like money supply and economic growth. But to define macro properties also requires simplifying and largely arbitrary assumptions: definition of the money supply, for instance, depends on what, in this credit-infested world, one assumes to 'be' money (for details, see the appendix); 'measurements' of economic growth depend *entirely* on how it is defined. Hence, economic numbers can positively deceive: for example, economic growth, reported to the first decimal place, provides a 'scientific' surrogate for an *accurate* measurement of wealth or welfare, and helps to distract from, and disclaim, often very sub-optimal results. As dissenting British economist, E.F.Schumacher noted: "Quantitative differences can be more easily grasped and certainly more easily defined than qualitative differences; their concreteness is beguiling and gives them the appearance of *scientific* precision, even when this precision has been purchased by the suppression of vital differences of quality."[167] Schumacher went even further: "to undertake to measure the immeasurable… constitutes but an elaborate method of moving from preconceived notions to foregone conclusions".[168] Nonetheless, economists try.

Economists use their 'measurements' of the immeasurable as the basis of mathematical models. Models can be developed confidently if the data fit only certain equations. However, because of the complexity of economic behaviour, data rarely provide such easy solutions. More

165 Balogh, *The Irrelevance of Conventional Economics*, p.30

166 Kapp, *The Social Costs of Business Enterprise*, p.22

167 Schumacher, *Small is Beautiful*, p.40 (my italics)

168 Schumacher, *Small is Beautiful*, p.38

usually, the equations of mathematical economic models can be developed only by making yet more simplifying assumptions. For instance, does increased money supply growth cause inflation (as some think)? Or vice versa? Or both at once? Or does each proceed independently of the other? To establish the answer scientifically requires a controlled experiment where *all* other possible influences on money supply growth and inflation can be kept constant. In other words, we need to have at least two identical economies, *with identical people*, then alter *only* the rate of money supply growth or inflation of one economy, and measure any resultant differences with the other. Of course, no economy fits into a laboratory, and neither can any be duplicated or controlled experimentally. Consequently, economists can only *assume* particular cause-effect relationships, mathematically model them in equations that can be manipulated to derive predictions, and then make more assumption-bound 'measurements' to check if they agree with the assumption-bound and necessarily simplifying model's expectations. When they do agree, it seems inappropriately presumptuous to call the *assumed* relationship a 'law'—nonetheless, economists try.

Assumption-bound mathematical 'laws' that attempt to describe or predict the complex, diverse, dynamic economic behaviour of billions of unique individuals, in scores of unique nations with differing social conventions and conditions, must necessarily reflect a crudely simplified view of reality that leaves out many—possibly very significant—details. Accordingly, the results have rarely proved satisfying. As Balogh put it: "varying attempts at mechanistic explanation and prediction…, even if they have produced a good 'fit' to the data for a short time, have lacked explanatory power in the longer run."[169] The complexity of the subject ensures that the mathematical approach in economics can have only very limited success. Even Alfred Marshall, one of the most prestigious and influential economists, expressed doubts about mathematical economics. Near the turn of the last century he remarked: "In my view every economic fact whether or not it is of such a nature as to be expressed in numbers, stands in relation as cause and effect to many other facts, and since it *never* happens that all of them can be expressed in numbers, the application of exact mathematical methods to those which can is nearly always waste of time, while in the large majority of cases it is positively misleading; and the world would have been further on its way forward if the work had never been done at all."[170]

So, forced by the nature of their subject, economists find themselves adrift in a chaotic ocean of human behaviour, clinging to lifeboats of assumptions from which stable islands of order and 'law' can be sought. But while actual islands sometimes sink and are often battered by tides and hurricanes, not so the economic counterparts. As the previous chapter mentioned, and section 3.3 further details, once 'laws' are found, economists generally treat them and their underlying assumptions as "fixed and permanent truths". When "verifiable implications" suggested by a previously deduced 'law' are later contradicted by actual behaviour, economists often adjust an equation's constant, make it variable, or alter some other minor detail that allows them to keep the 'law' and its underlying assumptions more or less unchanged. Such an approach cannot be regarded as scientific: as physicists David Bohm and F.David Peat wrote, "an acceptable scientific theory… must be formulated in such a way that its implications are not subject to too many arbitrary assumptions, so that the theory can always be 'saved' by suitable adjustment of these assumptions to fit the facts, no matter what these facts turn out to be."[171]

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169 Balogh, *The Irrelevance of Conventional Economics*, p.23

170 Cited by Balogh, *The Irrelevance of Conventional Economics*, p.12

171 Bohm & Peat, *Science, Order and Creativity*, pp.58-59

So, economic 'science', difficult in theory, in practice has often just not occurred. Economists try, but nonetheless they seem very trying. Ultimately, in Balogh's words, leaving "[e]conomic reality… circumscribed within the mathematical limits of some arbitrary system of equation… [has] reduced the history of economic 'science' into a tale of evasions of reality, into attempts to derive general rules from a few arbitrary and unprovable assumptions",[172] especially the assumption of optimality through competition (discussed in section 2.5). No wonder that Schumacher, referring to "the most pressing problems of the times", concluded that "it would not be unfair to say that economics, as currently constituted and practised, acts as a most effective barrier against the understanding of these problems, owing to its addiction to purely quantitative analysis and its timorous refusal to look into the real nature of things."[173]

Economists began their retreat into the fantasy worlds of their mathematical theories when, compelled by the desire to build a 'science', they thought it best to exclude certain questions…

3.2 Normative & Positive

> "*In its scientific aspect economics is strictly* positive. *It answers the question 'What is reality like?' But* normative *issues in public policy, turning upon the question 'What* should *be done?', also always require economic analysis. Given the social objective aimed at (with which he might in fact personally disagree), the scientific economist can use his knowledge of reality to analyze the problem and suggest efficient means for attaining the desired end." – Jack Hirshleifer*[174]

Most economists aim to describe what happens and to leave normative questions involving value judgements for others to decide. In other words, economists may try to use their 'positive science' to determine the best *means* of achieving certain ends, but they do not determine the *ends*. So it goes in theory.

For modelling an atom or an electrical circuit, a positive approach can be taken because these objects behave according to rigid physical laws. Human economic behaviour, however, involves free choice motivated by normative judgements, and so economics must to some extent incorporate these normative judgements into its study. This leads inevitably, as in any science, to the colouring of conclusions with personal views; but more importantly, for economic 'science' it has also involved, to a far greater extent than in most sciences, the reduction of normative issues into explicit or implicit assumptions. For example, economists answer unavoidable normative questions like 'what should we do about profits?' by assuming that, whatever we do, profits will still be sought and won; in effect, the question is converted to 'what distribution of profits should we seek?'. Economists treat not just profits but also competition, scarcity, inequality, and many other fundamental distinguishing features of capitalism as given and not subject to debate—as effectively 'ends' already 'determined'. This is *not* positive science.

The fundamentals of capitalism are *not* ends, least of all community-determined ends, but merely the less-than-best transient results of cumulative historical processes. We do not *have* to have competition, scarcity, inequality, profits, and many other capitalist basics. They are not absolutes to be dogmatized by economic theory. Yet because economic theory does just this, it

172 Balogh, *The Irrelevance of Conventional Economics*, pp.29-30

173 Schumacher, *Small is Beautiful*, p.39

174 Hirshleifer, *Price Theory & Applications* , p.11

implies and effectively makes a normative judgement: that the underlying features of capitalism *should* be retained.

So, by not considering alternatives to the arbitrary reality of the day—an accident of history—the "strictly positive" 'science' of economics normatively sides with things as they 'are'. Even some within the profession recognise that this cannot but assist the maintenance of the status quo. Frank Hahn, for instance, stated that "economics… is easily convertible into an apologia for existing economic arrangements, and it is frequently so converted… It is an unsatisfactory and slightly dishonest state of affairs".[175] The extent to which economics supports the status quo can be glimpsed in the details of some basic economic models…

3.3 Models & Assumptions

> *"Too large a proportion of recent 'mathematical' economics are merely concoctions, as imprecise as the initial assumptions they rest on, which allow the author to lose sight of the complexities and interdependencies of the real world in a maze of pretentious and unhelpful symbols." – John Maynard Keynes*[176]

As one standard first-year university textbook put it: "An *economic model* is a set of mathematical equations designed to represent the important features of the economy. To cast something as complex as the economy into a mathematical form, it is necessary to make simplifying assumptions about the basic internal behavior of the economy and its reactions to various external shocks."[177] These assumptions correspond to "simplifications of reality that allow us to approximate reality with a mathematical expression."[178] Models built on such assumptions necessarily are not realistic, but as another standard first-year textbook correctly emphasises, "no model in any science, and therefore no… economic model, is completely realistic in the sense that it captures every detail and interrelationship that exists. Not only is such a model impossible to build, but it would also be impossible to work with… The nature of scientific model building is such that the model should capture the essential relationships that are sufficient to analyze or answer the particular question at hand."[179]

But how does one identify the "essential relationships"? How does one know which parts of the system to simplify, and which not? (How does one know *how* to model the system, and *how* to simplify?) As it turns out, economic behaviour can only be modelled using *particular* assumptions—insurmountable inconsistencies and difficulties of computation result from others. So, assumptions are *chosen* which *facilitate* modelling and which *seem* reasonable to those assuming them.

Economists *must* make assumptions to build models and theories, but proper science requires the propositional nature of underlying assumptions to be kept firmly in mind. Assumptions must be seen as *working* assumptions able to be refuted by real events. The assumptions mostly used by economists, which usually make mathematical modelling fairly easy (probably too easy), are based on the notion of natural liberty as a source of optimality; yet such assumptions, rather than being treated as working propositions, have instead tended to develop (via their associated theories) very loyal followings who defend them as permanent self-evident truths against any evidence to the contrary. This unscientific approach can best be

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175 Cited by Balogh, *The Irrelevance of Conventional Economics*, p.29

176 Cited by Balogh, *The Irrelevance of Conventional Economics*, p.1

177 Peter E.Kennedy, *Macroeconomics* (Allyn & Bacon, Boston, 1979), p.2

178 Kennedy, *Macroeconomics*, p.17

179 Miller, *Intermediate Microeconomics*, pp.3-4

demonstrated with just a few examples. Indeed, as a textbook admits, "the great bulk of economic reasoning makes use of only two analytical techniques… *optimization* and… *determination of equilibrium*."[180]

People are assumed to 'optimise': producers try to maximise profits, and consumers try to maximise satisfaction. The textbooks claim that: "Given a number of ideal conditions, optimizing behaviour on the part of individuals and firms under pure [ie. perfect] competition leads to an efficient… social outcome."[181] Of course, the ideal conditions are rarely met, competition is not pure or perfect, and while we may try to optimise, we need not succeed—after all, each person has a different capacity to optimise, largely depending on the extent to which they have already won or lost. Furthermore, people do not always try to optimise, at least not in the short-term. Balogh provided an example: "When a large corporation forgoes profit opportunities in the short run in order to maintain good public relations with its clients, or to secure industrial peace, or to avoid government interference, this could equally be regarded as intelligent profit maximization in the long run."[182] In any case, as section 1.5 explained, the zero-sum game of competition means that for every successful optimiser, a non-optimising loser exists. So, calling people optimisers may imply, but cannot guarantee, optimal results.

The concept of equilibrium suffers from even more glaring weaknesses. According to textbooks,[183] various forces act upon economies, but most have a tendency to counteract each other and so result in a balanced state called equilibrium. For instance, as section 2.2 explained, LSD is supposed to cause the supply of commercial products to generally alter so as to match public demand for them. When supply and demand match, we have equilibrium, which is said to involve "no tendency for price or for quantity to change",[184] and to represent not only stable but also optimal situations—at least, as section 2.2 explained, as long as one assumes perfect competition,[185] single prices, zero transaction costs, and the constructability of schedules.

Such balanced states—very reminiscent of those studied by chemists, physicists and many other scientists—can be mathematically modelled much more easily than disequilibrium. So the circumstance seems fortunate for economists. But it also seems suspicious. Certainly, the tendency for supply and demand and other economic 'forces' to adopt some state of equilibrium seems anything but beyond dispute. Kapp, for one, spoke of a "mass of factual evidence"[186] against the notion. Even textbooks admit that "given a world in which determining conditions are ever-changing, the chances are that prices will always be some distance from and scarcely ever at their equilibrium values. Disequilibrium is therefore the prevalent state of affairs."[187] In Kapp's view, equilibrium nonetheless stuck because it not only eased the task of building theory, but also allowed economists "to demonstrate that production and distribution were self-regulating processes capable of achieving an optimum solution of the economic problem without positive direction by public authority."[188]

Indeed, equilibrium provides so much optimality, it even 'saves' the environment. Supposedly, equilibrium forces provide salvation, from whatever economic activity is

[180] Hirshleifer, *Price Theory & Applications* , p.18

[181] Hirshleifer, *Price Theory & Applications* , p.444

[182] Balogh, *The Irrelevance of Conventional Economics*, p.133

[183] See, for instance, Kennedy, *Macroeconomics*, p.4

[184] Hirshleifer, *Price Theory & Applications* , p.19

[185] Balogh, *The Irrelevance of Conventional Economics*, p.58, & Galbraith & Salinger, *Almost Everyone's Guide to Economics*, p.17

[186] Kapp, *The Social Costs of Business Enterprise*, p.28

[187] Hirshleifer, *Price Theory & Applications* , p.447

[188] Kapp, *The Social Costs of Business Enterprise*, p.28

unleashed, by efficiently and quickly repairing any ecological damage that might be caused; at worst, a little government regulation such as pollution taxes might be required to tidy things up properly. This convenient piece of wishful thinking, which simplifies the task of modelling, and sits very comfortably with the notion of natural liberty as an optimising system, implies that ecological resources have no limits and can be plundered without concern. Only in the last few decades have a growing minority of heretic economists voiced opinions against this doctrine.

Meanwhile the concept of equilibrium has been further entrenched by treating change as causing the economy to move from one supposedly stable and 'optimal' state of equilibrium to another. Despite the alleged stability of equilibrium prices, when supply and demand change—for instance because of "changes in *tastes*, *technology*, *resources*, and the *political-legal system*",[189] or because of changes to related goods (for instance, "an increase in the price of butter… will tend to raise the demand for margarine[;]… a rise in the production of wool will almost necessarily increase the supply of mutton"[190])—the intersection point of their curves is said to also change, and hence so too does the equilibrium price. If demand rises, economists shift demand curves vertically upwards; if it falls, downwards (see Figure 3). If supply rises, supply curves are shifted to the right; if it falls, to the left. These movements are supposed to represent prices adjusting in accordance with LSD to changed conditions. The new equilibrium price then results at the intersection point of the shifted curves. So, different equilibria represent static 'snapshots' of an economy between which comparisons can be made (an approach much easier than trying to model continuous dynamic economic development). Economists call this approach *comparative-static* analysis.

A textbook admits that comparative-statics involves "drawing explicit comparisons between various *hypothetical* equilibrium positions."[191] But even if the hypothesis is granted—along with its requirements and assumptions of perfect competition, single prices, zero transaction costs, and the constructability of schedules—then still the simple movements of curves in four possible directions need have little or no correspondence with what actually happens. Different people react differently, and their preferences can change differently, resulting in differently shaped curves, and *several* prices.

A simple movement of curves and a single final price could result only if two conditions are met (in addition to the long list previously mentioned and reiterated). Firstly, all individuals' preferences must closely and constantly match market curves—and not even neoclassical economists think quite *that* uniformly. Secondly, no 'secondary' reactions must occur: the changes represented by a movement from one equilibrium to another cannot feedback so as to further alter equilibrium; for example, oil price rises cannot boost inflation in ways that give rise to more oil price rises. In this way assuming 'all other things equal', equilibrium analysis can give determinate (predictive) answers, but otherwise not.[192] Although, by using comparative-statics, economists "waive consideration of such problems", they do admit that the final hypothetical "equilibrium reached might conceivably depend upon the path for getting there."[193] Occasionally textbooks even admit the assumption is not valid: "disequilibrium in *one* market will tend to reduce demand… *in all other* markets. A second-order adjustment in these other markets will then carry the process further. A self-reinforcing process may thus ensue".[194]

189 Hirshleifer, *Price Theory & Applications* , p.26

190 Hirshleifer, *Price Theory & Applications* , p.27

191 Kennedy, *Macroeconomics*, p.45 (my italics)

192 Balogh, *The Irrelevance of Conventional Economics*, p.81

193 Hirshleifer, *Price Theory & Applications* , p.25

194 Hirshleifer, *Price Theory & Applications* , p.449

And yet, the belief that natural liberty ensures the optimality of free enterprise apparently makes it easy for most economists to disregard all these issues—and the evidence—and instead to believe in equilibrium as a normal economic state. A few unbelievers such as Balogh see it differently however: "As changes are continuous and adjustments take time, no position of 'eventual equilibrium' will in fact ever be reached, or is necessarily existent even in principle. The system may be in continuous disequilibrium 'chasing'… a steadily receding and changing 'equilibrium' position. What is happening is history. History never reaches equilibrium, it merely moves slower or faster and in frequently changing directions."[195]

Even if, despite the evidence, stable equilibrium states could be regarded as typical (and unaffected by secondary reactions), they would still not necessarily have optimality. In Balogh's words: "Why the equilibrium will be 'optimum' has never actually been explained. One leading neoclassical theorist of… equilibrium, Professor Frank Hahn, has pointed out that there is in fact nothing whatever in general equilibrium theory to justify the claim of social optimality, and he condemns writers who make the claim. The textbooks do make the claim, almost universally."[196] Equilibrium then not so much describes economic reality, as restates the very dubious *assumption* of the Invisible Hand.

Nevertheless, most economists continue to model economies as if in states of equilibrium, so no wonder that they often find reasons in favour of natural liberty and self-regulation. One textbook admits that "presumptive assumptions (assumptions that in essence provide the answer) occur all too often in economic analyses… [but] cannot be defended".[197] Yet textbooks do not call equilibrium a presumptive assumption, nor many other obvious candidates for the title.

International trade provides another glaring example of how economic 'science' assumes away reality. According to neoclassical theory, free trade between nations serves their self-interest. It works like this: if the country of Up produces a nic for ten dollars and a nac for nine dollars, while the nation of Down makes a nine dollar nic and a ten dollar nac, then (as long as importing either item costs less than a dollar) both nations can save if Up exports its cheaper nacs, and Down, its nics. A textbook claims that, in this way, "trade offers each country the possibility of specializing in the line of its comparative advantage and then exchanging these products for those in which she has a comparative disadvantage. Both countries can reallocate their factors of production to… where their comparative advantage lies and then export this product and import the other product. In short, with a given amount of resources each country can consume more by trading than in isolation."[198]

But what happens to the producers of Up's nics and Down's nacs, who can't compete against their foreign counterparts? Neoclassical theory recommends they reallocate their assets to other fields of production. Yet this need not prove feasible or affordable, because of the specialisation of modern production equipment and the skills needed to run them. International prices (and currency rates) also fluctuate, and can turn a comparative advantage one day into a disadvantage by the time any possible reallocations of assets are completed. So, with free trade, some win, but others lose—as a textbook admits: "There is no guarantee that every consumer will be better off under free trade than under no trade, even though the country as a whole will

195 Balogh, *The Irrelevance of Conventional Economics*, p.28

196 Balogh, *The Irrelevance of Conventional Economics*, p.98

197 Kennedy, *Macroeconomics*, p.15

198 Sodersten, *International Economics*, p.14

be better off. Only if a policy of redistribution is pursued can free trade guarantee such an outcome."[199]

Redistribution because of free trade occurs less often, however, than the avoidance of free trade, aptly called *protectionism*. Up's nic producers would have plenty of motivation to lobby their government to put a *tariff* on nic imports—a charge owing to the government that would raise the cost of imports to levels near or above those of local producers. But although tariffs protect local producers, they also cause higher prices, discourage improvements in efficiency, and damage the exporting nations by preventing or lowering their sales and income (which could run down Down, and stuff up Up).

For these and other reasons, neoclassical theory advocates tariff-free trade. Indeed, textbooks easily demonstrate—after making several "quite strong assumptions… [that] one might think… are rarely fulfilled in the real world",[200] including perfect competition—that tariff-free trade causes wages to gradually alter, so that eventually the same work will receive the same pay in all trading nations. But textbooks also explain why this trickle down from rich to poor nations does not *actually* occur: "Someone must own the capital… [and] the more capital a country has for a given amount of labor, the higher the average income will be. So even if factor rewards were completely equalized, as long as the capital stocks differ, incomes will also differ."[201]

In other words, a head start makes it a lot easier in the game of competition (perfect or otherwise). And as Balogh pointed out, "in periods of accelerated technical change the handicap of being small and weak is heightened, for the education, research and development effort of the small and weak cannot match the formidable technical and economic advances secured by the strong. The rapidity of change acts to accentuate and increase the differences among countries."[202] And so, instead of the wishful thinking of trade theory, actual *im*perfect competition leads not only to economic elites forming within nations, but also to elite nations dominating the world community. Rather than wealth trickling down to the poorest, they more often receive just the rich's industrial waste.

The strongest international players, those with the biggest head start, consist mostly of oligopolist 'multinationals'. It should be emphasised, in the words of Robert Heilbroner, that "multinational companies are in fact *national* companies that have extended their operations abroad. They are not, as their spokesmen sometimes claim, companies that have lost their nationality."[203] Like any firm or producer, multinationals chase maximum profits; this is often most easily achieved by setting up production equipment in countries that have plentiful cheap labour or raw materials, or low taxes or minimal regulation—which often requires abandoning their original profit-making facilities in the process, thus leaving unemployment behind. However, as Galbraith explained, producers of advanced goods "must have organizations in the receiving country to assemble… [their products], to market them and, on occasion, even to repair them… International trade in things like automobiles and computers means automatically that there will be multinational corporations."[204] Of course, multinationals provide employment in their host countries, and a share in their often very maximised profits for local investors, executives and governments; but they also, in Heilbroner's words, "often support technologies and social structures that are inimical to the rounded development of the

199 Sodersten, *International Economics*, p.22

200 Sodersten, *International Economics*, p.42

201 Sodersten, *International Economics*, p.54

202 Balogh, *The Irrelevance of Conventional Economics*, p.184

203 Heilbroner, *Business Civilization in Decline*, p.91

204 Galbraith & Salinger, *Almost Everyone's Guide to Economics*, p.68

backward areas—for example, shoring up corrupt and privileged classes or encouraging countries to concentrate agricultural production on exports rather than on badly needed food for local consumption."[205]

As international trade has increased, multinationals have grown more dominant. Given their prominence, trade theory should include multinationals in its models. But "the increasing importance of the multinational corporations in international trade is, of course, ignored by the conventional model, which assumes that trade is conducted by myriad atomistic units unable to influence prices."[206] Once again, perfect enough.

Devotion to convenient presumptive assumptions of mythical states like perfect competition and equilibrium manages to hide an even more fundamental presupposition lurking behind the flawed case for optimal outcomes flowing from market competition: scarcity. Economics, the 'science' of production, distribution, exchange and consumption, has been defined as that "which studies human behaviour as a relationship between ends and *scarce* means which have alternative uses";[207] and "the study of the changing patterns of cultural relations which deal with the creation and disposal of *scarce* material goods and services by individuals and groups in the light of their private and public ends."[208] Competition for self-betterment tries to defeat scarcity, but even if material abundance were gained, economists say this 'optimal' result would leave us *scarce* time to enjoy it.[209] And so, with scarcity *assumed* to be always there to motivate competition, the economic engine can't be turned off. Not so much competition to *overcome* scarcity as ever more of the same—ever more production, consumption, debt and work.

A competitive economic system based on the assumption of scarcity must predispose us to neither achieve, cope with, nor even recognise a prosperous lack of scarcity. Rather than assuming permanent scarcity, surely abundance *and* the time to enjoy it must be regarded as at least possible. If we grant this possibility, then economics should be re-defined as the study of the strategies and behaviour of people as they attempt to survive and, ideally, prosper. It should pay particular attention to consensus tunnel-realities, because they determine what 'prosper' actually 'is', and also to the environment, from which ultimately all survival and prosperity is drawn. Economics would then treat scarcity as a failure to survive and prosper—not as a perpetual predetermined fate.

Ultimately, economics seems to ignore or neglect whatever seems too cumbersome to model—however significant. Economists *can* model order, which most believe natural liberty optimally provides, so no wonder they adopt assumptions that support and/or define natural liberty. To do otherwise would render the mathematics much more difficult if not impossible, and the 'science' a faint hope at best. But while economists have thus found order, they have lost the plot. If you assume everything 'is' optimal, then you *know* what should be done: leave the status quo alone. And so, economists have developed not a positive science, but one ridden with *normative* assumptions which do not even fit the facts.

All science runs the risk of hanging on to out-dated assumptions. Even nineteenth century physicists, when they could not detect the ether they had postulated to exist, at first modified its concept to make it undetectable. Not until Einstein's relativity theory had been supported by experiment did (most) physicists abandon the ether. But generally, economists hang on far more

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[205] Heilbroner, *Business Civilization in Decline*, p.94

[206] Balogh, *The Irrelevance of Conventional Economics*, p.189

[207] L.Robbins, *An Essay on the Nature and Significance of Economic Science* (MacMillan, London, 1940), p.16 (my italic)—cited by Kapp, *The Social Costs of Business Enterprise*, p.287

[208] A.G.Gruchy, *Modern Economic Thought* (Prentice Hall, New York, 1947), p.552 (my italic)—cited by Kapp, *The Social Costs of Business Enterprise*, p.287

[209] Hirshleifer, *Price Theory & Applications* , p.14

tenaciously to their concepts than do other 'scientists'. They have, in effect, dogmatised natural liberty, equilibrium, and many other unrealistic assumptions, despite the wealth of evidence against them. A long citation from Kapp seems to best demonstrate the extent of the problem: "Instead of testing… solutions by trying to disprove them… [social scientists] tend to defend them against evidence to the contrary. Instead of formulating… problems and… solutions as clearly and as definitely as possible so that they may be critically discussed and revised, social scientists have often tended to save untenable propositions by refining their definitions or by introducing auxiliary hypotheses—thereby rendering more difficult their disproof. Indeed, when new data come to light which contradict earlier conclusions strenuous efforts are sometimes made to play down their significance and to evade their impact… [T]heoretical systems… respond with considerable vigor to new data… due to the abundance and the complexity of social evidence and the extreme difficulty of disproving 'experimentally' and once and for all any particular social theory… In the social sciences, entire systems of analysis have succeeded in surviving by a restatement of assumptions and by redefining concepts or by narrowing the scope of their investigations. This has made it possible to attribute empirical facts which seemed to contradict the conclusions either to minor disturbances and exceptions or to factors which were said to fall outside the 'proper' subject matter of the discipline."[210]

So, economic 'science', implausible in theory, in practice rests on normative, eternally 'true', presumptive assumptions. Nonetheless, economists try very hard to believe in their 'science'. Armed with their very own sophisticated, almost indecipherable, specialist terminology, economists defend their 'science' with the claim that, whatever the assumptions, accuracy of prediction matters most—if an economic model can be used to make accurate forecasts, then this suffices. Such a neat defence could only be accepted if economic predictions worked. But alas, usually they don't…

3.4 Prediction & Myth

"Big Science. Hallelujah. Every man, every man for himself." – Laurie Anderson[211]

The story will probably seem all too familiar…

Gorged on orthodoxy, muttering so much economic jargonspeak as to suggest the native tongue has been forgotten, masquerading authority with a title like Treasurer, Chancellor of the Exchequer, or Minister of Finance—and desperate to invoke confidence in that authority—the 'democratically' elected political representative, convinced that the signs have been correctly read, conveys to the public (with great gravity) the sad sobering 'truth'.

"The economy's stuffed", screams the economic minister from the press-room pulpit. "It's over-heated, unbalanced, impaled on a J-curve, crushed under debt, infected by foreign problems, congested, brittle, strangled, suffocated, castrated and crippled; but above all, *it's no longer competitive*. We aren't winning anymore. Time to pull the finger out, tighten our belts, make the extra effort…", and perform all those other clichés that might more accurately be rendered: "The gods of the economy have been angered and we must offer them a sacrifice".

With a seal of approval from the most fashionable economists, credit might be tightened, interest rates hiked, taxes raised, government services reduced, and/or some other bitter policy pill popped… "for the national interest… to regain our competitive edge… so living standards can rise."

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[210] Kapp, *The Social Costs of Business Enterprise*, pp.1-2

[211] Laurie Anderson, title track from her album *Big Science* (Warner Bros. Records, USA, 1982)

But, usually, living standards drop as the policies bite. Only later will the minister release the screws, when confident the ceremony has had the desired effect (or else when convinced no other option exists).

In practice, though, the policies often just do not work. Instead, everyone races faster just to stay still, while breathlessly awaited economic indicators degenerate, cancelling the promise of imminent prosperity and eroding faith in the holy prophecies of economic priests.

Using orthodox economics to predict the results of government policies, or indeed anything else, has not achieved notable success—indeed, at times, it has caused particular embarrassment. For instance, almost all economists failed to predict the 'credit crisis' turmoil of 2007-08 that unleashed the Great Recession—instead they optimistically forecast more onwards and upwards movements of the most sacred economic indicators. This at least maintained their long track record: in 1929, almost all economic soothsayers similarly agreed that the stock market would not crash—it crashed anyway. Soon, the same people were predicting that the economy would recover quickly; they continued to predict this for months, then years. The false sense of security encouraged by these and other economic predictions only aggravated the situation by ensuring that nothing was done when much indeed was needed.

As another example, just before UN-sanctioned forces attacked Iraq in January 1991, 'experts' predicted that the offensive would restrict the supply of oil and so cause oil prices to rise, possibly three-fold. When war came, prices fell: fearing higher prices, people had stockpiled in advance; although less able to then take advantage (though also having done so to some extent beforehand, when prices doubled between July and October 1990), most oil producers felt obliged as part of their support for the UN action to avoid profiteering, and so prices were deliberately kept low. The official predictions failed because, firstly, they were based on past economic events which do *not* have to be repeated in the future, and secondly, because they were based on only a partial picture of those events which did not and probably could not give sufficient emphasis to what, in the end, had the greatest influence: human perception. An example of how economists make predictions should clarify this.

If the price and number of sales of a particular item—say, fish—are measured at various times, these observations might suggest that a relationship exists between price and sales. It might seem that LSD rules, that the higher the price, the lower the number of sales, and vice versa. Plotting observations on a graph might even reveal a straight line—a linear relationship between the two 'variables'. On the basis of this relationship, if fisherpersons intended to increase their prices, then a prediction could be made that sales would decrease. In fact, sales might not alter at all, or they could conceivably even increase. Other factors, not measured or plotted or previously taken into account, might invalidate the observed—or rather deduced—relationship.

Despite increased prices, fish sales might not decrease if beef went into short supply, and/or if water pollution suddenly reduced, and/or if the time of year corresponded to a period when religious customs forbad the eating of red meat, and/or if some in-vogue celebrity or tabloid dietary expert expressed a preference for fish, and/or if most prices were rising, and/or for numerous other possible reasons. Normally, the many interdependent influences of people's intricate thinking processes and subsequent economic behaviour prevent relationships between specific factors from being recognised, but sometimes they act coincidentally to imply a relationship that exists only in atypical circumstances or for short periods.

Even when relationships can be confidently established as genuinely 'real'—rather than merely being *assumed* so—they do not ensure accurate predictions because they vary from place to place. "For example exports and imports have behaved under similar policy treatment in

startlingly different manners at different times and in different countries."[212] Ultimately, predictions can only be made by *assuming* the validity of deduced relationships, an act rarely justified in economics (see the appendix for a detailed example).

Almost certainly, too many interdependent factors exist in market economies for them to be modelled well enough for economics to have a chance of any accurate predictive capabilities. At the very least, the evidence forces a conclusion similar to Balogh's: "the difficulties in the way of using economic 'systems' or models to arrive at determinate answers to… economic problems are innate and insuperable."[213]

Some hold hopes that chaos theory may enable more accurate modelling of the economy than has been previously achieved. Certainly, non-linear chaos theory seems more suited to modelling the complex interdependencies of economic behaviour than does the simpler linear mathematics normally used. However, chaos theory still depends—as must all mathematical techniques—on accurate measurements. So, given the difficulties and impracticalities of making accurate measurements in economics, probably chaos theory will help little with modelling, and even less with prediction.

However sophisticated the techniques of modelling, human action remains indeterminate—not even the calculating abilities of computers can prevail. With multi-coloured, laser-printed, computer-generated graphs, spreadsheets and flowcharts, calculations frequently take on an aura of authoritative prediction; they look scientific and unarguable. But while computers can calculate much more quickly than people, they do so in ways determined by what humans program into them. To program equations that computers can use invariably involves the making of various assumptions—and the more sophisticated the computer technique, the more likely it acts to disguise the assumptions underlying it. In Schumacher's words: "The person who makes the forecasts may still have a precise appreciation of the assumptions on which they are based. But the person who uses the forecast may have no idea at all that the whole edifice, as is often the case, stands and falls with one single, unverifiable assumption… If the forecasts were presented quite artlessly, as it were, on the back of an envelope, he would have a much better chance of appreciating their tenuous character".[214]

Whatever the mathematical techniques employed, accurate prediction of even some aspects of the intricate and varied behaviour of millions or billions of people seems unlikely. As Schumacher pointed out, "in laboratory science, dealing with carefully isolated deterministic systems, future events may be described as certain. The real world, however, is not a deterministic system; we may be able to talk with certainty about the acts or events of the past… but we can do so *about future events only on the basis of assumptions*. In other words, we can formulate conditional statements about the future, such as: *if* such and such a trend of events continued for another x years, this is where it would take us. This is not a forecast or prediction, which must always be uncertain in the real world, but an exploratory calculation".[215]

Calculations can work successfully as predictions, but (as the principal 'definer' of falsifiable science, Sir Karl Popper, put it) "only if they apply to systems which can be described as well-isolated, stationary and recurrent. These systems are very rare in nature, and modern society is surely not one of them."[216] The nonetheless widespread treatment of economic calculations as predictions is motivated normally by faith in the soundness of their assumptions—faith usually

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[212] Balogh, *The Irrelevance of Conventional Economics*, p.20

[213] Balogh, *The Irrelevance of Conventional Economics*, p.16

[214] Schumacher, *Small is Beautiful*, pp.194-5

[215] Schumacher, *Small is Beautiful*, pp.190

[216] Cited by Balogh, *The Irrelevance of Conventional Economics*, p.15

inspired, yet again, by the desire for economic 'science', and by the compatibility of the assumptions and the 'predicted' future with the notion of optimal results through natural liberty. Only when 'predictions' fail do economists adopt humble tones and stress how their forecasts can never be guaranteed for reasons they, and/or those they advise, forget when they next attempt to foretell the future.

Ultimately, it seems difficult to avoid agreeing with Galbraith's conclusion that "there are very great limits to what economists can predict… You must always remember that prediction itself derives from the fact that no one knows… The safe rule for the citizen on economic predictions is to ignore them."[217] However, people often do not ignore them. Indeed, people sometimes believe economic predictions so much that behaviour alters in ways which help make the predictions come true and turn them into 'self-fulfilling prophecies'. As Balogh put it, "one of the most disagreeably important characteristics of economic phenomena is their potential self-justifying nature. Provided the brainwashing is sufficiently intensive, reactions to change may themselves also alter, thus justifying nonsense claims".[218] Authoritative forecasts of inflation, for example, can inspire people to raise prices in order to avoid falling behind others expected to do the same; widely publicised predictions of recession can encourage staff cuts as a means of reducing production thought excessive for the anticipated future; expectations of higher trade deficits, and a consequent increased chance of import restrictions and/or higher tariffs, can compel people to import now rather than later, and so widen the deficit; and so on.

Yet economic predictions rarely foretell the worst possible scenarios. As Galbraith observed, partly because of the possibility of self-fulfilment, the "economist in high office is under a strong personal and political compulsion… to predict what is wanted, and it is better, not worse, economic performance that is always wanted… It follows that *all* official prediction in economics is suspect; everyone reading it should assume a heavy component of wishful thought."[219] Wishful thought even of an economy turning around when it might actually be nose-diving…

Just close your eyes, Dorothy, and imagine you're in Prosperity—soon you'll be there.

And don't worry about ecological collapse either. The state of the environment has not escaped the attention of the economic orthodoxy—they have rallied and adapted to the times, combined their talents, earnestly applied their abilities, and come up with their 'panacea' for LSD-competition's self-destructive woes: a brand new catchphrase…

3.5 Sustaining Faith

> *"Economists have the unenviable task of telling people confronted with inadequacy that, in a world of resources that are scarce, there are limits to the demands that can be made on them; that man as an individual, firms as units of industry, and governments have to make choices in which they must reject claims that are seen by men of sensibility and compassion as humanitarian." – Arthur Seldon*[220]

While the biosphere crumbles under the slow-motion impact of all our manic economic busy-ness, and our social environments wilt as inequality worsens and materialism grows ever more blind, political and business powerbrokers continue to defend their privileges. Armed to the

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[217] Galbraith & Salinger, *Almost Everyone's Guide to Economics*, p.8

[218] Balogh, *The Irrelevance of Conventional Economics*, p.14

[219] Galbraith, *Money*, p.283

[220] Arthur Seldon, preface to Milton Friedman, *From Galbraith to Economic Freedom* (The Institute of Economic Affairs, London, 1977), p.8

teeth with orthodox explanations provided by myopic economic experts rigidly facing yesterday, they confound common-sense with their wishful thinking and their reality-tunnel-vision. However bad it looks, they advise us merely to continue, perhaps a little more carefully, with habits of the past.

Yes, we have some trouble—even economists are forced to agree. But not to worry, they say, because if something has enough importance, the market *will* act—LSD, the Invisible Hand, optimising equilibrium forces and all that—remember? Just trust us. The market knows best.

Yet as long as the market maximises its profits by externalising its costs in the form of ecological degradation, it has no monetary incentive to change its practices—*unless* doing so would somehow increase profits. However, usually the opposite occurs: short-term costs are normally involved in arranging pollution control or sustainable timber-logging or developing renewable energy alternatives or most other changes that might enhance the future by improving present techniques. Consequently, those who must pay the additional costs (initially at least) simply don't (a few responsible exceptions aside)—instead they pursue their self-interest and maximised profits most easily by continuing entrenched externalising habits.

Neoclassical theory has recognised this, and even proposed how to deal with it.

Early in the twentieth century, A.G.Pigou proposed that taxes be levied on polluting or otherwise externalising firms (and subsidies given to those few who provide positive externalities).[221] Such taxes would push up the costs and prices of the externalising firms, so giving them at least some incentive to consider other methods of production not subject to the same taxes, including previously costlier alternatives that the taxes might thus render 'competitive'. Pigou's approach, to this day, remains the standard one—even the 1992 Earth Summit and later iterations advocated its widespread adoption, and it lies at the foundation of carbon taxes and emission trading schemes.

Of course, Pigou's call for government regulation—of what, in his day, was thought of as a perfectly self-regulating system—was not then popular with other economists; even so, his proposal contains serious flaws.[222] Firstly, the ecological effects of productive techniques often cannot be properly anticipated, and hence, taxes cannot be expected to apply to some producers until long after they have caused problems. But even then, to work as intended, any such tax would have to cost producers more than it would for them to stop degrading the environment; otherwise, as Commoner put it, "some producers might be willing to buy the right to pollute by paying a tax and then damage the environment in ways that no taxes can repair."[223]

However high the extra costs, and whether imposed by taxes or by willingly chosen adoption of more ecologically aware techniques and equipment, producers would still attempt to pass the costs back to consumers by raising prices; if they did not, usually they would lose profits and probably eventually go out of business. Either way, as Commoner again pointed out, "inevitably, the poor would suffer most… either through increased prices or reduced wages."[224] Governments could compensate the poorest, by redistributing some of the tax gains back to some of those ultimately paying for it, and this is often advocated by carbon tax/trading proponents—however, the complexity of such an approach, especially given the potentially difficult task of settling on a level of tax sufficient to actually dissuade pollution, makes this approach potentially far more cumbersome and bureaucratically involved than direct

221 Commoner, *The Closing Circle*, p.253

222 As mentioned in footnote 41, see Patel, *The Value Of Nothing*, pp.158-163 for a more detailed explanation of the weaknesses of carbon taxes and emission trading schemes.

223 Commoner, *The Closing Circle*, p.254

224 Commoner, *The Closing Circle*, p.271

investment by government in research and development of greener technologies (not that any neo-classicists would heretically suggest that government should take over the role of any part of the market).

So, taxing of negative externalities *might* reduce them, albeit by transferring costs of cleaning them up from those causing them, but it does little to prevent or dissuade externalities from arising in the first place. And, of course, externalising firms often have sufficient profit levels to motivate them to argue strongly to government against being taxed, to at least delay if not prevent change.

And so, we barely change at all, instead muddling on with BAU (most suitably pronounced as 'bore'): *B*usiness-*A*s-*U*sual.

BAU remains approved and sanctified by neoclassical economics, for which the bottom line 'is' that we must continue to compete—fighting scarcity enough to survive and prosper, but not so well as to avoid needing to invent more jobs to keep the numbers of losers low enough for winners to continue winning *and* fighting scarcity enough to survive and prosper, but not so well as to avoid needing to invent more jobs to keep the numbers of losers low enough for winners to continue winning *and* fighting scarcity enough to etc etc… ad nauseam.

BAU invariably advocates greater market rule (however much already exists, and however much damage it has caused), increased competition (which usually means lowered wages and/or reduced tariffs), and growth. These, claim neoclassical advocates, give us our only real chance of achieving optimality in circumstances of eternal scarcity. Indeed, in their view, without competitive growth, the market won't make enough profits to afford investing in ecological protection and restoration. So, first things second (if not last).

But if we can only afford to fix our problems *when* we are growing, then the question becomes how often *will* we fix them? In theory, frequently. Because ecological responsibility involves work, and therefore jobs, it can actually increase (as well as accompany) growth. But in practice, as explained, the questions of who pays for it all and who might lose profits take precedence—and because the market rules, responsibility is generally avoided until ecological or social degradation mounts so much that even LSD-prices cannot mask it. Hence, growth tends to occur without the problems that most need attention being addressed before they turn critical.

So, following BAU-ing economically rational prescriptions means acting as though (most of the time) we *cannot* afford to *save* the world (although, apparently, we *can* afford to *destroy* it). Rational behaviour, did they assume? Even a textbook recognised that "to be economically rational, production should represent a conversion from a less desired to a more desired configuration."[225]

Recently, perhaps belatedly aware of BAU's pitfalls, economists have augmented their claims with another: as well as market rule, competition, and growth, we require 'sustainable development'. If we manage this, say economists, wealth will trickle down in the most optimal manner. A couple of decades ago, it was even suggested that sustainable development with growth rates of just three percent could all but remove poverty worldwide any year now.[226]

It certainly makes sense to develop sustainably—otherwise, eventually, development stops. If development isn't sustainable, then we run out of trees to chop down, oil and coal and minerals to dig up, clean air to breathe, and functioning ecologies on which to depend. If

[225] Hirshleifer, *Price Theory & Applications* , p.15

[226] MacNeill, "Strategies for sustainable economic development", p.106

development isn't sustainable, then we won't be able to sustain development. Trivially accurate, such advice provides no hint of *how* to develop sustainably.

Truly sustainable development could happen if we stopped defining development *as* economic growth, and concentrated instead on improving the quality, rather than increasing the quantity, of our economic activity. But the fierce futility of LSD-competition, sanctified by BAU-ing neoclassical economics, does not allow this. It demands not actually sustainable development, but the oxymoron of sustainable growth—another hopeless attempt to run in two different directions at once. And so, 'sustainable development' seems a mere catchphrase, bereft of meaning, adorning neoclassical economics like a tatty thin mask, and borrowed by canny politicians to placate frustrated electorates.

The prominence given to economics, particularly in recent times, and especially to its ministers' largely incomprehensible ramblings, seems to give it an air of authority and indisputability. But as the state of economies often suggest, authority does *not* guarantee understanding. Devoted to flawed assumptions, implausible aims, and unreliable predictions, and ever defending its sacred tenets, however authoritative and indisputable it might seem on the surface, economics functions more as faith than science. This seems oddly apt, because modern society so strongly worships money…

Chapter 4

Money & Wealth

"There have been so many changes and they come so fast and nobody really understands the international monetary system. I believe the long run stability of the system is in question." – M.Johannes Witteveen[227]

While the game of competition uses prices as the scores, money acts as a symbol of wealth meant to facilitate both the scoring and the game. Too often though, money takes over the game, becomes its end rather than its means. LSD turns into L$D, reducing prices to numbers that mean next to nothing—mean only what we perceive or choose to ascribe to them.

This chapter examines the use and abuse of money, beginning with a brief historical overview of the many forms it has taken since its inception, which makes obvious how, to successfully function, money requires widespread agreement or belief. Too often, though, that belief confuses money with wealth, which further corrupts the market's flawed price signals, encouraging even less optimal results including the frittering away of energies on money-making but wealth-destroying goals. (Section 4.1)

Confusing money with wealth also results in the charging of interest for borrowing money. Ownership allows and competition compels interest, but, as a consequence, lending is restricted to ventures expected to make profits, not efforts that satisfy more pressing needs, such as homes for the homeless. (4.2)

Confused beliefs also lead to modern financial exchange that can look like sleight-of-hand or, particularly regarding banks (4.3) and speculative markets (4.4), like delusion. With no more than the flourish of a pen, loaves-and-fishes banking systems lend money many times greater in amount than the savings left by depositors. Reserve Banks create money on receipt of nothing more tangible than government-completed forms. Currencies fluctuate, constantly shifting values based on *perceptions*, incessantly being bet upon, for and against. Creative accountancy manipulates ledgers to transform a reality of bankruptcy into a pretence of profit. Fickle manic depressive (sometimes paranoid) markets for bonds, stocks, derivatives, shorts, mortgage-based bundles, collateralized debt obligations, credit swaps, and various other too-clever-by-half exercises in self-deception—glorified IOUs and bets upon gambles—conjure up cash flows with almost as much ease as they lose them (the traders' assumptions, biases and perceptions now enshrined in automated computer trading programs).

The constant turmoil of our confused monetary beliefs—the endlessly shifting values of interest rates, debt levels, currencies, stocks, bonds, and derived fabrications—also lead naturally to frequent and often undesirable changes to the prices assigned to real wealth, their inherent inaccuracies and flawed functioning as market signals corrupted further by inflation. (4.5)

[227] M.Johannes Witteveen, former managing director of IMF and former Netherlands Finance Minister, cited by 'Smith', *Paper Money*, p.109

4.1 Can You Believe It?

> *"You have to decide whether you make money or make sense, because the two are mutually exclusive." – Buckminster Fuller*[228]

Money sounds absurd, unless one's ears have been tuned just right…

The handing over of a few pieces of paper or coins, to receive in return the objects or services of one's desires, would seem an act of magic if it did not comprise such an ingrained habit and prime feature of our consensus tunnel-reality. Of course, such magic is meant to prevent time and energy from being eaten away in barter. However, this convenience comes with a price that, over time, has rendered money's magic at least as much black as white.

Since its invention millennia ago, money has taken diverse forms—including cattle, beads, shells, whale teeth, tobacco, stone disks, cigarettes, and liquor[229]—and come in many different national brands (currencies): the USA has dollars, England pounds, Germany marks, Iran rials, Laos kips. (Money also has many alternate names, including cash, dough, bread, bills, greenbacks, moulah, wampum, scratch…) Today, most money exists as book-keeping entries and as bits of information in computers, but quite a lot still takes the form of metal coins and paper. (…dosh…)

To supersede barter, money necessarily functions in two ways: as a 'medium of exchange'—something that can be accepted in return for goods and services—and as an 'asset'—something that can retain its value between its acquisition and exchange. (…palm oil…) The dual functioning of money has been most commonly attempted using metal, especially silver and gold. Early metal money dates back four thousand years, but not until the seventh century BC did a state issue standardised coins in any quantity. Probably first minted in ancient Greece, early coins, shaped like beans, consisted of both gold and silver, and were stamped to certify their weight and/or purity.

Though rarely the case now, a coin's content once determined its 'value'. For instance, between roughly 600 BC and 350 BC, the Athenian drachma contained about 67 grains of fine silver,[230] so that exchanging a drachma equated to handing over a definite quantity of precious metal. Because the 'value' of goods in terms of drachmas was thus directly and stably related to the 'value' of goods in terms of silver (which in turn was 'determined' by LSD), the drachma's content enabled it to be treated as an asset of known value and, hence, also as a medium of exchange. Because of its content, the drachma had what is called a silver 'standard'. But, like all currencies, the drachma eventually lost its standard, because of deliberate 'debasement' of the coinage. (…loot…)

For most of money's history, people of sufficient inventiveness have found ways to manipulate it to suit their profit-maximising purposes. The oldest recipe for such financial 'success' consisted of removing some of the precious metals from coins (sometimes replacing them with less valuable materials) and selling the precious metals for more coins—to extract more metals from—to sell for more coins—to repeat over and over until satisfied (if ever). But when people found out that their coins had been debased in this way (or even when they only thought they had), they stopped trusting in the 'value' of their money—in its claim as an asset—preferring instead to trust precious metals or other items regarded as valuable and likely to

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228 Fuller, *Critical Path*, p.225

229 *The New Encyclopaedia Britannica*, Volume 24, p.333 (Macropaedia entry for *Money*, written by Milton Friedman). Much that follows is based on this reference.

230 Friedman, *The New Encyclopaedia Britannica*, p.334

remain so. Deprived of their official content, debased coins also performed less well as an exchange medium: people happily exchanged them for goods, but few people wanted them in return for goods—unless offered more than usual amounts, which meant generally rising prices or 'inflation'. Not until the late seventeenth century, when coins began to be made with serrations around their circumferences ('milled'), so that debased coins could be more easily detected, was the practice discouraged. Since then, however, various other profit-maximising practices have been pursued which have had adverse effects on money standards.

Prior to the twentieth century, many currencies were simultaneously defined as worth so much gold *and* so much silver, but such bimetallic standards did not last for long. (…spondulics…) At the end of the eighteenth century, for instance, after the USA dollar had been defined as worth a specific amount of gold, and fifteen times as much silver, an influx of silver caused the market to treat gold as worth *more* than fifteen times as much silver. For anyone then in possession of gold, profit-maximisation was achieved not by selling it to the government mint for them to use in coins but rather by selling it in the market, buying more than fifteen times as much silver with the proceeds, and then selling that to the mint. Consequently, the silver content of coins increased, and the metal overvalued by the official bimetallic definition became the effective standard. Years later, the dollar was redefined as worth sixteen times as much silver as gold, "which overvalued gold, so gold became the standard."[231] These examples demonstrate Gresham's law: readily exchanged ('bad') money drives out more trusted ('good') money, by causing it to be retained as an asset and so cease to function as an exchange medium.

A single gold standard—despite its reputation as *the* traditional standard, and despite its reign in Britain since 1717—did not proliferate until late in the nineteenth century, after vast gold discoveries in California, Australia, and (later) South Africa had caused the LSD-price of gold in terms of silver to decline. By early in the twentieth century, most of the world had adopted a gold standard; this made conversion of one currency into another quite simple. For example, as Milton Friedman explained, at the time a USA "dollar… was defined as 23.22 grains of pure gold… A British pound sterling was defined as 113.00 grains of pure gold… Accordingly, one British pound equalled 4.8665 U.S. dollars (113.00/23.22) at the official parity. The actual exchange rate could deviate from this only by an amount that corresponded to the cost of shipping gold."[232] (If exchange rates had deviated further, buying and shipping gold to settle a foreign debt would have cost less than exchanging local for foreign currency.) But the gold standard all but ended with World War 1, the emphasis since being placed on paper money.

Paper money was first used in a form called 'fiduciary': especially from the seventeenth century, paper notes were issued as the equivalent of IOUs, representing for the recipient a claim on, and for the issuer a promise to pay, a corresponding amount of the money's metal standard (likewise, coins began to be made of only cheap metals like copper, tin, brass, and/or steel). Such an approach, however, tended to result in fiduciary money being issued in amounts which promised repayment of more precious metals than actually existed. (…gravy…) It didn't matter as long as people kept the money and didn't all try to swap it for the metal standard. But as over-issues became recognised, people lost faith in the money and did try to swap it, or else demanded a greater quantity of it in lieu of its perceived impoverished quality (just as occurred after coin debasement). Galbraith noted a few of the more distinctive historical examples of over-issued fiduciary money: "the paper money of the American colonies before the Revolution,

231 Friedman, *The New Encyclopaedia Britannica*, p.334

232 Friedman, *The New Encyclopaedia Britannica*, p.334

the *assignats* that helped finance the French Revolution, the Continental notes that paid Washington's armies and the Greenbacks of the American Civil War were all issued by governments on their own. And when the volume outstanding could no longer be sustained by the state from any available metal, conversion of the notes back into hard coin would be suspended."[233]

Money that lacks convertibility into metal is called 'fiat' money. But dropping the metal convertibility of a fiduciary currency, and so making it fiat, has usually been done only in the extreme need prompted by war. Even the most reliable fiduciary money of all—British sterling, whose pounds, shillings and pence had stable values for almost two centuries—could not avoid twice being made inconvertible, in order to pay for fighting Napoleon and World War 1. In both instances, inflation followed as people found it difficult to believe in money not backed by metal. Between Napoleon and World War 1, however, British sterling acted as what a modern writer with the pen-name of 'Adam Smith' called the world's 'key currency'—the money other nations trusted most and measured theirs against. (…lolly…) During its hey-day, people of many nations even keenly exchanged their own less reliable currencies for sterling, which gave Britain enough foreign money to help finance the building of its world empire. But like the British Empire, fiduciary sterling began to pass into history upon the outset of the First World War.

After suspending gold convertibility during the war, Britain reinstated it in 1925 at the *pre*-war standard. With higher prices, as a result largely of war-time inflation, this overvalued the pound, so exporters to Britain preferred payments to be made in gold. Britain increased interest rates to attract foreign money, which could be traded instead of gold, but this helped little—as did most else—and by the time the Great Depression began, though most of the world had also returned to a gold standard, sterling's reign had ended. In 1931, sterling's gold convertibility was again abolished, and the world was left without a key currency. Considerable chaos ensued: international exchange rates were no longer fixed and each country tried to use the situation to their own advantage. But when World War 2 tipped civilisation out of the frying pan and into the fire, the USA dollar took over the role of the world's key currency. USA citizens could not convert dollars to gold, but central banks (see section 4.3) of foreign nations could—at the rate of 1/35th an ounce of gold per dollar. In 1944, forty-four nations fixed their currencies in terms of dollars (more nations soon followed), and with enough dollars "to finance the world's trade",[234] and in the absence of any alternative key currency, the international monetary system returned to fixed exchange rates.

But just as everyone wanted sterling last century, after World War 2 everyone wanted dollars. (…smackers…) The currency travelled everywhere, paying for the rebuilding of much of Europe, and then for the products it made, even for transactions denominated in dollars but not involving USA citizens or businesses. Yet while some dollars came back to the USA to buy its goods, by the 1960s more had piled up abroad: by purchasing more from other economies than they did of it, the USA had developed a balance of payments deficit. The Vietnam War, paid not out of taxes but by printing money (see section 4.3), exacerbated the problem. And by then, resurgent European economies were making products in many cases preferable to those of the USA, so they began to trade their dollars, in increasingly large amounts, for other gradually more desired currencies (especially Swiss francs, German marks, and Japanese yen). Thus, in only a quarter of a century, the key currency had lost favour.

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233 Galbraith, *Economics in Perspective*, p.144

234 'Smith', *Paper Money*, p.119

From the late 1960s, dollars piled up in European and other central banks—which naturally chose to send the excess back to the USA, in exchange for gold (or, as section 4.3 explains, for government bonds). But the USA was not going to give its gold to foreigners in exchange for travel-worn greenbacks for long. "In August 1971 the United States Treasury stopped selling gold for dollars altogether. The potential claims on the gold were too great."[235]

Since then, the world has not had a key currency (although, because of the sheer size of the USA's economy, its dollars have nevertheless continued as usually the most dominant currency). Rather, as had been briefly and disastrously attempted during the Great Depression, fixed exchange rates between national currencies have been abandoned, and exchange rates vary from transaction to transaction, as determined by the buyers and sellers involved, and subject only to their own appraisal (occasionally modified by central banks, as section 4.4 explains). The present international monetary system thus consists of national fiat currencies mediated by 'floating' exchange rates. It has not proved stable, either.

Since the 1970s, the 'floating world' has seen seething tidal waves of economic instability batter national prestige and performance. Indeed, without a bedrock on which to fasten our economic machinery, without a clear standard to measure the 'value' of money, it often seems we are drowning more than floating. In particular, prices have soared: a USA dollar that bought 1/35th of an ounce of gold from 1933 to 1971 could buy less than one-tenth of that amount two decades later (at the time of writing, not even one-fiftieth). Conservatives often suggest beating a retreat to a gold standard, but the world's central banks own too little gold for it to serve as a standard for the amount of money needed to maintain current levels of world trade (unless most currencies are redefined, contrary to LSD, as worth a very tiny fraction of an ounce of gold). Most of our current monetary problems, however, stem from something even more fundamental than the absence of a standard.

Money functions as intended only if most people using it accept it as what it is said to 'be': money. (…lettuce…) The logic seems circular, but without it money could not exist. Money 'is', in effect, whatever we *believe* it to 'be'. Hence, with sufficient belief, the International Monetary Fund (IMF), an intergovernmental organization that oversees the global financial system and functions more or less as an international 'bank', could create its own currency in the early 1970s—the Special Drawing Right (SDR)—"by a stroke of the pen, by creating a new account and a new unit of account… not backed by gold or any other national currency… It derives its strength from the fact that the members of the I.M.F. are *willing* to accept it and use it as a means of payment between central banks in exchange for existing currencies."[236]

As long as people are willing to accept a currency, the spell of belief holds and money magic works; but when the spell wears off, people start to treat inherently worthless metal coins and paper notes as inherently worthless. The spell wears off and people lose faith whenever coins are debased or paper is over-issued, or when money loses convertibility into a 'real' asset or erodes in value under high inflation or *changes* in any essential way *from what we know and believe*. Hence, floating exchange rates, which guarantee change (especially when adopted after centuries of fixed metal-backed rates) only ensure less belief and less convincing money magic.

Those who call for a return to a gold standard see it as able to renew belief (as it did in 1944). Yet gold is not the final repository of value. Like the metal-base of any fiduciary money, and like the money itself, gold can only be *traded* for things genuinely valuable (meaning useful) such as a meal or a shirt or a house—and only *if people agree* to trade it, which requires a

235 'Smith', *Paper Money*, p.121

236 Sodersten, *International Economics*, p.445 (my italic)

common basis for exchange. So, whether fiduciary or fiat, metal or paper, precious or base, money can only be traded for goods if there exists a common acceptance of an utterly artificial *definition* of the money's 'value'. Money thus constitutes a not always maintainable "social convention"[237] or agreement, and its metal backing or lack, an *arbitrary* choice which, at best, may encourage the stability of belief necessary to maintain the social agreement. Ultimately, money depends not only on the backing of real wealth—including the environment and human imagination, from which all wealth ultimately derives—but on a society capable of agreement and of performing the work necessary to create the real wealth.

However, the convention of money tends to fail not just because of weakened beliefs, but also because of *confused* beliefs. (…shekels…) Whatever the particular form employed, people often confuse money with wealth—even though our social agreement, when maintainable, allows money merely to *represent* wealth. Money is *not* wealth, only its symbol. Wealth can be defined as physical objects or services which benefit humanity (John Ruskin likewise defined 'illth' as objects or services detrimental to humanity, such as weapons). But money merely represents the market LSD-valuation of the real wealth.[238] Robert Anton Wilson put it neatly: "*Money is neither wealth nor illth but merely tickets for the transfer of wealth or illth*."[239]

Confusing the map of money with the territory of wealth, though, constitutes the norm. And the normal confusion motivates a pursuit of monetary profits which not only damages real wealth like forests, rivers and air, but also emphasises money's asset quality so much as to inevitably weaken its capacity to function as an exchange medium. And so, we play not market competition, and definitely not perfect competition, not even LSD-competition, but L$D-competition, a game where players aim not to increase real wealth but to redirect and concentrate onto themselves the fluctuating wealth-symbols of the economic flow, by convincing others to part with their money for any reason that can be accepted. Such a game further corrupts the market's flawed signals…

4.2 Vested Interest

> *"The trouble with paper money is that it rewards the minority that can manipulate money and makes fools of the generation that has worked and saved."—'Adam Smith'*[240]

The creation of real wealth requires effort—directly as labour, indirectly as provision of tools, equipment, and know-how. Under L$D-competition, effort requires payment—even before the effort can produce consumable goods that can be sold at prices that might cover the monetary costs of the effort. Over the centuries, as the scale of production has increased, borrowing money to pay people to help create new wealth has grown more and more necessary. A very advantageous situation has thus developed for those with an excess of money available to lend—and of course, in a system based on the pursuit of self-interest, they exact a price for their lending, a price aptly called 'interest'.

Money-lenders are particularly advantaged by the compounding of interest. If you borrow $100 at an interest rate of ten percent a week, then in a week's time you could fully repay the loan with $110 ($100 of 'principal' plus $10 interest). But if you don't pay next week, then a

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237 Friedman, *The New Encyclopaedia Britannica*, p.333

238 Working against such a distinction, economists and others use the word 'capital' to mean real-capital (physical assets) or capital-value (money) or both.

239 Wilson, *The Illuminati Papers*, p.149

240 'Smith', *Paper Money*, p.295

week later you'd owe not just $110, but an extra ten percent of that—a total of $121. Every week that the debt is foregone, you'd be penalised ten percent of the total amount owed the week before. After a year of no repayments you'd owe more than $14,000. (…oof…)

Partly because of its compounding nature, interest was condemned for most of recorded history as extortion. But as the scale of production increased in the last few centuries, opinions changed. In Galbraith's words, interest became "reputable" when it "was redefined as a payment for productive capital—when it became compellingly evident that the one who borrowed money made money out of doing so and should, in all justice, share some of the return with the original lender".[241] However, the lender's return is generally not provided by the borrower but ultimately by the purchaser of goods produced by the borrower: producers who borrow can only have successful businesses if they add their costs of borrowing to the desired level of profit, and set LSD-prices to cover both. By adding a cost ultimately paid by consumers, interest turns LSD-prices into L$D-prices.

Of course, economics textbooks defend interest as a "natural cost" of borrowing money. They do so by treating money and credit (loaned money) as subject to supply and demand, which enables schedules of interest versus "quantity of credit" to be drawn. Yet this approach does not justify why a mere *symbol* of wealth should be ruled by LSD and cost more symbols to borrow; it merely *accepts* that money can be owned as an asset, and hired out for a fee like land, labour and production equipment. In the words of a textbook: "If someone else wishes to obtain current command over resources that I presently own, I cannot be induced voluntarily to give up that command unless I am rewarded. That reward will be the interest received."[242]

In other words, interest is charged because ownership *allows* it and because competition *compels* it—which comprises an explanation but not a justification. Even as an explanation, it seems out of date, because for centuries, most lending has been done not by actual owners of the money lent but by banks and other institutions with whom others have merely *stored* money. Furthermore, as the following section explains, most money leant nowadays is not even truly owned, merely recorded in bank ledgers and treated as owned.

Ultimately, interest allows those with possession or claim, but not necessarily actual ownership, of plenty of wealth-symbols (whether gained by skill, deception, sheer hard work and perseverance, extortion, or just plain good luck) to determine, by their willingness or reluctance to lend, what new wealth is created. And the willingness to lend depends simply on whether lenders expect borrowers to be able to repay the loan and afford the interest charges. For lending to businesses, this in turn depends almost entirely on lenders' estimates of borrowers' potential to profit from their ventures. (…ackers…)

Hence, mostly sure-fire profit-returning or risky higher-profit-returning wealth tends to be created. Wealth that requires money in advance to initiate, but which has genuinely optimising effects that cannot be measured in terms of profits or delusionary L$D-prices—for example, homes for the homeless—tends *not* to be created by the market, only (if deemed essential) via government taxation. So, the territory further loses priority to the map ("if it says Utopia, then that must 'be' where we 'are'").

Of course, borrowing means debt, and debt (as chapter 1 explained) requires growth, which in turn requires more debt—a dangerously unstable dynamic prone to collapse. Aggravating this dynamic, and making interest even more dubious, a delusional set of banking practices allows the lending of a great deal more money than the amount actually possessed…

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[241] Galbraith, *Economics in Perspective*, p.12

[242] Miller, *Intermediate Microeconomics*, p.13

4.3 Liquid Delusion

> *"A 'sound' banker, alas! is not one who foresees danger and avoids it, but one who, when he is ruined, is ruined in a conventional and orthodox way along with his fellows, so that noone can really blame him." – John Maynard Keynes*[243]

Savings banks, commercial banks, investment banks, trading banks, finance companies, trust companies, savings-and-loans companies, building societies—their exact rules of operation vary, but no shortage exists of firms who accept money for safekeeping and pay interest to their depositors for the privilege. (All such firms will usually be referred to henceforth as banks.)

People have been leaving money with others for safekeeping since ancient times, but the earliest 'modern' banks appeared 'only' about 800 years ago in Tuscany in northern Italy. The Tuscan banks can be called modern because they began the process of replacing cash (at the time, coins full of precious metals) with pieces of paper representing a promise to pay cash. These early experiments in fiduciary money, like primitive credit cards, saved merchants from the bother of transporting unwieldy volumes of cash around with them on their often wide-ranging journeys. In time, Italy's banking practices spread to the Netherlands, where the Bank of Amsterdam was formed in 1609. This bank, initially just a place of deposit, soon took to lending money in ways barely distinguishable from current practices.

When a bank lends money, it alters its records by opening a credit account. Then or later, *if required*, it hands over to the borrower the corresponding amount, either in cash—which it obtains from that left with it by depositors—or as a cheque—which can later be cashed. More often these days, no cash is handed over, instead all the transfers are merely recorded in the relevant accounts. Either way, as soon as even one credit account is opened, the money available to all of a bank's customers, according to their accounts, exceeds the actual cash deposited. On the books, credit creates money; in reality, it merely shuffles it around. (…lucre…) Repayments of credit—whether by cash, cheque or transfer from deposit accounts—have the reverse effect: they reduce credit accounts (eventually) to zero, leaving a bank's recorded customer liabilities equal to its actual cash stocks—or at least they would if banks didn't *always* have outstanding loans.

So, out of nothing credit comes, and to nothing it returns. Freshly created credit thickens the economic flow by re-circulating over and over an otherwise stagnant savings pool, but repayments thin the flow back to 'normal'. However, the compounding interest paid for credit concentrates the 'normal' economic flow in the direction of banks, transferring to them money from *someone* else's pockets (see section 1.5)—and not just a little either. Typical home mortgage loans, when not repaid until the end of their multi-decade terms, net lenders interest worth several times the amount loaned. Quite a reward for shuffling paper.

Of course, credit-creation can only occur because banks have the unique legal power to adjust their accounts and be taken literally, and to access their depositors' cash with little restriction. Yet, for any bank with even one credit account open, if every account holder wanted to withdraw all of the money recorded in their accounts, this could not be done—because the total recorded in all of the bank's customer accounts would exceed the actual cash deposited. Hence, banking involves certain inherent risks, as many have discovered over the years eg. the USA's IndyMac, and Savings-And-Loan companies, including Washington Mutual; Australia's Tricontinental, Pyramid Building Society and Estate Mortgage Trust; Iceland's Landsbanki; many nations' Bank of Credit and Commerce International, and Bear Sterns…

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[243] Keynes, *Essays in Persuasion*, p.156

Sometimes, a bank fails: it finds itself with insufficient cash to meet depositors' withdrawal demands, either because it made too many bad loans (those ultimately not repayable), or because its depositors lost confidence upon hearing of many bad loans—or even upon hearing rumour of them. Whatever the reasons, in a 'bank run', many depositors come at once for their money, but with much loaned out to others, insufficient for all is left. The bank turns away those of its customers who miss out, closes its doors, and calls in its loans (which often results in collateral acquisitions, because loan contracts invariably authorise banks, should repayments prove tardy or not forthcoming, to legally confiscate borrowers' assets as their own, up to the value of the outstanding amount). Then the bank sells its assets, and returns the proceeds to its creditors, owners and depositors—in that order. (…dibs…) Rarely if ever is enough scraped together to cover everyone's losses, and so the economic flow usually thins. But this non-optimising effect can sometimes spread considerably: in 1933, for instance, after four years of bank runs, depression, and diminishing confidence in the economy—against which the magic wands of bankers' pens have no power—it took a presidential declaration of a week-long 'bank holiday' to stop the entire USA banking system from folding up.

Many different 'remedies' have been tried to prevent bank failures—or at least to minimise their very non-optimal effects—but in Galbraith's words, "all were a response to bitter experience. At all times, men were torn between the immediate rewards and costs of excess and the ultimate rewards of restraint. It was only after the first were experienced that the second were legislated."[244] For instance, after the USA banking system all but collapsed in the Great Depression, the Roosevelt administration attempted to resurrect it using insurance. During the 1933 bank holiday, the Federal Deposit Insurance Corporation (FDIC) was formed, backed by the federal government to guarantee all deposits up to a maximum (currently) of $250,000 per account owner. Funded by insurance premiums paid to it by banks, the FDIC seemed to adequately serve the USA banking system—until the mid-1980s when cracks began to show.

Like any other insurance firm, the FDIC can lose its liquidity—which is to say, its excess of cash and cash-convertible assets over its debt commitments. This can occur if enough banks insured by it lose their liquidity and go bust. Encouragement for just such a turn of events began with President Reagan's deregulation of USA financial institutions in 1982, which legally allowed them to take extreme and sometimes greedy risks; hence, when later property market downturns and the 1987 stock market crash wiped out hefty proportions of the value of many banks' assets, some found themselves non-liquid. In particular, the USA's Savings-And-Loan companies (S&Ls) went bust in such great numbers that the FDIC had insufficient funds to cover all the losses. At first, the FDIC allowed the S&Ls to stay in business in the hope that they would trade themselves out of trouble, but most only got into deeper trouble. Eventually, the FDIC had no option but to shut down the failed S&Ls, seize their assets, sell them, and with the proceeds pay creditors, owners and depositors.

As a government body, the FDIC can make up its shortfall of funds by borrowing from the government Treasury, but this means ultimately that taxpayers foot the bill. (…brass…) Hence, by the end of 1999, the entire S&L debacle had cost taxpayers $124 billion.[245] So, when bank failures occur in great numbers, the FDIC merely acts as an intermediary in the economic flow—a go-between for redistributing money from the nation as a whole to those of its members who lose because of bust banks. Paper-shuffling squared. The process can work very inefficiently: it has been suggested that inexperienced FDIC staff sold S&L assets at absurdly

244 Galbraith, *Money*, p.40

245 Timothy Curry and Lynn Shibut, "The Cost of the Savings and Loan Crisis: Truth and Consequences FDIC", December 2000, available at http://www.fdic.gov/bank/analytical/banking/2000dec/brv13n2_2.pdf. Additional details from *The Great American Bailout* (broadcast 6 April 1992 on Australia's SBS TV network), and John K.Galbraith, *The Culture of Contentment* (Houghton Mifflin, New York, 1992), pp.61-4

low, possibly colluded prices, and that, for political purposes, the FDIC delayed action until after the 1988 presidential elections, an act which ultimately doubled the S&L losses and, consequently, the FDIC/taxpayer debt. But then, as Galbraith wrote in regard to the debacle: "The free enterprise system fully embraces the right to inflict limitless damage on itself."[246]

Not all nations insure bank deposits as an attempt to prevent or minimise bank failures, but most operate 'central banks'. Central banking began with the founding of the Bank of England in 1694, originally as a private bank, but soon after as "largely an agency of the government. The Bank of France was established as a governmental institution by Napoleon in 1800."[247] The USA, since Independence, has had several tries at a central bank; the current version—the Federal Reserve System—was founded in 1913. In Australia, the counterpart is called the Reserve Bank.

Although central banks operate (like banks) as businesses, seeking and usually winning profits, they also have wider responsibilities and are occasionally nationalised. They exist mainly to regulate banks and their lending practices. But like insurance, central banking does not always work. The USA's Federal Reserve System could not stop the banking collapse of the Great Depression or the bank failures of the Great Recession, or less dramatic failures in between. In other countries, too, bank failures have persisted despite the many forms of central banking. Nonetheless, central banks do sometimes help keep banks liquid, by regulating the amount of money available to an economy and the amount that banks can lend—in other words, by managing a nation's money supply (roughly speaking, the 'volume' of its economic flow).

A central bank regulates the money supply in three main ways. Firstly, it sets 'reserve requirements'—a minimum percentage (usually) of bank deposits to be kept at the central bank 'in reserve' (enough to satisfy all depositors seeking their money in normal circumstances but *not* in a run). When business booms, however, and profits are thought to be guaranteed from doing so, banks will keep less money in reserve (and lend more) than is required—at least until auditors investigate carefully enough. They may also employ other more creative accountancy practices to reduce their official reserve. In contrast, during dark economic times, banks may keep more in reserve than is required, due to reduced numbers of willing new borrowers. Just as the actual reserves vary, the reserve requirement itself depends on the country, the type of deposit (time or demand), the size of the bank, and the economic, political, and psychological climate. In most cases, the figure ranges from two to ten percent, with no country presently above thirty percent, but a few at zero.[248] How reserve requirements actually affect the money supply and banks' lending practices can be best explained using an example.[249]

Assume, for simplicity, that for all banks and all deposits, the reserve requirement is set at ten percent and that all banks meet this requirement. Thus, if a bank receives a new $1,000 deposit, it sends $100 as a reserve to the central bank, and lends the remainder. But the loaned $900 is eventually spent, and sooner or later, it passes to people who choose to deposit it in one or more banks. These banks, in turn, send ten percent of the now *re-circulated* $900 ($90) to the central bank, and loan the remainder ($810). But the new loans, too, are eventually spent and re-deposited in banks, which send ten percent to the central bank, and lend ninety percent ($729)—which ends up re-deposited to start yet another cycle—which eventually starts

246 Galbraith, *The Culture of Contentment*, p.59

247 Friedman, *The New Encyclopaedia Britannica*, p.336

248 See list included in http://en.wikipedia.org/wiki/Reserve_requirement

249 Much of following based on Sherman, *Stagflation*, pp.127-9

another—and so on. When the final cycle is reached, money 'created' by the entire banking system as loans, because of the original $1,000 deposit, will total $9,000, and reserves, $1,000.

But although the depositors of the original $1,000 and its many re-circulations will have bank accounts 'proving' that, between them, they 'own' $10,000, only the original $1,000 will actually exist as cash—the extra illusory $9,000 will 'exist' only in bank records as a result of re-circulating the actual $1,000, over and over. So, no new money is printed, merely *recorded*. (Of course, modern accountancy's version of the loaves and fishes miracle can work only as long as everyone doesn't come at once for their money.)

The proportion by which money can be expanded *on paper* by the 'fractional reserve' banking system just described equals the reciprocal of the reserve requirement—at ten percent, the recorded money supply equals ten times the actual; at five percent, twenty times; and so on. Approximately. In practice, people may not need to borrow all that banks make available for borrowing, banks may not want to lend it all, and some loans may not return to banks but be kept under mattresses, with illegal 'black' markets, and so on.

Central banks can regulate banks by adjusting the reserve requirement: raising it means that banks keep less and so reduce lending, lowering it means banks have more to lend. The 'multiplier effect' that sees one deposit re-circulated many times as loans also works in reverse: reduced loans even for one bank have the same contractionary effect on others. However, the potential for this approach to cause liquidity problems for riskier banks tends to result in it being used less often than other regulatory options.

Central banks more often and more easily affect the money supply by altering what is called the 'bank rate' or 'rediscount rate'—the interest rate they charge, as lenders of last resort, for their loans to banks. Raising the bank rate either reduces the amount that banks are prepared to loan, or, more likely, causes their own interest rates to be raised—in either case, borrowings tend to reduce. Lowering the bank rate has the opposite effect of increasing the money supply.

A third method employed by central banks to regulate the money supply involves the very curious subject of 'bonds'. Bonds are issued by business companies, including banks, as well as by various government departments, especially Treasury, and by state-owned enterprises such as the post office. Like paper money, bonds have no intrinsic value in themselves, and act essentially as interest-bearing IOUs: they are offered at a set interest rate and with a promise that the bond-seller will repay the purchase price after a set period (at 'maturity'). Companies sell bonds because they expect to use the money so gained in ways that will make them sufficient profits to not only repay the 'bondholders' their money plus interest, but also to make a tidy profit themselves. They do not always succeed. Of course. If issuers of bonds go bust, proceeds from the sales of their assets go first to those they owe money for goods, services and taxes, and then, if any is left, to bondholders. Sometimes, holders of bonds issued by companies which go bust get nothing back, as happened with nearly all of the USA's railroad bonds during the Great Depression.[250] Bonds that stop paying their promised returns are said to have 'defaulted' (the same term is used for loans that can no longer be repaid by their borrowers).

Central banks regulate the money supply by buying and selling government bonds, activities called 'open-market operations'. Operation seems an appropriate word. Study the following example very carefully—the central banker's pen 'is' quicker than the eye.

[250] Fuller, *Grunch of Giants*, pp.59-60

If a central bank buys (say) $1,000 of government bonds—from the Treasury or second-hand from someone else—it pays "by a check on itself",[251] *recording* this in its official books as increases of $1,000 in its assets (the bonds) and $1,000 in its liabilities (the cheque). When the bond-seller cashes the cheque or deposits it at a bank, or passes it on eventually to someone else who does the same, the bank receiving the cheque 'cashes' it at the central bank, which does so by again *recording* it as done: the cheque liability is removed and replaced by an increase of $1,000 in the reserves of the bank cashing the cheque, which means (with a ten percent reserve requirement) that an extra $9,000 can be lent by the banking system overall. Because, at some stage, $1,000 in new notes will need to be printed to match the increase in the *record* of bank reserves, central bank purchasing of government bonds is often referred to as 'printing money'. It also has a more benign and vague euphemism: 'quantitative easing'. Since the turn of the century, it has been used extensively by the USA, Europe, Japan, and other nations after they had reduced their rediscount rates to zero percent or barely above.

In a similar fashion, if a central bank *sells* government bonds, the cash or cheque used to buy them reduces some bank's reserve account with the central bank, which reduces that bank's and the system's overall lending capacity by nine times as much (assuming a ten percent reserve requirement).

The central bank gains by either operation: bond sales return it cash or else a ticket to plunder a bank's reserve account, bond purchases return it interest from governments until the bonds mature—a handy arrangement for a profit-seeking business like central banking.

So, the convenient fictions of bonds, mere *promises* of future security, by 'mutual' agreement, and via the legally granted powers of central banks, 'allow' money to be created by the recording of it as done—and once recorded, everyone treats it as so. Just like the shuffling of fractional reserve systems that turn a deposit into several loans, money magic indeed. But when a central bank buys bonds with cheques on itself, and ups its assets and liabilities by the same amount, so recording its liquidity as unchanged, it can do so only because, unique among economic game-players, it has a mint handy to keep up with its cheque-writing propensities. Even banks have to work harder than this to make money.

Purchase of a government bond costs a central bank nothing, yet gains it interest. The government or bond-seller also gains the sale's revenue—handy for covering a budget deficit, bailing out the FDIC or even the entire financial system, paying for the Vietnam war, or (in theory at least) trying to boost spending during a recession. The economy even gets more money to spend. Dare we believe that everyone wins? A *positive-sum* game? Well, yes. But not for long. Because governments must go into debt to sell bonds and pay interest on them, and because "government bonds have prior right to funds produced by taxes",[252] the apparent free gift more closely approximates hire purchase.

Governments sell bonds for similar reasons to business firms: governments often see bonds as worthwhile investments because the revenue gained from their sales can be used to encourage economic growth, which not only is expected to work to the benefit of the nation they are meant to be managing, but also means extra tax revenue (from extra income) to pay off the bonds and their interest. Hence, though frowned on by neoclassical theory, governments can—and frequently did until a decade or so ago—run budget deficits year after year, without any need for compensating surpluses, as long as the following year's economic growth is expected to increase revenue enough to cover the interest on this year's escalation of debt.

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[251] Friedman, *The New Encyclopaedia Britannica*, p.336. Nowadays, rather than involving a cheque, computerised update of the seller's and his bank's reserve account usually suffice to record the sale—the consequences about to be explained, however, remain the same.

[252] Fuller, *Grunch of Giants*, p.60

But the process remains a gamble: if growth does not occur, revenue does not increase, and the debt mounts. Governments then have only a few options. Firstly, sell off state-owned assets like banks, airlines, and electricity and water companies—although such 'garage sales' involve a lot of effort and mess, and can't last forever. Or raise taxes and/or cut spending—not always politic, but sometimes necessary to keep debt manageable. Or, like a snake swallowing its tail to avoid starving to death, a government can try to foster growth to pay off bond debts by going *further* into debt, either with banks or via new issues of bonds. Certainly, the USA Federal Congress, despite inevitable ceremonies of protest, has a persistent habit of raising the legal 'limit' for the total value of outstanding government bonds whenever it feels the need. But of course, a snake cannot swallow its tail indefinitely.[253]

If government bonds were to be defaulted, the central bank's assets would diminish by the value of its unredeemable bonds, and liquidity would evaporate. No more central bank, no more fractional reserve banking system, and no more economy ('optimal' or otherwise). To avoid such a disaster, to maintain the system, and to keep its own debts in hand, governments *must* sell assets, cut spending, and/or raise taxes as necessary. So, although a bondholding minority benefit, the system is maintained ultimately at taxpayers' expense. So also, we have 'no' option but to believe (or at least hope) that, despite mounting ecological and social decay, the future will always provide greater optimality and more capacity to repay debts incurred now to keep the system going. Meanwhile, eroding that belief, government and central bank debt mounts—along with business, consumer, and most other forms of debt[254]—in nominal terms, in real terms, as a percentage of GDP—here, there, and in most places—and most of the time since World War 2. 'Smith' wrote that "the accumulation of debt began as a logical response to the era of paper money",[255] but a snake swallowing its tail must at some stage stop—if only to throw up.

Before then, however, the snake gorges itself on many imaginary meals provided not just by banks…

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253 In distinct contrast to all this, one nation, the Channel Islands has a very different approach: it "does not run a national debt. If one of the islands' administrations wishes to fund a new project or public service, but does not have the revenue from taxation to do so, it creates money as a government issue for the specific purpose. This is used to fund the project and is thereby spent into the economy. In subsequent years the money is gradually taxed back, then cancelled out or 'destroyed'. The rationale behind the process is that the monetary economy is, or should be, subordinate to the 'real' economy. The questions that the islands' administrations consider are: (a) is there a genuine need for this project? (b) do we have the materials necessary to complete the task? (c) do we have unemployed workers who want employment? If the answer to all three is 'Yes'', then the Governors feel justified in creating the money to allow the various resources to be mobilised, and the project completed. Once the job is complete, the money involved has completed its function—hence it is withdrawn by taxation and destroyed." —Michael Rowbotham, *Goodbye America! Globalisation, debt and the dollar empire* (Jon Carpenter, Charlsbury, 2000), p.188. The rationale that the real economy takes precedence over the monetary version, and that we should ask the question 'what needs doing?' rather than 'what can we afford?', forms the basis for the economic proposals of part two of this book, with a one-off injection of money for specific public projects implicit in the way prices are set (section 7.5) and how exchange is accounted (section 7.8).

254 As per footnote 78, see 'Smith', *Paper Money*, p.292, & Fuller, *Critical Path*, p.115 , or for more recent data, http://www.rba.gov.au/speeches/2010/sp-dg-150610.html, http://www.debtdeflation.com/blogs/2010/11/05/solving-the-paradox-of-monetary-profits-2/ and http://yellowroad.wallstreetexaminer.com/blogs/?p=32

255 'Smith', *Paper Money*, p.104

4.4 Speculation

> *"Face it—you're too busy to lose the kind of money you're making. It's time to put our strong hand in your pocket. Turn it over. Give it up. Submit to Boom Dot Bust… A usurer-friendly, randomly managed, ethically indifferent, cash vacuum. From U.S. Whatgate Plus." – The Firesign Theatre*[256]

As mentioned, to gain investment money, businesses sometimes issue bonds—either asset-secured 'mortgage' bonds or asset-unsecured 'debentures'. Companies also acquire money via two types of 'stocks': 'preferred' stocks yield a fixed interest return (like bonds), and 'common' stocks return annual payments called 'dividends', the value of which depends on what's left of company profits after first being apportioned to bondholders, then to preferred stockholders, and then to the company itself (as 'retained' profits) for investment or expansion purposes.

Bonds and stocks are together called 'securities', but unlike bonds, stocks entitle buyers to part-ownership of the issuing company. Stocks are issued in what are called 'shares' (a word often used synonymously for 'stocks'). If a million shares of stock are issued (often in minimum lots of hundreds or thousands), any one share corresponds to 'ownership' of a millionth of the company, including proportional voting rights for some operational and policy decisions.

Some shares are not made available to the public, but are retained by the founders of issuing companies (at zero cost, because paying oneself for anything involves no exchange.) Founders of companies naturally aim to retain a controlling majority of shares to ensure their own policies rule, but circumstances sometimes prevent this: firms can and often do maximise their profits most easily by gaining a majority of the shares of smaller, more profitable companies. Indeed, profitable businesses are often bought by so-called 'private equity' groups of financiers with no relevant experience of managing those businesses, who then pay the loans taken out to afford the purchases via the profits of the companies obtained, after which they sell the businesses at yet another profit after having done nothing as owners to enhance their operations or even keep them competitive.[257] This never-ending process of 'buying out' and 'taking over' further concentrates business, involves a lot of debt, risk and effort that could be put into more productive ventures, frequently leads to inefficient and hastily conceived organisational restructures based on massive staff cuts for those taken over, and generally replaces the practical knowledge of original business owners with the operational ignorance of financiers. Hardly optimal.

Any legally registered business company can sell stocks (or 'go public' as the process is sometimes called), although state approval and licenses may be required in some countries for issues over a certain size. But while the actual value and amount of shares issued ultimately depends on a firm's perceived ability to pay returns to stockholders, sometimes it seems like companies just play 'pick a number—any number'. Consider this example given by 'Smith': "In 1972… [t]he Levitz brothers… of Pottstown, Pennsylvania, were furniture retailers whose company netted $60,000 or so a year. Then the company noticed that sales were terrific when they ran the year-end clearance sale from the warehouse… [T]hey added more warehouses, and the company went public… At one point, it was selling for seventeen times its book value, one hundred times its earnings, and… [the brothers] had banked $33 million of public money for

256 The Firesign Theatre, from the title track & 'Doom Bot Dust' from their album *Boom Dot Bust* (Rhino Records, USA, 1999)

257 For details, see Das, *Extreme Money*, pp.155-164

their stock, and they still held $300 million worth."[258] (…pelf…) More money magic, reminiscent of money-printing and credit. Yet impossible without L$D.

Because the profitability of a company determines the returns to common stockholders, and the certainty of returns to holders of bonds and preferred stocks, it also influences the demand for the company's securities, and hence—via L$D—their prices. "Those who first find out about the increased present or future profitability of a company will bid up the price of the shares of stock in that company, and those who first find out that the company is going to be less profitable in the future will, by their selling, cause the price of the stock to fall."[259] Of course, people find out different things, and think differently, and 'know' differently.

In fact, people mostly *speculate* as to the prices of securities, depending on what they *think* they know and what they *expect*. Perceptions rule. It makes for extreme activity. For instance, some people might expect interest rates at banks to rise enough to cause their own fixed interest returns on bonds and preferred stocks to be surpassed. They would therefore probably be prepared to sell their securities at a discount. Likewise in reverse: if bank interest rates fell or were expected to fall, the market valuation of bonds and stocks generally rise. But a re-sale of any security occurs only if both parties to the exchange *believe* they gain an advantage from it, which largely depends on them having different circumstances and/or expecting (or hoping for) different futures (such as those in which interest rates change in opposite directions).

Much speculating over, and buying and selling of, securities occurs in what (less than correctly) is usually called the 'stock market'. Yet "for most stocks on any one day, only a fraction of 1 percent of the total number of shares owned is traded."[260] All who 'play' the stock market aim to buy cheap and sell for a profit, but of course, not all can succeed. Nevertheless, the stock market's potential for quick and easy profits lures people to it—those with spare cash who think they have an eye for picking winners. Some even turn it into a business: financial institutions like mutual fund companies exist almost solely for the purpose of investing clients' money in securities. Many other people indirectly speculate through insurance and superannuation companies, and even banks, who all invest at least some of their clients' savings in stocks and bonds and whatever else seems likely at the time to pay off. But although the totality of all (international) buying and selling of securities can result in generally rising security prices (aptly called 'bull' markets) or falling prices ('bear' markets), ultimately, even well "managed funds with well-paid managers do about the same as a totally random portfolio… that is what the statistics say."[261] And of course, in a zero-sum game, those who win do so only because others lose.

A few can't help but win. People in privileged positions of trust and/or specialisation, such as company directors or lawyers, can find themselves in possession of information—unavailable to the general public—indicating highly probable price movements of specific securities. For instance, share prices often rise after a company is taken over—which happens all the time—so anyone in the know beforehand could profit by buying shares prior to the official take-over announcement. Such 'insider trading' is not legal, but the extent to which it nevertheless happens can only be guessed. Likewise for the extent to which creative accountancy fiddles the books…

If L$D-prices mislead, then some of the work of accountants on company revenue and expense ledgers, which determine official profits, simply deceives—especially in recent

258 'Adam Smith', *Supermoney*, (McGraw-Hill, New York, 1978), pp.20-21

259 Miller, *Intermediate Microeconomics*, p.263

260 Miller, *Intermediate Microeconomics*, p.95

261 'Smith', *Supermoney*, p.92

decades. To use one example provided by Satyajit Das, "Traditionally, earnings are recognised when cash is or is about to be received, progressively over the life of a contract. *Mark-to-market* accounting allowed revenues over the entire contract life to be recognised *immediately*."[262] In an accountant's own words: "Accounting today permits a shaping of results to attain a desired end. Accounting as a mirror of activity is dead."[263] Reiterating this differently, "the head of one of… [the USA's] major drug companies put it quite succinctly: 'One good accountant is worth a thousand salesmen'"[264]—at least as long as he or she can get away with it. In the most notable example of recent years, Enron Corporation reported high profits for years, but in 2001, soon after its widespread accountancy *fraud* was discovered, the company went bankrupt.

Subject to such manipulations, and the speculations of those who do not *know* what is happening, securities markets prove less than secure. Yet some securities prove more prone to trouble than others. In the 1920s, for instance, many financial innovators developed what were called 'investment trusts' and 'holding companies'—businesses which did nothing more productive than issue securities of their own to invest the money so raised in securities of other companies. (…boodle…) Galbraith explained the inherent risks of such an arrangement: "if anything interrupted the upward flow of dividends—from which the interest charges on the upper-level [investment trust/holding company] bonds had to be met—the bonds would go into default, the whole structure collapse in bankruptcy."[265] And of course, the stock market crash of 1929 provided the unsought interruption: the dramatic fall in prices of securities savagely cut the market valuation of business assets, and thus evaporated much liquidity; less profitable as a result (if not bankrupt), most companies could only pay much smaller (if any) dividends, which thus ended the free ride of investment trusts and holding companies.

Not that the security-issuing methods of the 1920s constitute an exception. As Galbraith put it: "The holding-company promotions together with the investment trusts… were, in all respects, the precursors of the conglomerates, performance funds, growth funds, offshore funds, and real estate investment trusts… [which] were to grace and then ungrace the financial scene of the sixties and seventies."[266]

The junk bonds of the 1980s also deserve mention: high-interest bonds issued for high-risk business ventures lacking alternative funding but rarely profitable for long, and hence rarely paying bondholders their expected returns beyond the short-term. Michael Milken, a USA 'stockbroker', achieved brief fame by arranging junk bond issues largely to finance risky business takeovers. Milken made much personal profit in the process ("$550 million in 1987 alone"[267]), but his junk bonds nonetheless turned quickly to junk, most investors lost their money, and Milken lost his freedom.

The subject would not be complete without mention of 'mortgage-backed securities' (MDSs)—also known as 'bundles' or 'collateralized debt obligations' (CDOs). When house prices were steadily climbing in the 1990s, some financial innovators realised they could profit by purchasing mortgages from banks, bundling them together, and then issuing securities backed by the mortgagees' repayments. Like other borrowings similarly transformed by financial wizardry into 'securitized debt', these MDSs were then traded like any other type of

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[262] Das, *Extreme Money*, p.66. Similarly, though perhaps not strictly an accounting trick, 'repos'—which require sales to be followed later by repurchases at a higher price—effectively hide assets. According to Das, *Extreme Money*, p.366, using repos, banks "reduced their balance sheets by as much as 40 per cent over quarter ends, effectively hiding their leverage and risk from the world."

[263] David Norr, cited in 'Smith', *Supermoney*, p.214

[264] 'Smith', *Supermoney*, p.215

[265] Galbraith, *Money*, p.182

[266] Galbraith, *Money*, pp.182-3

[267] From an article in a Melbourne (Australia) newspaper, *The Age*, 26 April 1990

security. As long as borrowers kept paying their mortgages, MDSs made their owners significant profits. But MDSs went sour after interest rates rose and housing prices, especially in the USA and Britain, began to fall in 2006. Soon, many borrowers defaulted on their mortgages, and the MDSs turned to junk, which eventually prompted the investment company Lehman Brothers to make the largest ever USA bankruptcy filing (over $600 billion)—all of which triggered the credit crisis and stock market plummeting of 2007-08 that ushered in the Great Recession.

An increasing number of other very insecure securities could also be explained, such as 'derivatives', 'shorts', 'swaps', but these too-clever-by-half exercises in self-deception—glorified IOUs and bets upon gambles—differ only in detail; like all the others, they conjure up cash flows with almost as much ease as they lose them.[268] As Keynes remarked: "The social object of skilled investment should be to defeat the dark forces of time and ignorance which envelop our future. The actual, private object of the most skilled investment today is 'to beat the gun',… to outwit the crowd, to pass the bad, or depreciating, half-crown to the other fellow."[269] This point is further made by the vast amounts invested in the most insecure securities: by 2006, securitized debt and derivatives comprised 79 percent of all the world's liquidity, equivalent to more than five times global GDP (with bank loans adding up to 19 percent, and only two percent in cash, reserves, and bank deposits held by central banks).[270]

Of course, various authorities have responsibility for preventing or stopping unfair and dangerous securities practices. Some activities are even forbidden by legislation (usually *after* they have caused a lot of damage). But the actions of some authorities, such as the New York Stock Exchange (founded on Wall Street in 1692) can themselves seem unfair and dangerous. Referring to events during 1970, when the USA stock market fell almost as markedly as it did in 1929, 'Smith' had this to say: "A firm is supposed to have a certain amount of capital in relation to its obligations… As firms began to fall grossly behind in their capital requirements, they would be suspended from dealings by the New York Stock Exchange. Except for very big firms… Said Robert Haack, president of the exchange, 'We simply can't afford to have a major firm fail.'… [Principally because] the announcement of a suspension of a major firm might cause a run on all brokers, even ones in good shape, by worried customers."[271]

But Stock Exchanges can only do so much—they certainly cannot prevent the market from falling. Stock markets have crashed dramatically not just in 1929 and 1970, but also in 1987 when stock prices fell by twenty to sixty percent in a matter of days.[272] Indeed, on October 19, 1987, aided by computer programs that automatically sold stock as soon as their prices fell to certain levels (undoubtedly incorporating the traders' assumptions, biases and perceptions),[273] stock prices fell more sharply (in percentage terms) than on any single day before or after (over 22 percent in the USA). A year later, another dive of around ten percent occurred. Japan's stock market fell less than others in 1987, but mostly declined for the next twenty years, its 'average' dropping from almost 40,000 to barely 7,000 over that time. As section 5.2 explains more fully,

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[268] The basics are explained very readably in Satyajit Das, *Traders, Guns & Money: Knowns And Unknowns In The Dazzling World of Derivatives* (Prentice Hall, Harlow, 2010), pp.26-7. This concludes by calling financial derivatives a "gigantic system of betting on changes in prices". On page 29, the *speculative* nature of derivatives is admitted. On page 322, they are described as "highly leveraged [ie. indebted] commercial bets on movements in prices, interest rates, currencies, shares and commodities… [which] can be used to manage or create risk. But investors increasingly used derivatives to increase risk to earn higher returns. As at the end of 2008, derivative outstandings were around US$600 *trillion*. In comparison, total global Gross Domestic Product is around US$60 trillion."

[269] Keynes, cited by 'Smith', *Supermoney*, p.76

[270] Das, *Traders, Guns & Money,* p.325

[271] 'Smith', *Supermoney*, pp.56-57

[272] As 'little' as 22 percent in Canada, but up to 60 percent in New Zealand—see http://en.wikipedia.org/wiki/Black_Monday_%281987%29.

[273] Das, *Extreme Money*, p.420, claims over half of all stock trading is now done by computers, the "average holding period… a few seconds."

such changes have their effects. According to some analysts, the 1987 crash made a major contribution to the recession of the early 1990s, by filling the interim period with unstable short-term curative attempts and alternative investment strategies that ultimately could not be sustained. The market fall that followed the 'dotcom bubble' of the late 1990s (a period marked by overly enthusiastic investment in Internet-based companies) has also been blamed for leading to similarly poor policies (such as too low interest rates) that helped create the credit crisis of 2007—which in turn led to even lower interest rates and even easier money policies of central banks, which many consider to be leading inexorably to yet another financial crisis.

Regardless, the stock market—inherently and irremediably unstable and uncontrollable—*must* crash sometimes. As Galbraith explained: "Speculation occurs when people buy assets, always with the support of some rationalizing doctrine, because they expect their prices to rise. That expectation and the resulting action then serve to confirm expectation… [If] enough people are expecting the speculative object to advance in price… [they] make it advance in price and thus attract yet more people to yet further fulfil expectations of yet further increases… If anything serious interrupts the price advance, the expectations by which the advance is sustained are lost or anyhow endangered. All who are holding for a further rise—all but the gullible and egregiously optimistic, of which there is invariably a considerable supply—then seek to get out. Whatever the pace of the preceding build-up, whether slow or rapid, the resulting fall is always abrupt."[274] And of course, hopes and expectations cannot rise indefinitely, and serious interruptions do occur—so, the stock market can only bear so much bull.

Stocks and bonds cannot help but cause trouble, their markets doomed to sometimes turn into over-valued 'bubbles' that must inevitably burst. Securities markets divert the economic flow, channelling money into companies keen to profit, in return for receipts whose values and interest/dividend returns swell and shrink, oscillating as perception and misperception of profitability changes. A comment by Das about a particular company in 2000 seems more generally applicable: "Stock prices no longer represented any real underlying business or earnings. It was monopoly money, convertible into something real if others believed in its value."[275] Necessarily variable, security values can mislead economies into thinking they have, or are making, great wealth, when instead, like banks and central banks, they may merely be devoting much of their efforts to a non-optimal shuffling of unproductive wealth-symbols. But securities are not the only things that suffer from these problems; and neither are they unique in developing a credulous following who sooner or later can't maintain their belief.

Land and property values also go up and down depending on L$D. Usually, in the developed world, they mostly rise. But sometimes they rise too quickly and then quickly fall. The falls don't last long— usually. The Great Depression, however, saw such a steep fall that it was not reversed until the 1950s. Speculators who can pick the trends tend to clean up. Just as they do with commodities: anyone anticipating higher prices because of poor crops or lowered production can buy now or order at current and contractually binding prices, then (if expectations prove correct) reap large rewards by re-selling at higher L$D-prices. The same advantages can be gained by storing a surplus for later, when supplies are expected to run low.

Speculation also now runs rife in regard to currency exchange rates: only about three percent of currency market flows deal with "actual trade and investment… The rest is… speculative capital zooming around the globe at the speed of light along fibre-optic cables in search of

[274] Galbraith, *Money*, p.116

[275] Das, *Extreme Money*, p.68

profits."[276] The habit began decades ago. As section 4.1 explained, currencies were still fixed when the USA severed the link between its dollar and gold in 1971, but national growth rates and debts, balances of payments, and government budgets, often told tales different to the stories implied by the exchange rates. So, people learnt to distrust or favour certain currencies—some seemed overvalued, others undervalued. To cope, the dollar was soon devalued, the price of gold raised, and newer more 'agreeable' exchange rates fixed. But this didn't help much.

As nations grappled with the uncertainty of *no* standard—no key currency against which to measure their own—as over-issues and under-issues of money loomed big in fact and imagination, L$D went into overdrive. In the scramble, prices and wages rose here and skyrocketed there. A textbook explained the results: "differences in price levels tended to create lasting deficits and surpluses. Some currencies were weak, while others were strong. The field was now left open for speculators to move in. They started to sell the weak currencies and buy the strong ones. They could hardly lose under a system of fixed exchange rates as speculation tended to become a riskless one-way operation… It has been estimated that the speculators made net profits of at least $5 billion during the crisis years 1967-73. These losses were born by the various central banks in their struggle to defend existing parities."[277]

After a few more attempts at currency revaluations, exchange rates were floated in 1973. Change had become too swift and perception too confused to leave them fixed. The majority of economists, especially those employed for their counsel by governments, gave their approval to the move, believing that no other option existed (and few have changed their minds since).

After the 1973 float, any currency "was worth, on any given day, what the buyers and sellers said it was worth… [T]he markets… follow… Gresham. Sell the weak currency and buy the strong one. Better, borrow the weak currency—pay it back when it's still weaker—and buy the strong one."[278] Money is thus treated like a commodity, and exchanged accordingly.

But L$D-trading in wealth-symbols creates problems even for strong currencies. Nations can acquire too much of a strong currency, then reduce the excess by selling it cheaply, enough of which lowers the average exchange rate, and so 'weakens' the currency. To strengthen currencies, governments and central banks often resort to raising interest rates above those of other nations; this motivates more trading of other currencies for the local version (in order for it to be deposited in local banks) and, hence, increases demand for it, which L$D-pushes up its exchange rate. But locals also pay more for borrowing, so it involves a price. And it often just encourages other nations to raise their interest rates to 'enhance' their currency in the same way—another potential vicious circle. More regularly, central banks try to stabilise their currencies and compensate for market excesses by themselves buying and selling different currencies, using reserves put aside for just such emergencies, or raiding petty cash as the need fits.

Not surprisingly, floating exchange rates have not made for much stability. Indeed, in the modern floating world, some nations only have to burp in order to rock others' boats. For instance, because Germany and Japan import all their oil, their balance of payments surpluses reduced (and sometimes turned to deficits) when OPEC (the Organisation of Petroleum Exporting Countries) raised its oil prices in the 1970s. The mark and the yen consequently lost value—but they soon regained it, because the German and Japanese economies produced and exported more goods, and so gained the extra income necessary to pay for the costlier oil. The USA dollar fared less well at the time; however, because OPEC has a lot of dollars in its many

[276] Das, *Traders, Guns & Money*, p.30

[277] Sodersten, *International Economics*, p.465

[278] 'Smith', *Paper Money*, pp.129 & 131

bank accounts around the world, when the dollar's value goes down, OPEC at least considers raising oil prices to compensate—yet another vicious circle hard to exit.

But instability arises in an even more fundamental and less easily compensated way: because the behaviour of floating foreign exchange markets—like stock, bond, property, commodity and other speculative markets—depends mostly on the not always rational beliefs of traders, self-fulfilling prophecies tend to rule. Hence, if the latest official *estimate* of inflation is calculated as a mere tenth of a percent more or less than the average anticipated by self-styled authorities, then currencies—and stock markets and interest rates—can fall or rise out of all proportion. Similarly, if ('say') a somnambulant federal treasurer (without announcing any new information, just opinion) casually includes the phrase 'banana republic' while publicly speculating about his nation's future, traders can be inclined to believe it—prompting the home currency's value to sink like a stone.[279] Thus, economies using floating exchange rates must cope with how ill-considered hyperbolic spoken thoughts, even whims, of those with influence and/or a high-profile can greatly and adversely affect economic parameters and, more importantly, in a very non-optimal fashion, the lives and livelihoods of many game-players. Fixed exchange rates had their problems, but in the words of 'Smith', the "trouble with floating rates is that they bounce all over the place."[280] Especially in periods of doubt and uncertainty.

Keynes called money a veil, but what a tangled web we weave. Preceding chapters explained why capitalism does not produce optimality (despite what neoclassical theory claims), but adding money to the picture makes for even less optimal results. Today, with no backing by precious metals, and with no key currency to underpin others and so define 'value', we just print money—at central banks, certainly, but effectively also through credit accounts, security issues, and exchange and property markets. Tickets. Our estimates and perceptions of value, measured without a yardstick. And our energies go into speculating about those tickets, into diverting the economic flow of money onto ourselves without improving the state of real wealth. Yet though the records and accounts and receipts and ledgers and market indices often speak of utopia, oblivion always catches up. The records must be believed to be maintained, but sooner or later, the state of real wealth is perceived to deny the records. Belief wavers, the so-called 'speculative bubble' bursts, and speculators and non-speculators alike are crushed together by the collapse. The greater the misrepresentation on paper, the greater the toll. Yet given our addiction to L$D, and its encouragement to mistake the map of money as the territory of wealth, what else *could* result but multiple insoluble problems and eventual collapse.

And given the constant turmoil—the endlessly shifting values of currencies, stocks, bonds, interest rates, deposits, debts, reserves, and derived fabrications—what else could result but frequent and often undesirable changes to the L$D-prices assigned to real wealth, their inherent inaccuracy corrupted further by inflation…

4.5 Inflation

> *"…inflation is basically an endemic consequence of the operation of the economic mechanism" – Robert L.Heilbroner*[281]

When prices generally rise, this is termed 'inflation'; when prices fall, 'deflation' (or 'negative inflation'). An inflation or deflation rate estimates the *average* rise or fall in prices over a given

279 This happened in 1986 when the Australian dollar fell about eight percent in a day

280 'Smith', *Paper Money*, p.130

281 Heilbroner, *Business Civilization in Decline*, p.26

period of time, usually a year. Naturally, some individual prices rise or fall by more than average, some by less, and a few in the opposite direction to that of the many. But in keeping with most other economic 'science', even the average rate of inflation or deflation can only be *estimated*, and only after adopting convenient simplifying assumptions.

The most commonly used method for estimating inflation employs what is called a Consumer Price Index (CPI). After measuring consumer spending habits, economic statisticians define an average or 'typical bundle' of goods and services that is purchased, according to the measurements, by an average or 'typical consumer'. The typical bundle's actual cost is then used as an index of consumer prices: inflation of ±x percent means ±x percent change to the cost of the typical bundle. But no bundle stays typical forever: consumer spending habits adjust as tastes change, as the quality of products alters, as new goods and services appear, and as old ones disappear. Hence, typical consumers may spend more or less than before, and receive more or less—quantity and/or quality—in return for their money. Economic statisticians try to take this into account: according to a textbook, "if the typical bundle becomes glaringly out of date…, the bundle is revised and the old index is spliced to the new through statistical jockeying designed to smooth the transition."[282] This applies not just to the CPI but also to the wholesale price index, the investment price index, and all the rest.

But although the exact rate of inflation can be debated, not so its effects. For those whose incomes do not increase in line with inflation, it steadily reduces their ability to buy and consume; their 'real' wages drop, even if their 'nominal' (numeric) wages remain the same. On the other hand, purchasing power increases for those who raise their prices ahead of inflation. Inflation also effectively redistributes purchasing power from creditors (lenders) to debtors (borrowers) via the 'wealth effect': money used to repay loans buys less after a period of inflation than when borrowed. But inflation, like competition and exchange, comprises a zero-sum game. As Lester Thurow pointed out: "For every loser there is a winner. Inflation can redistribute income, but it does not lower the total amount to be divided."[283]

It has been claimed[284] that inflation has proportionally greater effects for high-income earners than for the poor; this follows, say claimants, because of reduced equity values, progressive tax rates, and other factors. If true, having to give up the Mercedes for a BMW should still involve less actual adversity than having to forgo a daily meal. But more importantly, the rich have more price-raising abilities than have the poor, as well as more money- and interest-making capacities, which can be used to compensate for inflation's adverse effects.

Deflation also has its problems. A little deflation mightn't hurt much, but when prices reduce significantly, as occurred in the Great Depression, business income falls, and inevitably unemployment results. In recent decades, though, deflation has occurred rarely, barely and briefly, so most of the discussion hereafter exclusively concerns inflation.

As for what causes inflation, one textbook admitted that "inflation is an area of economic theory and policy that is not yet well understood by economists."[285] (Like so much else.) Balogh gave an essentially similar though more detailed answer: "A great many factors are involved, the interaction between them is intense, and their causal direction is difficult to discern. Cause

[282] Kennedy, *Macroeconomics*, p.269

[283] Lester Thurow, *The Zero-Sum Society* (Basic Books, New York, 1979), p.55

[284] George Gilder, *Wealth and Poverty* (Buchanan & Enright, London, 1982), pp.18-19

[285] Kennedy, *Macroeconomics*, p.299

and effect intermingle".[286] Nonetheless, the economic orthodoxy has claimed the existence of two main causes and types of inflation.[287]

'Demand-pull' inflation occurs when excess demand 'pulls' up prices: if an economy's aggregate demand for all goods and services increases without a corresponding increase in supply, then—as dictated by L$D—buyers will bid up prices. But because higher prices mean lower 'real' wages, producers tend to hire more employees, and this raises demand for labour, which allows the bidding up of wages, which discourages more hiring. With higher prices and wages, demand and consumption should then reduce for many reasons: the wealth effect; the so-called 'money illusion effect' (how people tend to neglect to increase spending in proportion to their raised income); because fixed tax brackets siphon off greater tax revenue from higher nominal incomes ('bracket creep'); because government spending does not automatically keep up with inflation; because foreign buyers often find less inflated exporters; because local demand is likewise redirected to less inflated imports; and because higher prices prompt an increased turnover of money which increases its 'transaction demand' and, consequently, interest rates. For inflation to persist, with all these forces pushing demand down after prices and wages rise, something else must keep demand rising.

Keynesians—economists influenced by Keynes' analysis of the Great Depression—have long maintained that demand-pull inflation arises from, and continues because of, misjudged government budget deficits—too much government spending. Monetarists, another school of neoclassical economists who emphasise the role of money, also blame inflation on governments, but on their printing of money in amounts that keep demand ahead of supply (which often also involves big budget deficits). Monetarist theory is detailed in the appendix, but it must be pointed out here that, with or without government prompting, central banks must increase the money supply during periods of inflation so as to avoid money turning over too quickly (which would make the economic flow a vortex). If central banks did not act in this way, although inflation would eventually burn itself out through the wealth and money-illusion effects and other mechanisms described above, it would involve lowered demand, raised interest rates, increased importing, and probably reduced economic growth or even recession,[288] all undesirable results. So, the money supply usually grows to compensate for inflation—but while this can prove tricky to perform and can easily turn into *over*compensation, 'excess' money-printing is not *always* accompanied by rising prices (as the appendix shows), and even when it is, other causes contribute. Likewise for 'excess' government spending.

Inflation cannot be explained as arising purely from too much demand—whether caused by an excess of money-printing or government spending—because inflation could not then occur during recessions when demand falls below supply. Yet since the 1950s, inflation and recessions have occurred simultaneously. This has prompted the economic orthodoxy to propose an additional source of inflation: 'cost-push' inflation is said to arise because of higher production costs pushing up prices. In the words of a textbook, cost-push "theory has two key facets, without either of which it fails. The first is the ability of labor to raise its wage in the absence of excess demand for labor, and the second is the ability of businessmen to raise their prices in the absence of excess demand for goods and services."[289] In other words, imperfect competition.

It ultimately makes little difference whether labour unions or producers start the ball rolling, whether wages or prices rise first, because the other usually follows. According to Galbraith, for

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286 Balogh, *The Irrelevance of Conventional Economics*, pp.163-4

287 Much of following based on Kennedy, *Macroeconomics*, pp.192-3, 274-286

288 Kennedy, *Macroeconomics*, p.284

289 Kennedy, *Macroeconomics*, p.282

example, there existed (during the 1950s) in monoligopolistic "steel and other industries… a well-established policy of making the occasion of a wage increase the opportunity for a rather larger increase in prices and company revenues."[290] Similarly, when OPEC in 1973 steeply raised taxes on multinationals' extracting of oil from their land, the multinationals, in response, increased the price of oil—nearly fourfold in a few months—which soon led many nations to suffer the highest inflation rates of the last fifty years.

So, higher wages lead to higher prices and vice versa, which lead to even higher wages and prices, and so on over and over, giving rise to the so-called 'wage-price spiral'. Balogh aptly described the process as "a desperate and mostly futile endeavour to reassert… status and protect… real incomes".[291] Few can get much ahead of others, but none feel content to fall behind, and so all follow one and one follows all—another self-devouring snake which, before long, prompts people to start *expecting* inflation, which sponsors the raising of prices and wages in anticipation of raised wages and prices—a self-fulfilling prophecy.

Cost-push inflation, however, originates not just with unions and monoligopolies, but also with governments. Perhaps more than any other group, governments benefit from inflation, which increases their tax revenue via bracket creep, and reduces their 'real' debts to bondholders. Hence, if governments wish to raise public sector wages so as to better compete with the private sector for employees, they have fewer motivations than most for not doing so on the grounds that it would encourage inflation (especially with taxes and a mint available to pay for it). But governments contribute to inflation probably more significantly via their ever-mounting plethora of regulations—which tend to raise others' production costs—and via the techniques they use to gain revenue: 'excess' money-printing can occasionally raise prices, monetarist-fashion, and increases to taxation can reduce consumers' and producers' purchasing power. Supply-siders, another school of neoclassical economists who focus on the supply side of LSD, see taxation as *very* significant: "Taxes are costs and when costs rise, profits fall, marginal suppliers fail, output declines, demand continues, and prices rise for the remaining supplies."[292] Cost-push inflation arising in this manner is called 'tax-push' inflation.

Supply-siders—who, like most monetarists and neoclassical economists, strongly favour less government intervention—regard the inflation of the 1970s as a prime tax-push example, caused by "the *diffusion* through the price structure of the rising costs of government around the world, from OPEC to… HEW".[293] According to one supply-sider, George Gilder, from 1940 to 1979, the "price of government rose four times faster than the price of food and six times faster than the price of oil… The spiral began with necessary spending to accommodate the baby boom as it moved into schools and colleges. But then the surge acquired a momentum of its own, impelled as much by political enterprise as by social needs."[294]

Of course, when taxes do not rise, tax-push inflation should not occur. Yet the persistence of inflation in times of falling or static taxes, as occurred occasionally in the 1980s, and frequently since, demonstrates that tax-push mechanisms comprise only *one* source of inflation. Governments, at times, undoubtedly milk economies dry, but many other groups tussling for control of the udders have similar tendencies.

At least one other, perhaps most important, factor contributes to cost-push inflation. Modern developed economies have long depended greatly upon non-renewable fossil fuels and mining.

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290 John K.Galbraith, *The Affluent Society* (Penguin, Harmondsworth, 1963), pp.182-183

291 Balogh, *The Irrelevance of Conventional Economics*, p.152

292 Gilder, *Wealth and Poverty*, p.184

293 Gilder, *Wealth and Poverty*, p.198. HEW stands for the then USA federal government's Health, Education & Welfare Department.

294 Gilder, *Wealth and Poverty*, p.198

Our ingenuity in finding, extracting, processing, and transporting fuels and raw substances continues to increase, as it has for some time—but ingenuity does not increase so quickly as to necessarily make these processes cheaper. Indeed, as quickly as technology advances, supplies dwindle further, and even more elaborate equipment is then required to find, extract, process and transport less concentrated deposits from greater depths and/or more isolated locations. The more elaborate the equipment used in these processes, generally, the more it costs to build, buy, and maintain; and the more likely it requires the borrowing of money (and repayment of interest) to afford. Furthermore, with ecological concerns mounting, anti-pollution laws generally proliferate and increase costs of equipment and processing still further. Of course, as costs rise, so must prices, but likewise in reverse: as the most easily extractible reserves are used up and supply diminishes, prices rise, making viable some of the more costly but previously unprofitable extraction techniques. Because energy and mining underpin modern economies, their inflation raises a high proportion of other industries' costs—so inflation spreads.

To summarise, cost-push inflation arises from raised production costs caused by depletion of the most easily extracted supplies of fossil fuels and minerals, and/or monoligopoly and union power, and/or raised taxes; whereas demand-pull inflation follows from demand moving ahead of supply, due to an excess of government spending and/or an overly rapid growth of the money supply. All causes occur simultaneously to various extents, and feed each other.

Incorporating both demand-pull and cost-push mechanisms, the 'demand-shift' theory attempts to explain their interaction.[295] At any time, for various reasons, some sectors of an economy may experience increased demand; some producers, unable to increase supply, may instead raise L$D-prices; this can allow such 'bottleneck' producers to afford changes necessary to increase supply, such as the hiring of more workers, but it can also encourage their employees to seek wage rises. Once bottleneck workers are paid more, people doing similar work elsewhere tend to expect the same—to keep them, their employers usually comply, and then raise prices to compensate. Higher wages, though, increase demand in other sectors, prompting some of them to raise their prices and wages—so inflation spreads. But with generally higher prices and wages, the bottlenecks find themselves in the same relative situation as when they started—only the numbers have increased, and roughly the same for all. So, the bottlenecks start raising prices again, and other sectors react as before. Repeated experiences lead to confidence and expectation, which reinforce the tendency for inflation.

As all of the preceding shows, many motivations to inflate exist, but demand-shift theory makes it clear that behind them all lies the nature of L$D-competition itself: inflation ultimately occurs because game-players pursue their self-interest.

Inflation has grown into a greater and more entrenched problem in recent times: for most of the first half of the twentieth century, most countries saw prices move up and down yet vary little overall; since then, though, inflation has dominated, with few and very brief periods of deflation, so that prices now sit roughly twenty-five times higher than just over a century ago. (…stash…) Exemplifying this pattern, Figure 4 shows the USA urban average CPI for 1915-2020.[296]

[295] Following based on Kennedy, *Macroeconomics*, p.286

[296] Derived from data available at https://www.usinflationcalculator.com/inflation/consumer-price-index-and-annual-percent-changes-from-1913-to-2008/

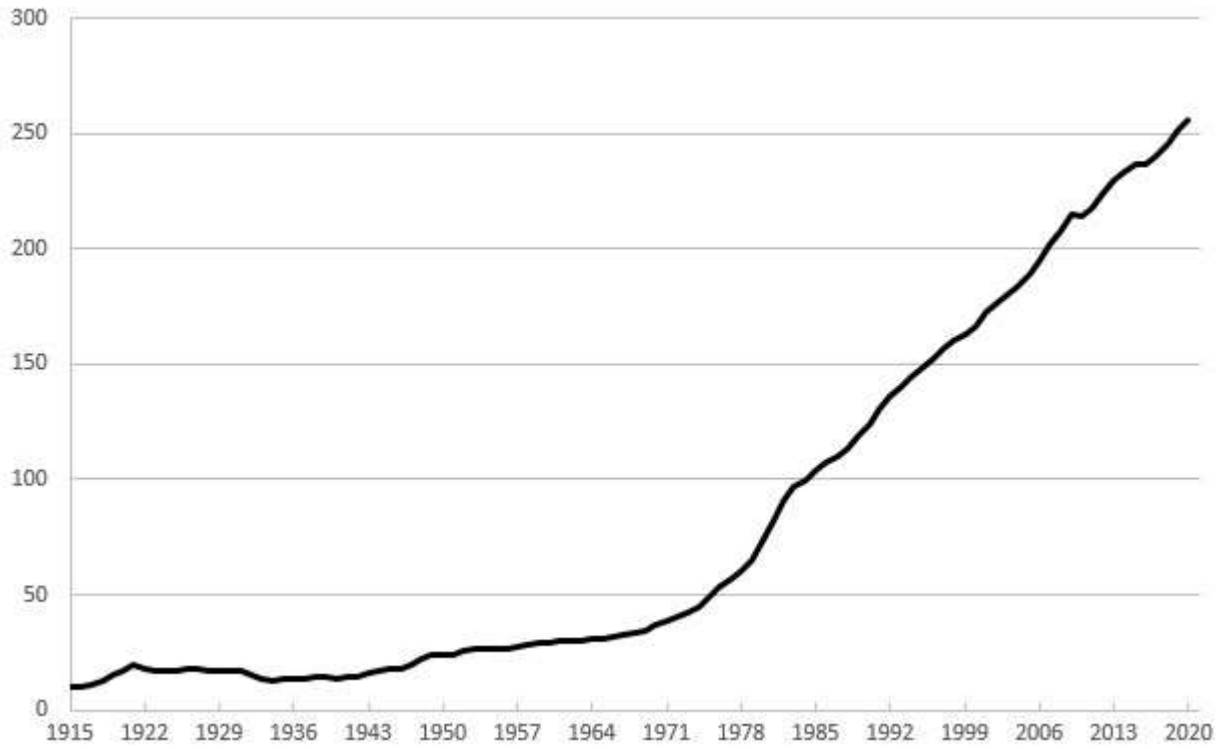

Figure 4: USA City Average CPI 1915-2020

The reasons for such steady inflation, I suggest, stem not just from diminishing raw materials and a greater number of cost-push forces, but more fundamentally because L$D-competition has little suitability for the conditions it helps create.

Modern affluence has the nature of thwarted abundance: in a system which has already satisfied most genuine needs, but which requires perpetual flows of income and maximised profits, and hence the incessant creation of work to replace that lost because of competition, producers are compelled to constantly "contrive"[297] new wants—a process which prevents people from ever having 'enough', however much abundance surrounds them. Governments and economists, infatuated with economic growth, watch on in approval. So, we pursue full employment and growth, but we create *over-employment* (more on this in section 5.1), waste, and redundancy, which ruin our ecological and social environments with pollution, the inconsumable arms race, bureaucracy, materialism, and much else. The more affluence we attain, the more waste and redundancy we generate, and pay for as we must—because it cannot be paid for in any other way—through higher prices of consumable goods.

The constant pressure to contrive wants also encourages inflation in another way. To afford a newly invented want, people must either alter their spending habits, or acquire new income; naturally, in a system based on the invention of wants and the pursuit of growth, rather than reduce other expenditure people try to raise wages and profits—or if cost-push comes to demand-shove, they take on debt. Contrived wants thus create a general demand-pull force which activates numerous cost-push forces. While some economists claim that the setting of minimum wage rates, and the price-setting powers of monoligopolies, unions, and governments, provide modern economies with so-called 'downward price rigidity'—if prices don't rise, they at least don't fall—perhaps we should talk as well of 'upward price flexibility'. And rather than cost-push and demand-pull, perhaps we should speak of want-thrust or fad-

[297] Galbraith, *The Affluent Society*, p.135

compel inflation, because the contrived wants required for the survival, let alone the growth, of L$D-competition compel prices forward, as a waving flag incites a bull to charge.

Only if new wants increase demand less quickly than supply can inflation be avoided under modern conditions, and only if the shortfall in demand appears large enough to discourage the use of cost-push powers—which means heightened unemployment. This has been demonstrated more than amply by not just the Great Recession but also the severe recession of the early 1990s, in both cases when the then highest levels of unemployment generally since the 1930s were accompanied by the lowest inflation rates for two or three decades (in some places for a few months even turning into deflation of usually less than half a percent).

In summary, many causes of inflation exist, but most follow unavoidably from L$D-competition. By insisting on the incessant pursuit of self-interest and profit-maximisation, and by needing to constantly expand and grow, modern L$D-competition creates inefficient over-employment, a demand-pull of new-want-led upwardly-flexible affluence, and a cost-push of downwardly-rigid market power—all demand-shifting us into inflationary overdrive.

But not only does modern L$D-competition's predisposition to inflation ensure further corruption of its inherently inaccurate L$D-prices, and worsen their already deeply flawed functioning as market signals, it also erodes the belief necessary for money itself to work properly.

Money generally continues to be believed in and to be accepted by "each person… because he is confident that others will. The pieces of green paper have value because everybody thinks they have value. Everybody thinks they have value because in his experience they have had value."[298]

But with sufficient and/or persistent enough inflation, the habitual unstated social belief that those otherwise worthless papers and coins have value can unravel. This has happened commonly under the pressures of war and revolution… in Hungary many times,[299] including in 1946 a record rate of 416 *quintillion* percent per *month*[300]… in Russia after its 1917 communist revolution, and nearly so in the early 1990s during its struggle to return to capitalism… in China before its communist revolution… in Chile in 1973… in Argentina in 1976 and 1989… in a lesser form, in Brazil and some other South American nations for many of the last fifty or so years… in Zimbabwe in the 2000s[301]… in Venezuela in 2018-19… and, in the most well-known instance, in Germany after World War 1, when the nation could not cope with its monstrous war debt.

By the end of 1921, German prices reached levels 35 times those of 1913; by the end of 1922, 1475 times; by 27 November 1923, 1,422,900,000,000 times. Not just inflation, but *hyper*inflation. The value of the German currency deteriorated likewise. How people responded to the situation has been told many times, including in this fashion by Galbraith: "Men and women rushed to spend their wages, if possible within minutes of receiving them. Notes were trundled to the stores in wheelbarrows—or baby carriages… At the end of October [1923] the *New York Times* told of a stranger in one of 'the lesser restaurants' in Berlin who flourished a dollar bill and asked for all the dinner it would buy. He was amply provided, and, as he was about to leave, the waiter arrived with another plate of soup and another entree, and bowed politely: 'The dollar has gone up again.'"[302]

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298 Friedman & Friedman, *Free to Choose*, p.293

299 Balogh, *The Irrelevance of Conventional Economics*, p.164

300 Das, *Extreme Money*, p.26

301 Das, *Extreme Money*, p.26 mentions that: "In July 2008, a bank in Zimbabwe cashed a cheque for $1,072,418,003,000,000"!

302 Galbraith, *Money*, pp.166-167

As disbelief in money's value bred more disbelief, Germany's vicious hyperinflationary feedback loop rendered life savings worthless, and all but destroyed the nation (in the process helping to foster conditions Hitler found so apt).

In the end, however, the need to believe in some form of money saved the day. The unreliable Mark was replaced with a new currency: the Rentenmark. In the words of 'Smith': "Germany was still a very rich country—with mines, farms, factories, forests. The backing for the Rentenmark was mortgages on the land and bonds on the factories but that backing was a fiction; the factories and land couldn't be turned into cash or used abroad. Nine zeros were struck from the currency; that is, one Rentenmark was equal to one billion old Marks. The Germans desperately wanted to believe in the Rentenmark and so they did! *All money is a matter of belief*. 'Credit' derives from Latin, credere, 'to believe'. Belief was there, the factories functioned, the farms delivered their produce."[303]

So, money seems the Tinkerbell of the economic world, a figment of our collective imagination ready to disappear as soon as we stop believing in it. But as the next chapter details, playing imperfect L$D-competition with Tinkerbell often has results—besides hyperinflation—that can do belief no good at all…

303 'Smith', *Paper Money*, p.61

Chapter 5

Profits, Jobs & Holy Growth

> *"…the complacency with which* Laissez-Faire *capitalism was expounded especially by its economist-flag bearers, was not vindicated. The system as such has not been stable; it has not produced equality, whether nationally or internationally; it has done little or nothing to mitigate the privileged position of the richer areas by a more equitable international distribution of wealth. There has been no automatic tendency for countries (nor regions within countries) of unequal economic strength to become more equal merely through the mechanism of trade or growth." – Thomas Balogh*[304]

This chapter looks at the 'macro' effects of L$D-competition, beginning with how the compulsion to grow motivates the creation of an endless amount of frequently unnecessary, often counter-productive, even self-destructive activity: only about thirty percent of work in modern economies produces real wealth, while forty percent cleans up the mess made by the rest, with the minority who do the essential work often rewarded far less than many of the majority devoted to producing no real wealth whatsoever. (Section 5.1)

And yet, despite their compulsive need to grow, and the efforts made to try to ensure this, L$D-competitive economies periodically contract into recession, casting many participants aside in the wake. Indeed, business cycles of boom and bust cannot be avoided as long as we L$D-compete. (5.2)

Governments try to keep L$D-competition growing smoothly, but because they remain *part* of the market, because they are inextricably tied to the private sector by mutual self-interest, they cannot play the role of the market's fuse-like optimiser. (5.3) Certainly, the methods they use to try to regulate the market—fiscal and monetary regulation of aggregate demand—often just don't work, for a multitude of reasons, but principally because they require a series of often contradictory juggling acts. (5.4)

L$D-competition has no way of avoiding its unwelcome outcomes, because they follow irrevocably from its game rules. As a result, despite claims of orthodox economic theory, market economies do not involve equilibrium and have no neat circular flow. Instead, their interdependent parts engage in a perpetual contest to direct onto themselves as much as possible of a complex and turbulent, yet coagulated, eddy-filled flow of liquidity—a contest which invariably leaves some fully immersed if not drowning but others bone dry (5.5).

304 Balogh, *The Irrelevance of Conventional Economics*, p.62

5.1 Employmentism[305]

> *"If we continue to believe that the goals of the industrial system – the expansion of output, the companion increase in consumption, technological advance, the public images that sustain it – are coordinate with life, then all our lives will be in the service of these goals. What is consistent with these ends we shall have or be allowed, all else will be off limits." – John K.Galbraith*[306]

Near the end of section 1.4, it was explained how market competition's drive to maximise profits encourages cost reductions which often involve less labour, and how fewer workers with less money to spend contradictorily risks reduced consumption, profits and growth. So, to truly maximise profits and growth, new jobs have to be perpetually created to replace those lost. And so, competitive market economies must aim for ever more work, which, as the last section mentioned, requires new consumable wants to be contrived. Hence, the game can have no end, and the economic engine cannot be turned off, instead it drives the vehicle round in endless circles until it must grind itself into the ground or run out of fuel.

The compelled invention of contrived wants and ever more work may comprise the real growth industry, but invented work need achieve nothing especially useful. Frivolous goods with built-in obsolescence, hybridised spawn of laptops and phones that perform the same functions only in different packaging, toothbrushes with inbuilt brushstroke counters, office furniture too expensive to sit in—whatever—just so long as they make a profit (even a short-term one) and so help the system survive and, preferably, grow. For the same reasons, more of what used to be done for pleasure is now done instead for money. Now we have entertainment, sport, recreation, and sex *industries*. One day, perhaps, a slumber industry will pay people to sleep (perhaps with the slogan "at least it keeps them off the streets").

It can't be helped, at least not as long as L$D-prices measure manipulated financial-backed demand rather than genuine need, and the market values profit-making *activity* over and above scarcity-minimising and/or life-improving and/or wealth-creating work. Nevertheless, profitable but otherwise useless activity now tends to dominate…

Fuller estimated that "70 percent of all jobs in America and probably an equivalently high percentage of the jobs in other Western private-enterprise countries are preoccupied with work that is not producing any wealth or life support—inspectors of inspectors, reunderwriters of insurance reinsurers,… spies and counterspies, military personnel, gunmakers etc."[307] To this overly brief list, I would add *most or all* work in advertising, marketing,[308] red-tape-binding, consultancy, administration, lobbying, stockbroking, employment counselling, currency and other financial trading, cosmetic surgery, real estate, commercial law, research of the bleeding obvious or utterly useless, multi-level management and supervision, elevator assistance, door monitoring, and various other jobs that do not create wealth nor serve any genuinely useful purpose except to prompt more spending and help make (or, in government circles, redistribute) profits.

Fuller's estimate, made in the 1970s, can be treated only as approximate, but most likely also as conservative, because of subsequent productivity increases, and growth in financial and other service industries. However, much modern contrived work doesn't just seem merely

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305 A term first used, as far as I know, in Geoffrey Dobbs' preface to C.H.Douglas, *Economic Democracy* (Bloomfield Books, Sudbury, 1979), p.19

306 John K.Galbraith, *The New Industrial State* (Andre Deutsch, London, 1972), p.398

307 Fuller, *Critical Path,* p.226

308 According to Rowbotham, *Goodbye America*, p.18: "Today, advertising, image-creation and various marketing strategies represent a staggering 18% of the American economy."

unproductive or unnecessary, but also counter-productive, even self-destructive: as section 1.4 mentioned, perhaps forty percent of all money spent cleans up the mess made by the rest, with the environment treated as "a garbage dump and a get-rich-quick scheme."[309] Indeed, the notion of the market optimally allocating resources can only be viewed as a mistaken article of faith when one realises that "half to three quarters of annual resource inputs to industrial economies are returned to the environment as wastes within a year."[310]

And so, forests die for memos in quadruplicate giving inaccurate details about subjects of no relevance to people who aren't interested. Toxic waste and littered packaging spew forth so some can own lights that switch on and off by themselves, or toy penguins which sweep up table-crumbs. Chemical weapons capable of wiping out the biosphere proliferate, only to become victims of treaties demanding their destruction (at fifty times the cost of production[311]). Health and environment degenerate because of pollution from gridlocked cars 'travelling' between homes and distant workplaces that many drivers would prefer not to have to attend. Inadequate leisure-time and crèche-dumped quality-time-unsatisfied children languish because of double-income stress. Corporate power games and promotional struggles sell out friendship, self-respect, and individuality. Lives waste away from workaholism or alternative addictive states sought for escape from nine-to-five humdrum. Relentless L$D-competition transforms "I was just doing my job" into a universal excuse for collective idiocy—even bestowing clear consciences to exporters of hi-tech weaponry and torture equipment banned in the exporting countries, yet sometimes sold even to nations rife with human rights violations and/or links to terrorism. If we did not 'have' to keep the economic flow growing, surely at least seventy percent of jobs in the developed world would not be 'needed'. But instead we keep on inventing new, futile, frivolous and/or dangerous forms of employment. Mundanity 'til Friday (or, nowadays, Sunday).

Naturally, too, L$D-competition ensures that the monetary reward for work has much less to do with its actual need than its capacity to assist in the making of profits. So, necessary but comparatively easily supplied work to produce food, housing and clothing, due to its inability to maximise profits, often returns low L$D-pay. In contrast, other activities akin to recreational hobbies in art, music, sport, literature, film and TV—sometimes with intrinsic value but never serving fundamental needs—often receive ludicrously high rewards due to their profit-maximising capacities… as do other unproductive jobs in marketing, legitimised gambling, pen-pushing, paper-shuffling, post-15-minutes-of-fame speaking engagements, finance—especially speculation—and much much else. Perfectly exemplifying the disconnect, according to Das: "In 2007 the combined remuneration at the five major Wall Street investment banks alone exceeded the world's total foreign aid budget of $850 billion."[312]

The cost of invented work though, whatever its true value (or lack of), must be covered by a price. And if work is not invented quickly enough to sustain growth, still someone pays—via higher taxes to cover extra unemployment benefits, greater crime rates (and consequently bigger insurance premiums), and a less cohesive and compassionate social fabric. One way or another, rich must subsidise poor; winners, losers; and those with jobs, the unemployed.

Even so, despite all the efforts to contrive wants and create jobs, to maximise profits, and above all else to sustain growth, remarkably, the efforts periodically fail…

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309 Peter Garrett, interviewed on an Australian current affairs program, *Four Corners*, ABC-TV, 19 March 1990

310 Emily Matthews et al, *The Weight of Nations: Material Outflows from Industrial Economies* (World Resources Institute, Washington, 2000), p.xi, cited in Speth, *The Bridge at the Edge of the World*, p.56

311 *Scientific American*, September 1990, p.18

312 Das, *Extreme Money*, p.365

5.2 The Manic Depressive Market

> *"…anything which interferes with the processes of production necessarily interferes also with those of consumption… [W]hen a man is thrown out of work… his diminished spending power causes further unemployment amongst those who would have produced what he can no longer afford to buy… If you buy goods, someone will have to make them. And if you do not buy goods the shop will not clear their stocks, they will not give repeat orders, and someone will be thrown out of work." – John Maynard Keynes*[313]

L$D-competitive economies are never static: often they grow, but sometimes they shrink. Alternations of expansion (growth) and contraction (often, somewhat euphemistically, referred to as 'negative growth') have been termed the 'business cycle'.

During expansion, expenditures, demand and consumption rise, and so businesses, sensing increased profits, often further expand production and hire extra staff, causing unemployment to reduce and/or consumption to increase further. Yet despite this positive feedback process, which ostensibly seems capable of keeping expansions going forever, competitive economies somehow flip over to a contraction phase, during which expenditures, demand and consumption fall, which prompts businesses to jettison staff or pay them less or close down altogether—all options that cause unemployment to grow and/or demand to reduce further, thus potentially creating another vicious circle.

Of course, growth is seen as desirable, but mostly because of the undesirable consequences of contraction. Periods of six months or more of sustained negative growth are called 'recessions', or if particularly severe or protracted, 'depressions'. When recessions and depressions end, the initial period of positive growth is called the 'recovery' phase, and the peak of expansion that follows it, if involving near-capacity production, is called a 'boom'. Recessions and depressions are also sometimes called 'busts', and the business cycle, 'boom 'n' bust'.

Most economies bust at least once a decade. In the less than seventy years since World War 2, the USA, the world's richest nation over the period, has experienced no less than ten recessions—in 1948-49, 1953, 1958, 1960-61, 1969-70, 1973-75, 1980-82, 1990-91, 2001, and the 'Great Recession' of 2007-09. Depressions occur much less frequently: the last one (the Great Depression) occupied most of the world for the entirety of the 1930s, coming four decades after the previous one in Australia and Britain, and six decades after the previous USA depression.

Busts sometimes affect only one or a few countries, but more often they spread from one to another, especially when severe or originating in economically strong nations. The weakest, of course, feel most the adverse effects. But in depressions, L$D-competition's losers proliferate and dilute the economic flow so much that even most winners are inconvenienced (although, as always, some of the more astute rich grow richer by plundering the cheap spoils made available by others' hardships).

That L$D-competition self-regulates itself optimally by repeatedly falling in a heap may seem absurd, but at least until the Great Depression, the dominant economic opinion made just that claim. At first, bewildered economists blamed 'external' causes: sunspots that impoverished harvests, inept government intervention, wars and trade breakdowns, stock market crashes, exceptional changes to money supplies (such as the retirement of the USA greenbacks just prior to the depression of the 1870s), even "inexplicable waves of psychological pessimism… [that]

313 Keynes, *Essays in Persuasion*, pp.135-138

cause temporary panics during which money is hoarded and credit is withheld."[314] But "inexplicable" and/or "external" causes allow no general design for prevention or cure, and so economists claimed that bust economies had to correct themselves—meaning self-regulation. The same conclusion followed when treating business cycles as 'normal' or inevitable rhythms, in which economic weaknesses or 'maladjustments', picked up during booms, could only be purged by busts: any attempt to hasten the end of 'bad' times or coax the 'good' could interfere with the economy's self-healing capacities, and perhaps even cause the maladjustments to be retained into the next cycle.

For all of the nineteenth century, the orthodox viewed recessions as possibly exceptional but always necessary self-regulated purgings of the economic system. It was not until early in the twentieth century, in England, that John Hobson proposed an alternative explanation: that recession resulted from insufficient consumption caused by higher profits. Hobson argued that, during expansions, profits rise faster than wages, which leaves already high-income profit-makers with a larger share of the total national income; because, generally, the higher the income, the less inclination to spend it all, the success of profit-makers in expansions reduces a nation's total inclination to consume, which turns boom into bust. However, the 'underconsumptionist' reasoning of Hobson, and many others to follow him, failed to take into account that investor demand may compensate for lower consumer demand. Underconsumptionists also could offer no practical advice for avoiding busts, merely calling for higher wages to raise consumer demand and so maintain profits and the boom—fundamentally flawed advice because higher wages also mean higher costs and potentially *reduced* profits.

'Overinvestment' theorists agreed with Hobson that the higher profits of an expansion sow the seeds of a subsequent bust, but claimed the seeds sprout because of too much investment, not too little consumption. Higher profits allow greater investment, which prompts the creation of new production equipment, but this raises demand for, and prices of, factors used in producing the goods, including labour and raw materials. Hence, by the time an economy booms, prices of consumer goods do not rise as quickly as their costs, and so, profits reduce—which decreases investment—which causes the growth in employment, income, and consumption to fall—which reduces profits and investment further—and so on—eventually increasing unemployment and turning boom into bust. The opposite process later reverses the cycle. But the many overinvestment theorists proved just as impractical as underconsumptionists when it came to advising how to prevent recessions: costs, especially wages, they said (contrary to Hobson), should be kept as low as possible, even though this would keep consumer demand low, and thus retard the growth of profits. Not until the Great Depression and the work of Keynes did economics progress beyond the joint impasse of underconsumption and overinvestment.

In 1936, in the depths of the Great Depression, John Maynard Keynes, a well-known and respected British economist, published his "General Theory of Employment Interest and Money", in which he refuted century-old dogma that had originated with "J.B.Say, the French counterpart and interpreter of Adam Smith… Say's law, not a thing of startling complexity, held that, from the proceeds of every sale of goods, there was paid out to someone somewhere in wages, salaries, interest, rent or profit (or there was taken from the man who absorbed a loss) the wherewithal to buy that item. As with one item, so with all. This being so, there could not be a shortage of purchasing power."[315]

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[314] Sherman, *Stagflation*, p.91

[315] Galbraith, *Money*, p.230

According to Say, even savings could not reduce purchasing power, because they allow a compensating level of investment. If investment fails to keep up with savings, according to Say, the problem resolves itself in a manner typical of equilibrium theory: savings surpluses reduce consumer spending and demand—which lowers interest rates and prices—which stimulates investment and consumption—which reduces and discourages savings, and brings them into line with investment. Similarly, Say viewed unemployment as sure to lead to a reduction in wages sufficient to encourage the hiring of the unemployed; because of "always sufficient" purchasing power, wages would not rise until nearly *full* employment had been achieved. Say's L$D-inspired visions of economic heaven, however, did not materialise in the Great Depression, when investment, savings, wages and prices all fell, and unemployment rose to unimaginable heights—in Britain, one person in three.

In essence, Keynes' overturning of Say's law centred on the fact that "since savings and investment were by different people and institutions, there was no good reason to expect them to be equal."[316] In an economy's expansion phase, wages, profits, consumption, production, employment and investment all increase; but as underconsumptionists suggest, sooner or later, consumption fails to keep up, and savings grow. Contrary to Say, however, Keynes maintained that savings need not all be invested—instead, as a precaution, they could be retained for the sake of increased liquidity. Of course, retained savings reduce aggregate demand and consumption, which decrease production and employment. Keynes agreed with Say that interest rates, wages and prices then all reduce, but Keynes claimed this in no way guarantees a return to full employment. Lower interest rates might merely reinforce liquidity preferences; lower wages need not be accepted, at least by those who can instead rely (for a time) on savings; and hence, lower prices need not increase consumption or investment. By the time savings reduce out of need to a level matching investment, wages, prices and production could reduce considerably, and unemployment could rise dangerously high—not a full employment but an 'underemployment' equilibrium.

Keynes' conclusion, that free markets do not always optimally self-regulate, forced him to argue for governments to regulate aggregate demand by spending in ways that compensate for changes to consumption and investment. And his methods (to be detailed in the next two sections) worked—for a while. Ultimately though, history since Keynes has shown that government regulation cannot avoid business cycles, only soften their blows (even fully regulated Soviet socialism could not avoid them[317]). However, not just Keynes' remedy but also his explanation seems flawed: it treats inadequate demand as sure to lower production, employment *and* prices, whereas recent recessions have been accompanied by rising prices.

Many attempts have been made since Keynes to more fully explain business cycles, and according to Howard Sherman: "Almost all economists agree that the crisis leading to a recession or depression is caused by a profit squeeze."[318] Sherman's own detailed analysis of business cycles[319]—based on data for USA cycles between 1947 and 1975, and synthesising underconsumption and overinvestment with Marx and Keynes—does explain simultaneous recession and inflation; my own emphasis has been placed on the summary of it which follows.

After declining during a contraction, profits stabilise at a recession's trough, whereas wages, costs and prices all continue to fall (or else, if cost-push forces have not been quelled by reduced demand, they grow more slowly); but also, as per Hobson's logic, proportionately more income

316 Galbraith, *Economics in Perspective*, p.237

317 Sherman, *Stagflation*, p.102

318 Sherman, *Stagflation*, p.34

319 Sherman, *Stagflation*, pp.102-4

is left in the hands of workers than in the earlier stages of contraction. So, with the economy overall having a rising inclination to consume, and with a negative (or else a diminishing positive) rate of growth of wages and costs, businesses are enticed to make use of equipment left idle in the recession and produce more continuously—which reduces their costs and so increases their profits. The expansion begins. Greater consumption and profits encourage increased production, investment, and eventually, once all idle equipment is re-functioning, employment—which increases income and, with it, demand and consumption—which further increases employment, production, profits, investment, and soon, prices (or else allows them to grow even faster). The economy booms. But aggregate demand has limits and cannot forever grow as or more quickly. Rising investment demand raises the prices of labour and, even more so, non-labour costs, especially raw materials. Higher wages lead to higher savings, which, with rising profits, reduce the economy's overall inclination to consume. The combination of tapering consumer demand and rising costs slows the growth of consumer prices until they rise more slowly than costs—so profits taper off and fall—which reduces investment—which lowers income—which lowers demand—which lowers production. The expansion turns into a contraction: reduced production lowers employment, which further reduces demand, and eventually, wages, costs and prices (or else slows their growth rates)—lower wages and costs then cause profits to fall more slowly and eventually taper at the recession's trough—at which point, the economy is doomed to repeat the sequence just described.

The interplay of many economic factors to create the business cycle is also greatly affected by the exercise of market power (particularly by groups like OPEC), by "irrational optimism and pessimism,… foreign trade and investment,… postponement or hurrying of major inventions and innovations,… depreciation and replacement cycles,… panics and expansions in money and credit,… some kinds of government intervention, and… inventory cycles."[320] The recession of 1990-91, for example, saw profits fall because of high interest rates and debt levels following pervasive financial deregulation in the 1980s, a relatively brief oil price spike in the second half of 1990, and cutbacks in military expenditures due to the end of the cold war. By contrast, the Great Recession of 2007-09, as mentioned in section 4.4, followed after rising interest rates led to falling house prices, which prompted widespread defaulting of mortgages, the demise of mortgage-backed securities, the consequent collapse of many financial institutions, and the stock market plummeting and credit crisis this triggered—all of which led to reduced lending to businesses and lowered demand, which eroded profits. In both cases, resultant unemployment was aggravated by increased automation, computerisation, off-shore migration of facilities and labour, and other 'productivity improvements' which had boosted profits and economic growth more than job growth. The recession of 2020, on the other hand, resulted from the COVID-19 pandemic prompting governments to restrict social interaction including employment, thus immediately reducing profits and income for many.

The interplay of many factors nevertheless cannot hide how profits have the most fundamental influence on the business cycle: rising profits cause bust economies to limp into expansion; tapering then falling profits contract booming economies into recession. However, because aggregate net profits cannot happen without mounting debt (as section 1.5 explained), financial markets must also play fundamental roles.

In distinct contrast to neoclassical theory, Hyman Minsky argued that financial markets have major influences on the business cycle. In his "financial-instability hypothesis", Minsky contended that the swelling profits accompanying economic growth sooner or later prompt 'speculative euphoria', which results in riskier investments through 'innovative' finance, so that

[320] Sherman, *Stagflation*, p.10

"over a protracted period of good times, capitalist economies tend to move… to a structure in which there is large weight to units engaged in speculative and Ponzi finance."[321] Eventually, the process peaks, the Ponzi investments can no longer be sustained and therefore suffer defaults, credit is tightened, and panic may set in, all of which are "likely to lead to a collapse of asset values."[322] The Great Recession of 2007-9 provided an egregious example of the outcome.

However, Minksy emphasised that: "In spite of the complexity of financial relations, the key determinant of system behavior remains the level of profits."[323] Debt enables profits (which foster growth) but the pursuit of profit motivates and requires (as per section 1.5) the creation of debt—therefore profit has the primary role. Consistent with this, Minsky contended that the instability of business cycles follows irrevocably because of the "internal dynamics of capitalist economies" (though cycles can be moderated by "the system of interventions and regulations that are designed to keep the economy operating within reasonable bounds").[324]

So, although profits rise or fall depending on the behaviour of many factors, especially debt and interest rates—but also wages, costs, foreign competition, and others mentioned above—nevertheless, because people L$D-compete for profits (and for most all else), no balance can be reached. Profits must rise and fall, and market economies—inherently unstable—must boom and bust.

In modern affluent economies, which maximise profits by contriving wants and work, profit-makers may lack sufficient new products in which to invest; then, profits can act much like Keynes' notion of retained liquidity, rising too quickly to be put fully to use, and instead clogging the economic flow and slowing expansion. Alternately, inadequate contrivance of new wants may prompt profits to be invested, as Minsky argued, in risky, non-wealth creating, speculative ventures, leading to fragile bubbles[325]—especially if recent success has encouraged more casual, even careless attitudes towards investment, reduced or less enforced regulation by government, and/or greater lending to those with few assets and, thus, little credit-worthiness. All of these profit-related factors played their part in causing the Great Recession, but likely they influence all recessions to some extent.

The same factors also play their part in turning recessions into depressions. Keynes deduced that the Great Depression began because of reduced demand. Some have suggested demand fell because of high interest rates squeezing profits. Others have claimed that economic difficulties 'transmitted' to the whole economy from troubled sectors like agriculture, where poor harvests especially in 1926 left many barely usable farms in the hands of bankers. Galbraith proposed merely that "business concerns, in the characteristic enthusiasm of good times, misjudged the prospective increase in demand and acquired larger inventories than they later found they needed. As a result they curtailed their buying, and this led to a cutback in production."[326] Galbraith also mentioned that, after years of rising profits, investment might have "failed to keep pace", which also would have resulted in "falling total demand reflected in turn in falling orders and output."[327]

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[321] Hyman Minsky, "The Financial Instability Hypothesis" (May 1992). The Jerome Levy Economics Institute Working Paper No. 74 (available at http://ssrn.com/abstract=161024), p.8. This brief paper provides an overview of Minsky's ideas. For an even briefer one, see John Cassidy, "The Minsky Moment, *The New Yorker*, 4 February 2008 (http://www.newyorker.com/talk/comment/2008/02/04/080204taco_talk_cassidy). For more detail, see Steve Keen, *Debunking Economics: The Naked Emperor of the Social Sciences* (Pluto Press, Sydney, 2001), pp.251-255.

[322] Minsky, "The Financial Instability Hypothesis", p.8

[323] Minsky, "The Financial Instability Hypothesis", p.5

[324] Minsky, "The Financial Instability Hypothesis", p.8

[325] Put more crudely, economic winners may insist on masturbating in wind-tunnels, surrounded by hand-tied losers, but it must eventually blow up in everyone's faces.

[326] John K.Galbraith, *The Great Crash 1929* (Penguin, Harmondsworth, 1988), p.1

[327] Galbraith, *The Great Crash 1929*, p.193

Undoubtedly, as in any recession, many factors helped squeeze profits and reduce demand, but the contraction that began near the middle of 1929 at first seemed no different to earlier short contractions such as in 1924 and 1927.

Monetarists (naturally) have argued that poor government management of the money supply turned the 1929 contraction into the Great Depression: instead of growing to compensate for falling demand, as monetarists advise, the money supply fell in the USA by one-third between 1929 and 1932. Yet in Britain and Canada, central banks expanded the money supply from the start, and bank failures were kept to a minimum, but still these countries were gripped by depression as much as or more than the USA.[328]

Keynesians (also naturally) claim that inept fiscal policy had a greater effect than inept monetary policy: after an initial fall in investment in 1929, dwindling consumption reduced tax revenue, which prompted the USA government to *raise* tax rates, which reduced consumption and growth even further.[329]

The ineptitude of official policy certainly seems significant, but other entwined factors seem just as or more important—the stock market crash especially. All great periods of speculation end, and usually tumultuously—the nature of speculation ensures it. As section 4.4 explained, anything which seriously interrupts the rise of a stock market also weakens the expectations of the market's players, without which the rise cannot be maintained. Hence, when demand reduced in the middle of 1929, this only lit a Minskian fuse already in place (and with so much bull in the air, an explosion had to occur). That the market responded to its serious interruption by converting undue optimism to excessive pessimism, and confidence to panic, merely demonstrates the inherent insecurity of securities markets. But because lowered stock values mean less capacity to spend, cheaper assets, and decreased liquidity, the stock market crash bled dry corporations and those who depended on them for proceeds (such as the many holding companies and investment trusts that had earlier proliferated). Thus, with the bursting of the speculative bubble, much of the wealth claimed by the rich was wiped off the board.

The loss of income resulting from lowered demand and the stock market crash turned numerous loans bad, and also forced many people to use their savings; consequently, the liquidity of banks, many of which had also lost money on the stock market, partly or wholly evaporated. The banking structure of the time seems somewhat fragile, "implicit in the large numbers of independent units. When one bank failed, the assets of others were frozen while depositors elsewhere had a pregnant warning to go and ask for their money. Thus one failure led to other failures, and these spread with a domino effect."[330] With less money about, fear motivated some people to keep a supply of cash hidden away at home, which deprived others of its turnover, and which reduced demand and bank liquidity further. Eventually, to entice sales, many producers felt they had no option but to lower prices, setting in a period of deflation, which further aggravated the situation.

The avalanche of bank failures also had the effect of a large reduction in foreign lending. Foreign demand had contributed significantly to the USA's aggregate demand during the 1920s, and loans had been freely granted to foreign debtors to cover their trade deficits. Once the loans stopped, and the depression spread from the USA to just about everywhere else, it interrupted and reduced the income flow of many of these debtors. So, more loans defaulted, aggravating the USA depression, which aggravated the depression elsewhere.

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328 Ravi Batra, *The Great Depression of 1990* (Bantam/Schwartz, Sydney, 1988), p.115

329 Batra, *The Great Depression of 1990*, pp.115-6

330 Galbraith, *The Great Crash 1929*, pp.196

One further aggravation stemmed from economists' rigid defence of their dogma. The market must be allowed to heal itself, went the creed, and experts paraded no action as the best action. Business leaders generally believed this too, feeding another piece of dogma: that actions contrary to the views of market forces would decrease business confidence and so exacerbate existing problems.[331] Hence, little effort to 'cure' the Great Depression was made until it had been running for more than three years—by which stage, prices, output and money supply had all been slashed by up to a third, and USA unemployment had risen to about one person in four. In Galbraith's words: "The rejection of both fiscal… and monetary policy amounted precisely to a rejection of all affirmative government economic policy. The economic advisers of the day had both the unanimity and the authority to force the leaders of both parties to disavow all the available steps to check deflation and depression. In its own way this was a marked achievement—a triumph of dogma over thought. The consequences were profound."[332]

The influence of economic dogma (perhaps) aside, the causes of all depressions and recessions, of the business cycle itself, and of the various sources of its aggravation, arise ultimately from the pursuit of self-interest, capitalism's first commandment. Competition for profits, dividends, interest, income, goods—real and imagined wealth in general—guarantees that some win and some lose. Nothing, not even government regulation and money-printing, can long compensate for the nature of a zero-sum game.

5.3 Regulating The Free Market

> *"If the market fails, so does the case against government intervention."*
> *– John K.Galbraith*[333]

As mentioned, during the Great Depression, Keynes advised that because the market cannot regulate itself, the state should help by boosting demand when thought too low, and reducing it when too high, thus keeping the economy on the fine (often indiscernible) line between the depressed stagnation of insufficient consumption and the inflationary burn-out of over-spending. Of course, such a role for governments diverged markedly from that recommended by neoclassical theory—namely, running defence, law, prisons, and police; building and maintaining roads, lighthouses, and various public works; providing a minimal level of care for the poor and disadvantaged; and handling any other public goods for which exclusion of non-payers was not feasible. But according to Keynes, governments had a lot more to do than this.

Since Keynes, governments have attempted to keep the economic flow evenly churning over by using two main types of regulation of aggregate demand. 'Fiscal' (or 'Keynesian') regulation varies government revenue and expenditure, whereas 'monetary' regulation varies the amount of money and credit available to an economy, often via interest rates (both approaches are detailed in the next section).[334]

Fiscal policy determines the extent not only of taxation, but also of producer subsidies and grants (such as farmer support payments and business lunch allowances), welfare benefits, and all other state spending, such as for education, public transport, housing, and commercially unviable research and development (principally how nuclear energy, for example, was developed). Some governments also fiscally budget for running coal and/or electricity

331 Galbraith, *Money*, pp.197-8

332 Galbraith, *The Great Crash 1929*, p.202

333 Galbraith & Salinger, *Almost Everyone's Guide to Economics*, p.31

334 Some developed nations' governments also perform a small amount of wages regulation, at least by their setting of a minimum wage. Of course, neoclassical economists advocate that the market should determine *all* wages purely as a result of competition for jobs.

production, some telecommunications, a bank and airline or two, and other 'nationalised' (state-owned) industries and companies—although many fewer of these now remain after recent decades of widespread 'privatisation' ie. selling of government assets to private industry. (Once upon a time, in some nations, over half of all employed people worked directly or indirectly for the state.)

But while fiscal and monetary regulation have turned laissez-faire free markets into what are called 'mixed economies', unfortunately they don't work optimally either.

The state can't hope to make up for the pitfalls of competition any more than Stan Laurel could have hoped to have made up for Adolph Hitler. Apart from fiscal and monetary regulation often just not working (as the next section details), in a populous and complicated ever-changing world, governments may not even know how to identify what regulation should take place. Keynes might as well have suggested giving the job to Superman.

Governments have their own self-interest to pursue, in any case, and some measures thought necessary for an optimal mixed economy might have enough disadvantages (for some voters) to encourage governments not to implement them, for fear of later being voted out of office. For example, anti-inflation policies nearly always reduce employment and income, voter concerns obvious enough for even governments to recognise. Ultimately, because it must attempt the hopeless task of trying to please everyone in a game where winners must balance losers, the state always remains *part* of the market, and therefore cannot play the role of the market's fuse-like optimiser. But if the would-be regulator forms part of the market, the market is *not* regulated—even after Keynes, it can only *self*-regulate.

In many nations, rather than acting as economic regulators, governments and their state employees have adopted roles more closely akin to those of monoligopolists, with close links to others. The phrase 'lobby power' says it all. Big Business pays some of its employees to keep governments informed about its desires and plans, and tries to persuade them to co-operate. And the state attempts the same in return. Indeed, because the success of a government depends greatly on the economy's performance, which is determined largely by the performance of the economy's biggest players, Big Business and Big Government have very strong mutual interests. Sometimes Big Business and Big Government can even act like friends: occasionally, business can help out governments via the media by prodigiously propagating prestigious praise, while the state bails business out of trouble with a big subsidy or tax concession or even a loan or grant (or it delays and/or minimises pollution or other taxes).

Big Business receives such privileges because some large monoligopolist corporations employ so many people that should they fail, not only would their employees suffer and the nation's growth falter, but innumerable smaller firms they use during production would lose revenue: parts producers, transporters, advertisers, legal and scientific experts, banks, office furnishers, locksmiths for the weekly executive washroom ritual, people in miscellaneous service industries, and many others. Revenue lost by these small firms, in turn, would cause income to be lost by the firms they use, and a domino effect could ensue to affect an entire economy, wiping out business confidence. Consequently, while small players such as milk bars and bakeries are left to their L$D-fate, when large but 'too-big-to-fail' firms have visions of the final profit, they have a saviour to whom they can turn—with taxpayers who did not directly enjoy the earlier spoils of success paying for the avoidance of failure, usually with no repayments owing. As Galbraith put it, "there is first the speech on the eternal verities of free

enterprise and then the case for the particular exception. Socialism in our time is not the achievement of socialists; modern socialism is the failed children of capitalism."[335]

As a result, sometimes, distinguishing Big Government and Big Business is not easy. Consider the mutual masturbation of the military-industrial complex. In most countries, the military depend upon a few large-scale industries for their hi-tech weaponry, and these industries depend upon the military for business that would otherwise not exist. The consequent marriage has produced, no doubt, much deeply satisfying employment, income, and associated pleasures of consumption for both parties (as well as sufficient overkill to wipe out *all* life on the planet many times over—if that were possible). It has also made the task of government much easier: to keep the favour of the military (and so minimise any chance of a coup), to keep them well-armed, to maintain the profitability of the industries supplying them, and to avoid any loss of jobs in those and dependent industries, governments 'only' have to keep spending on defence the same or more each year. To reduce defence budgets (as was done briefly after the cold war ended) causes hardship all-round (although it may be required to avoid other hardships such as high taxes or big budget deficits).

So, although governments certainly play larger roles than they once did, economies nonetheless consist—and have always consisted—of a private (business) sector inextricably tied by mutual self-interest to a public (government) sector. Self-regulation.

But if the market fails to guarantee optimality—with or without perfect competition—*and* government intervention also fails, then what? Given the neoclassical tradition so far revealed, it should come as no surprise that the claims of Keynes have always been resisted by fervent laissez-faire enthusiasts. Many conservative economists—especially monetarists, supply-siders and other free marketers—continue to argue for a return to as free (meaning competitive) a market as possible, preferably without such 'uncompetitive' features as minimum (or even award) wages, and with much smaller, less intrusive government. 'Nobel' laureate Milton Friedman, for example, claimed that "government is today the major source of economic instability."[336] (A less well-known writer called "[p]olitics… the *exclusive* reason why the economic situation has degenerated as far as it has."[337]) In Friedman's view, government fails because "bureaucrats spend someone else's money on someone else. Only human kindness, not the much stronger and more dependable spur of self-interest, assure that they will spend the money in the way most beneficial to the recipients. Hence the wastefulness and ineffectiveness of the spending."[338]

Certainly, governments often do seem ineffective and wasteful… inefficient… absurdly extravagant… short-sighted, corrupt, and incompetent… intrusive, insufferable, even imbecilic. And free market advocates can certainly find endless statistics to support this view.

As one example, Friedman pointed out that, in 1978, the USA government spent $90 billion on one hundred social security programs for the poor, enough money to have provided an average of $14,000 for every poor family in the country at the time. If the money had all reached the poor, they would not have been poor; but instead, poverty grew as most of the money was "siphoned off by administrative expenditures, supporting a massive bureaucracy at attractive pay scales."[339] One other notable Friedman statistic claimed that the USA government's Health, Education and Welfare department, "[b]y its own accounting, in one year… lost through fraud,

335 Galbraith, *Economics in Perspective*, p.295

336 Friedman & Friedman, *Free to Choose*, p.117

337 D.R.Casey, *Crisis Investing* ('76 Press, Seal Beach, 1979), p.21

338 Friedman & Friedman, *Free to Choose*,p.147

339 Friedman & Friedman, *Free to Choose*,p.138

abuse, and waste an amount of money that would have sufficed to build well over 100,000 houses costing more than $50,000 each."[340]

Despite these examples, however, conservative belief that a smaller government corresponds to a more successful economy does not accord with the facts. For some time, many nations with as much or more state intervention and regulation than the USA competed more successfully – Japan, for example, and Germany, home of the saying, "as little government as possible, as much government as necessary".

Of course, many factors other than the extent of state intervention affect economic performance. For instance, after the obliteration of World War 2, Japan and Germany were rebuilt with the newest technologies, which gave them something of an advantage over more archaically equipped nations like Britain and the USA. War treaties also prevented the ex-Axis powers from engaging in costly arms races and offensive defence. Other recent winners like Hong Kong and Singapore are very conveniently located on trade routes; many, including Thailand, South Korea and Taiwan, have mainly achieved their spoils at the cost of even greater than usual ecological destruction; and most, including the burgeoning India and China, have relied upon what could politely be called low wage rates or, impolitely, sweatshops. Yet all these economically successful nations have had interventionist governments. Culture, tradition and history do affect each nation's capacity to accept and co-operate with economic leadership by the state (although once economic success is gained, state rule usually grows less acceptable, as best exemplified by South Korea), but rather than dwelling on the *quantity* of government intervention, the emphasis should surely be placed on its *quality*.

Because inefficiency varies from one government to another (just as it does from one business to another), suggesting that a nation need only reduce its government as much as possible in order to obtain the best possible outcome seems as naive as the 'opposite' suggestion that all politicians can be trusted. Furthermore, self-interest rather than "human kindness" *might* make more monetary profits, but as earlier sections showed, no reason exists as to why it should result in greater overall benefit. Government can be shrunk but the non-optimal inefficiencies and inherent instability of an imperfectly competitive free market would still exist: maximum profits would still be chased at the expense of unsatisfied needs.

Nevertheless, governments remain, and regulate they try…

5.4 Failed Remedies

> *"To end unemployment by increasing aggregate demand sufficiently to affect output in all sectors allows the monopoly sector to set off another inflation spiral. To end inflation by reducing aggregate demand sufficiently to affect monopoly prices causes catastrophic unemployment in the whole economy." – Howard J.Sherman*[341]

Keynesian fiscal regulation requires governments to compensate for bothersome variations in aggregate demand by varying their taxing and/or spending habits. Inflation warrants higher taxes and/or lower government spending (perhaps a budget surplus), in order to leave people less income, and so compensate for the excess demand supposedly pushing up prices. On the other hand, in times of higher unemployment, such as recessions, the remedy is said to lie with reduced taxes and/or higher spending (often more than governments receive, usually arranged

340 Friedman & Friedman, *Free to Choose*,p.158

341 Sherman, *Stagflation*, pp.200-1

via increased budget deficits financed normally by borrowing—see section 4.3), in order to give people more income, and so compensate for inadequate demand.

Shortly before Keynes formalised these views in 1936, Adolph Hitler (a well-known eligible bachelor, Wagner fan, and believer in Jewish banker conspiracies) adopted a similar approach for dealing with Germany's depression—though he did so not because of any great affinity for economics, but rather "as an *ad hoc* response to what seemed over-riding circumstance".[342] Hitler's government borrowed hugely via bond issues to run budget deficits that paid for vast public works programs which employed sufficient numbers to reduce German unemployment to minimal levels by 1935 (which increased tax revenue enough to pay off the bonds). But outside of Germany, none attempted Keynesian fiscal management so ruthlessly, and the depression dragged on—until World War 2 provided unarguably urgent reasons for spending, and Keynes' heresy gradually became orthodoxy. Indeed, Galbraith claimed that: "The Great Depression did not, in fact, end. It was swept away by the second World War."[343] Remarkably, under the influence of L$D, economies are often measured as 'progressing' when their depression gives way to the psychosis of war.

World War 2, in its own unique way, provided a matchless opportunity for the spending of money. Like chronic shoppers, governments spent to keep depression at bay. Likewise for subsequent hot and cold wars which prompted defence spending sprees often totalling, in the USA, a quarter or a third of all government expenditure. No wonder Sherman suggested that "only large-scale military spending brought the United States out of the great depression of the 1930s, and only large-scale military spending has kept the United States out of a major depression [since]."[344] Governments can spend in many ways, including on social welfare, unemployment benefits, subsidised health care and education, poverty relief, infrastructure, and much else, but it seems in none so easily as 'defence'. Certainly, with a few exceptions such as business subsidies, and expenditures for roads (which suit big oil and car manufacturers), most potential forms of government spending—such as for housing—motivate objections from groups who consider their interests threatened, either by government competition in their own business fields, or by the redistribution of income implied. The military-industrial complex, though, lacks competition, and tends to do very well from fiscal policy.

Aside from increasing spending, governments can also fiscally deal with recessions by reducing taxes. But in times of extremely low demand, for either action (or both) to sufficiently stimulate an economy, the budget deficit and its corresponding debt-burden may need to grow dangerously high. Even if only *regarded* as dangerously high, this may lead to lowered currency values as foreign investors lose faith and flee the country—which may provoke a response of raised interest rates to attract them back, something likely to entrench a recession further.

However, according to supply-side economists, tax cuts not only pose a lesser risk than increased spending, they may also even reduce deficits rather than increase them. According to Gilder, "lower tax rates can so stimulate business and so shift income from shelters to taxable activity that lower rates bring in higher tax revenues",[345] which allow governments to maintain spending without increasing their deficit or requiring any extra (potentially inflationary) money-printing. Furthermore, in the supply-side view, if governments have earlier set high taxes, tax cuts can so lower business costs as to even reduce inflation at the same time as they increase demand to overcome recession.

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342 Galbraith, *Money*, p.238

343 Galbraith, *Money*, pp.246-7

344 Sherman, *Stagflation*, pp.194-5

345 Gilder, *Wealth and Poverty*, p.177

Adopting a supply-side stance in 1981, USA President Reagan introduced "a massive tax cut, mostly for affluent individuals and large corporations".[346] The USA climbed out of recession with inflation kept at a few percent, but, contradicting Reagan's avowed commitment to smaller government, federal spending increased, especially in defence—in real terms, by about fifty percent between 1980 and 1990.[347] Because tax revenue failed to increase proportionally, the budget deficit soared. Supply-siders, rather than admitting defeat, claimed the high deficit unimportant, and emphasised instead the stimulus it provided to work and invest: "In an expanding economy money available now is many times more valuable than money paid later in interest on payments diffused through the economy in higher prices… Only in a static, uncreative economy, does it pay to pay as you go."[348] In other words (as goes the theory for money-printing), growth can compensate for increased debt. And of course, it can—*if* enough of it occurs, but this of course remains a gamble. Likewise, supply-siders' rosy hope of an inflation-free increase to demand via tax cuts cannot be guaranteed: lowering of business costs because of reduced taxes can be more than offset by demand-pull rises in bottleneck sectors, and/or by monoligopoly and union power inflation (see section 4.5).

Just as the Keynesian remedy for recession, and its supply-side variant, have their considerable problems, so does the standard Keynesian prescription for controlling inflation. Raising taxes and/or cutting government spending *can* stabilise or even reduce prices in areas of the economy where players have no market control, but downwardly-rigid price-setting unions and monoligopolies react to decreased demand by reducing employment and lowering production. If governments apply anti-inflation fiscal policy long and hard enough, cost-push forces can be beaten, but only at the expense of high unemployment and recession or depression. Like ending indigestion by disembowelment. Even so, no fall in demand could stop L$D-competition from requiring the invention of wants and the creation of counter-productive 'work'—these causes of inflation (see section 4.5) cannot be dealt with by fiscal policy alone, even when extreme. Nor can fiscal policy deal with simultaneous inflation and recession, as has happened in recent decades, because inflation has to be met with reduced government spending whereas recession requires a contradictory increase to spending. Nor can it adequately contend with multinationals. Possibly more than half of all foreign trade transactions occur between companies that have the same multinational owners;[349] so, taxes tend to be paid in nations with the lowest tax rates, and local fiscal policy tends to be circumvented.

Not only can't fiscal policy cure modern inflation, it can rarely even be attempted. If vested interests make it difficult to spend more, then they make it even harder to spend less. Government spending cuts and tax hikes tend to be seen as threats against ingrained habits of consumption and accustomed levels of affluence. In a downwardly-price-rigid economy, such measures invariably provoke great resistance, including electoral backlash. They may also have effects opposite to those intended: according to supply-siders, raising taxes, for high income earners especially, can often decrease government revenue rather than increase it—by inspiring people (who can) to use their money in non-taxable and usually unproductive ways. In an environment of perpetual want-creation, enforced thrift seems a gloomy and unenforceable contradiction. Of course, some taxes do get raised and some government spending does get cut, but until recently, almost never in defence, and nearly always in areas for which resistance can

346 Batra, *The Great Depression of 1990*, p.78
347 Galbraith, *The Culture of Contentment*, p.126
348 Gilder, *Wealth and Poverty*, p.222
349 Sherman, *Stagflation*, p.215

be least well organised, such as welfare. In Galbraith's words, "the weakest and the poorest,… more than incidentally, are the least articulate. Military expenditures, needed or otherwise, are defended by strong corporations, formidable generals, a big bureaucracy. So they are never imagined to be subject to reduction for reasons of fiscal policy."[350]

So much for Keynesian fiscal policy. It worked for a while, when hot and cold wars kept the spending machine going, and while the after-effects of the Great Depression left employment rather than wage rises the highest priority. It also worked, at least in the short-term, when the stark imperatives of the Great Recession caused it to be dragged out of the 'no longer fashionable' box and, despite vociferous disapproval from conservatives, applied with abandon—however, the government and central bank debts accrued in the process, and later by all but identical responses to the COVID Recession, seem likely to prove that success short-lived, the final result probably fated to accord with the conclusion that, since the 1960s, fiscal policy has mostly proved "too painful to use".[351]

By the 1970s, the helplessness of Keynesian regulation in the face of high inflation had assisted the resurrection of the monetarist approach of 'controlling' the money supply. A fuller explanation of monetarist theory and the difficulties of applying it to a real economy is provided in the appendix, but, in essence, its advocates argue to increase money growth in recessions, and decrease it during times of inflation. This sounds simple in theory, but does not prove so in practice. For one thing, as the chief advocate, Milton Friedman, himself recognised, a lot can happen in the roughly two years it takes for monetarist regulation to 'work', enough to alter conditions sufficiently to thwart the expected results, or render them detrimental.

Especially when dealing with inflation, a slight misjudgement of the unavoidable "painful side effects"[352] caused by tighter money—heightened unemployment and reduced trade—can easily turn into a grave error two years later. This was demonstrated more than amply in Australia when interest-rate-led monetarism, applied with unbending loyalty (if not sadism) during 1988 and 1989, pushed home mortgage interest rates from 11.5 percent to 17.5 percent (business rates even higher), but was accompanied by inflation slowly and erratically continuing to climb from about seven percent in early 1988 to 8.6 percent in early 1990. Meanwhile, unemployment stayed roughly constant at about six percent. Then, true to the two-year time-lag claimed by monetarists, the policy bit (like a fundamentalist ferret). By the middle of 1993, inflation had fallen to under two percent, and interest rates to less than seven percent. But economic nirvana was not attained: in what the Treasurer planned at the time as a 'soft landing' but which he later reluctantly called "the recession Australia had to have", unemployment almost doubled to over eleven percent (forty percent for teenagers), and real wages fell. So, monetary policy traded everyone's inflation for nearly everyone's loss of income. Yet while most suffer because of anti-inflation monetary policy, some do so more than others…

Slowed money growth means reduced lending and/or higher interest rates. While Friedman and other monetarists have criticised most governments since the 1970s for trying to slow money growth using mostly just higher interest rates, Galbraith remarked: "If there were a perfect and possible design wholly to… [monetarist] specifications that worked and was reasonably painless, it would, of course, have been used before now… But there has been plenty of practical proof both of the unworkability and of the pain."[353] As regards unworkability: whatever the method used to slow money growth, banks that exceed their reserve requirements

350 Galbraith & Salinger, *Almost Everyone's Guide to Economics*, p.95

351 Galbraith & Salinger, *Almost Everyone's Guide to Economics*, p.98

352 Friedman & Friedman, *Free to Choose*, p.317

353 Galbraith & Salinger, *Almost Everyone's Guide to Economics*, p.87

can lend their excess. Monoligopolies too can use their profits for investment, or turn to subsidiaries or foreign banks for cheaper loans. They need rely on local banks only as a last resort, one made easy by their wealth-backed credit-worthiness and their ability to pass onto customers the cost of whatever interest rate is charged. But while monetary policy to monoligopolies compares to water off a duck's back, none of their skills of evasion reside with firms who lack market control, who must compete. In Galbraith's words, "the farmer, the small tradesman who needs money to carry his inventories and, above all, firms in industries like housing which operate on borrowed money and depend on customers who borrow money are highly vulnerable to monetary policy. So… it works… by creating unemployment, by exempting the big and strong corporations and by putting the squeeze on the small and the weak."[354] Hence, monetarist anti-inflation policy (like the fiscal counterpart) cannot evade what inflation itself produces: suffering for the weakest.

Monetary policy also acts less than perfectly against recession and unemployment. Making money more freely available by increasing lending and/or lowering interest rates can raise demand, but interest rates can only go so low, perhaps not enough in a depression. The Great Recession, for instance, saw the central banks of the USA and Japan quickly lower their bank rates to zero percent, yet both economies grew at a snail pace for years after. Just as higher interest rates do not always thwart borrowers confident of their 'sure thing', lower rates do not always tempt those lacking theirs. As Sherman put it: "You can lead a businessman to the river of loans, but you cannot force him to drink… In short, monetary policies may have some effect in minor recessions, but when pessimistic expectations become general in a depression, monetary policy may be able to do little or nothing to expand the volume of spending."[355]

Sometimes, increased money growth does successfully lower unemployment; but in doing so, it adds its own pressures to inflationary tendencies. Indeed, ignoring dubious supply-side exceptions, monetary and fiscal policy alike can only fight unemployment *or* inflation, not both—and only by trading one for the other. Fiscally or monetarily increasing demand aggravates modern economies' innate inflationary tendencies; decreasing it reduces the need for production and, in a downwardly rigid economy, employment.

Yet because demand consists not just of money or income with which to spend, but also the *desire* to spend, fiscal and monetary regulation—*when* they can be applied—affect demand only approximately. Like 'money supply', 'aggregate demand' has no easily manipulable counterpart in the real world. Monetarily altering the volume of the economic flow, or fiscally changing the distribution of that portion of it involving government, cannot guarantee a more efficient or consistently expanding overall movement because extra income, however made available, can only encourage spending and investing *if* enough people know of things they regard as worth buying and investing in. Whatever the amount and distribution of money, people still need to know how to use it profitably, and this knowledge cannot be regulated to grow at the 'right' pace. Growth requires ideas (even ill-conceived ideas) of *how* to grow, else the loans ready to fund the conversion of ideas into jobs, products and sales lay dormant. But ideas can't be guaranteed to turn up continuously as needed, least of all ideas for new products, new reasons for parting the fool and his/her money.

Ultimately, attempts to regulate economies require a series of simultaneous but often contradictory juggling acts of interdependent yet sometimes countervailing forces. A growth-inducing boost to consumption, for example, often means decreased savings, which tends to reduce investment, which lowers growth. Increased investment often stimulates not only

354 Galbraith & Salinger, *Almost Everyone's Guide to Economics*, pp.85-6

355 Sherman, *Stagflation*, p.133

growth but also inflationary pressures, which tend to reduce consumption and (consequently) growth. Rising productivity boosts profits which assists growth but eradicates jobs which retards growth. Higher interest rates motivate lending to riskier borrowers but increase the likelihood of those borrowers defaulting. Reducing government spending to pay off debt can lower growth enough to decrease government revenue, making it harder to pay off debt (the current conundrum for many overly indebted nations).

The juggling acts also require superhuman precision. Not simply growth, but growth at just the right pace: too much yields inflation, too little and jobs are not created quickly enough to compensate for those lost to rising productivity or cheaper competitors. Unemployment must be kept low, but not so low it encourages higher wage demands, which can increase inflation, which can prompt even higher wage demands to compensate, which can prompt even higher inflation, and so on until the economy disappears up its hyper-inflated assets. Inflation too must be kept low, but not so low that it deters investment and growth and leads to stagnation or deflation. Interest rates can't be set too high or they discourage borrowing and risk putting the economy into a recession "we had to have", yet they can't be set so low either that they deter saving and foreign investment. Property, bond and equity markets should rise but not so quickly they risk turning into bubbles. National floating currency exchange rates should be high enough to afford imports but not so high they discourage exports. And so on… and on…

Even population growth, like all the other juggling acts, has to be Goldilocks perfect, with just the right amount of breeding (something beyond the control of even our über monopoly economic system). Capitalism can't handle too many old people: it needs enough working age people to pay enough taxes to support retirees through pensions and health funding—if the aged proportion gets too high, then, in order to ensure all the work that's needed gets done, taxes and/or wages might need to rise, which could upset all the other juggling acts.

Never mind, just another 'market failure'—to be fixed, eventually, by the market via more juggling acts. Keep working. Keep shopping. And do ignore all the clowns juggling other clowns juggling their economic balls.

Ultimately, the bitter policy pills regarded by Keynesians and monetarists as, in the long run, worth popping, cannot cure economic ills because the sicknesses, though worsened by internal imbalances, stem from fundamental institutionalised attitudes and habits—from the L$D-competitive pursuit of profit and self-interest.

In the end, it doesn't matter how much devotion and effort governments and businesses put into keeping the treadmill ever rolling along, how many new jobs are contrived, how frantic the spending and chasing of fluctuating phantom values—none of the orthodox impossible Goldilocks juggling acts can stabilise L$D-competition, because they leave unchanged the game rules and motivations which create instability and foster inefficiency and social and ecological decay. As Steve Keen pointed out: "Reform, of course, cannot make capitalism stable".[356]

Government regulation of L$D-competition *must* fail: the unfathomable complexity and unpredictability of so many different people in so many different nations, the constant shifting of alliances to suit self-interest, the often blistering march of technical and scientific innovation, and the various time lags between event, perception, cognisance, and response, subvert the economic authority of even the most peerless trustworthy governments, prevent them gaining sustained or pervasive control, and defeat their best and worst efforts. Ultimately, for all their prognostications and pronouncements, regardless of their pomp and ceremony, and in spite of

[356] Steve Keen, *Debunking Economics*, p.255

their real and imagined power, governments act more as belated commentators of past events than manipulators and shapers of the future.

5.5 Losing The Game

> *"To convert the business man into the profiteer is to strike a blow at capitalism, because it destroys the psychological equilibrium which permits the perpetuance of unequal rewards. The economic doctrine of normal profits, vaguely apprehended by every one, is a necessary condition for the justification of capitalism." – John Maynard Keynes*[357]

Clearly, the myth of economic 'equilibrium' does not occur, nor can L$D-competition produce optimal universal prosperity. Instead, because the inclusion of profit in prices ensures that someone has to lose—somewhere, sometime or another—regardless of their efficiency, the game rules, as well as the short-term measures designed to keep the system going, sub-optimally guarantee the ever more long-term prices of instability, towering debt, resource *mis*allocation, and social and ecological decay.

Similarly, Figure 2's neat circular flow between producers and consumers doesn't occur. The less simple real world has more in common with Figure 5 below (although this still simplifies). Imagine it as groups of many pumps each siphoning liquidity to and from the other, interdependently through hoses, recycling money over and over. The real wealth and other items exchanged for money are denoted by numbers attached to each particular flow, as per the diagram's legend. The dotted lines represent initial provision of credit, which turn solid when circulated further into the flow, and its repayments. Don't ask where the flow starts or ends in such an arrangement—in this accident of history, cause and effect intermingle.

Viewed in this way, capitalism consists of a perpetual contest between its interconnected players over the contents of a complex and turbulent, yet coagulated, eddy-filled flow of liquidity—the aim, to suck as much as possible, and simultaneously expel a bit less—the result invariably leaving some fully immersed if not drowning but others gasping.

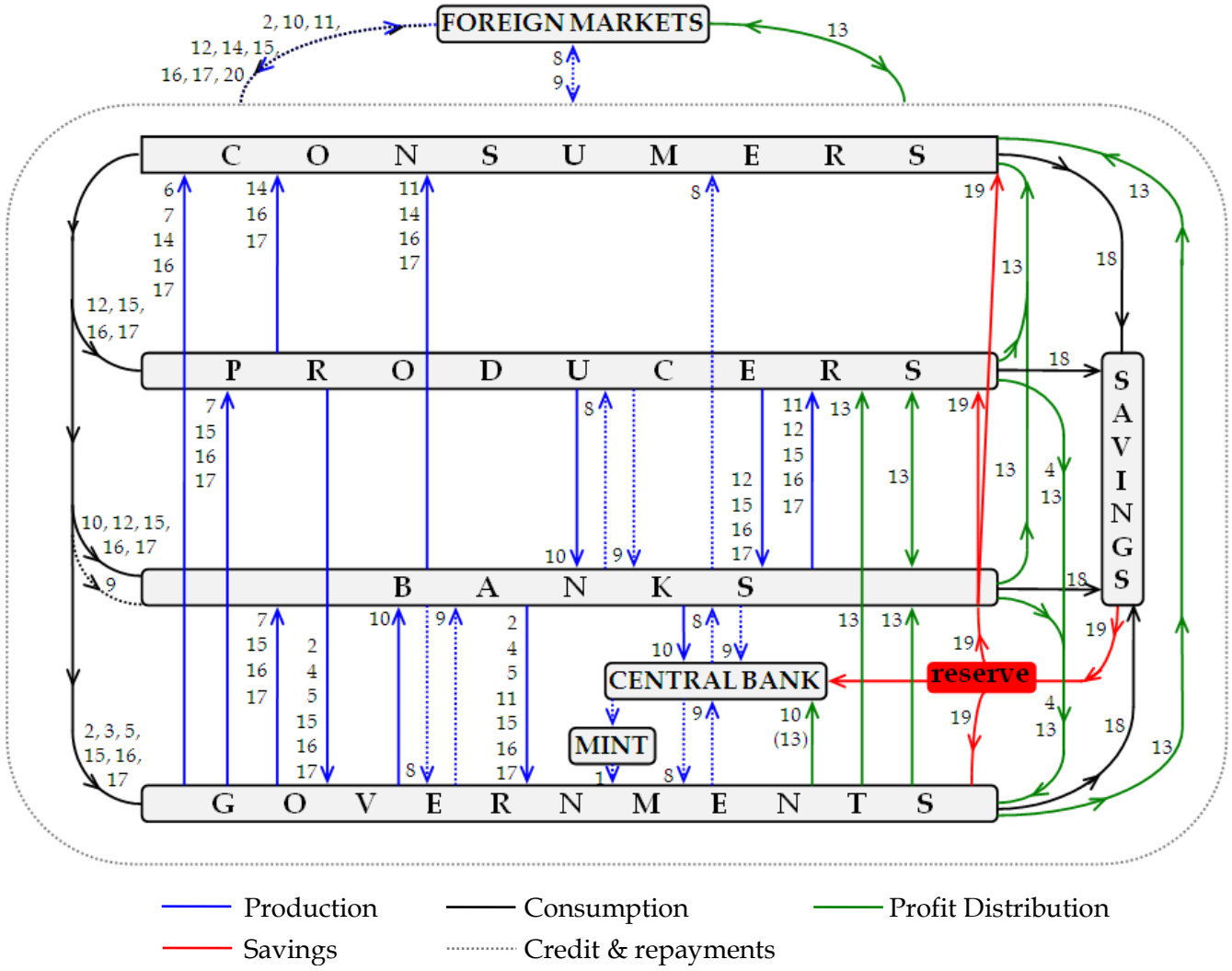
It's all about money, topped up in spurts as banks find borrowers, and central banks print money. Pass the parcel: pull it in, but pump it out quickly to keep it all flowing. Try, though, to retain some liquid, to suck in more than is given out, to profit—even though doing so creates whirlpools and vortices that thin the rest of the flow…

The vortex-ridden flow cannot stabilise because, although some pumps manage to profit, others (as section 1.5 explained) *must* lose. Finding themselves immersed in a mere trickle, or sucking air, pumps can delay loss by slowing down (cutting production), borrowing liquidity from others (going into debt), or partially liquidating (selling assets), but eventually some are caught in the undertow of others and lose all their liquidity to them. Gasping at thin air, the pumps seize, the flow diverts round them, and they are left high and dry, their losses also interrupting the flow for others.

Amid the turbulence, the flow dragged away from pumps to make profits for others initially congregates in the sometimes stagnant backwaters of the savings pool. If profits and savings are not soon recycled back to the flow, either as consumption or investment (new or enhanced pumps), or to holders of securities, the flow stays diluted, and the economy runs the risk of being sucked dry. Savings that recirculate as credit top up a diluted flow, but they require counterflows back to savings of repayment plus interest. Similarly, central banks top up the flow with freshly minted money but demand more tax revenue back. So, although dependent

[357] Keynes, *Essays in Persuasion*, p.69

on borrowers maintaining their vortices, lenders, by pursuing profit, create their own whirlpools. But not all vortices can be sustained—some have to fail.



[1]government bonds (sold to central bank)
[2]government bonds (sold other than to central bank)
[3]income tax
[4]company taxes
[5]other government charges (incl. bank account taxes)
[6]government welfare
[7]government subsidies/grants
[8]credit
[9]credit repayments
[10]credit interest
[11]deposit interest
[12]securities
[13]share dividends, bond interest & maturity payments
[14]labour
[15]goods & services
[16]assets (re-sales of property, durable goods, etc.)
[17]rent
[18]deposits to saving
[19]withdrawals from savings (via banks)
[20]currency speculation

Each group holds money & trades it for 2,9,10,12,15,16,17. Consumers also trade for 14, and banks for 11.
Plus, much genuine but unpaid work exists (eg. housework), & many unrecorded black market transactions.

Figure 5: The Economic Flow—Exchanging Money

At times, an excess of liquidity seeps in, recirculating from reinvested profits, credit, exports, and money-printing—the economy booms. But as an economy grows, debt accumulates, and business and wealth concentration increases as losers acquire smaller slices of the economic

cake, and winners, bigger shares—all of which eventually results in so many interdependent losses, so many failed pumps, that the economic cake curdles.

When an economy busts, its savings, credit repayments, and imports drain away the liquid seeping in, and with winners' profits dormant due to insufficient ideas about how to compound their winnings, hordes are left gasping. Usually, the system coughs and splutters until liquidations unclog the flow, government and central bank injections of liquidity flood it, profits recirculate, and things begin to boom again. But because profits then grow again, the flow sooner or later starts to coagulate and ebb again.

Sometimes, if liquidity is highly concentrated, debt excessive, investments clustered in speculative dreamlands, and/or pumps more interlinked and/or struggling with the speed or bulk of an inflationary flow, the trouble of one spreads more quickly to others, and more suck air. When bursting speculative bubbles evaporate much liquidity, and/or when many pumps horde theirs and keep it away from the economic flow, the diluted current can lose momentum and collapse to a *depressed* trickle. Like a game of musical chairs, most lose. Then, the survivors pick up the pieces, eventually get some new ideas for making stronger, better connected pumps, print new tickets of liquidity to fill their hoses, and start sucking again.

Modern conditions provide greater difficulties than ever before, because vaster numbers of game-players complicate economic activity; because the world economy grows ever more singular and interdependent, providing each player with more and better informed competitors, and increased risk; because financial markets fabricate increasingly dominant, turbulent and interlinked yet unproductive flows via their concoction of ever more dizzyingly complex and inadequately understood bets and gambles about which way other flows go; because escalating debt makes for a larger amount of unrealised profits which form a particularly destabilising and sickly icing on the economic cake; because cumulative ecological abuse has bequeathed a more fragile, less cheaply exploitable environment; and because technology's overcoming of scarcity makes it ever harder to devise truly useful ideas for profit-maximising investment and associated employment. With more swirling liquidity, more vortices sucking and gushing, comes an ever more unstable, inefficient and dangerous game. Hence, the last quarter of the twentieth century involved almost one hundred economic crises, "more frequent (and deeper)" than previously.[358]

Too dynamic for equilibrium or stability, too complex and large to control or guide or regulate, the flow has far too much interdependent activity for all the countervailing dynamics and conflicting attempts to influence it to ever fluke a perfect balance.

In the end, the economic doctrine that an optimal result follows from leaving everyone to look after themselves, makes sense only if attempting doublethink; otherwise, with or without government 'intervention', self-regulation seems transparent nonsense. Put another way: however much pump-priming goes on, capitalism still sucks.

Pursuit of self-interest defines capitalism, but also condemns it. To continue to compete for self-interest, and profits, can only aggravate most problems because they originate from just such competition. Modern business civilisation has a *systemic* problem, and no amount of tinkering or changing window dressing will suffice. The fundamentals need to be changed…

358 Stiglitz, *Globalization And Its Discontents*, p.99

Part Two

…A Free Lunch

"The question we should be asking is not how to maintain employment, but how to create an economic system that can distribute resources and enhance our well-being without raping the planet – while at the same time fulfilling our age-old wish to be free from unwanted toil."

Peter Russell,
The White Hole in Time: Our Future Evolution & the Meaning of Now
(Harper Collins, San Francisco, 1992), p.109

Chapter 6

Choices

> *"…we need to know not just what to rebel* against *but what to rebel* for.*"—Peter Cadogan*[359]

Thrashing about amid the turbulence of the economic flow has allowed us to accumulate, over the centuries, a great stock of ideas and inventions. And so, capitalism, despite its many faults, has left at least the developed world with a material standard of living beyond the wildest expectations of even a generation ago. Time now to move on before capitalism's inherent contradictions and manic depressive obsessive-compulsiveness destroy all it has achieved. Time to retain and fully share the material success, and concentrate not on more of the same but instead on social, ecological and spiritual improvement. We can still enhance material success, but this goal must now take a back seat to more pressing urgencies.

To move on, it must be recognised that, despite their pervasive dominance, capitalism's rules are not god-given, self-evident, unalterable commandments. They have become entrenched due to historical accident, so ingrained from long use that alternatives may evoke cognitive dissonance, but they remain *arbitrary*.

Perhaps many of us have grown too used to capitalism's rules to consider changing, too habituated to recognise the addiction. But I am going to dream on. Instead of the profit-mad economic flow and its deranged rules, I will describe another more balanced, calmer, more controlled arrangement, one at our beck and call, with better rules more suited to modern times, needs and abilities, and more capable of providing a truly sustainable and attractive future.

Understanding the ideas that follow may not be easy because they will seem alien. So you'll probably need to read it all at least twice, once to take in the parts separately, the second time to see the big picture to which they sum.

Although most of what follows details a new economic system, this chapter discusses democracy and why it also needs replacement with something that works properly. It may seem odd, given that the contents of part one almost exclusively concerned economic issues, that discussion of politics now precedes that of a revitalised economics—however, democracy as currently practiced would impede the economic proposals, whereas a properly working democracy will allow them to be used to their full potential.

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[359] Peter Cadogan, *Direct Democracy* (1 Hampstead Hill Gardens, London, 1975), p.27

6.1 Rule

"Here's the modern political man, for sure he's nobody's fool,
believes in media coverage as a promotional tool…
you've seen the TV commercials, you've seen the poster campaign
you've seen the ads in the papers, there's nothing else to explain…
Politics now, it's just like selling soap powder" – Peter Hammill[360]

The word democracy comes from two Greek words: *demos*, meaning people or population, and *kratos*, meaning power. So, democracy means people power—government by the people… at least in theory.

In practice, modern 'democracy' provides people not with the power to govern themselves, but with infrequent opportunities to choose between inadequate options of often poorly, selfishly, or otherwise unsuitably motivated, and mostly misrepresented, party devotees who, once elected, not so much serve the people as make decisions for them, usually in conjunction with influential financial supporters and lobbyists, and mostly regarding matters few if any of them properly understand, effectively 'running' society on everyone's behalf (occasionally into the ground). These failings are aggravated by top-down hierarchical political and bureaucratic structures which encourage individuals to hoard information and communicate only what serves their interests. Democracy, as practiced, fails to live up to its name…

In particular, true democracy is thwarted by the *kratos* held by elected 'representatives', sufficient in amount to satisfy some of the less demanding Greek gods. But while some 'representatives' also speak as though gods, their utterances generally prove a lot less reliable. For it has come to pass that 'representatives' have said (more or less) "let there be no recession", and, verily, a recession didst eventuate. One spake thus, "let no Australian child live in poverty by 1990", and, lo, many children endured poverty that year and for years thereafter. Another bellowed "readeth mine lips—let there be no new taxes", and, behold, new taxes didst appear.

The infrequent and inadequate opportunities for 'the people' to 'choose' their political 'representatives' are provided every few years by elections—at least for anyone old enough to vote, and *if* allowed. In most countries, women could not vote until the twentieth century: not until 1991 in Appenzell Inner-Rhoden, a Swiss canton; 1984 in Liechtenstein; 2005 in Kuwait; and 2015 in Saudi Arabia (the final laggard).[361] Black South Africans, despite majority status, did not gain voting rights until 1994. The USA's African-American population could not vote until many decades after they were officially 'emancipated'. Indigenous Australians were excluded until the 1960s.

Even so, not everyone takes the opportunity to vote at elections, because most nations do not make voting compulsory. For example, barely half of those eligible to vote did so in most recent USA Presidential elections (only 49 percent in 1996).[362] And yet, no matter how few vote or how close the voting, 'representatives' often claim the people have given them a mandate to govern.

One might think that political representation would involve 'the people' developing ideas and schemes for change, and presenting them to their 'representatives' to consider and arrange. Under existing forms of democracy, however, things work backwards. Elected 'representatives' fail to live up to their titles by making decisions for most matters—even the quantity of taxes

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[360] Peter Hammill, from the song 'Vote Brand X' on his album *In a Foreign Town* (Enigma Records, USA, 1988)

[361] http://en.wikipedia.org/wiki/Women%27s_suffrage

[362] http://en.wikipedia.org/wiki/Voter_turnout_in_the_United_States_presidential_elections, http://www.presidency.ucsb.edu/data/turnout.php

needed for their wages, and for all other government spending—on *behalf* of the people, usually with little consultation (more often none). Even with referenda, often paraded as democracy in action, in most nations the people are merely presented with opportunities to authorise or reject proposals of their 'representatives' (often concerning complex issues but expressed as simple yes-or-no proposals).[363] So democracy as practiced yields not representation, but government.

The aspiration of people power is further degraded by how elections effectively grant 'representatives' multi-year employment contracts, which can only be broken by extremely gross negligence or law-breaking, not mere incompetence or dissatisfaction by voters. Ironically, the goal of greater labour flexibility, however loudly advocated by 'representatives', does not extend to them. Yet democracy as practiced has more shortcomings than just this.

The task of deciding who to vote for is greatly simplified—overly so—by political parties: these offer a 'team' of election candidates, allegedly if not actually in agreement on principles and policies for governing. Hence, voting for a party candidate acts as a vote for his/her party, its views or 'platform', and its leader and senior ranks. Voters need make much less effort to learn and assess well-publicised party creeds than the many and diverse platforms of independent candidates, so not surprisingly political parties usually gain far more votes. However, party platforms commonly conceal widespread differences of opinion between factions within each party, and oversimplify political reality—as a result, once elected, pragmatism often causes party principles to be abandoned and election 'promises' to be broken.

Simplifying the oversimplified even further, many democracies are dominated by only *two* political parties—often barely distinguishable except to their most rabid or habituated supporters—which attract the vast majority of votes. Such democracies might be called 'poligopolies'.

Political parties not only simplify the task for voters, but also for candidates, especially by providing them with greater financial resources than most could acquire on their own. And money is certainly needed for election campaigns—for publicity and promotion, to pay for costs of transport from one corner of the electorate or nation to another, to make predictably inane speeches and hold quasi-religious rallies, to plaster flattering posters on billboards and walls, to run advertisements in the media, even (in many places) to cover charges for candidate registration. Elections now cost literally fortunes—millions of dollars, even hundreds of millions for some recent USA Presidential candidates.[364]

But the sizeable memberships and loyal supporters of political parties can provide only some of the money needed by party candidates. In some nations, part of the rest is publicly funded from tax revenue. But most of the remainder comes from donations, inevitably by those who see advantage in the policies being promoted by candidates and their parties. Obviously, the wealthiest corporations and individuals not only have the most incentive to donate but can most easily afford such an investment (often tax deductible). Likewise, they are most disposed to invest in lobbying governments during their terms for favourable policies.

The wealthy who control large firms, multinationals, and especially the media, can give candidates and elected politicians even more than financial support however. Publicity and promotion, or suppression and criticism, biased reporting and editorials, and daily restatements of preferred poll 'results' can all be arranged with particular ease when business ownership

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[363] In some nations, if a given proportion or number of people petition their government to hold specific referenda, then the government must do so. In most countries, however, only governments can initiate referenda.

[364] http://thecaucus.blogs.nytimes.com/2011/03/26/how-much-does-it-cost-to-run-for-president/, http://en.wikipedia.org/wiki/United_States_presidential_election,_2008#Campaign_costs

concentrates to the current extreme. Enter the L$D-competitive pursuit of self-interest, exit any hope of democracy.

So, as a natural and unavoidable side effect of leaving all to pursue self-interest, mutually masturbating coalitions of political and economic forces constantly shift and realign as they overtly and covertly tussle for control. But although the elected and the elect may swap or share puppet and puppet-master roles as circumstances change and interests overlap or diverge, the concentration of so much power in so few hands invalidates the 'one person, one vote' claim (or assumption) of democracy. As Ralph Miliband put it: "Political equality, save in formal terms, is impossible in the conditions of advanced capitalism. Economic life cannot be separated from political life. Unequal economic power, on the scale and of the kind encountered in advanced capitalist societies, inherently *produces* political inequality, on a more or less commensurate scale, whatever the constitution may say."[365]

The flaws of modern democracy are further compounded by the inadequacy of democratic choice. The majority of election candidates, mostly male, come from business and law; many, especially USA presidents, also own great personal fortunes; few could be called young. To put it in the most polite terms possible, rich old/middle-aged male businesspeople and lawyers have no monopoly on the skills and talents required for governing (or even, if they were so disposed, for knowing how to assess the desires of the people and arrange change accordingly).

Furthermore, 'representatives' are not required to possess any relevant qualifications or skills *other than popularity*—with other party members in order to win their nomination to stand for election, and with voters. Of course, popularity need not bestow aptitude. Indeed, popularity can thwart both government and representation—by reinforcing belief in personal or party dogma, by bloating egos, and by rendering the masses more willing to abdicate control and less thoughtful about the consequences.

Attempts *to gain* popularity also cause problems. For the public to be able to assess an individual's potential as a political representative, or a party's as a government, they need information. What they instead receive generally misinforms with greater intensity even than the often irrelevant credos of party platforms. Politicians want your vote, and this motivates them to inform you only of what they expect you to find positive about them.

Generally, it serves the purposes of candidates and politicians to act full of conviction and confidence in their platform and their own capabilities, whether they feel it or not. It serves them to appear as though they can answer all questions, but many answers can lose votes; so they evade questions (especially those not understood) while trying not to appear evasive. This can be done by sly changes of subject, appeals to patriotism and prejudice, thalamic slander of opponents, reiteration of principles and viewpoints so as to imply rather than spell out answers, forceful proclamations of identifying and distracting catch-cries (such as 'that is nonsense'), and numerous other verbal tricks and deceptions.

Like others intent on spreading conviction, politicians rely heavily on emotional language that prevents an accurate communication of facts and issues. For instance, political orators tend to refer to the obstinacy of opponents as 'pig-headedness', but that of themselves or their colleagues as 'firmness'; thus people who share a common trait are described with different words having clearly associated emotional qualities that condemn foes, but exonerate and applaud friends. Such an approach communicates not information, but personal bias.

Politicians bandy about many words and phrases that provoke emotional reactions—like 'democracy', 'freedom', 'national welfare', 'liberty, equality and fraternity'. Such terms imply

[365] Ralph Miliband, *The State in Capitalist Society* (Quartet Books, London, 1979), p.237

unquestionable ideals shared by listener and speaker alike, and so help to avoid questions about what is actually meant by them. But words remain one thing, and actions another. Election speeches full of the word 'freedom' are often followed up by new legislation restricting liberties and civil rights; major parties with self-proclaimed 'green' credentials buy the environmentalist vote, then offer excuses for not reducing mining and/or timber-logging in national parks. Election promises, as any lip-reader can confirm, are often not kept.

Most politicians know that the 'right' words can work people up into enthusiastic states where they tend to hear what they want to hear—especially when helped by the group hysteria of public rallies and meetings, stirring and patriotic music, half a lifetime's habits of thought, and the false prestige of famous orators ("he's been in power for years now, he must know something"). But the 'right' words often so camouflage political intentions and motivations, they render electioneering comparable to dishonest advertising—especially now when media consultants and advertising firms help market and sell political ideology in much the same way as they do any other commodity.

Commercial advertising reduces most of the task of representation—as well as the many diverse and often unresolvable issues of the day—into simplistic slogans, propagandistic sound-bites, and almost subliminal imagery. Advertisers use selective and often misleading information to display opponents as inept or dangerous, and to cast clients as virtue-ridden saints. Simple but powerful images that create feelings of fear or faith highlight the supposed differences between political foes, associate ideology with 'family values' or a threat to national well-being, justify failure and rebuke success. With all the techniques available to manipulate image and sound, rhetoric and bombast are presented as factual and informative. Entire platforms are reduced to catchy jingles and empty trite slogans such as 'the brighter future', 'it's time', or 'the sensible choice'. Mantras to avoid enlightenment.

Whether to win an election or to make a point afterwards, the fatal combination of entertainment-focussed media reporting and political advertising gives people not a display of substance or aptitude, but skilfully orchestrated and often false representations of image and charisma. Media consultants fashion and refashion candidates for the camera: they arrange more 'authoritative' styles of hair, suit or skirt; adjust the pace or delivery of speech; fuss over pronunciation, diction, and deportment; regulate eye-contact and body language; turn wimps into winners. Televised debates are won or lost not on the quality of argument, but on candidates' five o'clock shadows, height differences, and perspiration rates. Conceivably, many revered past leaders might never have been elected had current practices been used in their time. Lincoln's facial warts and 'crazy' wife, Churchill's and Menzies' girth, and FDR's polio-weakened legs, all might have seemed to marketers as possibly irremediable electoral liabilities.

Theodore Roszak suggested that political campaigning has, over time, grown "more and more obsessively focused on… the huckstering skills of the marketplace".[366] This can be seen further by how political parties and governments now rely on polling—the 'establishment' of public opinion—so that campaigning and government, in their own misleading fashion, can be seen to be concentrated upon what 'the people' are claimed to regard as issues, and so that policies can be seen to provide what is supposedly wanted.

Polling, however, can mislead as much or more than advertising because questions can be phrased and ordered so as to attract the desired answers. For instance, pollsters would have a better chance of 'finding' that people favour expanding their nation's nuclear arsenal, if they asked: (1) Are there any nations that threaten or might one day threaten our nation's security?

366 Theodore Roszak, *The Cult Of Information* (Pantheon Books, New York, 1986), p.190.

(2) Should we have the most powerful deterrent available for self-protection? (3) Should we increase nuclear weapon production? On the other hand, the opposite opinion could be all but guaranteed with a single question: should we sacrifice other government spending, on such things as schools and hospitals, in order to build more bombs, remembering that already enough nuclear firepower exists to destroy the world several times over? Because the style of question influences 'the' answer, parading poll results as public opinion can misinterpret and misrepresent belief, and so stymie rather than assist political choice.

Uniformity of opinion will rarely be found by pollsters or anyone else. Similarly, democracy, as currently practiced, must fail in its attempts to apply a one-size-fits-all approach. Political parties fraught with internal bickering, squabbling coalitions elected with bare majority support, neighbouring electorates with diametrically opposed voting patterns, all belie the claim of mandates or consensus. Instead, any democracy truly living up to its name must reflect the clear and obvious plurality of views among its population. To that end, a completely reorganised form of participatory democracy needs to be constructed…

6.2 Self-determination

> "*The notion of the majority is used as a dogma by political leaders to* prevent *democracy… We are sold the idea that voting is* action *whereas a moment's reflection will show that voting is* abdication*. When people take government into their own hands that is democracy, when they relinquish it, leaving it in the hands of MPs and Councillors, that is something else – mere representative government. We have been tricked into supposing that the two things are one when in fact they are mutually exclusive." – Peter Cadogan*[367]

Aiming for a much more direct and participatory form of democracy, Peter Cadogan once suggested that: "The way ahead lies through… sovereign city regions supported by national self-financing utilities, industry, commerce and the professions."[368] Cadogan identified the pluralist nature of such a system when he pointed out that "each region, being sovereign, will take decisions peculiar to itself."[369] This envisaged "direct democracy" depends on "face-to-face accountability… transformation of local government (made feasible by manageable scale and communications)… and… the division of *political* labour so that all who are willing and able to take on some social responsibility are able to do so".[370] As to agreement, Cadogan wrote: "The important numerical question, constitutionally, is not the majority at all. It concerns the number of people effectively engaged in decision-making."[371]

Cadogan's ideas have something in common with a more daring notion outlined in an episode of the British TV satire 'Yes Prime Minister'.[372] Extending both sets of ideas, and augmenting them with others, yields *plurocracy*—a bottom-up, pluralist, decentralised and participatory version of democracy underpinned by small self-governing electorates arranged into progressively larger associations whose decisions require the majority agreement of constituent groups…

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367 Cadogan, *Direct Democracy*, pp.24-5

368 Cadogan, *Direct Democracy*, p.3

369 Cadogan, *Direct Democracy*, p.21

370 Cadogan, *Direct Democracy*, pp.3-4

371 Cadogan, *Direct Democracy*, p.25

372 Similar proposals are made in *The Book of Visions* (Virgin, London, 1992), edited by Nicholas Albery, pp.128-32, 256-9, & 283-6.

The essence of plurocracy lies in its bottom-up structure, based on small electorates called *localities*, each consisting of (say) 250 people (perhaps 200 old enough to vote). Groups of (say) twenty localities form larger electorates (of 5,000 people) called *towns*. Groups of towns, in turn, form still larger electorates—groups of these, yet larger electorates—and so on, with the biggest varying in size to suit population densities, ethnic and religious groupings, national or state boundaries, and other factors. To illustrate the idea (as in Figure 6), ten towns might form a *city* (50,000 people), forty cities might form a *region* (2,000,000); twenty regions, a *nation* (40,000,000); fifteen nations, a *meta-nation* (600,000,000); and twelve meta-nations, the world. Something like that.

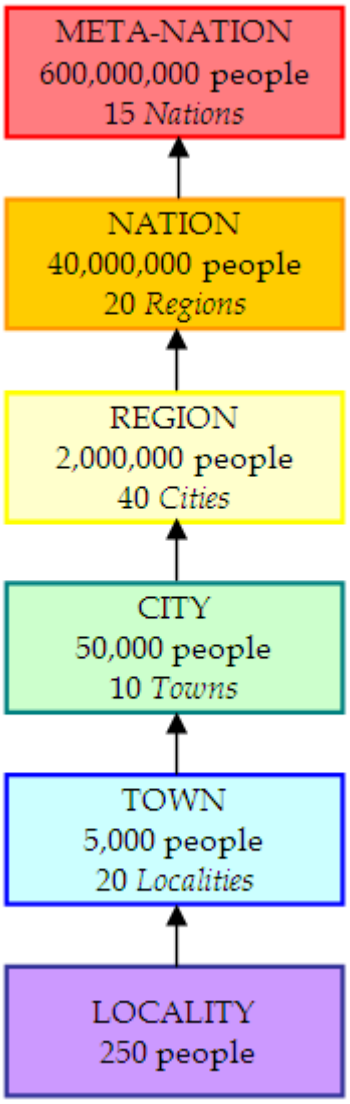

Figure 6: Plurocracy

With plurocracy, decisions are not abdicated to representatives (who nevertheless have roles to play, as the next section explains), but made by the people themselves—for any and all issues with which they wish to be involved. The people make decisions from the bottom up: for any electorate to plurocratically pass any proposal requires approval not only by a majority of its voters but also by a majority of its constituent electorates—each, in turn, approved also by a majority of *their* constituent electorates—all the way down to the locality level.

Plurocratic electorates ('plurocracies') at every level function semi-autonomously. Although each locality, for example, must heed the plurocratic decisions of its town, these apply only to issues affecting two or more localities, as agreed upon plurocratically. Each locality makes its own rulings, for purely internal affairs. So, the decision to build a new house or shop, for instance, is made by the locality it is to be built in (perhaps recommended by its town or city); but a height restriction, an ecologically safe and efficient method for its construction, and/or other relevant matters, might be agreed upon at the town or higher levels (following plurocratic agreement of that level's constituent electorates).

This approach follows that of a suggestion by David Weston (in regard to community-based and -issued currency): "the priority for decision-making and action-taking should be at the most decentralised level possible. Only when those decisions and actions impinge upon the well-being of the next-larger communities or regions, should those too have an influence."[373] More or less the reverse of what happens now.

Just as importantly, each plurocratic electorate has the right to secede from its 'parent' electorate. If, for example, a locality found itself often voting against decisions plurocratically passed by its town, and felt enough dissent, it might choose to secede from its town, and join other more-like-minded localities (not necessarily with common borders) or else become independent. This option, although no guarantee, should help protect minority groups.

The autonomy of each plurocratic electorate is restricted only by their members' imaginations (and by the time they have available to utilise them, which the next chapter

[373] Albery, *The Book of Visions*, p.66

explains should greatly exceed what most people have now). Not only does each plurocracy make up its own mind, it even chooses *how* it makes up its own mind. Individual plurocracies can settle on their own definitions of 'majority approval' or vary it according to the issue. Some might 'weight' votes in certain circumstances, so people most affected by decisions have the greatest say. Others might vote on a scale of (say) zero to a hundred, with a pre-agreed average or median score required for any decision to be passed. Still others—especially at the locality level, for which it is most suited—might seek consensus for some or all issues, by modifying proposals until they satisfy all who previously dissented.

Something akin to plurocracy (though not as multi-layered, flexible or as feature-laden) is already in use, and operates highly successfully.[374] Switzerland consists of a "confederation of [26] self-governing cantons, each of which can leave the confederation if it so wishes… [C]itizens of a single canton can divide themselves into two cantons if they are, as they have been, so minded… [T]he governing systems, the boundaries and the allocation of constitutional powers and prerogatives have been decided by the people themselves".[375] The system is underpinned by semi-autonomous "rural Swiss commune[s] at the village level, each with a couple of thousand inhabitants[, which]… have their own constitutions".[376] Also, referenda can be initiated at the communal, cantonal, and federal levels, if enough signatures are collected—100,000 or less depending on the issue.[377] Minorities are protected by communal and cantonal semi-autonomy, the right to secede, and the requirement that federal referenda can only be passed if a majority of cantons vote for them.

It might be thought that a nation comprised of various ancestries, about equal parts Protestants and Catholics, and with four main languages, might have experienced territorial disputes, religious feuds, even ethnic cleansing. Instead, Switzerland's decentralised participatory democracy—and other undoubtedly important factors—have encouraged a stable co-existence of diverse views, leading to enduring peace and prosperity.

Plurocracy, however, decentralises political power further than in Switzerland. It enables decisions to be made from the bottom up, but still allows information to transmit up, down, and across each level to form the network essential for a true democracy. It fosters economic self-management similar to that envisaged by Ted Trainer and James Robertson,[378] in which individuals and households engage in do-it-yourself community projects at the locality level, with town, city and regional planning 'above' them, augmented by national, meta-national and global co-operative agreements.

Of course, even with the bottom-up decentralised structure of plurocracy, some functions of its higher levels—especially those involving relevant specialists, planners, advisors, and other 'experts'—probably need to be centralised to some extent. As Gabel put it: "There are certain things that make sense—with present day needs, technology, resources, and know-how—to do on a large centralized/integrated scale; others make sense on a decentralized scale. Which is which is subject to steady transformation."[379] Determination of which is which can be left to decentralised plurocratic choice, informed by 'expert' opinion. Nevertheless, *efficient* allocation of most resources and responsibilities can be made more likely if the suggested sizes of towns and cities are adopted…

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374 *Many* other historical precedents for decentralised government are mentioned in Sale, *Human* Scale, pp.443-52

375 Albery, *The Book of Visions*, p.258

376 Albery, *The Book of Visions*, p.262

377 Albery, *The Book of Visions*, p.262

378 Trainer, *Abandon Affluence!*, pp.251-260; James Robertson, *The Sane Alternative: A Choice of Futures* (River Basin Publishing Company, St.Paul, 1979), p.75

379 Gabel, *Ho-Ping*, p.210

Much research[380] indicates that the most cohesive self-sufficient communities consist of about five to ten thousand people (a plurocratic town or two): this size ensures the lowest possible cost per person for the satisfaction of most social and many cultural needs, maintenance of eco-energy systems, and provision of some services such as basic health-care, all of which the communities themselves can run and plan (rather than distant bureaucratic government departments). Groups of fifty to a hundred thousand people (a plurocratic city or two) likewise can control, operate, and, at the lowest possible cost per person, provide themselves with housing, education, sanitation, energy, entertainment, libraries, information, law enforcement, street maintenance, fire protection, parks and recreational facilities, most healthcare, and many other services. (Of course, the resources and skills of larger groupings such as regions and nations need to be pooled for *some* purposes, such as high standard orchestras, sports teams, universities, specialist research groups, and other ensembles of note.)

6.3 Representation

> *"…the only real 'seizure of power' by the 'masses' is the* dissolution *of power"* – *Murray Bookchin*[381]

As mentioned, plurocracy involves electoral representatives, but they have very different roles than those currently the norm for democracy.

With plurocracy, voters of each locality elect one person *from among themselves* to act as their representative—or, if they so choose, select different representatives for different issues, or roster the job among volunteers, or settle on representation in whatever manner they determine. Whatever the method used, representation is not faceless or unaccountable in an electorate of two hundred voters. Indeed, most people could end up becoming personally acquainted, perhaps friendly, with their representative, even in geographically larger rural localities.

Similarly, each town selects their representative from their constituent localities' representatives—or maybe the localities' representatives make the choice, with town reps perhaps replaced or assisted at the locality level. Likewise for higher levels. Importantly, decisions on these matters are determined independently by each electorate.

And so, 'government' at any level consists of all the elected representatives of that level, not simply those able to form a majority based on their affiliations with political parties. Indeed, given the bottom-up process of plurocratic decision-making, political parties seem more likely to impede true independent representation than assist it, and so might be best avoided.

With or without political parties, much less complacent representation than occurs now can be further encouraged by storing the votes for all levels' representatives online, each vote accessible to its owner to change *any time* he or she wishes. This not only saves the cost and tedium of periodic elections, but also enables voters to instantly dismiss poorly performing representatives, which should spur them on to avoid such a fate.

Some might consider a permanent electronic election liable to lead to instability, due to rapid changes in representation. Italy could be cited as an example of where instability results from power changing hands too often. However, with plurocracy, a change of representation only corresponds to the people's change of mind, not to a potentially destabilising power shift. Power remains with the people—especially because of the nature of plurocratic representation…

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[380] Cited in Sale, *Human* Scale, pp.179-208

[381] Murray Bookchin, *Toward an Ecological Society* (Black Rose Books, Montreal, 1980), p.254

Plurocratic representatives have mostly coordinative roles, providing or disseminating information, options and proposals to their electorates, making sure they have all available and necessary information to make up their minds, and communicating to other electorates the majority opinions of those they represent. Though some, as now, might hope to pretend otherwise, no representative can know everything—so, on occasions, they will need to seek information, options and proposals from various 'experts'. But even then, the people make the final decisions as to which 'expert' advice to follow.

To assist representatives and their electorates, the online voting system is also used, by any voter who wishes to use it, to register an opinion on any issue requiring a decision; to seek, publicise, obtain and assess 'expert' advice; to bring any issue to the attention of those it affects; to initiate and arrange referenda; to allow any vote on any decision to be reviewed and altered as voters plurocratically change their minds; and to generally function as an electronic communal noticeboard. True democracy from the comfort of your favourite armchair (although face-to-face meetings also occur, at least at the locality level).

Self-government comprises the essential nature of plurocracy: people proposing, deciding, and implementing their own schemes whenever possible, advised by 'experts' when unavoidable, and coordinated by each level's representatives directly answerable to their electors.

To an extent, the very notion of government vanishes if people govern themselves: with plurocratic representation, no meaningful distinction exists between the governed and the government, between private and public sectors. Groups take on responsibilities for tasks now associated with government (such as law and defence), and undoubtedly initiate most ideas for improving how they fulfil their duties, but they ultimately serve the plurocratic will of the people, and always remain answerable to them.

Many readers, comparing plurocracy with today's hierarchical democracies in which governments make and implement most decisions usually without consulting voters, might fear that plurocratic decision-making, especially if involving consensus, would slow down the wheel of progress, if not grind it to a halt. Of course, plurocracy might well take longer to decide what needs doing—*but* decisions will more accurately represent what people want. So, with sovereignty over themselves, and a more cohesive and integrative political structure, perhaps people will make a less fast wheel, but for most it will seem a *better* wheel.

Some readers might also question whether people can be trusted with the power provided by plurocracy. If so, I suggest the question is misplaced. History's numerous examples of *centralised* non-participatory empires—from ancient Rome to the Soviet Union—all of which over-extended themselves and/or collapsed under their own weight,[382] demonstrates that major problems are created by concentration of power, *not* the sharing of it.

Still, the considerable novelty of plurocratic power-sharing certainly requires care and responsibility. On this subject, I have considerable optimism. Ask any parent: a child only learns responsibility when they are given it. Similarly, adults won't learn political responsibility *until* they are given it…

[382] For more detail on this point, see Albery, *The Book of Visions*, pp.283-5

6.4 Rights & Duties

> *"Our present commercial 'civilization' can be characterized as of an infantile type… The rules and regulations are naturally antiquated, and belong to the period to which the underlying metaphysics and language belong. The 'adult' or scientific semantic stage of civilization would be precisely the 'social' stage of complete evaluation of our privileges and duties." – Alfred Korzybski*[383]

In one of Doris Lessing's science-fiction novels, an alien civilisation is depicted in which: "There was no written or formal constitution… [S]ome of the worst tyrannies… had 'constitutions' and written laws with no purpose except to deceive the unfortunate victims and outside observers. There was no point in constitutions and frameworks of laws. If each child was taught what its inheritance was, both of rights due from it and to it, taught to watch its own behaviour and that of others, told that the proper and healthy functioning of this wonderful city depended only on his or her vigilance—then law would thrive and renew itself. But the moment any child was left excluded from a full and feeling participation in the governance of its city, then she or he must become a threat and soon there would be decay and then a pulling down and a destruction."[384]

Just as Lessing's imaginary civilisation depends on vigilance, integrity and participation, so does plurocracy. For example, plurocracy, on its own, can encourage but not guarantee an end to discrimination and persecution of minorities. In the absence of sufficient understanding and empathy, plurocracy could instead result in a series of voluntary residential relocations and/or secessions leading to independent electorates composed almost entirely of minorities—a very parochial form of plurocracy. To avoid this, for plurocracy to foster a peaceful co-existence of diverse groups, people must participate with vigilance, and be educated from as early an age as possible to understand the responsibilities associated with self-determination.

To this end, I propose not a series of complex legal frameworks or a bill of rights or a constitution (though at least some of these might have their uses), but a simple overarching guideline: everyone has a right to do as they see fit, as long as their choices fulfil the duty not to harm others in the process.

Of course, no guideline is foolproof.

Even with such a guideline, care is required to distinguish the truly harmful from the merely disagreeable—to avoid misinterpreting due to shocked sensibilities or outraged 'morality' (or laziness) or other reactions based on personal matters of taste and disposition. It does not suffice either to rely on a formal majority definition of 'harm', because this opens the door to just the sort of rule by weight of numbers that persecution depends upon—hence, localities (at least) should probably pursue consensus rather than majority approval. The guideline indeed can only guide—it cannot resolve disputes on its own, nor replace the need for thought and consideration.

And so, I believe the conclusion cannot be escaped: because agreement, however reached, nearly always avoids unanimity—because, ultimately, we can only agree if we agree to make efforts to agree—we cannot be *made* to behave fairly, responsibly and properly; we can be educated to our responsibilities and rights, but even then we can only *trust* each other to act fairly and appropriately; we can settle on freedom of informed and dutiful choice as our ultimate right, and vigilance and participation as our ultimate duties, but because these remain

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383 Korzybski, *Science & Sanity*, p.509

384 Doris Lessing, *The Sirian Experiments* (Alfred A.Knopf, New York, 1980), p.189

only generalised ideals, no system can be made to function fairly—it can only be carefully and suitably designed, then trusted to work. Giving people the ability to plurocratically choose will not work unless people are trusted to choose carefully.

Sorry, but no absolute solutions exist, no hard and fast realities. Each moment involves choice and chance. Control is not possible, only trust. And care. And forgiveness and understanding when mistakes are made.

We probably have no way forward except to learn to trust each other, and to learn to tolerate each other's differences. Enclaves of people with different views, habits, and cultures will always exist, and we will always retain the onus not to let it matter. Plurocracy cannot guarantee the best outcomes, but it encourages them far more than do current forms of democracy.

Trust and tolerance can be encouraged in many other ways, too—not just by education but also economically. If accompanied by a competitive dog-eat-dog economic system, which inevitably breeds distrust, plurocracy would function less well. But a co-operative economic system might provide enough material security for all to *motivate us to learn* to trust each other and to tolerate each other's differences—especially if it unleashes us from the afflictions of nine-to-five humdrum, and so gives us ample spare time to properly deliberate over decisions, to seek and assess information, and to use our plurocratic abilities for change creatively and responsibly. To properly explore the potential of plurocracy, its accompanying economic system must be detailed…

Chapter 7

Needs & Wants

"…there is nothing natural about buying and selling things for profit, and allowing markets to determine their value." – Raj Patel[385]

With or without plurocracy, to properly make responsible decisions about any activity or subject, its 'worth' or harmfulness needs to be thoroughly established. This requires an unbiased approach, unfettered by thoughts of self-interest, and able to take into account not just people directly affected but those indirectly concerned, including future generations. Any activity's effects on its encompassing ecosystem also needs consideration, else sustainable development remains just a convenient but insincere phrase.

Plurocracy's decentralisation of decision-making helps to achieve these aims by enabling local control, thus making it harder for privileged elites to pursue their self-interest at others' and the environment's expense. However, as long as capitalism's unholy trinity of profits, jobs and growth continue to be treated as the real issues and motivations, even decentralised plurocracy cannot compensate for such false decision-making criteria.

Of the three members of the unholy trinity, only jobs cannot be avoided. Perhaps in the far future, a life of complete leisure can be attained for all, with labour performed only by machinery. Personally, I doubt it. For the immediate future, though, we will certainly have to continue working, at least to some extent.

Profit and compelled economic growth on the other hand are not essential, merely habitual. Yet one without the other cannot work: as chapter 1 explained, the two are interlinked, with growth requiring and sustaining profits, and profits encouraging and needing growth. So, to avoid the compulsion to grow, profits must be abandoned.

A few economic 'heretics' advocate a no-growth or 'steady-state' economy, but this cannot be achieved if profit, or interest, is involved, because (as per section 1.5) they make losses inevitable, thus giving any economy that includes them a tendency to contract. Even if an economy did for a while achieve a steady-state (without suffering reduced employment), profit-maximisation would still encourage greater productivity which would lead to less money distributed as wages to afford the same amount of or more output, which would cause economic contraction. Thus, profit, interest and L$D-competition all guarantee very unsteady steady-states.[386]

Without profit and interest, however, growth is not compelled, and so a steady-state economy then becomes possible.

Certainly profit and interest have little compatibility with plurocracy: if some must lose for others to gain, wealth cannot be properly shared, and the level of trust necessary for plurocracy to function optimally cannot be expected to be achieved.

So, sound reasons exist to design economic rules free of the constraints and costs of profit and interest…

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[385] Patel, *The Value Of Nothing*, p.17

[386] See footnote 63.

7.1 Cost And Price Equalisation

> *"The cash flowing into an organisation must be kept in balance with the cash flowing out, and procedures are required for distributing the outgoing cash flows fairly among all concerned. Accept that convention and you have the conceptual basis for a post-capitalist and post-socialist society." – James Robertson*[387]

To a large extent, we've been doing it backwards, horses dragged behind runaway carts. Our current economic rules compel us to spend ever more—actions and decisions are then made subject to that compulsion, with much harm and inefficiency resulting. We don't need this. We also don't need ever more of the same as techno-optimists hope. And we certainly don't want the disasters of insufficiency envisioned by doomsayers. Yet we do not have a choice only between ever more and dangerously less. Rather, we need to find a balance, and settle for enough. But that can't be done while being driven by an economic engine without an off-switch.

So, we need to construct new economic rules that allow us to organise and ensure enough, yet able to cope with fluctuations above or below expectations or ideals (rather than falling in a heap each time we don't spend ever more). We need rules that don't compel ever more activity, but which ensure that only work of genuine need or sufficient desirability is paid for, that all such work can be afforded, and that no-one is penalised whenever less (or more) work is needed.

The basis of suitable new economic rules follows from a simple observation: if jobs are lost as productivity increases, then total income obviously reduces—but so too does total costs. This can be used to great advantage if profit, interest and L$D-competition are not involved, as will now be demonstrated.

Consider an economy of any size over (say) a week during which, for the sake of explanation, it's expected to neither grow nor contract: production won't change, and everyone keeps their jobs and consumes as normal. Production costs for such a stable economy over the week are known in advance: without interest or profit, total producer costs equal total wage costs (either paid directly to the producers' employees, or indirectly to those of other producers, as Figure 1 demonstrated). Hence, *without profit or interest, the total prices of the goods produced over the week can be set to equal the total production costs.*

Of course, expectations are not always met. So, at the end of the week, it makes sense to examine what actually happened, what work was really required, especially the time needed to do it. *If less work was needed by some producers than anticipated and paid for over the week, then average working hours for the entire economy can be reduced accordingly for the next week, with the necessary work shared. But if the total costs of work reduce, so too can the total prices of the goods produced by that work – by the same proportion*. An example will hopefully make this clearer…

Consider a simplified economy, depicted in Figure 7, consisting of three businesses—'Ay', 'Bee', and 'Sea'—each having a forty-hour working week. Between them, the businesses have a total of ten employees paid at the rates indicated in the diagram, so that an anticipated total of four hundred man-hours for the week involves a total expenditure of $10,000. The *total* costs are balanced by the *total* prices: both $10,000. However, the prices of individual products need *not* equal their costs of production: individual businesses can have total costs different to their total of prices as long as prices in aggregate for *all* businesses equal their aggregate costs. (Section 7.5

387 James Robertson, *Profit or People? The New Social Role of Money* (Calder & Boyars, London, 1974), p.85. Note that the proposal of this section adopts Robertson's "convention", but with the important distinction that "an organisation" is substituted by 'a national economy'.

explains the considerable advantages of having different prices than costs for some products.) Hence, in the diagram below, Ay's prices exceed its costs by the same $1,000 amount that Sea's prices fall short of its costs, while Bee's prices equal its costs, as do those of the total economy.

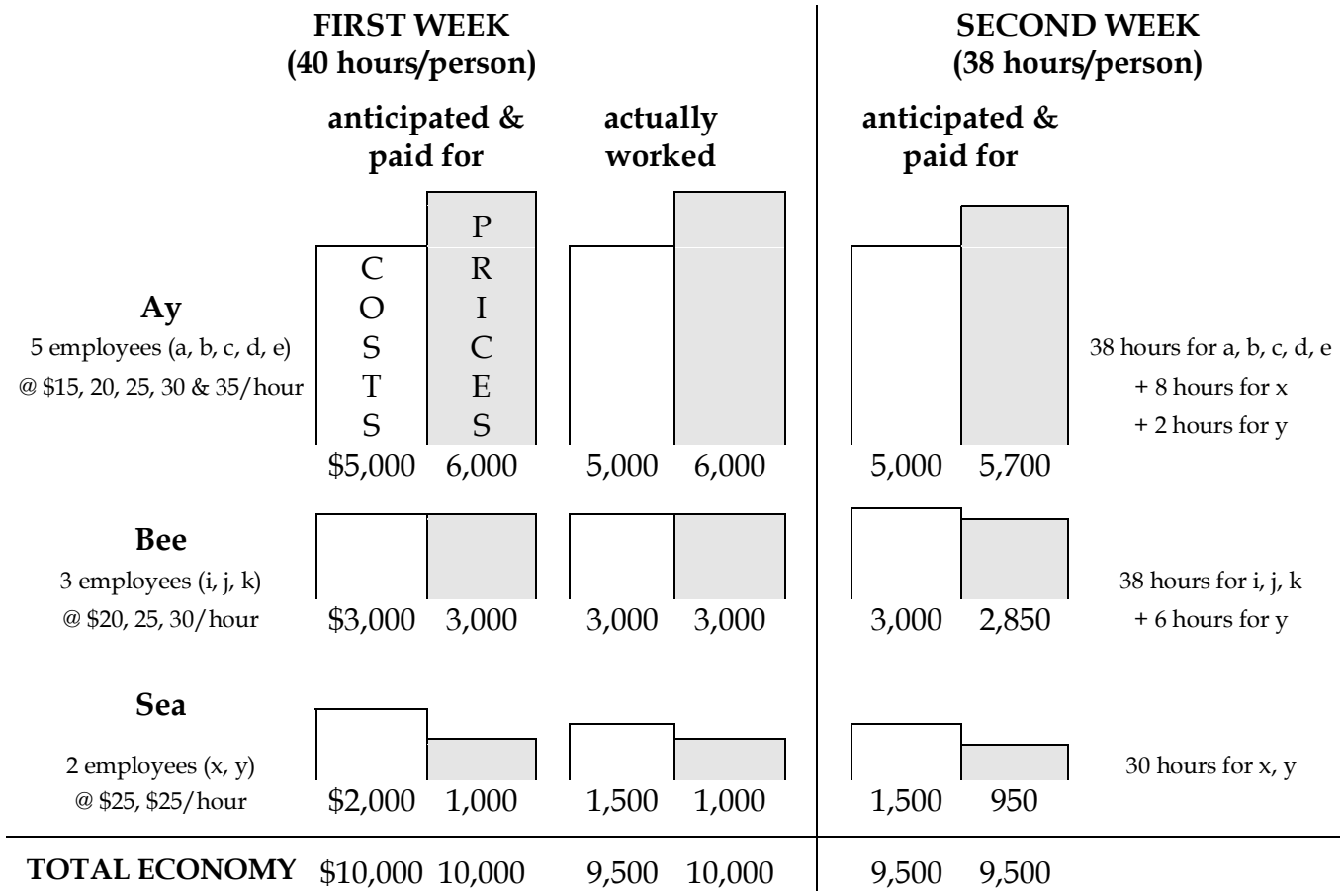

Figure 7: Cost And Price Equalisation

Now say Sea's two employees find ways to perform their required work with ten hours less labour each over the week, and they expect to maintain this saving in the future. So, only 380 man-hours—ninety-five percent of the first week's anticipated work—are actually required to produce the same output. Therefore, in the second week, all the necessary work can be shared over a 38 hour week in the manner depicted in the diagram, with *prices likewise reduced* to ninety-five percent of those set during the first week. In this way, Sea's savings prompt everyone to work five percent less, and so earn five percent less—but because this also reduces the economy's *total* costs by five percent it allows *all* prices to be reduced by five percent. Thus, purchasing power is kept constant for all, while avoiding unemployment and recession.

This approach—'Cost And Price Equalisation' (CAPE)—has the main effect of absorbing changes which now give rise to the boom-bust business cycle into altered working hours and prices. *If efficiency improvements and/or sales declines and/or reduced consumption and/or anything else decreases the need for work by x percent, the same work is shared over a working week also lowered by x percent. Income and total costs then also reduce by x percent, because of which CAPE requires an x percent reduction of all prices. Similarly, more shared work, whether because of reduced productivity, natural disaster, or any other reason, causes the working week, income and prices to all rise by the same proportion*—a much better alternative than the inflation that normally results under capitalism.

So, though people can get less (or more) income, none lose (or gain) purchasing power because all prices drop (or rise) by the same proportion as income. And if prices and income move up or down in unison, then growth or contraction or a steady-state can be handled by sharing the work around. (As mentioned, despite plurocratic decentralisation, some functions can be most efficiently pursued with centralised approaches: if all prices of all businesses are recorded on a single database, all of them can be easily altered periodically by the same CAPE proportion using a simple computer program.)

This provides the basic overview but the devil as always is in the detail—especially concerning the sharing of work. However, other proposals to be detailed in subsequent sections ensure that these details merely complicate rather than undermine CAPE, and so the details are discussed in the final section of this chapter.

Make no mistake though: this is not capitalism. It has no profits, maximised or otherwise, or interest, nor does it encourage ruthless labour market competition. Likewise, businesses whose prices adjust in line with changes to the overall economy cannot be regarded as capitalist. But neither does this approach retain the faults of capitalism, because it neither requires growth nor leads to inevitable loss.

Habituated self-serving capitalist dogma aside, a reduction in the work required to produce and distribute needs and desires should be treated as welcome. Rather than increased productivity and/or sales declines and/or reduced consumption leading, as now, to job losses, they can instead prompt necessary work to be redistributed among all people wanting and able to work so that the average time spent working reduces—CAPE allows this to happen with the resultant reduced costs for producers balanced by a lowering of prices, so that reduced working hours involve no loss of purchasing power.

CAPE removes one of capitalism's most fundamental motivations, to preserve and create jobs. It unleashes us to instead reduce work, to levels now only in our dreams…

7.2 Saving Work

> "*…unemployment due to our discovery of means of economising the use of labour [is] outrunning the pace at which we can find new uses for labour. But this is only a temporary phase of maladjustment. All this means in the long run* that mankind is solving its economic problem." – *John Maynard Keynes*[388]

To unleash CAPE's (and our) full potential, work planned for any period is paid for even if not all of the hours expected prove necessary ie. for any CAPE period, workers are paid for the hours expected to be needed from them, even if they find ways to increase their productivity so that they actually work fewer hours. Then, not only are people prevented from being financially penalised for finding ways to save themselves—and ultimately their community—work, but also a clear incentive of fewer working hours *motivates* the saving of labour.

Indeed, in this way CAPE allows work to be not merely reduced but *minimised*.

We could work a *lot* less than we do now if we abandoned all the unproductive work currently performed, automated everything we could of what remained, and shared the rest—especially if we also built to last instead of to obsolesce, and if we produced and consumed less slavishly and more responsibly (particularly by minimising or avoiding pollution, resource-hungry processes, and non-renewable energy use). After considering these matters, Trainer concluded that "it is quite plausible that our non-renewable resource use and the time we

388 Keynes, *Essays in Persuasion*, p.325

would have to spend on commercial production could be slashed to the region of one-fifth or less of their present values."[389] *A one-day working week*.

Supporting Trainer's claim, similar results follow by using Fuller's estimate of unproductive work (mentioned in section 5.1). If we *need* to do only thirty percent of the 'work' that currently occupies about ninety percent of those who want employment, each for about forty hours a week, sharing it equally requires a working week of less than eleven hours. But the less we work, the less resources we need, like petrol, car and truck tyres, steel, concrete, paper, and energy; and the less damage we cause and need to fix, such as through pollution, congestion and waste. So, less work further reduces the need to work (in economic parlance, a 'negative multiplier effect'), making a one-day, or even a half-day, working week more than plausible.

However, this possibility can be taken even further. Some work likely to always be needed or wanted nevertheless does not *have* to be paid for in a plurocratic CAPE-based economy. A shorter working week unleashes time to take on personal unpaid responsibilities for tasks people now pay for because of insufficient spare time, such as house chores, and at least some aged, child and disability care. A shorter working week also gives individuals, neighbourhoods and local communities the time to take direct responsibility for even some social work, basic nursing, and much else of the human, health and other services now run by governments or businesses. A shorter working week even encourages those in the so-called entertainment, sports, arts, recreation, sex and other 'industries' to do at least some of their 'work' for pleasure instead of for money. All of which allows the working week to reduce further.

On the other hand, we must also consider whether some work that *isn't* now done really needs to be, and whether current efficiencies can be maintained as more of the developing world demand a share of limited fossil fuels and other natural resources. In the short term, these concerns might negate at least some of the potential for shedding unnecessary work, but in the medium term of perhaps a decade or so, as we learn to produce and consume more sensibly and responsibly, and do only work that is really needed and wanted, we might well end up with a one-day working week.

Common-sense dictates only that hours worked equal the minimum necessary to perform the work really needed and wanted—taking into account *all* work. Hence, if, say, ten hours of labour are saved by using a certain piece of technology, but eleven hours are then needed to clean up the mess resulting from that use, then it involves less work overall not to use that technology. (This approach has been called 'least-cost planning', and I will return to it in section 8.4.)

Not everyone need work the same hours. Because individual consumers and producers have different needs and wants, working hours can vary from place to place and time to time, though the average responsible citizen should aim to work, over their lifetime, an average total amount. Thus, those whose work cannot easily be performed in a single day per week can work longer hours but (hopefully) over compensatively shorter working lifetimes. An economy might have so few doctors, for example, that each needs to work (say) five days a week, until more are trained to ease their burden and allow them to return to standard hours—but then their extra initial contributions would be compensated by subsequent reduced hours and/or earlier retirements. This complicates CAPE, but given sufficient computer resources and organisation, it almost certainly poses far less trouble than what now goes into calculating GDP.

CAPE need not be applied with unerring exactitude in any case. Nothing useful is gained by calculating requirements and capacities to a level of precision that leads to a working week of (say) 33 hours, 47 minutes and 3 seconds, then discovering that saved work and/or reduced

[389] Trainer, *Abandon Affluence!*, p.217

consumption over the period allows the working week to reduce in the next period by 2 minutes and 14 seconds. This and other considerations explained in section 7.9 suggest the working week should change only in increments of half-hours or full hours. Doing so also seems practical for another reason. Most people do not slavishly work for every minute of every working hour, but rather have some leeway for putting in a little more or less effort to suit needs and circumstances. So, if the working week reduces by a half-hour or so, most workers can probably continue to do all they had previously done without needing to bring in extra help—which actually assists in reducing working hours further for everyone. This certainly seems practical for the future day when CAPE has reduced working hours to an amount approaching the *minimum* necessary to perform all work needed and wanted, when changes to the working week seem likely to reduce in both frequency and degree.

7.3 Attitudes & Motivation

"…we have been trained too long to strive and not to enjoy." – John Maynard Keynes[390]

Some people might object to the very idea of a much shorter working week in the belief that increased leisure-time spoils people, and encourages hedonism and anarchy. Yet, probably, CAPE will reduce working hours gradually, not suddenly, thus giving everyone plenty of time to adapt. Furthermore, the duties and responsibilities required by a properly functioning plurocracy should occupy some part of the time freed up by a shorter working week and so discourage harmful hedonism and anarchy, while encouraging tolerance for genuinely harmless self-indulgence.

Even if accepting a shorter working week, some might fear that an economic system free of profit is bound to miserably fail because of a supposed lack of incentive. Soviet socialism might be cited as an example of what happens without profits to spur people on. Yet the issue lacks such simplicity. Soviet socialism failed because of a lack of incentive, certainly, but this was surely encouraged more by its authoritarian political structure than by its absence of profit. In marked contrast, plurocracy provides *participatory* decision-making—therefore, citing the *opposite* political system of Soviet socialism only raises an irrelevance.

In any case, rather than leading to a lack of incentive, plurocratic self-government and vastly increased spare-time provide opportunities to unleash rather than quell our potentials, to motivate greater responsibility and creativity, and to enable us to construct a world free of the ecological and social degradation that (all but) inevitably follows from L$D-competition—the last seems a goal not only full to the brim with incentives, but also truly able "to organize and measure the best of our abilities and skills".[391]

Yet even without these incentives, a vastly shorter working week still won't prevent the need to use time productively, and for reasons far more sustaining and 'natural' than the current 'need' to work—reasons such as the urge to avoid boredom and to feel useful and valued (or, if you prefer, to satisfy and please others)… the thrill of achievement… self-development and the hope for immortality through exceptionality… and the satisfaction of basic needs and desires. Fulfilment, not as consumers or producers but as members of an integrated world community, provides the ultimate incentive.

As for the selfish motivation forced by L$D-competition, that can be shed without concern. An experiment with apes demonstrated the problems of relying on the pursuit of self-interest as

[390] Keynes, *Essays in Persuasion*, p.328

[391] The words of JFK's speechwriter referring to the mostly technological achievement of a lunar landing.

incentive: when their performance of 'work' determined their reward or punishment, the apes' standard of work "began to degenerate until they produced the bare minimum that would satisfy the experimenter."[392] Clearly, apes have plenty in common with humans.

Even so, market proponents might still insist that a system lacking the competitive pursuit of profit goes against 'human nature', which (they might claim) the current economic game merely reflects. But this has it back to front: our current 'business culture', especially its revered goal of profit-maximisation, does not reflect 'human nature', but rather crafts a temporary straitjacket from which 'human nature' struggles to escape. As Richard Wilkinson and Kate Pickett put it: "rather than assuming that we are stuck with levels of self-interested consumerism, individualism and materialism which must defeat any attempts to develop sustainable economic systems, we need to recognize that these are not fixed expressions of human nature. Instead they reflect the characteristics of the societies in which we find ourselves and vary even from one rich market democracy to another."[393]

To a dominant extent, 'human nature' is determined *by* the specifics of ruling institutions and societal conventions, not vice versa. Change the economic game and 'human nature' alters too. For example, the practice of Soviet socialism moulded the 'nature' of its practitioners, but when Eastern Europe's centrally planned economies converted in the 1990s to 'free' markets, many once docile, unquestioning followers turned into aggressive demonstrators, coup defeaters, and profit-hungry capitalists. A change of economic game will affect L$D-competitors likewise.

Anthropological studies of other cultures also demonstrate that a competitive 'nature' is neither natural nor mandatory. According to John Langdon-Davies, Nicobar Islanders play (or played) sports which have "no starting point and no winning post; and… whilst they compete… side by side, struggling for all they [are]… worth, if one side begins to find that it is getting a little ahead of the other it will very soon slacken off a bit and let the others get ahead."[394] Trobriand Islanders near New Guinea also 'compete' oddly with their yam-growing: "The gardener spends much time on unproductive labour, decorating his garden and using better materials than are needed for the proper growth of the plants; he grows far more yams than he can use, and cheerfully leaves half the harvest, if it is abundant, to rot; and finally, he is content with a social convention which allows him only one-quarter of his harvest for his own use and makes him give away the rest chiefly to his relations-in-law."[395]

Agree to define any set of conventions, institutions and/or economic game rules, and 'human nature' changes accordingly. In the words of Langdon-Davies: "Put the son of a bricklayer in infancy with the family of a Trobriander gardener, he will grow up with the traditional outlook towards yam culture of his foster parents. And from this it follows logically that a different set of institutions in the future may alter the human motives behind action and work, just as they have so frequently altered in the past."[396]

The very "different set of institutions", mechanisms and approaches of plurocracy and CAPE at the least foster, in Trainer's words, "a greater readiness to connect means and ends in our thought and action… We would be spending most of our time in situations where we had to think about the outcomes and consequences of our actions because we would directly experience those consequences."[397] Because of this, plurocratic co-operation also assists in the

[392] Bohm & Peat, *Science, Order and Creativity*, p.230

[393] Wilkinson & Pickett, *The Spirit Level*, p.227

[394] John Langdon-Davies, *Man and His Universe* (Watts, London, 1937), p.219

[395] Langdon-Davies, *Man and His Universe*, p.218

[396] Langdon-Davies, *Man and His Universe*, p.222

[397] Trainer, *Abandon Affluence!*, p.264

control of aggression and desire for power (in marked contrast to how L$D-competition 'naturally' encourages them). Even so, the desire for power cannot be abolished. Even in Aldous Huxley's utopian novel, *Island*, in which a society operates with social and political arrangements that largely prevent domination, some people retain a potentially destructive desire for power. To reduce the likelihood of them causing trouble, they are trained in sensitivity, awareness, and the consequences of action, and also have their energies redirected. In the words of a character from the novel: "We canalize this love of power and we deflect it—turn it away from people and to things. We give them all kinds of difficult tasks to perform—strenuous and violent tasks that exercise their muscles and satisfy their craving for domination—but satisfy it at nobody's expense and in ways that are either harmless or positively useful… [such as] fell[ing] trees… or… mining."[398] A plurocratic CAPE-assisted future will be advantaged by adopting similar approaches.

7.4 Determining & Doing

> *"…the classical law of 'supply and demand' is structurally and semantically an* animalistic law*, which in an adult human civilization must be reformulated. In fact, an adult human civilization cannot be produced at all if we preserve such fundamental animalistic 'laws'. – Alfred Korzybski*[399]

Even if persuaded about the issues just discussed, devoted proponents of free markets might still bristle at the idea of sharing all necessary work, with clichéd fears of socialist planning leaving them (hopefully) speechless—but again their fears are not warranted. Not just sharing work, but figuring out what work—public *and* private—is really needed and wanted, and ensuring it suits priorities appropriate to circumstance and culture, locally, regionally and nationally, cannot be left to central planning by faceless bureaucrats and party apparatchiks, any more than it can to profit-obsessed CEOs and marketing managers. Instead, people can determine their own needs and wants and how to satisfy them, more or less plurocratically.

Plurocracy certainly eases the task of identifying necessary work and sharing it. While specialist co-ordination and advice at times will be needed—contributed, as mentioned, by planners at higher plurocratic levels—especially regarding the latest innovations, newly invented products, and availability of resources, mostly requirements can be determined and fed into the plurocratic online communal noticeboard at the base-electorate level by the people themselves, then tallied and tabulated at successively higher levels, up to (and for some concerns even beyond) the level of a nation.

Plurocracy can thus be used as a market surrogate, enabling needs and desires for goods and services (*and* provision of labour) to be identified and accrued from the bottom up, and assisting producers and workers to plan and employ resources accordingly.

Given the task involved, it seems wise to play safe and overestimate rather than underestimate needs, so that an economy's planned total production might perhaps usually exceed its anticipated consumption (although periodic CAPE revision can refine this to the minimum necessary level of 'cautious excess'). Similarly, because not everything in life can be planned, each person's 'requirements' might perhaps include an additional individually nominated percentage of their total anticipated expenditures, this percentage devoted to discretionary 'impulsive' purchases—items they do not expect to buy but might if the mood

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398 Aldous Huxley, *Island* (Penguin, Harmondsworth, 1971), pp.160-1

399 Korzybski, *Science & Sanity*, p.548

takes them. This would increase production and the working week across the board, but the obvious consequence provides clear motivation to keep the percentages fairly small.

Once the necessary work is identified, co-operatively sharing it is assisted by the same online mechanisms, with people nominating themselves for specific work. Personal choice, needs, skills, dispositions, and experience—as well as practicalities such as location and transport availability—should continue to play the dominant roles in determining who gets what work. However, people are always going to see *some* work as odious or undesirable, and it seems unreasonable to expect a cooperative society to require those jobs to be performed by an unlucky few. Rather, true cooperation requires all to take on an equal *small* share of work that none or too few want to do.

Once established which work lacks workers, people can choose which of the unwanted work they prefer. But probably still some work will lack sufficient volunteers, and have to be assigned—perhaps most fairly by periodic randomisation, subject to the constraints of spreading the load evenly, and not forcing people to work impractically far from home or to do labour for which they clearly have no suitability (for example, abattoir work for vegetarians). Even then, volunteers' online recording can indicate they prefer to swap or give up any assigned work to others less repelled by it. Certainly, hard and fast draconian solutions need not be imposed, but all willing participants need to be prepared to compromise to some small extent, and to accept their plurocratic duty to make responsible choices.

Because a person's skills often dictate their preferences, allowing people to choose their own work as much as possible actually encourages efficiency (unless their work preferences too frequently change). However, economic efficiency—output purely as a ratio of input—should not take on too much importance. In Huxley's *Island*, he describes a sound approach: "We think first of human beings and their satisfactions. Changing jobs doesn't make for the biggest output in the fewest days. But most people like it better than doing one kind of job all their lives. If it's a choice between mechanical efficiency and human satisfaction, we choose satisfaction."[400]

For similar reasons, people can choose *not* to work. Giving everyone a choice rather than an obligation to work has consistency with the guideline previously suggested—that everyone has a right to do as they see fit, as long as their choices fulfil the duty not to harm others in the process. However, each individual has to assess for themselves whether choosing not to work shirks their plurocratic duty to not make harmful choices.

Of course, *some* people might indulge in selfish habits (although, if persisting at them for long enough, they seem likely to be penalised in some way, or at least ostracised, by their communities—certainly, poor choices can be at least discouraged, as the end of section 7.8 explains). Yet surely the vast majority of a participatory and cooperative plurocratic community—liberated by minimal working hours and the abolition of any need to compete—will see responsibility more as gleaming with reward than reeking of effort, and will be motivated to make a responsible choice, at least partly *because* they can do so without coercion.

Even so, the potential difficulties of finding willing workers for all necessary work should not be understated—but nor should they be exaggerated. Much of the really necessary work done today has minimal learning curves, and in some cases need not even require training by experienced personnel but instead by audiovisual means. Some jobs won't even need the same staff for an entire CAPE period, but can involve different people working each week or each several weeks, if that suits willing workers' overall preferences. That might mean a little more

[400] Huxley, *Island*, p.154

time spent working overall than more stable staffing allows, but unless the difference proves extreme, efficiency, as mentioned, should not take priority over satisfaction.

On the other hand, having some jobs lack for full-time workers fosters multiple skills and self-sufficiency, which have the potential to lower costs and prices and working hours even further. Consider, for example, an early job of my own (between University years), at a hi-fi speaker manufacturer, where components parts were assembled and manually connected. The 'skills' took less than half an hour of training to learn, and reasonable proficiency was usually achieved within half a day, but the repetitious nature of the work probably permanently dooms it to widespread unpopularity. However, anyone so disposed might be inclined to happily do the work for a week or several, if they have the option to do as I did: work beyond their required hours to assemble a pair of speakers for their own personal use, paying only for the cost of parts, the labour not 'charged'. (Mine still work as well as ever more than forty years later.) The same approach can be adopted by anyone wanting a new bed, curtains, or most anything, though of course CAPE has to take it all into account in advance. Sharing 'unwanted' work in this way, however, not only gives people knowledge and skills, it also means fewer monetary costs, which, because of CAPE means lower prices and reduced working hours for all.

7.5 Affording

> *"It is not a question of what we can afford, but of what we choose to spend our money on." – E.F.Schumacher*[401]

As section 7.1 mentioned, even with CAPE deliberately manipulating prices so that their *total* balances the total costs of an economy, the prices of *individual* products need not equal their costs of production. Indeed, the costs of work seen as genuinely productive but inherently 'unprofitable' (in the commercial sense of the word) might rarely balance the prices of the goods it produces: instead, to be more easily afforded, *any good's price can be set lower than its cost, even free, as long as other goods' prices are increased proportionally* (as in the example of Figure 7).

Given a choice, people might indeed prefer some goods to be made free—housing, education, health care, a reasonable minimum yearly quota of staple food and basic clothing, and perhaps more. Making most of these goods free (or even heavily discounted) should not lead to shortages or rationing: as Sherman wrote, in regard to "the basic necessities of life, public transportation, some food staples, and a certain amount of housing space… demand for these goods is not elastic and would not increase much when they become free."[402]

But CAPE's capacities extend beyond free or discounted goods. As long as people are prepared to do the work, CAPE allows them to afford *anything* they consider worth producing or in need of doing—any private *or* public sector cost—whether or not it directly results in finished consumable goods: community and neighbourhood projects, such as construction of meeting halls or playgrounds… new homes and infrastructure… research and development… public works, roads and all other endeavours now paid for by government, including welfare for the disabled, retired, injured, and anyone genuinely unable to work… restoration and preservation of the environment… international development and aid… entertainment, sport, art, and any discretion that cultural values and circumstances make a priority.

Any worthwhile work that does not produce consumable goods can be CAPE-afforded simply by increasing the prices of all non-free consumables by the appropriate proportion. In

401 Schumacher, *Small is Beautiful*, p.96

402 Sherman, *Stagflation*, p.242

the broad example of Figure 8, all such work is priced free for simplicity of explanation (although any part of it can instead be assigned a discounted price) and is, in effect, 'absorbed' (like an overhead) into the prices of all non-free consumables. (Yes, Virginia, there really is such a thing as a free lunch.)

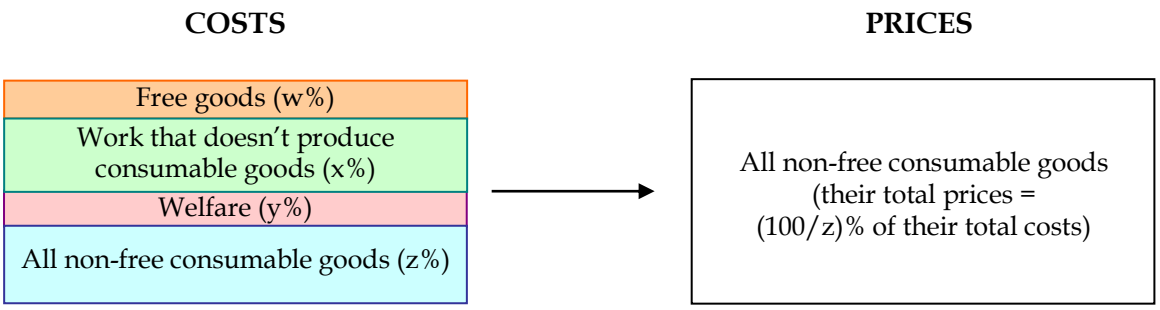

Figure 8: Affording What's Needed

In this way, CAPE can even replace insurance: prices can 'absorb' an estimate of likely costs, based on recent trends, of all repairs anticipated to be needed for natural disasters and misfortune. Indeed, prices can be set to absorb even a nominal amount for *un*anticipated expenses.

No, this approach does *not* lead to outrageous prices for consumables: CAPE's balance between total costs and total prices ensures all goods can be afforded by definition. Consider too: if you don't pay anything for your most fundamental needs like housing (including mortgages and rent) and basic food and clothing, you have less to spend on, and a *much* greater disposable income—especially if you don't pay federal taxes, local council rates, state government charges, stamp duty, payroll tax, sales tax, or any other direct or indirect tax.[403] Even if prices of non-free goods exceed those now current, so too will your capacity to afford them. But prices will probably decrease compared to now, because if the working week is substantially reduced to include only useful work, then CAPE requires the reduced costs to be balanced by similarly lower prices.

So, with CAPE, no longer does the question 'what can we afford?' take priority, but rather 'what do we need?', and 'what do we want that we're prepared to work for?'

Yet given the extreme flexibility of individual CAPE prices, the real question becomes: how can they be determined without L$D to (mis-)guide us? The last section explained how both needs and work-sharing can be determined by plurocracy functioning as a market surrogate, and not surprisingly this offers a similar solution for the establishment of prices… and wages…

7.6 Plurocratic Market Signals

> *"If economics is so defined that it depends for its validity on the impersonal operation of the market, then it is obsolete." – John K.Galbraith*[404]

The flexibility of individual prices (free, discounted, or otherwise) allows them to be set as the average plurocratic vote of their 'worth' and/or 'desirability' to the community. This is not a requirement—the findings of any suitably thorough and widespread survey can also be used, indeed *any* set of prices that satisfy CAPE's requirement of balancing price and cost *totals* can be

[403] You don't pay directly at least, but you do pay indirectly, because 'public' expenses are absorbed into prices of all non-free consumables.
[404] Galbraith & Salinger, *Almost Everyone's Guide to Economics*, p.152

adopted (even current prices uniformly adjusted to balance total costs)—but plurocratic nomination of prices seems the most consistent approach.

Wage rates can also be plurocratically nominated, to ensure labour's contribution to communal well-being is rewarded in proportion to its 'worth' and/or 'desirability' to the community (taking into account the exertion and tedium involved, associated resource costs, and the experience and capacity of those doing the work).

One approximate form of plurocratic wage-nominating took place in 1987-88 when the Australian National University surveyed 1,650 people as to what they thought certain work deserved to be paid.[405] 'Unskilled work' was nominated the lowest reward, only slightly less than the then actual *average* income, while the highest wage of just over four times the lowest was voted to a 'work' category called 'corporate chairman'.[406] In contrast, in L$D-competitive economies, the highest paid receive thousands times more than the lowest paid (often for nothing more egregiously skilful than staying awake at board meetings, or possession of artistic fashionability or ordinary vocal chords camouflaged by self-exploiting exhibitionism, or the ability to mumble vowel-less sentences under constrictively tight hair bands). So, clearly, if people are given a chance to plurocratically nominate wages, they will most probably select very different figures to those now extant.

Plurocracy can also settle on the amount to be paid to recipients of welfare. However, various surveys concerning the minimum amount of money required for material satisfaction[407] have found a figure of half the average income. Similarly, research of people pursuing "alternative lifestyles in Australia… [found] their average expenditures were around half the national average… None of them reported any sense of material deprivation."[408] For these reasons, payments of welfare—perhaps better renamed "citizen's wages"—seem most appropriately set as half the average income.

However they are determined, citizen's wages and rates for specific work can all be more or less permanently fixed. Because whenever prices rise or fall, purchasing power is protected by CAPE's adjustment of average working hours, L$D-competition's usual motivation for seeking increases to income disappears. Wage rates need only change when plurocratic agreement is reached that circumstances have changed enough to make any existing wage rates misrepresentative of the work's value to the community. The rest of the time, static wage rates will simplify the process of using CAPE.

Like wages, plurocratically nominated prices will probably also differ greatly from today's. Once determined, though, however much they change because of CAPE, their *relative* values will remain indefinitely (unless revised plurocratically, like wage rates, because of changes of mind): if any product starts out with a low or high price relative to others, it stays relatively low or high, whether prices rise or fall in line with the working week—if widgets initially have twice the price of flambers, they retain that ratio however prices are adjusted to match changes to working hours.

Free market proponents might react with horror at the very thought of plurocratic nomination of wages and prices. Ignoring how the process, by taking everyone's opinion into

405 *Australia – Working It Out* (Australian Bureau of Statistics, Canberra, 1990), p.156

406 This compares to a seven-to-one ratio between maximum and minimum wages stipulated in the constitution of the co-operative worker-owned commonwealth company Scott Bader (Schumacher, *Small is Beautiful*, p.231), and a ten-to-one ratio recommended by P.R.Sarkar, (Ravi Batra, *PROUT: The Alternative to Capitalism and Marxism* (University Press of America, Lanham, 1980), p.38) and briefly legislated by Gorbachev early in his leadership. According to an *Age* article (date not noted but undoubtedly soon after the report's release in 1990), the previously cited ANU survey measured little variation in individuals' wage nominations for low-paying jobs, but high-income earners nominated significantly larger wages for high-paying work than did others. So, plurocratic nomination should perhaps exclude some or all people from voting for their own work's wage (or else involve a downward adjustment of their votes).

407 See, for example, Thurow, *The Zero-Sum Society*, p.198

408 Trainer, *Abandon Affluence!*, p.254

account, seems more likely to create accurate market signals than does L$D-competition and its many imperfections, market advocates instead might make hasty comparisons with the alleged dangers of wage-price controls. Governments sometimes implement controls by 'freezing' prices and wages or by setting maximum values ('ceilings') for them—but they do so rarely, usually only when they can't otherwise control inflation, notably in wartime. Indeed, governments mostly resort to controls only as a last desperate "attempt to interfere with the operation of the imperfections in the market rather than to interfere with the market itself… during periods characterized by an inflationary psychology [when] market prices are not very reliable signals for resource allocation, implying that temporary guidelines or controls can be imposed without seriously disturbing the allocative mechanism."[409] Even so, these last desperate attempts usually prove successful, as the USA demonstrated in World War 2, the Korean War, and the early 1970s. Critics claim controls merely postpone inflation, but proponents suggest they not only delay but also ultimately reduce inflation.[410] Nevertheless, the most stable prices have usually been achieved in countries attempting not just bureaucratic price control from above, but *restraint* from within, where workers, unions, employers, and governments all negotiate to pursue claims designed not to have impacts that feedback negatively on the original claimants.[411] Plurocratic nomination of wages and prices takes such an approach much further, but earlier success with controls and restraints suggests reasons for optimism.

Further optimism is suggested by considering the different motivations likely to be involved in setting wages and prices plurocratically: because competitive markets aim to maximise profits, they cater to financially-backed demand rather than need, but without profit, a plurocratic surrogate market can use CAPE to prioritise need, to act ethically, and to behave more like ancient markets where people sought mutually beneficial exchange rather than private gain.[412]

Plurocracy and CAPE also allow another option sure to dismay free marketeers…

7.7 Stewardship

> *"…a transformation of ownership is essential—without it everything remains make-believe." – E.F.Schumacher*[413]

The possibility of free housing, briefly mentioned in section 7.5, may evoke thoughts of socialism and collective ownership. I have something else in mind—and not just for housing.

Like staple food and other free goods, the costs of developing land for use, and of building homes and fixed capital such as factories, can be CAPE-absorbed into the prices of all non-free goods and services—in other words, land, homes, and fixed capital can be made free. Doing so renders stocks, bonds, and other destabilising speculative money-raising devices, as well as home mortgages and business loans, (deservedly) obsolete.

It can be afforded quite easily.

The costs of fixed capital are now already effectively absorbed into prices: for success in a competitive economy, prices have to be set high enough to cover all of a business's costs

409 Kennedy, *Macroeconomics*, p.303 (in contrast to this, part 1 argued that prices *generally* do not act as "reliable signals for resource allocation")

410 See Galbraith, *Money*, pp.256-7, 303-4 for detailed discussion of results of the USA controls.

411 Galbraith & Salinger, *Almost Everyone's Guide to Economics*, p.115

412 This last point is detailed in Trainer, "De-growth—is not enough" (last four paragraphs of "Connections with the market system" section)

413 Schumacher, *Small is Beautiful*, p.234

including the building of its factories or other productive capital necessary to produce its goods. So doing the same via CAPE poses no additional difficulty. But although as much as twenty percent of total expenditure is now spent on building new fixed capital,[414] these costs reduce markedly for a co-operative CAPE-assisted economy that abolishes unnecessary and unwanted work, and sheds interest, shares, and various other cost-raising artifices employed to pursue L$D-competition's goals of more jobs and more profits. Such an economy also has less need for new capital, as it does not contrive new wants, or build to obsolesce. For all these reasons, CAPE-absorbing capital costs into prices of all consumables can be very easily afforded.

The costs of housing also can be easily absorbed: construction of "new private residential buildings" now comprises well under ten percent of total national spending,[415] and so only a similar increase to prices is required for housing to become free. By contrast, most people now spend several times more than ten percent of their income on mortgages or rent. A CAPE-assisted economy with less work overall might have a higher proportion devoted to building houses than occurs today, but other factors might compensate or even result in a lower proportion. With less work overall, some buildings now used for business—such as factories and retail outlets, but especially skyscrapers and office blocks—will become superfluous, freeing them up to be used for housing instead[416] (very comfortable housing in many cases). Many 'summer', 'beach', 'holiday', 'second', 'third' and so forth homes owned by a fortunate minority also offer an additional housing supply if shared properly. Indeed, a developed co-operative economy might find it has more houses than it needs, or at least less need to build more[417] or replace existing dwellings (especially when its population stabilises as the economy attains sufficient development[418]). And with seventy percent of current work gone, construction costs reduce, especially with no interest on loans, no government charges like stamp duty and sales tax, and reduced obsolescence. Even labour costs reduce, because CAPE motivates builders to complete construction as efficiently as possible, to save work. So free housing becomes very possible.

Yet without an associated price, free land, housing and fixed capital cannot be bought by a highest bidder. Therefore, neither can any of it be owned (or rented). Instead, it is plurocratically *stewarded*…

People living in the smallest plurocratic electorate with borders fully enclosing unused land steward it. They have responsibility for looking after the land until they agree on how, if at all, to use or develop it, with larger principles and interests protected by the plurocratic decision-making process.

Fixed capital is stewarded mostly by the people operating it—all the workers of a factory, for example—but also, and ultimately, by those most directly affected by the capital's operations: those living in the smallest plurocratic electorate with borders fully enclosing the capital. Such an arrangement encourages ecological and social care, which CAPE ensures can be afforded.

Stewards of fixed capital make all relevant decisions about operations and practices, although issues can be raised by anyone, including members of nearby plurocracies affected by the capital's day-to-day activities. Stewards are motivated to at least maintain if not increase the productivity of their operations, because doing so either saves work or increases production,

414 *Pocket Year Book Australia 1988* (Australian Bureau of Statistics, Canberra, 1988), p.91, & Kennedy, *Macroeconomics*, p.30

415 *Pocket Year Book Australia 1988*, pp.91-2, & Kennedy, *Macroeconomics*, p.30

416 Recommended by Buckminster Fuller, *Operating Manual for Spaceship Earth* (Pocket Books, New York, 1970), p.109, and actually done in Australia during the recession of the early 1990s to deal with a glut of unused office buildings.

417 *Pocket Year Book Australia 1988*, p.66, indicates that, even now, new homes need to be built each year for only about one percent of the population.

418 This was mentioned in section 1.1—although definitely part of the techno-optimist creed, the evidence for it seems hard to dispute.

and so contributes to the total economy's prospects for CAPE-reduction of the working week and prices. Lower productivity, on the other hand, though calling for attention, need not be treated as a cut-throat disaster—it can be compensated for in the next CAPE period with raised productivity. If productivity consistently falls, however, stewards are obliged to investigate their capital's viability and determine whether its continued operation is warranted.

With responsibility for performance falling largely on the workers themselves, they need to co-operate more or less as equals. Jobs naturally have specific individual duties, different wages, and undoubtedly most have some supervisory content, but *all* workers share a general responsibility for efficiency and care, and a plurocratic say in any major decision. (Many existing companies have already moved in similar directions, and with often astounding success.[419])

In contrast, home stewards have all the usual rights bestowed by ownership, except they cannot sell their houses—but neither do they need to afford to buy another. Responsible home stewards simply move house—the more responsible their stewardship, the greater their options. Any time residents intend to move house, an inspection is made by appropriately trained people charged with establishing—via a consistent, plurocratically agreed procedure—the building's condition and its corresponding 'value': an estimate of what it would cost to rebuild the home from scratch to its current state (with some allowance made for its location, proximity to services, and other advantages and disadvantages, such as, for farms, the state of soil and land). If people leave a house in worse condition than when they move in—if its value, adjusted to take CAPE-fluctuations into account, falls during their tenancy—they can only move to places of equal or worse condition (those with equal or lower value). But if tenants/stewards improve a home before leaving, this grants them the right to move to higher-valued residences. Houses with unchanged conditions also probably allow some 'upward mobility', but to a lesser extent and not too often. Each plurocracy determines for itself the exact rules to use, and has responsibility for planning the building of houses and ensuring the costs are covered via CAPE—but occupants still have responsibility for maintaining their homes. This motivates proper care of the homes even if they are not 'owned'.

This more consistent—more 'real'—form of real estate is accompanied by the use of waiting lists. If people favour a house (or even a particular street, locality, suburb, town), they put themselves on its waiting list, and when it becomes available, those nearest the top of the list who find it convenient, and who have eligibility (as per their house's value), move in. Most might choose to increase their chances by putting themselves on several homes' waiting lists; others might choose to avoid waiting lists entirely due to the availability of houses vacated without anyone waiting on them. If waiting lists, house 'values', vacancies, and transfers, are all recorded on the plurocratic online communal noticeboard,[420] the ease with which people can then indicate their intentions, choices, and actions, enables all to be treated much more fairly than at present when a home's 'value' is determined almost solely by what the manic-compulsive market (double)thinks.

Perhaps, too, home waiting lists can be used to reward or punish exceptional behaviour. Bravery, genius, extreme efficiency, creativity—if the community plurocratically agrees—might lead to a jump, or several, higher up waiting lists, whereas extreme laziness or persistent irresponsibility might force a fall down lists (something like this last option is indeed advocated

[419] Many examples (and reasons) are given in Schumacher, *Small is Beautiful*, pp.230-7, & Sale, *Human Scale,* pp.368-76. A notable example is detailed in Ricardo Semler, *Maverick: The Success Story Behind the World's Most Unusual Workplace* (Random House, London, 2001)

[420] A similar arrangement is recommended by Steven Burkeman in Albery, *The Book of Visions*, p.53

in the next section for providing additional motivation for those not willing to pull their weight).

The homeless, needless to say, deserve first choice of all vacant homes. No excuse can be made for advanced and supposedly civilised societies which condemn even one of their members to living under railway bridges or inside tunnels, kept alive by handouts from charities, isolated, unwanted, half-frozen at night, and semi-catatonic during the day. In an environment of plenty, none should lack a home. It can no longer be accepted—if it ever could—that the homeless have only themselves to blame, that their own laziness or alcoholism or violent tendencies have exiled them; in each recession, the ranks of the homeless swell with people retrenched from long-held jobs and unable to gain work no matter how hard they try. Rather than confusing cause and effect, and trying to pin the blame on the homeless themselves, we should simply make economic arrangements, such as free housing, to avoid such sorry circumstances.

None of the above implies or suggests the abolition of private property, it merely recognises the distinctive communal nature of land, homes and fixed capital. Land cannot be owned, whatever the artifices of law suggest, instead it is merely acquired, by whatever techniques work at the time—now mostly legal, but once, in many nations, often based on the brute force of 'colonisation'. Fixed capital and homes, as demonstrated, can be stewarded in a similar fashion as land. But for everything else that can be purchased, the buyer owns what she/he buys, and private ownership seems more suitable than any alternative.

As for the actual process of purchase, of monetary exchange, the next section details an approach which allows all of the above ideas to be implemented in a simple, straightforward and consistent way, while reinforcing all of the ideals and aspirations to which these ideas are directed…

7.8 Accounting

> *"Are we to be an authoritarian society which believes that people are too irresponsible and frail and selfish to make responsible decisions for themselves; that people must be manipulated and cajoled and told what they should or should not do? Or are we to be libertarians who believe that if people are given the responsibility of being participants in their own destiny, rather than patients, they will astonish us by being as responsible and sensible as we are?… By denying people responsibility, an authoritarian society makes them irresponsible." – Robert Pritchard*[421]

With CAPE, not only is the pursuit of profit abandoned, and businesses stewarded rather than owned, but individual producers do not even have the capacity to set or alter prices of their goods. Some even have to accept that their goods are sold for free. But all of this can be handled easily enough if…

Every producer has an account, in a centralised database, which is credited at the start of each CAPE period (henceforth treated as a year) with an amount that fully covers their expenditures for the work plurocratically planned to be done by them over that year. When a good or service is purchased, the account of the purchaser is debited by the price, but the account of the producer of the good or service is credited with the *cost* of producing what was bought.

Over the year, some producers undoubtedly spend more or less than they expect, or sell

[421] Robert Pritchard, "Your work in their hands", *New Scientist*, 12 May 1990, p.51

fewer goods, or suffer shortfalls—so by year's end, their accounts differ from at the start, thus providing data to inform future allocation of work and resources and related plurocratic CAPE-planning. Nevertheless, at year's end, producer accounts are reset: after their end-of-year balance is archived in the centralised database, it is replaced by a credit amount equal to the next year's planned CAPE-expenditures.

The same approach handles the building of capital goods, except the 'producer' account might more accurately be termed a 'project' account, and no purchases of produced goods balance expenditures. For example, say a plurocratic region deems it needs a new hospital: costs of construction are included as part of the region's total costs, with prices and the working week calculated accordingly via CAPE for the region and higher level plurocratic electorates 'containing' the region. So, at the beginning of each year, the project has an account recorded with its expected costs for the period. As work done on the project is paid, its account dwindles, but at the end of every year until the project is completed, the account is reset with a credit sufficient to cover its anticipated expenses for the following year. Any differences between the final figure at the end of each year before re-setting the account is used to assist better subsequent planning, but these 'discrepancies' have no more significance than that.

Consumption is accounted similarly, but with an important difference. Each worker is credited their full year's income at the start of each year, and citizen's wage recipients likewise (or this might be done weekly, fortnightly, or monthly, if people want to retain frequencies of payment to which they are accustomed). As people spend, their accounts dwindle. But unlike producers, consumer accounts are not reset at the end of each year, rather they accumulate, so functioning as statements of each individual's overall contribution to their community. Hard workers and frugal spenders keep their accounts mostly in credit. Big spenders and lazy burdens, on the other hand, have accounts more often in debit.

These arrangements make *all* forms of money-lending redundant, as well as mortgages, compound interest, and superannuation. They also radically reduce the roles of banks and financial institutions: not only can they not collapse because savings cannot disappear into thin air, but the few 'banking' functions still required can be performed mostly via periodic centralised crediting of all accounts and decentralised point-of-sale debiting, the latter occurring most probably by something resembling today's debit cards and EFTPOS machines. If plurocratic choice decides that cash remains an option, then with income corresponding to time worked, a suitably authorised statement or 'notification' of work performed might easily function as cash (or more closely perhaps, given that each statement could only be used once, to cheques or 'buying orders'). Such notifications, like traditional cash, enable—ultimately via some form of bank reconciliation—a manual version of CAPE account adjustment. Other than that, however, there seems little role for banks or banking—and none for central banks, discount rates, open market operations, and all the rest of current monetary regulation.

"Unrestricted credit!" I hear free market zealots cry in utter exasperation. So what would stop a person from simply refusing to work at all, yet still spending like a millionaire? Even if those who deliberately and consistently choose not to contribute are denied citizen's wages, they could still run up unlimited debts.

I suggest that few people would abuse a system built around cooperation and sharing of both the work and the fruits of that work, especially with community approval likely to play an even more significant role than it does now. Those who did fail to pull their weight would likely have personality problems of a scale that would make them difficult for any system to handle. However, probably few could persist for long without ending up shunned by their communities—which might well change their minds as "the tendency to ostracize people who

do not co-operate, and to exclude them from the shared proceeds of co-operation, is a very powerful way of maintaining high standards of co-operation."[422] Most people, however, as suggested in section 7.4, would instead feel liberated—not just by stable economic conditions, and the abolition of any need to compete, but perhaps most by the absence of compulsion. They'd be motivated to make a responsible choice *because* they could do so without coercion. And we're talking, remember, of eventually only one day's work per week. So, probably, most people would keep their accounts in approximate balance from one year to the next.

Nevertheless, while no one would be forced to work, they can still be encouraged in different ways to do the responsible thing. The most obvious encouragement stems from the knowledge that if enough people take the lazy option, too few are left to do the necessary work, and then everyone suffers. Co-operation can be further, and more inventively, encouraged if anyone refusing work for more than a year or two (or with an account in debit beyond a plurocratically agreed value) is disallowed moving house except to a place of lesser value than their existing residence (the longer they refuse to work, or the larger their debit, the less the quality of housing they can choose). Similar encouragement follows if everyone's account balance is made public information at all times (even after death), freely available online and accessible to anyone desiring to see it (likewise for producer and project accounts). Having everyone's final account balance displayed on their gravestone or memorial plaque also seems likely to motivate most people to avoid an unflattering epitaph. As a last resort perhaps, anyone refusing to work for a long enough period might have their plurocratic voting privileges revoked until they started putting in a reasonable effort.[423] With all these and perhaps other (plurocratically determined) encouragements, a cooperative CAPE-assisted economy seems likely to involve less shirking of duty than occurs now in our L$D-competitive free-for-all.

7.9 The Fine Print

> *"…our current economic system may well be the most pervasive and persuasive of all our cultural hypnotists." – Peter Russell*[424]

To simplify the explanation of how CAPE can reduce average working hours and prices by the same proportion, wage rates in the example of Figure 7 were carefully chosen: the employees who saved the work which allowed hours and prices to reduce are both paid the average wage rate of the other two businesses in the economy depicted in the figure. Less convenient results follow if their wage rates differ from the average.

For example, if both are paid $20 per hour, but with all else the same, then their saving of twenty hours of work gives rise to the situation depicted in Figure 9: still 380 man-hours are needed to produce the same output, but a five percent reduction in average hours to 38 hours a week requires the same reduction to total prices, lowering them to $9,120. However, the work provided by Ay and Bee to Sea's 'surplus' workers, if an 'average' of all their employees' work, and paid at their average wage rates—$25 per hour ie. *more* than they receive from Sea—causes total costs to sum to $9,200. Prices must equal the same figure, but therefore they reduce less than hours, meaning everyone other than the surplus workers (who effectively receive a pay rise) lose purchasing power, because their total income decreases more than prices.

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[422] Wilkinson & Pickett, *The Spirit Level*, p.212

[423] This is more or less the approach taken by Inclusive Democracy eg. see the answer to question four of http://www.inclusivedemocracy.org/journal/vol6/vol6_no4_Q&A_ID_economic_model.htm.

[424] Peter Russell, *The White Hole in Time: Our Future Evolution & the Meaning of Now* (Harper Collins, San Francisco, 1992), p.80

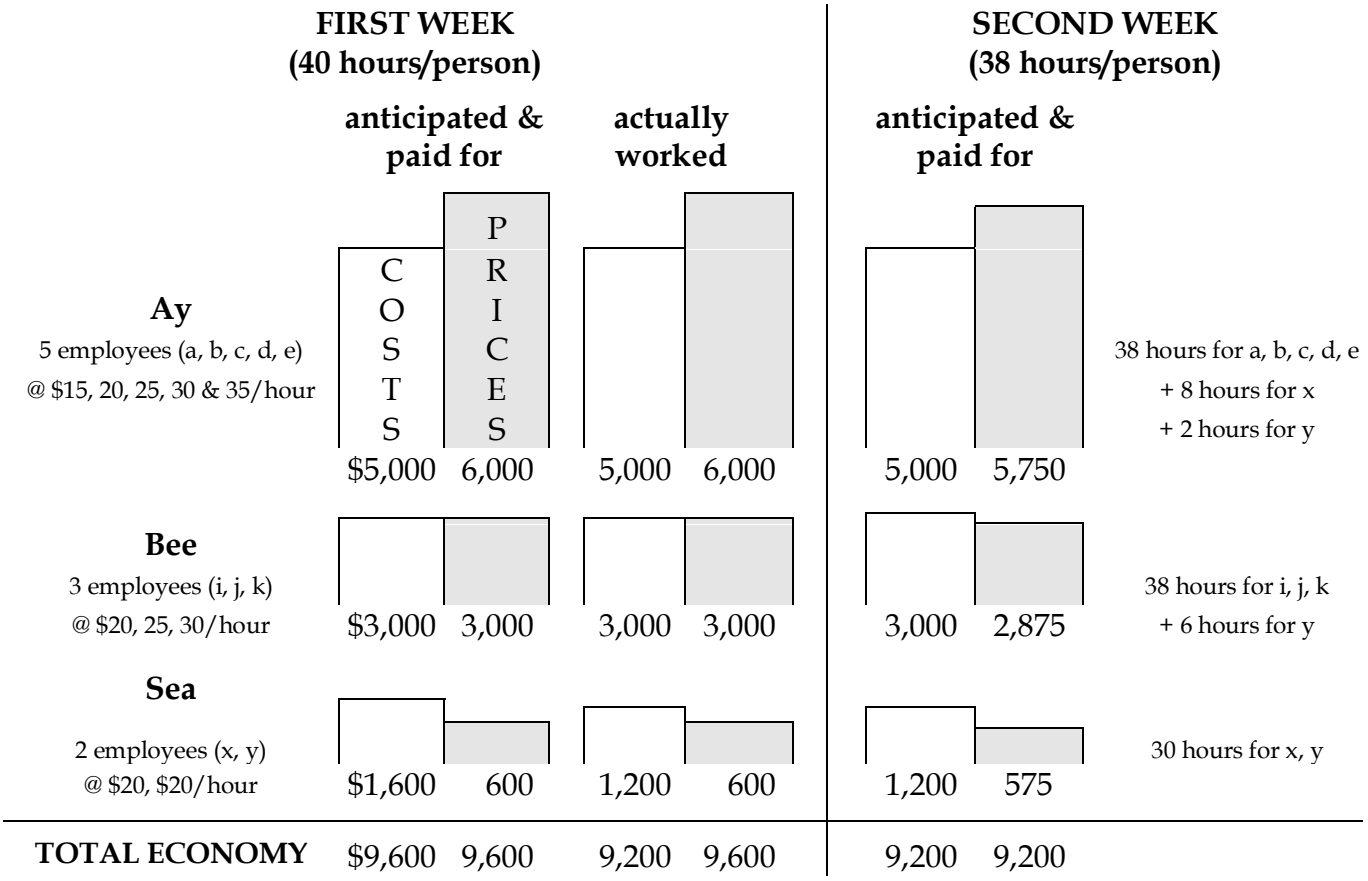

Figure 9: 'Problematic' Cost And Price Equalisation

On the other hand, if the surplus workers are paid by Sea not less but more than the average wage, the opposite situation results: the hours they work elsewhere lower their income more than prices reduce, whereas everyone else effectively increases their purchasing power.

Alternately, if the surplus workers of Figure 9 are paid their old rates at all of their jobs—in effect, being underpaid for the additional work they do beyond their original work—prices and income reduce across the board by the same percentage. But, needless to say, such an outcome for the surplus workers hardly seems a reasonable or fair reward for them previously saving work. Alternately, the discrepancies can be avoided if every job is paid the same wage rate, but that also hardly seems reasonable or fair.

Similar complications arise if working hours have to *increase* because of lost productivity in some sectors: unless some workers are paid less or more compared to others for the extra work they must do in 'secondary' jobs, CAPE requires others to gain or lose purchasing power.

Is this CAPE's Achilles heel, the flaw which renders it impractical or unusable? Perhaps so, if the average economy consisted of only a few firms and a handful of employees, but the difficulties just explained would barely register let alone pose insuperable problems for a typical modern economy with millions of people, a multitude of jobs, wages, working hours, product cost-price differences, and varying rates and even directions of productivity changes for different economic sectors and individual businesses. The size of a real economy, and the likely variety of hours required for specific jobs, allows for many more options for work reallocation than the simple examples above, and so, normally, few people will be required to do several jobs at vastly different pay-rates in the same period.

Remember too that only the *net* change determines CAPE adjustments necessary to the average working week and to prices. Hence, a productivity improvement in one sector of an economy can be offset by a productivity loss in another paying the same wages, and workers reallocated to suit, while keeping the average working week unchanged. Likewise for dealing with reduced consumption of one product, and increased consumption of another.

Also remember that CAPE adjusts *average* working hours, and not to the precise minute or second. Hence, in an economy with a variety of working hours, rather than all altering by the same proportion, certain jobs can retain the same weekly hours from one period to the next, if this is judged more suitable, but then those in the jobs either work fewer weeks in the year or retire earlier. Each and every business has to determine the most suitable approach for themselves, but always based on the need to pursue both efficiency *and* equity.

In fact, for CAPE to function properly, it needs to take into account many factors besides the practical specifics of work reallocation and the individual efficiencies of sectors and businesses. For example, CAPE adjustments must try to factor in the effects (actual and anticipated) of flood, drought and natural disaster on food production… age demographics (an aging population eventually leaves fewer to do whatever work is deemed necessary)… stockpiles and unsold inventories… costs of work not directly leading to goods and services, such as research and development, and their proportion of total spending… 'hidden' unemployment…

For instance, if the oil industry loses productivity when the economy overall increases efficiency, all prices fall including that of oil. Then, the rising unit costs for oil should be compensated for by research into alternatives. But if so, although the community works less in total, a greater proportion of its labour than previously the case is devoted to producing as much oil as needed *and* to developing eventual substitutes for it—all of which has to be absorbed by the prices of everything produced. CAPE can handle this easily enough, but only if effort is made to include the consideration into CAPE adjustments.

One thing CAPE does *not* have to consider: *private* second-hand sales (although it has to deal in the usual fashion with retail shops and other producers concerned with selling second-hand goods). Although the cooperative and participatory future envisaged perhaps will more often motivate people to give away items they no longer need, if someone does privately sell a second-hand good, the seller's consumer account increases by the same amount deducted from the purchaser's consumer account, and the exchange is reflected entirely in those consumer accounts, without any effect on CAPE for the period in question. A significant amount of second-hand sales, however, might prompt less purchasing of new goods than planned, but then CAPE-planning for the *next* period will require appropriate adjustment.

Whatever CAPE does or does not take into account, generally more of people's working time will be devoted than at present to retraining, because of work reallocation. Retraining, however, comprises a cost for a plurocratic economy and so—to protect the purchasing power of those being retrained—it makes sense that *everyone receives the same income during retraining as in their last job*, with CAPE factoring this into account. Similarly, in the unlikely situation of the vast variety of options of a realistically-sized economy somehow failing to prevent some workers from taking on lesser-paid duties, they still need not lose purchasing power if they are subsidised any loss of real income resulting from reallocation, another small adjustment for CAPE to take into account in advance (recorded against the business employing the reallocated workers or a general account applying to the entire economy covered by CAPE).

Nevertheless, the explanation of CAPE so far has been restricted largely to considering only optimistic outcomes—increased productivity and/or reduced consumption leading to reduced work and prices. In the example of Figure 7, work was saved, but what if work requirements are underestimated, say because of natural disaster or an unexpected fall in productivity in a

major economic sector or some other unanticipated circumstance? If, as previously suggested, people are paid for the work anticipated to be needed, even if it turns out they don't have to do all of it, does this also work in reverse: if more work is needed than anticipated, if some have to work overtime, do they receive no payment for the extra work, in order to ensure that costs balance prices? Or, if they *are* paid for the extra work, how does CAPE deal with their extra income causing total costs to exceed total prices?

A similar complication concerns savings. If total costs and prices balance, whenever someone saves a part of their income over a period, it means some of the goods produced are not bought. Yet if the prices of *all* goods rise in the next period, including those produced but not sold in previous periods, then savers have less money saved than needed to buy the same goods they did not buy in the previous period, leaving non-savers with the advantage; whereas if prices fall, savers have the advantage. On the other hand, if price adjustments apply only to goods made in the period in question, then unsold goods produced in earlier periods can have higher prices, and so might remain unsold indefinitely.

Again, these issues complicate CAPE but do not invalidate it. Several 'solutions' might be applied. For instance, for each period, savings accrued can be adjusted by the same proportion as prices, and all goods, even those unsold from years ago, can have the same proportionate price adjustment—then costs and prices balance, the monetary value of all unsold stock equals the total amount saved, neither savers nor spenders have any advantage or disadvantage, and no old expensive goods exist. Similarly, overtime can be paid, but these extra costs can be carried forward into the next period with prices and working hours adjusted accordingly to compensate for the imbalance between costs and prices caused in the previous period by the overtime. Or, overtime can be unpaid, but with those doing it getting a proportionate discount on their working hours in the next period, or a proportionately shorter working life.

Which if any of these approaches are adopted will depend on how much of our existing mindsets persist beyond L$D-competition. I would hate to see CAPE and its associated 'free lunch' economics turn into an accountant's wet dream. The simplest and least resource-intensive solution instead involves us simply not caring about the detail. Certainly, if consumer accounts work as explained in the previous section, responsible plurocratic citizens might aim to not spend more than they earn, but because their accounts can go 'into the red' without penalty as and when needed, it should make little difference to anyone if they had saved at a time of lower prices, or had received a slight excess from overtime. As long as people understand that the accounts give a *fairly* accurate indication of an individual's level of economic responsibility, they can make some allowance to the figures—a little bit over or under balance, given all the potential complications, can be treated as close enough. Better that than diverting energy and resources into trying to dot every 'i' and cross every 't' (something that can never actually be achieved anyway). Remember, CAPE aims to minimise not create work.

If things don't balance at the end of a CAPE period, ultimately it matters only as much as it's deemed to matter—it can be recorded, to assist planning, and then given no further importance (except perhaps to evoke pride or shame if planning consistently proves accurate or not). CAPE serves an accounting role, and is meant to serve us, not the other way round as too often occurs now. It facilitates doing and affording what is needed, coping with more or less work without penalty, and reducing consumption and work to sustainable levels. All of this can be achieved at the cost of relatively small imbalances in consumer accounts if we so choose—we can rely on qualitative success, rather than pursue exact quantitative balance via layers of otherwise unnecessary complexity and second-, third- and higher-order adjustments.

Ultimately, plurocracy will determine which of the options to adopt, but for me the choice seems obvious: the fewer and simpler, the better.

Chapter 8

Nutritious Options

> *"The divisive notion that businesses exist to maximize profits for shareholders must be replaced by the integrating idea that businesses (and other organizations) provide a framework in which people can create benefits and share them fairly. The divisive notion that the money system exists to make money for those who run it, must be replaced by the integrating idea that its function is to provide society with a mechanism of collective choice. The divisive notion that it is the government's primary function to maximize economic growth, must be replaced by the integrating idea that government's function is to enable us to allocate society's resources, and distribute claims upon them, according to values that are generally agreed and accepted." – James Robertson*[425]

The free lunch enabled by plurocracy, CAPE, and the principles and approaches explained in the last two chapters, tackles the disease rather than symptoms, does not prioritise the economy over the environment, treats neither nature nor people as economic resources, and provides a mechanism and motivation to reduce work and consumption rather than compel futile attempts at eternal expansion. Hence, ecological care, repair, and rejuvenation need no longer be rejected or postponed because they might reduce profits, jobs or growth—instead, a more objective, less biased assessment can take place. Additionally, without a need to economically compete, instead with institutions and arrangements fostering community and cooperation, a free lunch allows and encourages fundamental changes to current attitudes and values. For example, whereas now "an important part of consumerism is driven by emulation, status competition, or simply having to run to keep up with everyone else, and is basically about social appearances and position",[426] a free lunch society's reliance on cooperation discourages similar motivations.

A free lunch also offers a few other nutritional possibilities…

8.1 The Value Of Money

> *"Money… is a calculus of value, an accounting system, which indicates the entitlements of people (including organisations) to purchasing power and thus enables us to recognise the claims they may make on society's resources[,]… a resource allocation system… [T]he validity of the money system can be established only by widespread public agreement that it does indeed work fairly and reliably as a mechanism of collective choice. That is now the way, and the only way, that money values can be established as 'correct'." – James Robertson*[427]

Wealth can be created only by labour—hence, any currency's ultimate backing consists of the capacity to do work for which the currency is exchanged. If CAPE is simplified, as has been suggested, by the adoption of essentially static wage rates, then the 'value' of a currency can be

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[425] Robertson, *Profit or People?*, p.90

[426] Wilkinson & Pickett, *Spirit Level*, p.224

[427] Robertson, *Profit or People?*, pp.26 & 79

defined as a certain amount of time spent at a particular type of work. With one dollar defined as the payment for (say) five minutes of carpentry,[428] money can have a stable 'labour standard'.

This approach, however, needs extension to suit international exchange, because each nation can plurocratically place different relative values on different types of work. For example, those who traditionally build stone or brick dwellings might value carpentry less than masonry, whereas in places where wood predominates, the opposite might happen. To define every currency in terms of just one job cannot take these differences into account.

Different national plurocratic wage-valuations can be averaged out using a 'basket' of jobs[429]—a sort of average of all work—or 'composite-job'. Work most essential for everyone's survival—such as farming, house-building, and medical care—might form the majority of a composite-job, but it can include as many jobs as desired, each taking either an equal or a weighted fraction of the total. Each nation's currency can then be defined as the payment for so many minutes of work at the composite-job, perhaps equating to (say) a minute of carpentry, a minute of farming, thirty seconds of plumbing, forty-five seconds of medical care, or any combination of these and/or other labours.

Each nation's currency defined in this way can easily be measured in terms of another's. As an example, if the USA pays 40 dollars for an hour of work at the composite-job, while Spain pays 200 pesos for an hour of the same work, then one USA dollar equals five Spanish pesos.[430] And with wage rates fixed, so too are exchange rates, making currency speculation impossible.

Such an approach to exchange rates also suggests an international currency. If we follow a suggestion of Keynes and call a unit of international currency a 'bancor',[431] then one bancor might be defined as (say) the payment for one hour of the composite-job. Then, using the last example, a USA dollar equals one-fortieth of a bancor, and a Spanish peso, one-two-hundredth. While this requires international agreement as to the precise amount of work-time corresponding to a bancor, the choice could be made almost arbitrarily. Indeed, it might conceivably arise de facto from bilateral trading, without any formal international agreement. Likewise for the establishment of an acceptable composite-job.

8.2 Fair Trade

> *"…the crux of the balance-of-payments problem,… is the psychological one of being unable to break free from long-established habits of thought. Until we are ready to dare to think unorthodox thoughts we must dismiss as illusory any hope of being able, permanently, to emancipate domestic policy from the vicissitude of international trade and capital movements." – E.J.Mishan432*

Although it makes sense for all nations to aim for as much self-reliance as possible, some nations will always find it much easier to produce certain goods and services than others—not much chance of growing pineapples within the Arctic Circle, for instance. So CAPE has to cater for exports and imports…

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428 A similar labour standard, but based on an average 18- to 20-year-old's wage, was suggested by Conrad Hoopman and cited in Albery, *The Book of Visions*, pp.59-60. While Hoopman's money system has other similarities with my own suggestions, it differs fundamentally by retaining the notions of profits, shares, dividends, and producer-set prices.

429 In much the same way that a 'basket' or 'bundle' of goods now serves as a means of averaging price changes in order to establish inflation rates (as explained in section 4.5).

430 Generally, if X_N represents the equivalent wage-rate of country N for the composite-job, then N's currency, C_N, would exchange with country M's according to the rule, $C_N = (X_M/X_N)\, C_M$.

431 'Smith', *Paper Money*, p.119

432 E.J.Mishan, *Growth – The Price We Pay* (Penguin, Harmondsworth, 1969), p.184

Because importing only makes sense if it costs less than to produce the same goods locally—taking into account *all* costs, including externalities and transport—*prices* set locally by CAPE have no importance for deciding whether to import a product. Instead, *goods can be imported and exported at cost*, with no tariffs involved—at least for trade between free lunch nations. Importing from capitalist nations, however, will almost certainly require paying their profit-inclusive prices, which therefore may well exceed those of the same goods produced by free lunch nations. However, relative efficiencies of production will probably still leave some capitalist goods worth importing. In such cases, free lunch nations can compensate for the profits included in goods they import from capitalist nations by increasing—above cost—the prices of their exports to (just) those nations, by amounts equal to the profits of the imports.

For consistency with CAPE's overall approach, the costs of imported goods need to balance (and so be afforded by) the prices charged for exports. This can't be guaranteed to always happen, of course, but imbalances need prompt nothing more inconvenient than altered working hours to restore balance: longer hours to increase exports, shorter to reduce them. If exports exceed imports, then in the following year (assuming local production goes to plan) less hours need to be worked to either export less or else import more (with appropriate CAPE-reductions to local prices). Whereas if imports exceed exports, then the next year requires longer working hours, or improved productivity, so as to export more to make up the balance (with appropriate CAPE-increases to local prices).

Hence, each free lunch economy needs to plurocratically determine what it requires from other nations, and what it can export to cover the costs of importing. It needs to do some work solely for export purposes, just as happens today, by producing additional quantities beyond local requirements using existing production facilities. (Of course, different nations have different resources and, for complete fairness, this must be taken into account—I attempt to do so in the next section.)

As for the prices set for imported goods, if they *replace* goods produced (at greater cost) locally, then their prices are already established, and only need alteration to suit CAPE: export production increases to afford such imports, but because local production decreases by an amount equal to the higher costs of locally producing the imported goods (at least in the absence of any other changes), total costs reduce, and CAPE requires a proportionate reduction to all prices.

But if imports consist of goods not previously produced locally, then their prices can be set plurocratically at any value that suits the overall changes to the economy and the corresponding CAPE-adjustments to *all* prices.

With such an approach, the most efficient—those who produce for the least cost—will continue to be sought after (even more so than now because of the greater stability and accuracy of costs). Of course, delivery costs also have to be taken into account by CAPE, but it will still probably cost less for, say, Alaska to import pineapples from tropical areas than to try to grow them in greenhouses.

Now although total imports are meant to CAPE-balance total exports, no need exists for balancing imports and exports of any specific nation. Instead of the map's current priority over the territory requiring a permanent supply of enough foreign currencies to afford all imports, foreign exchange can be handled purely on paper—as an adjustment of international CAPE accounts. Such a convention might work best, though certainly not only, with an international currency, although this need not be produced as either paper or coin.

If, as an example, the USA buys a five-peso product from Spain, Spain's international account increases by five pesos (a credit), while the USA's drops by the equivalent in dollars (a

debit)—or, more easily, both accounts alter by the corresponding number of bancors. Actual hard currency is not required: accounts are simply set up by agreement with ledgers loaded, much as a banker's pen now creates credit, and the IMF creates SDRs. The backing of such accounts consists of the agreed mutual intention of all trading nations to balance their imports and exports overall—perhaps backed by formal agreements for limits to deviations from balance, and appropriate counter-measures to be employed if imbalances persist.

Even so, yearly fluctuations need not cause concern—only when a large national surplus or deficit persists does a problem exist, but this seems unlikely to occur in a co-operative world unless as a result of differing levels of development between nations. To discourage this, to ensure that appropriate technology and other means to produce goods are made available to all, to help develop the poorest nations (though not to the level of the worst excesses of the developed world, which probably is not even possible), and to relieve incipient international tensions (and motivations for seeking refuge in other countries), exports to poorer nations can be discounted in proportion to the depth of their poverty…

8.3 Fairer Trade

> *"The fruits of development are multiplied, not divided, by being shared." – Medard Gabel*[433]

Each nation could be assigned a 'wealth' rating, based perhaps on average income, per capita GDP, or more substantial, wide-ranging and/or complex data. In a free lunch economy, the length of the working week could be used: the longer the week, the lower the wealth rating, because poorer nations have more work to do to catch up with the rich. Of course, different cultures seek greater or fewer material conveniences than others, and so, such a rating could only be treated as approximate. However, precise accuracy is not needed…

Whatever the measure of wealth employed, assume it has a range of zero (for those nations all but obliterated by war or natural disaster) and ten (for the world's richest). So, Australia, might rate nine, Turkey seven, Liberia four, and so on.

Exports to poorer nations can be discounted according to the poverty ratings of both the exporter and the importer. Using the examples just given, Australian goods can be sold to Liberia for $4/9^{ths}$ of their cost, or to Turkey for $7/9^{ths}$. Liberia can buy Turkish goods at $4/7^{ths}$ cost.[434]

The 'missing' payments, by plurocratic agreement, can simply be adjusted on the books (credit-accounted). To buy a $90 Australian product, for example, Liberia debits its trade account by $40 in favour of Australia, which credits itself with the discounted $50 (or the international currency equivalents as per the last section).

Discounted trading, clearly beneficial to poor countries, could be initiated by a single developed nation, because it would open up its export markets. Over time, however, the poor would be made rich, and wealth ratings would all gradually converge—at which stage, or soon before, discounting, having served its purpose, could be abandoned.

The arrangement does not need to work in reverse, with, for example, Australia buying Liberian goods at over twice their actual price. The poor, in this way given not usable products but extra money, could return it to rich countries in exchange for appropriate technology at

433 Gabel, *Ho-Ping*, p.205

434 More generally, a country with a wealth rating of X_R would sell goods to a poorer country, rated X_P, reduced to X_P/X_R of their actual cost.

normal prices—however, the higher prices would dissuade importing from poorer nations, and costs would be less easily assessed. Instead, the rich should pay normal prices for poor nations' goods, with the poor receiving discounts from the rich. I call this approach Poor-And-Rich Exchange—PARE (whereas when the rich take priority, it seems better described as RAPE).

Some readers might regard the acceptance of part-payment, and the mere recording of the rest as paid, as an impossible self-deception. Yet we deceive ourselves whenever we think the poor deserve the same treatment as the rich. It does not pay the rich to have anyone else poor, no matter how distant, because the poor's desperate struggles to survive often foster crime, ecological and social decay, and other travesties that bedevil everyone, as well as occasional mass exoduses that result in more refugees than even the richest can easily accommodate. Hence, altruism and self-interest overlap rather than compete: the rich serve themselves best if they also serve the poor, by helping pull them up by their bootstraps. Indeed, with PARE fostering the sharing of resources and wealth, even national security seems likely to grow, and the need for defence and the threat of war diminish.

In any case, the money-magic of PARE can be believed in at least as easily as that of government bond creation, bank credit, and the various other self-deceptions of modern financial engineering—once the mental shackles of capitalism are escaped. And because PARE allows what is needed to be done, it deserves belief not as a self-deception but as an additional choice by which a free lunch's nutritional capacities can be fully unleashed…

8.4 Development

> *"The purpose of development is to increase the life-support capacities and individual freedoms of any particular locale, region, or even the planet as a whole… Development does not mean total self-sufficiency or independence, but rather a self-reliant sufficiency with a synergetic interdependence with other locales and regions." —Medard Gabel*[435]

Development is *not* growth, though it is too often treated as synonymous. Currently, L$D compels growth which prevents the developed world from settling for enough, while ensuring the developing world continues to lag. But CAPE, especially with PARE, has the capacity to sustainably develop the entire world.

Nevertheless, for PARE to work best, the specifics of each nation receiving discounts need to be taken properly into account. For instance, Schumacher advocated providing what he called "intermediate technology" to the Third World—goods "appropriate for labour surplus societies".[436] Recognising that "knowledge can be applied in a great variety of ways, of which the current application in modern industry is only one",[437] Schumacher defined intermediate technology as that which can make "use of the best of modern knowledge and experience, is conducive to decentralisation, compatible with the laws of ecology, gentle in its use of scarce resources,… designed to serve the human person instead of making him the servant of the machines… [and] vastly superior to the primitive technology of bygone ages but at the same time much simpler, cheaper, and freer than the super-technology of the rich… [S]elf-help technology."[438] Such an approach, as Schumacher noted, accords with what "Gandhi said, the poor of the world cannot be helped by mass-production, only by production by the masses."[439]

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435 Gabel, *Ho-Ping*, p.204-5

436 Schumacher, *Small is Beautiful*, p.156

437 Schumacher, *Small is Beautiful*, p.156

438 Schumacher, *Small is Beautiful*, p.128

439 Schumacher, *Small is Beautiful*, p.128

Calling for "a 'regional' approach to development" to avoid urbanisation and rural decay, Schumacher suggested that the Third World needs to set up workplaces "in the areas where the people are living now, and not primarily in metropolitan areas into which they tend to migrate… [T]hese workplaces must be, on average, cheap enough so that they can be created in large numbers without this calling for an unattainable level of capital formation and imports… [T]he production methods employed must be relatively simple, so that the demands for high skills are minimised, not only in the production process itself but also in matters of organisation, raw material supply, financing, marketing, and so forth… [P]roduction should be mainly from local materials and mainly for local use."[440]

Schumacher's vision has practicality. As Gabel wrote: "There is no reason why the highest standard of living possible—measured by such things as access to desirable food, clothing, shelter, clean water, sanitation facilities, health care, education, transportation, communication, recreation, cultural facilities, and self-fulfilling employment—higher than *anyone* anywhere currently enjoys, couldn't exist in a rural setting."[441]

Truly sustainable development might also best be pursued using something like 'least-cost planning', a technique by which, for example, electricity companies *save* costs by buying and distributing high-efficiency light bulbs to customers, rather than building more power stations to cater for increased demand. Least-cost planning not only encourages the minimisation of costs and therefore work, it also assists ecological and social care: if the costs of cleaning up the unwanted consequences of some economic practice exceed the gains achieved by using it, then least-cost planning argues for changing the practice. If costs of recuperation are recorded against the offending producers (when feasible to determine), CAPE can be better used to properly assess performance, plan for the future, and ultimately discourage the negligent habits.

Least-cost planning works not just locally but globally. As an example, least-cost sustainable development might justify paying Brazil to stop burning its rainforests: payments in the form of free or discounted exports might well cost less than the sums likely to be otherwise required to deal with the effects of a future Brazil without rainforests. Similarly, paying Third World women to avoid or delay pregnancy—in advance of sufficient development stabilising populations—seems likely to cost less over time for the developed world than coping with the effects of overpopulation.[442] To cater for such payments, CAPE simply adds them to its costs, and in its usual fashion adjusts prices and working hours accordingly.

But however it is afforded, and to whomever it is directed, development need not be pursued within the artificial constraint of financial year planning. The development of renewable energy technologies, for example, often involves decades of trial-and-error research before commercial goods result—judging success or failure on any single year's performance therefore makes no sense. As Gabel wrote, that "economics is on a yearly accounting schedule… naturally came about because our accounting system grew out of agriculture… Industrial processes [however] do not necessarily, and perhaps never, have the same production rates as agriculture… [Hence,] yearly accounting… is somewhat arbitrary, and for some processes, not well suited."[443]

Logically, any project's success or failure can be determined properly by its performance only over a period suitable for that project. This can be handled easily enough by CAPE which,

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[440] Schumacher, *Small is Beautiful*, pp.146-7

[441] Gabel, *Ho-Ping*, p.205

[442] An idea proposed by Guy Yeoman "as an emergency measure in the face of a crisis, to make possible the other necessary long-term measures of education and poverty reduction"—see Albery, *The Book of Visions*, pp.268-71

[443] Gabel, *Ho-Ping*, p.252

though it requires planning for specific periods (most probably a year), nevertheless has the capacity (see section 7.5) to afford all necessary work—including research and development—for as long as the work needs doing, by using project accounts (as detailed in section 7.8).

8.5 Surplus

> *"Ruth Benedict, the American anthropologist,… was studying aggression in various tribal communities and found that societies in which aggression was low or absent had a social structure such that actions which advantaged the individual also advantaged the group as a whole… Conversely,..[societies] in which an individual while acting for his own good is likely to be acting to the detriment of the group… tended to be very aggressive." – Peter Russell*[444]

A free lunch can do all manner of things that capitalism and socialism cannot. For example, capitalism has attempted to create food reserves every now and again, but, essentially, it goes against the grain (sic). Probably the best attempt was made in the 1930s in the USA, when "the New Deal established what it called 'the ever-normal-grainery,'… Under this program local representatives of the government would seal the farmers' harvests in local grain bins and pay them a fixed price adequate to cover their operating costs. Keeping surplus grain off the market kept the prices up."[445] But as the New Deal faded away in the wake of World War 2 and the Cold War, so too did the ever-normal-grainery, to be replaced by production cut-backs and farmer subsidies for keeping fields unplanted (well in excess of the need for periodic resting of the soil). The situation today is further compounded by the abandonment of long-established and productive plantations, methods, and agricultural sites because of competition from poorer nations using cheaper labour but often unsustainable methods, and by the conversion of farmlands to the growing of non-food crops such as biofuels.

Gabel has suggested a method for ensuring a global food reserve which has as its main feature something very similar to free lunch price-setting. He wrote: "The selective feeding of some people rather than all people is inherently suicidal in an interdependent closed system… Food is stored for security; there is no security if there are food shortages that one group of armed people attempt to keep another group of armed and hungry people from getting… [T]he only way to amass a multiple-year storage of food for the entire planet in a limited amount of time is to produce a large surplus each year. One of the best ways of furnishing the incentive to produce a surplus is to guarantee a market for the producer/farmer. Establish a price before the crop is planted. *Armed with the knowledge that a bumper harvest will not lower the prices that he will receive for his produce, the farmer can bring all his resources to bear on producing as much food as possible.* The surplus would be purchased to stock food reserves in the developing countries around the planet and, when those are full, in Antarctica… Priorities for purchase could be set up so that the poorest farmers and the small farmers had the highest priorities… As storages increased further, another priority would be established that would place the purchase priority on foods grown with production techniques judged to be regenerative."[446]

Gabel also proposed that food reserves be co-ordinated by a "Global Food Service", a group having "as its special interest all of humanity, not the maximization of profit for a specific and minute subset of the overall global food system… [It] would be non-political and non-profit."[447]

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444 Peter Russell, *The TM Technique* (Arkana, London, 1976), p.183

445 Fuller, *Critical Path*, p.272

446 Gabel, *Ho-Ping*, pp.220 & 222 (my italics)

447 Gabel, *Ho-Ping*, p.211

As "a meta-system to the nation-state and trans-national corporation, [it] could do things that neither of these institutes seem capable of. It could be ethical."[448]

A free lunch and a Global Food Service go hand in hand, not just semantically, but also operationally: a free lunch provides the motivation for ethical behaviour that capitalism lacks, because it treats all goods and services—and also information on improved production techniques—as something to be shared among all, rather than hoarded by the privileged no matter how desolate the condition of the underprivileged.

With CAPE guaranteeing the incomes of all, including farmers, a free lunch requires only one amendment to Gabel's plans: instead of the Global Food Service purchasing surpluses, they can acquire them for nothing—as CAPE does not factor production of surpluses into its prices, they need have no price. This applies for over-production of any goods—they can be stockpiled in all feasible instances, as insurance against possible subsequent shortfalls, so as to compensate and possibly even to avoid the need for extra work that those shortfalls would otherwise cause.

To encourage surpluses and so quickly "amass a multiple-year" food reserve, plurocracies—probably for a few years—can plan for production beyond their needs. Such excess production can be easily afforded because all work is shared, and because CAPE absorbs the extra costs (a very small proportion of the economy's total) into the prices of all consumables. Instead of, as today, the prospect of extra purchasing power motivating people to work marginally harder than necessary, sufficient incentives reside in the increased prospects for long-term nutritional security for home and abroad, and the consequent lessening of the risk of war. Farmers, with incomes guaranteed by CAPE regardless of performance, are nevertheless motivated to produce surpluses, where possible—even beyond any planned excess—because, via CAPE, this reduces working hours (whereas constant shortfalls result in famine, or at least a probable change of job for the offending farmers).

8.6 Sharing

> *"…power[:]… the interior capacity of persons and groups to control their own lives and to contribute creatively to the lives of others." – James Robertson*[449]

A free lunch can also avoid hard-sell waste and redundancy. In affluent suburbs of developed nations, for instance, most households possess their very own lawnmower, lawn-edger, power tools, and much other equipment for garden and house maintenance and repair—and use most of it no more than once a week, and no less than once in a blue moon. Yet people can have just as much convenience, with far fewer costs—and therefore less work—if they pool their resources: one lawnmower would usually suffice among ten, twenty, or more households, as would perhaps two or three drills and saws, and so on. Pooled equipment could be stored in a common tool shed, preferably situated near the middle of each group of households.

Individual households using collectively owned equipment serve themselves by looking after it as much as they do their own. Overt efforts to co-operate—for example, rostering of some tools such as lawnmowers—might be needed, but this constitutes a small price to pay compared to the inconveniences and costs of owning and maintaining one's own tool arsenal. One notable group operates (or at least operated) a similar system with great success: the Scott Bader Commonwealth—a chemical producer whose employees all have shares in the company—provides (or provided) its workers with the free use of a well-stocked tool shed

448 Gabel, *Ho-Ping*, p.213

449 Robertson, *The Sane Alternative*, p.83

located on its grounds (as well as equipment for car repairs and maintenance).[450] Similarly, in California, the Berkeley Public Library offers its members free borrowing from its Tool Lending Library.[451]

Pooling resources and increasing self-sufficiency allows groups of households to gain in many other possible ways. Trainer suggested that a few simple co-operative steps at the neighbourhood level can eliminate "all need for sewage treatment works, mains pumping for domestic wastes… [and] most water supply mains."[452] This demands little more than the collection of rainwater from home roofs, and each "10 to 20 houses… [to] flush their wastes into the one garbage gas unit [for electricity generation], which would also produce high quality garden fertiliser… They might all draw from the one windmill and heat storage tank, and make most use of the house on the block which has been converted to a group workshop, craft centre, library, computer terminal, store, drop-in centre and focal point for meetings, hobbies, leisure activities and entertainment. Where the back fences used to meet there might be a compact collection of jointly operated fowl pens, fish ponds, fruit-trees and greenhouses."[453] Permaculture instead of (or in addition to) purely ornamental lawns and gardens also helps increase self-sufficiency.[454]

A free lunch makes the sharing of resources not only practical but desirable, offering an antidote to continuously expanding consumerism. Indeed, the potential inherent in a free lunch for improved lives *and* lifestyles seems restricted only by our imaginations…

8.7 Creativity

> *"The most important work in the world, and the pre-condition of everything else we do, is that of mothers having babies. But because mothers are not paid for their baby production it is not regarded as work… The answer is not to pay mothers for having babies (or for doing housework) but to phase out the market economy itself; only then will the* work *of motherhood be properly seen and recognised for what it is." – Peter Cadogan*[455]

Whereas L$D-competition must grow to survive, must always require more and more, must ever expand into every last nook and cranny of our lives, a free lunch has capacities for the opposite: the minimisation of work, and the gradual reduction of the market economy. Because of CAPE, the less work we are paid to do, the more spare time we have and the lower the prices we pay. Consequently, a free lunch encourages us to re-examine how exactly 'work' is defined.

On this subject, section 7.2 briefly mentioned that CAPE makes it possible for much work in the arts, entertainment, sports, recreation, and sex 'industries'—among others perhaps—to return to being done for pleasure instead of for money. To this end, I offer a few suggestions, specifically concerning the arts (although some of the suggestions could also be used, perhaps in modified form, for at least the entertainment and sports 'industries' if not others)…

Whether creativity is pursued in regard to music, painting, sculpture, photography, literature, or other perhaps less categorisable art forms, it flourishes best when people have the

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450 Schumacher, *Small is Beautiful*, pp.230-8, discusses Scott Bader (which is still going strong - see https://www.scottbader.com/), but does not mention this; I think I read of it in Schumacher, *Small is Beautiful*'s sequel, *A Guide For The Perplexed*.

451 Leonard, *The Story Of Stuff*, p.176

452 Trainer, *Abandon Affluence!*, p.256

453 Trainer, *Abandon Affluence!*, p.251

454 Trainer, *Abandon Affluence!*, p.256

455 Cadogan, *Direct Democracy*, p.29

time and financial freedom to explore their interests without concern of remuneration. A free lunch enables this because *anyone* can pursue their muse in their copious spare-time while living off income earned for other paid work or from a citizen's wage.

Nevertheless, most if not all plurocracies will surely value the best and/or most popular artists sufficiently to reward and further encourage them by treating their efforts as payable work, thus freeing them from some or all of the time spent at other necessary work. In other words, some artists can be paid as such, either for the entirety of an average working week, or for part of it.

Choosing how many artists deserve full-time or part-time 'professional' status again can be left to plurocracy. Some level of subjectivity can't be avoided, with public perception and popularity sure to play the major role. But other factors will also influence decisions: for example, in some nations or regions, long established artistic traditions might motivate the granting of professional status to a larger proportion of aspiring painters; whereas in other places, they might be excluded entirely. Artists' wages might also vary depending on the nature and costs involved in their art. Perhaps some plurocracies, rather than having professional artists (or as well as), might include in their CAPE budget an art fund to be used at their discretion but ad hoc. The choice, as always with plurocracy, will remain with the people.

Whether a paid professional, or an unpaid amateur, all artists have costs associated with their art: paint, brushes, canvas, stone, musical instruments, equipment, electricity, and any other resource their art requires. These costs, as well as wages of professional artists, need to be estimated and planned for by CAPE, with sufficiently 'big' artistic project proposals—ones involving significant costs and resources—requiring agreement at a suitably high plurocratic level in order to be approved and pursued. The final total costs of artistic endeavour must then be added to all other costs so that CAPE can balance the grand total with that of prices (as per section 7.1). However, as section 7.5 explained, all free and discounted prices have to be taken into account—which raises the possibility of making at least some art free…

Probably a price (perhaps in some cases discounted) needs to be set for concerts, gallery displays, cinema film-screenings and other art *performances*, because these have costs beyond those of the individual artist. Nevertheless, much of the art itself can be made free—indeed, doing so makes it easier to decide which artists deserve professional status…

Imagine if the output of *all* musicians, writers, film-makers, or any professional *or* amateur whose art can be accessed from the Internet, is made available to download for free, with a record retained of each occasion this happens, but with downloaders obliged to provide a rating (say out of ten) once they have read the book, or watched the film, or heard (perhaps for the third time) the song or album. (If anyone fails to provide a rating within a given time, say a month, the download is ignored.) However, ratings need not be locked, but instead should remain free to be revised. In this way, a measure can be made not only of the number of people who had at least sampled the art, but also what they thought of it. Images of non-downloadable art such as paintings and sculpture could also be put on the Internet to publicise their artists' work and to allow rating in a similar fashion as the downloadable art.

The highest-rated artists, in this way thus recognised for having either widespread popularity or more fanatical appreciation by fewer numbers, can then take priority for CAPE funding to pay them fully or partly for their work, whereas less successful others can be left to pursue their muse in their spare time. The dividing line can vary from one plurocracy to another, as they see fit, but of course it also has to take into account what can be absorbed by CAPE without detrimental effect on working hours or prices.

Whatever the specific details, artists will undoubtedly continue to be drawn to the possibility and allure of platinum albums, hit films, million-seller novels, and associated fame, but no matter how much success they achieve, their income cannot exceed the plurocratically agreed wages assigned to their work. They can't get rich, but they can comfortably achieve recognition. Whereas amateurs will be spurred to continue their efforts, not just for their own personal satisfaction (which, if not trammelled by financial constraints, often provides all the motivation that's needed) but also by hopes of promotion to professional status.

As for the art produced, if free, mass produced downloadable art can be made available as just described, whereas 'unique' art such as painting or sculpture can be stewarded rather than owned: undoubtedly some will be commissioned by interested individuals or plurocracies, but the rest can be given away by the artist to the first party wishing to steward the art (subject to the artist's approval). Art commissioned or otherwise obtained by plurocracies of any level can be made available to the public in the usual ways, but need not stay within the boundaries of the stewarding plurocracy—it can sometimes be loaned to others. As for art already in existence, current owners retain the art but become its stewards, with an implicit obligation to share significant art—indeed, the abolition of excessive wealth in a free lunch future argues for most private stewards of art treasures to donate them to their city, region or nation to steward publicly.

Alternately, if art is not free, each professional artist can have a figure, possibly discounted, for each CAPE period which they charge *in total* for all art they produce over that period, with the flexibility to price each individual work as they see fit, subject only to their prices adding up to the assigned total. Then, professional artists would have a 'producer' account as explained in section 7.8, one credited with a figure at the start of each CAPE period, from which their expenses are deducted, and to which revenue from sales are credited. Amateurs, on the other hand, would have no 'producer' account, their costs being afforded from their 'consumer' account, and the prices of their work necessarily zero.

This last approach however runs into problems for professional artists who create mass produced downloadable art such as music, because the number of sales cannot be anticipated, making it impossible to accurately proportion the artist's total prices across individual prices. I suggest this makes a strong additional case for having free art, at least for anything that can be downloaded. However, the final decision as to which if any art is made free, as always, will rest plurocratically with the people.

Chapter 9

DIY Utopia

"…we envision the possibility of an evolutionary leap to a trans-industrial society that not only has know how, but also has a deep inner knowledge of what is worth doing." – Willis Harman[456]

After considering the ideas proposed in the last three chapters, readers might rightly question whether they can ever be implemented, or are instead destined to always remain mere ideas. This chapter considers the practicality of a free lunch, first summarising its pros and cons, then discussing what motivates and facilitates widespread social change, the resistance likely to be met in moving from our competitive growth-based present to a cooperative free lunch future, and finally offering a few ideas on navigating a transition.

9.1 A Free Lunch Menu

"…the precondition of any social advance is that people become convinced of the existence of many practical alternatives to the present policy." – E.J.Mishan[457]

Everything has pros and cons. The advantages of a free lunch include:

- a one-day working week (sooner or later)
- free goods such as staple food, basic clothing, housing, health care, education—anything deemed appropriate
- no more home mortgages, business loans, money-lending or debt
- no possibility of losing savings and retirement funds
- no more financial hardship, unwanted unemployment, or job insecurity
- the capacity to save work without fear of losing income
- a shift of emphasis from "what can be afforded?" to "what is needed and sufficiently wanted?"
- political self-determination
- non-complacent political 'representation' by people always answerable to voters
- the opportunity for all to participate and become empowered
- stewardship of land and resources by local residents and workers, instead of distant corporations and owners, leading to greater ecological care
- unfettered aid and development for developing nations
- the potential for international security and cooperation
- no more business cycles
- no more destabilising speculation (stocks, bonds, property, currency etc)
- competition kept in its place, subservient to cooperation for the greater good
- more agreeable progress.

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456 Cited by Robertson, *The Sane Alternative*, p.119

457 Mishan, *Growth – The Price We Pay*, p.77

On the other hand, a free lunch's cons are restricted to:

- the sharing of non-automatable work none or too few want to do (for the aforementioned one-day working week)
- the finding of incentives other than profit (less of a problem than might be thought, and a small price for universal security)
- the risk people will abuse their responsibilities (a risk of any arrangement)
- the largely self-inflicted 'trauma' of change (hardly lacking in current arrangements)
- for a tiny privileged minority, the loss of their excessive and generally unearned power and advantage (boo hoo)
- possibly slower progress (probably a boon because haste makes waste).

You don't need experience at cost-benefit analysis to work this one out.

9.2 Change

> *"The fatal blow to the conventional wisdom comes when the conventional ideas fail signally to deal with some contingency to which obsolescence has made them palpably inapplicable. This, sooner or later, must be the fate of ideas which have lost their relation to the world." – John K.Galbraith*[458]

It may seem static most of the time, but the world certainly does change—often in a big way and pretty much all at once. After studying several past periods when society changed radically due to new inventions (such as the printing press) and/or new thoughts (such as the theory of evolution), James Burke concluded that: "All communities in all places at all times manifest their own view of reality in what they do. The entire culture reflects the contemporary model of reality. We are what we know. And when the body of knowledge changes, so do we. Each change brings with it new attitudes and institutions created by new knowledge. These novel systems then either oust or coexist with the structures and attitudes held prior to the change."[459] Similarly, Bohm and Peat wrote of how the social consensus tunnel-reality grows "inadequate, in the face of the ever-changing nature of reality… [Then,] the activities of society… may lead eventually to decay, more or less independently of the institutions, will, and desires of the people who make up this society."[460]

As populations and knowledge increase, and societies grow more complex, the chances of transformative change mount. Ilya Prigogine won a Nobel prize for his discoveries concerning "dissipative structures"—unstable 'open' physical systems "involved in a continuous exchange of energy with the environment[,]… their form or structure… maintained by a continuous dissipation (consumption) of energy."[461] Dissipative structures include human constructs such as towns and societies. Prigogine found that increasing the energy moving through dissipative structures—like dropping straws on a camel's back—has little or no effect until a certain threshold is crossed. Then, a dissipative structure's extra energy movements "increase the number of novel interactions within it. They shake it up. The elements of the old pattern come into contact with each other in new ways and make new connections. *The parts reorganize into a*

458 Galbraith, *The Affluent Society*, p.22

459 James Burke, *The Day the Universe Changed* (British Broadcasting Corporation, London, 1985), p.11

460 Bohm & Peat, *Science, Order and Creativity*, p.206

461 Marilyn Ferguson, *The Aquarian Conspiracy* (St. Martin's Press, New York, 1987), p.164

new whole. The system escapes into a higher order. The more complex or coherent a structure, the greater the next level of complexity."[462]

In other words, dissipative structures such as seemingly static societies can suddenly transform as a result of gradually accrued, relatively small changes.

The increments of gradual change which eventually lead to sudden transformation often go unnoticed. One candidate was discussed by Thurow: during World War 2, after large fortunes were wiped out by the Great Depression, "there was a consensus that the economic burdens of the war should be shared relatively equally…; consequently the federal government used its economic controls over wages to achieve more relative equality… [T]he new standards were not imposed by government on a reluctant population but were imposed on the market by popular beliefs as to what constituted equity in wartime."[463] Revised popular beliefs will undoubtedly determine future change too—and when enough changes accrue, we will find ourselves in a different world.

As to the nature of that different world, James Robertson[464] suggested that the future holds five basic possibilities: a "Hyper-Expansionist" (HE) escalation of production and growth; a decentralised, ecologically benign, less industrialised way of life ("Sane Humane Ecological" or SHE); nuclear/ecological disaster; totalitarian control; and the non-transformative business-as-usual. As part one hopefully made clear, only SHE holds any real hope. Similarly, Peter Russell cited a study by Willis Harman which "concluded that there were only two alternatives which did not end in collective disaster. The first of these was what was referred to as 'friendly fascism'—'a managed society which rules by a faceless and widely dispersed complex of warfare-welfare-industrial-communications-police bureaucracies with a technocratic ideology' … The second alternative was envisioned as an 'evolutionary transformation'… [which] would (1) entail an ecological ethic; (2) place the highest value on self-development; (3) be multi-valued, multi-faceted and integrative; (4) involve the balancing and co-ordination of satisfactions rather than trying to satisfy just one narrowly defined field (e.g. economic); (5) convey a holistic sense of perspective or understanding of life; and (6) be experimental, open-minded and evolutionary."[465] Given the implausibility of any form of fascism remaining 'friendly' for long, the choice between the two alternatives seems obvious.

The future we end up with will depend on many factors, but the future that individuals *expect* to occur, as Robertson suggested, tends to match their dispositions and general expectations of life, as shaped by their experience. Hence, disaster looms in the minds of pessimists and those who see themselves as failures; business-as-usual tends to appeal to both content people and defeatists; a totalitarian future seems the only possibility to authoritarians, those who govern, and others who find it difficult to trust people; HE mostly attracts "optimistic, energetic, ambitious competitive people… often male, and… likely to be toy-loving and over-cerebral… [while] SHE… appeals to optimistic, participative, reflective people,… and… quite a large number of cranks."[466]

Ultimately, each person's choice will determine which self-fulfilling prophecy humankind adopts, yet to change the habits of centuries and produce a future worth living in requires optimism. Fatalism, pessimism, and despair can only pre-ordain an undesirable result.

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462 Ferguson, *The Aquarian Conspiracy*, pp.164-5

463 Thurow, *The Zero-Sum Society*, p.200

464 Robertson, *The Sane Alternative*, pp.16-29

465 Russell, *The TM Technique*, pp.176-7

466 Robertson, *The Sane Alternative*, pp.18-19

9.3 Resistance

> *"The power of vested interests is vastly exaggerated compared with the gradual encroachment of ideas." – John Maynard Keynes*[467]

It will not be easy to move to a *new* future—a SHE future—whether it involves plurocracy, CAPE and a free lunch, or something similar, different and/or better. The privileged, those who benefit most inequitably from existing arrangements, have the greatest motivation to continue to exhort the status quo—and to fear change. With vested interests to the fore, doomsayers will see any new future (however well considered) as destructive to *the* system—*their* system. Resistance will flourish.

One cannot convince, only persuade. Yet, reason, sound argument, even facts may not avail to persuade the most die-hard resisters. As Korzybski observed: "The new involves new semantic reactions, while, as a rule, the older generations have enforced their systems, and, through them, by means of controlled education and linguistic structure and habits, the old semantic reactions. This the younger generation, *always* having more racial experience, cannot accept, so that revolutions, scientific or otherwise, happen, and, when successful, the new systems are imposed on the older generation without the older generation's changing their semantic reactions. All of which is painful to all concerned. The next generation after such a 'revolution' does not have similar difficulties, because from childhood they are trained in the new semantic reactions, and all appears… 'natural' to them".[468]

Because of social conditioning and brain-set tunnel-reality binding, fear—of the new, of change, of the unknown, of losing privilege—will inspire not only resistance to the notion of a SHE future, but also misinterpretation. Retorts of "too labour intensive", "burdensome", "conforming", "parochial", "too much freedom, not enough discipline", "a backwards step", "too big a transition", will all flourish, missing most of the point.[469] None of these brain-gridlocked criticisms hold water, as a careful study of the proposals of part two will confirm, but neither do we have the option of not changing, as an equally careful study of part one will verify.

Nevertheless, change will be resisted, so those hoping for change need to anticipate the forms that resistance will take.

In any transformation to a better future, a single nation could take the lead—for the sake of brevity in what follows, I'll call such a nation 'Utopia'. In such a situation, multinationals would undoubtedly fret long in advance about loss of profits from their Utopian capital investments, while other nations' governments would be concerned about consequential effects to their national growth. If many nations were to quickly follow Utopia's lead, even hostile governments and multinationals would have to accept the inevitability of change, but if Utopia went it alone, its people would require much determination and belief to weather the resistance of unbelievers, who, locked into their long established semantic reactions, and finding outlet for all their truncated 'commophobia', would undoubtedly treat Utopia as an enemy. Although this could conceivably result in war, economic blockades, or other retaliatory or dissuasive measures being taken against Utopia, these can be avoided or rendered ineffective…

War has turned into such an expensive and resource intensive option in recent years that it seems likely to be entertained only if Utopia has an extremely abundant supply of resources on

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467 Cited by Robertson, *The Sane Alternative*, p.101

468 Korzybski, *Science & Sanity*, p.28

469 These retorts were originally listed—and rebutted—by Trainer, *Abandon Affluence!*, pp.270-5

which other nations depend. Even then, war probably could be avoided. In the last two decades, several South American nations have adopted avowedly socialist governments without it leading to invasion, or even (in most cases) blockades. Certainly, blockades of Utopia could probably be endured, indeed would encourage self-sufficiency and perhaps hasten transformation. But the result can only depend on the extent of a nation's fervour for change, on its determination, and on its preparedness to innovate even during the transition.

More probably, less direct measures would be taken against Utopia. International markets now use floating exchange rates as their most easily employed and perhaps most effective economic 'blockade'. If for *whatever* reason—no matter how imaginary and/or ludicrous—financial markets decide a nation is not performing up to expectations, or soon will not, they tend to react by pulling out their investment and swapping their stocks of the national currency for others, which causes the currency's exchange rate to fall, which makes importing more expensive for the nation, and puts pressure on its interest rates.

Although Utopia would use a fixed rate labour-standard currency (as per section 8.1), prior to its formal adoption of a free lunch its floating currency would be subject to the whims of financial markets, and so could well be 'punished'. Yet if this happened, Utopia could always choose to do as China now does and control its exchange rate via its central bank to float within a narrow range, at suitably averaged pre-fall levels—it could do this well before it adopts a labour-standard currency, indeed, ideally, in advance of any anticipated fall in the floating rate. Of course, the currency might then still be treated internationally as worthless, and so trade might reduce, which would probably affect Utopia's foreign currency supplies and make it more difficult to repay foreign loans, perhaps even leading to loans being called in. Yet working against this possibility, once a nation fully adopts a free lunch, stewardship would disqualify all collateral acquisitions—indeed, even the intention or expectation of adopting stewardship would probably dissuade lenders to call in their loans, because renegotiation of loans would likely prove more profitable. Lenders' self-interest might even be served best by *not* ostracising, blockading or otherwise punishing would-be free-lunchers because threats like these would probably serve only to motivate Utopia to hasten its process of transformation and/or even default on its foreign debts.

Similarly, some multinationals might be prepared to lose profits in the short-term by withholding the use of the capital they own in Utopia, in the hope of gaining special rights or preventing change. Others, convinced of the inevitability of a Utopian free lunch, would surely respond as they do today to unfavourably altered economic conditions—they would pull out their investment and move to wherever profits could be maximised. But in either case, L$D would cause Utopian capital prices to fall *before* a free lunch could be fully adopted. Foresighted multinationals would try to sell before this happened, of course, but by doing so, they might just hasten the inevitable. In any case, the 'threat' of a free lunch would mean only Utopians would be interested in buying capital from fleeing international investors—if indeed they did not prefer to simply take over its use after abandonment, akin to squatters taking over vacant homes.

Nevertheless, in keeping with the co-operative spirit of a free lunch, and to avoid retaliation, it seems preferable to pay a 'fair' price for abandoned capital and outstanding debt, although the definition of 'fair' would require considerable assessment and negotiation. At the least, in keeping with free lunch financing, only the principal of money owed to foreign lenders (with perhaps an appropriate one-off service fee) should be repaid, not interest. Indeed, most interest already paid could be treated as repayments of principal. Certainly, bigger concessions concerning debt have been made in the past: "After World War I the United States effectively

wrote off billions of dollars of British debt. After World War 2 West Germany was given debt relief estimated to be seventy per cent of pre-war German Debts".[470] Similarly, Michael Rowbotham explained that: "During the 1930s debt crisis, a number of Latin American nations defaulted on their loans to the United States, as did Britain. To this day, the US Treasury keeps a record of a number of these debts, accounting them in full… The US Treasury is fully aware that these debts were officially defaulted on, and that there is no intention by the nations concerned ever to repay them… [T]he US Treasury maintains the fiction that the debt bonds are valid assets… [because t]o remove these debts from the books and acknowledge their lack of worth would require the transfer of equivalent assets from US reserves. This the US does not wish to do, and so she wisely adapts her accountancy accordingly."[471] (And you might have considered my numbers rubbery!)

The sky-high debt of the modern age may well retard growth so much that some or much debt—of any nation, whether soldiering on with capitalism or not—will need to be cancelled to avoid (or, given the Invisible Hand faith of most economic 'experts', to recover from) depression.[472] But for nations attempting transformation, however much debt they pay, the *form* of repayment would also require negotiation, especially if Utopian currency is deliberately devalued by capitalist markets. Utopian stocks of foreign currency, gold and even SDRs could be used, and/or it could even involve something akin to barter, in the form of export goods.

Clearly, with sufficient commitment, a nation could find ways to single-handedly transform to a free lunch economy. And once other nations see the move as inevitable, their capacities to thwart it would dwindle. Indeed, once the process of transformation reaches a certain point, the privileged—whether foreign or local—would have no choice but to share their privileges. As Robertson put it: "The industrial revolution occurred spontaneously, behind the back of the state and of the ruling classes of the time. We may expect the post-industrial revolution similarly to by-pass the established order today. If the dominant institutions of industrial society—government, industry, finance, trade unions, public services, universities, and professions—are uninterested in promoting psychological and social innovation and growth, that is no cause for alarm."[473] People will innovate and grow anyway. Or as Trainer put it: "If enough people opt for a somewhat frugal, self-sufficient and communal alternative way of life then that is what we will have, irrespective of what corporations and politicians might prefer and regardless of their resistance."[474]

Even so, the transition could be eased with some simple measures…

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[470] John Langmore & John Quiggin, *Work For All: Full Employment in the Nineties* (Melbourne University Press, 1994), p.182.

[471] Rowbotham, *Goodbye America!*, p.139

[472] Steve Keen takes just this position eg. at http://www.debtdeflation.com/blogs/2008/12/04/uk-steps-in-the-right-direction/ he states: "much of the debt that the financial sector issued especially in the last two decades should never have been created in the first place, and it should be abolished". Debt cancellation between nations each moving to a free lunch could easily be agreed.

[473] Robertson, *The Sane Alternative*, p.114

[474] Trainer, *Abandon Affluence!*, p.275

9.4 Transition

> *"…we must now be free of history—not of its memory but its icy grasp on consciousness—to* create *history rather than to be created by it."—Murray Bookchin*[475]

For any nation or nations to be seen by others as committed to transforming to a SHE future and a free lunch, it must first convince itself of its own commitment. To this end, the current system's strengths can be used against the system. In particular, opinion polls seem suitable as a mechanism of change. Assuming that a free lunch or some other new economic-political system develops support as an alternative to the status quo, polls could be commissioned (perhaps by non-profit ecological groups or private philanthropists) or online surveys set up to establish how much the people desire change. Survey results, including suggestions and comments, and other feedback could help refine the theoretical system, and those refinements could be surveyed likewise, creating a constant flow of ideas aimed at eventually creating a consensus for change.

Finally, when a majority of people are polled as having a definite future in mind and desiring to move to it, a petition could be gathered for a referendum to officially ask the people their choice. Such a referendum should include something like the following question, to give a proper taste of the plurocracy perhaps just ahead: "Because not everyone will want to move to the proposed future, what proportion of the vote—between fifty and a hundred percent—would you consider sufficient to carry the decision? (The average of all answers to this question will determine if the vote *is* actually carried or not.)" Then, the people decide.

Such a course would have its hurdles; even with a majority wanting a referendum, it could be resisted possibly for years—but not indefinitely. If the referendum is held and passed, however, governments would be obliged to follow up and arrange the change.

The transition itself cannot be planned, but still, certain practical steps can be taken to minimise difficulties and save costs. Most importantly—given the relative success of China compared to Russia, as regards their attempts to alter their communist systems—economic change should partly precede political reform.

One sequence of ten steps for a transition to a free lunch is sketched below, but it should be treated as a rough draft only, a guide needing thorough contemplation, revision, and expansion in order to be applied to any moment and place.

1. On passing of the referendum, fix prices and wages—perhaps (if markets panic) at levels operating some time beforehand. (As previously explained, exchange rates would also probably have to be more or less fixed, but well before any referendum, so as to stymie disapproving financial markets.) Replace all forms of welfare with a citizen's wage of half the average income, funded—until a free lunch takes over—along with all other necessary government work via interest-free deficit-finance (money-printing and bank credit); this short-term measure would involve no more chicanery than usual, but would be directed at more desirable aims, including multinational capital purchases (if negotiable).
2. Abolish rent and declare stewardship. Wherever people live becomes their home. Set up a functional group to arrange housing for the homeless.
3. Simultaneous with step 2, abolish interest and taxation, and abolish all intra-national debt including residential mortgages. Negotiate settlement of 'fair' foreign debt repayment

475 Bookchin, *Toward an Ecological Society*, p.283

(paid by foreign exchange, SDRs, gold, local currency (if acceptable), and 'bartered' exports).

4. Declare company books 'open-ended', with profit and loss not mattering. Support loss-makers with interest-free overdrafts. Because, even at this stage, some work could begin to disappear out of the system, give 'surplus' workers the option of re-training (with deficit-financed pay equal to their old incomes) or an 'unpaid' holiday (affordable for most because of the absence of mortgages and rents, and because of the citizen's wage).
5. Determine 'geography' of plurocratic localities, cities, regions, and so on (although this could be done well in advance, even before the referendum phase—indeed, a partial or prototype online form of plurocracy could well be set up long before a full adoption of a free lunch, and used to develop a groundswell for change to hasten the entire process). Introduce *PARE*. Begin to replace democratic government with plurocratic participation.
6. Begin the process of plurocratic nomination of prices and wages—ideally one set for the nation, but if marked differences result, perhaps varying by region. (Afterwards, prices of *new* products could default as equal to cost, unless or until people plurocratically desire alterations.) Because this and the previous step would take some time, a set of prices and wages based on polls or previously frozen figures (adjusted to remove profit margins) could be used in the interim for what follows.
7. Record—probably at first on an existing Tax or Social Security database—each person's 'profession' (their main job) and the corresponding wage rate, where they work (or, if unemployed, what work they would be prepared to do), and other details relevant for organising a workforce. Derive and fix the national currency's 'labour' standard.
8. Determine the initial period's probable total costs and required amounts of production, including imports, exports, and possibly extra work needed initially for repaying foreign debts. If settled upon by this stage, a reduced length of the working week could be used as a basis for determining total costs. Alternately, to ease the inevitable pain of transition, the working week could be initially reduced only to the extent necessary to share all work—so, assuming all wish to work, ten percent unemployment with a 40-hour week would change to a 36-hour week for all.
9. Balance costs with prices using CAPE. Fully convert all bank accounts to suit CAPE. Finalise international exchange arrangements.
10. After a year (or less), CAPE-adjust prices, working hours, and savings to suit productivity changes and altered 'demand', the first step on the road to a one-day working week. By this stage, development would have begun to more fully embrace the aims of increasing self-sufficiency, life-support capacities, and freedom, and a free lunch would have begun.

Ultimately, whatever the resistance of vested interests, a new future *will* be gained. But waiting on others to build it, or on authorities to lead us all there, has no precedent for success. To gain utopia, you must do it yourself. The starting point of that process, however, consists of no more bothersome a task than recognising and desiring a viable alternative to the present oblivion-bound status quo. Only then can the competitive tunnel-reality of capitalism begin to be discarded by choice and by will in favour of co-operation and trust.

Appendix

Monetarism: Never Mind The Quality

"It is not easy, it seems, for men to apprehend that their money is a mere intermediary, without significance in itself" – John Maynard Keynes [476]

Section 4.5 mentioned that monetarists believe an economy can be regulated by appropriate adjustment of the money supply. Section 5.4 detailed some of the difficulties of applying this approach to a real economy, but a fuller explanation of the subject follows.

In 1911, USA economist Irving Fisher first proposed that an economy can be regulated via its money supply when he published his so-called 'quantity equation': MV = PT. Nice and simple, not unlike an alphabet block arrangement, but (as will be shown) requiring very sophisticated assumptions. In the words of the eminent monetarist Milton Friedman, M stands for "the amount of money in existence… [V,] the average number of times per year (or other unit of time) that each dollar [or other unit of currency] is used in effecting a transaction—the transaction velocity of circulation… [P,] an average price… [T,] an aggregate quantity of goods"[477] or transactions (volume of trade).

The quantity equation can best be demonstrated using a hypothetical example. Consider a tiny economy of two people, who maintain their economic flow with only two dollar notes each (M=4). Assume they engage in a total of (T=) 100 transactions over a year, each involving a transfer of an average of one dollar each (P=1); this means that each dollar note is used an average of 25 times over the year (V=25). The equation becomes MV = 4x25 = PT = 1x100.

In Fisher's view, velocity (V) remains fairly stable, and hence the quantity equation lends itself to practical use: if the volume of trade (T) stays constant but prices rise (or fall), then according to the equation, the money supply must be growing (or shrinking); to stop prices rising (or falling), end the growth (or shrinkage) of the money supply. In other words, stable prices can be ensured, for a constant volume of trade, by a fixed money supply (or for an increasing volume of trade, by a money supply growing at the same rate).

Fisher's views were widely accepted by economists until Keynes disputed them: he claimed that changes to the money supply affect the velocity of money (V) more than prices. (…palm grease…) "In the extreme form of this approach—as much a caricature of Keynes's thinking as the attribution of a constant V is of his predecessors'—the quantity of money supply did not matter at all for the course of prices or real output but only for the movement of V."[478] Keynes' views nevertheless held sway until the 1950s, when Milton Friedman began to revive Fisher's ideas and develop them into what has since been called 'monetarism'.

Friedman made his most influential case for monetarism in 1963, when he and Anna Schwartz published a lengthy study of price and money supply variations occurring in the USA

476 Keynes, *Essays in Persuasion*, p.170

477 Friedman, *The New Encyclopaedia Britannica*, p.337

478 Friedman, *The New Encyclopaedia Britannica*, p.338

over almost a century.[479] They interpreted their vast statistics as indicating that the velocity of money is not as flexible as Keynes had thought, and that Fisher had basically got it right. In Friedman's view, V, the "velocity of circulation, though not constant, is fairly predictable".[480] Hence, for stable prices, he advised, like Fisher, that the supply of money be increased at the same rate as the volume of trade; if prices rise, then money growth should be slowed below trade growth; and if prices fall, money growth should be increased. Friedman even offered an explanation as to *why* these variations to the money supply *should* have such effects.

Money growing faster in amount (M) than uses (T) has limited practical value; hence, people tend to trade it more freely to gain something 'better', *maybe* even being willing to offer or accept higher prices. Monetarists believe that more money growth than trade growth *does* prompt people to offer and accept higher prices, at least for assets like "bonds, equities, houses, and other physical capital… such… as durable consumer goods, and other real property".[481] Essentially, according to monetarism, L$D causes the 'price' of oversupplied money, in terms of assets, to fall—meaning prices of assets rise. For the same reasons, interest rates tend to drop.

But higher-priced assets and lower interest rates "in turn encourage spending to produce new assets."[482] Hence, with greater spending and more work, eventually, income rises. According to Friedman: "On the average, a change in the rate of monetary growth produces a change in the rate of growth of nominal income six to nine months later."[483] Higher income, in turn, encourages more consumption, meaning more transactions (greater volume of trade), and this, in turn, entices greater output. But higher income, consumption and output correspond to raised demand, which increases prices in general, not just those of assets—although it takes about a year, from the time income increases, to have its effect. Thus, according to monetarists, after a time lag of a year and a half or more, 'excess' money produces inflation.

Likewise in reverse, though it takes longer to reduce than boost prices. In Friedman's words: "If the rate of monetary growth is reduced, then about six to nine months later the rate of growth of nominal income and also of physical output will decline, but the rate of price rise will be affected very little. There will be downward pressure on prices only as a gap emerges between actual and potential output".[484] In other words, at first, because of undersupplied money, production lowers, meaning unemployment and less trade—in Friedman's view, on the evidence of history, unavoidable "painful side effects".[485] However, at some point, lowering production any further becomes less of an option than slowing down price rises. Inflation eases—or as Friedman put it, the economy is cleared of "price system… static"[486]—"on the average about a year after the effect on nominal income and output, so that the total delay between a change in monetary growth and a change in the rate of inflation averages roughly two years."[487]

Friedman based his claims and explanations on his analysis of data published in his book with Schwartz, and elsewhere. But not everyone is convinced. Harry Johnson claimed that Friedman's analysis "involves a very dubious attempt to reconcile the hypothesis with the facts

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479 Milton Friedman & Anna J.Schwartz, *A Monetary History of the United States, 1867-1960*, Study by the National Bureau of Economic Research (Princeton University Press, 1963)

480 Friedman, *The New Encyclopaedia Britannica*, p.339

481 Friedman, *The New Encyclopaedia Britannica*, p.339

482 Friedman, *The New Encyclopaedia Britannica*, p.339

483 Friedman, *The New Encyclopaedia Britannica*, p.339

484 Friedman, *The New Encyclopaedia Britannica*, p.339

485 Friedman & Friedman, *Free to Choose*, p.317

486 Friedman & Friedman, *Free to Choose*, p.320

487 Friedman, *The New Encyclopaedia Britannica*, p.339

by some intricate inferences about the lags involved".[488] Balogh called it "a (not-so-very-good) empirical correlation between the volume of money and prices" involving "curious statistical manipulation".[489] Balogh also pointed out that even a superb correlation could "by no means prove the causal connection. Tuberculosis sanatoria were numerous when tuberculosis was rampant. Their number declined when tuberculosis as a general menace was eliminated. But it was not the suppression of sanatoria which caused the malady to disappear."[490]

Friedman's 'evidence' seems to me, as to many, inconclusive as regards cause and effect. For instance, in several graphs[491] showing growth rates of prices (consumer price index) and money supply, for various countries between 1960 and 1978, increased rates of growth of money in *some* periods were not followed about a year and a half later by increased inflation, as the theory suggests, but rather by *reduced* or *unaffected* rates. On occasions, decreased money growth also defied theory by being followed by *increased* or *unaffected* inflation rates. While Friedman admits that the timing can vary, on his evidence, the opposite of the proposed relationship seems just as plausible: that price changes alter the money supply. (…tin…)

Friedman, though, provided what he calls a "dramatic" example to support his belief. During the American Civil War, inflation in the South ran at ten percent per month from October 1861 to March 1864. "In May, 1864,… the stock of money was reduced. Dramatically, the general price index dropped."[492] Not two years later, as Friedman's theory predicts, but in weeks. Of course, much that happens in war cannot be expected to recur in peacetime. Nevertheless, Friedman's views receive less contestable support from more recent events.

To pay for its military adventures in Vietnam, the USA resorted to money-printing, which boosted the growth rate of the money supply. But because the USA economy had reached full capacity by the early 1960s, production still could not increase enough to supply all of the military's extra requirements—so, the military competed with the rest of the economy for whatever they could get. Thus subject to raised demand, the prices of physical resources needed to build bombs, tanks, uniforms, body bags, coffins, and all the other paraphernalia of war, rose—as did the wages of those involved—and also, after a time lag, inflation, "from 2.2 percent in 1965 to 4.5 percent in 1968."[493]

Given this example, Friedman's explanation of how money supply changes lead to altered prices does seem plausible—yet still an equal claim can be made for the opposite process. Certainly, to avoid impossible rates of turnover, the money supply, to some extent, *must* follow prices. But probably, the money supply and prices, and the volume of trade, *follow each other simultaneously*—to differing degrees depending on time and place—and balance via the undeterminable V.

That reality at least does not *have* to follow the simple L$D-inspired monetarist viewpoint can be demonstrated by a hypothetical economy having stable prices and money growth that matches trade growth. If the money supply suddenly grows a bit quicker than trade, according to Friedman, this "raises the amount of cash people (or businesses) have relative to other assets… [and t]he holders of the excess cash will try to correct this imbalance by buying other assets."[494] Of course, some people *may* do this and settle for higher prices in the process.

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488 Cited by Balogh, *The Irrelevance of Conventional Economics*, p.180

489 Balogh, *The Irrelevance of Conventional Economics*, p.55

490 Balogh, *The Irrelevance of Conventional Economics*, p.55

491 Friedman & Friedman, *Free to Choose*, pp.301-5 & 32

492 Friedman & Friedman, *Free to Choose*, p.30

493 Thurow, *The Zero-Sum Society*, p.43

494 Friedman, *The New Encyclopaedia Britannica*, p.339

However, others may just use their extra cash to repay debts, or to increase their savings, or to spend in circumspect ways that do not raise demand and thus do not affect prices, but rather slow money's velocity. Certainly, central bank policies since the Great Recession have boosted money supply significantly yet with demand and inflation barely changing.

How people *actually* behave depends on their expectations and situations, and on the general economic climate and mood of the day. Even if most spend 'excess' money primarily on consumption (as happened with the USA's money-printing of the 1960s), prices (probably) rise only if the economy is operating at or near full capacity; otherwise, greater trade and/or lower money turnover without inflation (more probably) result. The quantity equation even allows for the possibility that an 'excess' of money could increase trade and/or decrease turnover enough for prices to actually *fall*.

Certainly, in suitable cultural and economic climates, what monetarists would regard as 'excess' money has circulated *without* causing inflation. According to Galbraith, for instance, in the USA's 'frontier' days, especially "in the early decades of independence,… settlers… were… enthusiastically devoted to the creation of banks and by them of money… '[C]orporations and tradesmen issued 'currency'. Even barbers and bartenders competed with the banks in this respect… Nearly every citizen regarded it his constitutional right to issue money.'"[495]

For the majority of the time from a decade after Independence until shortly before the Civil War, USA prices fell. To achieve such a result, monetarism requires, with a constant velocity of money, a volume of trade that grew, for most of the eighty-odd years, a little more quickly than did the money supply; while possible, the largely unregulated creation of money that did go on seems unlikely to have worked so consistently. More likely, with plenty of work to be done, with resources freely available, and with an economic capacity not even determined let alone reached, frontier expansion coped with frequently 'excess' money by boosting trade (and/or slowing turnover) rather than by increasing prices. Our current developed economies perhaps work less flexibly, but they are not, by any means, totally inflexible.

As for reducing inflation by decreasing the growth of the money supply, this also cannot be guaranteed—people's overall spending habits may be unaffected, maintained by expectation of profits and/or by savings. Monoligopolies, in particular, can resist lowering or stabilising prices, even in opposition to general trends. A sharp enough cut-back of money (especially via interest rate increases) will eventually stop inflation, but only after the side effects of unemployment and reduced trade begin to dominate—somewhat like curing a sore toe by amputation at the knee.

Ultimately, the furious turbulence of the economic flow, with its various alliances and its misleading L$D-prices, has too complex and dynamic a set of interactions to control by simply topping it up with more money or draining some off. Because people make the economic decisions, prices depend on much more than merely the size of the money supply. As just one example, some of the changes to inflation rates before, during and after the 1991 Gulf War had nothing to do with the availability of money at the time—or two years earlier—but everything to do with largely unwarranted panic and fervour gripping sellers and buyers of oil.

The volume of trade or output also does not depend primarily on the money supply. Even in Friedman's view: "Monetary changes affect output only in the short run—though 'short run' may mean five to 10 years… What happens to the output in the long run depends on such 'real' factors as the enterprise, ingenuity, and industry of the people; the extent of thrift; the structure

[495] Galbraith, *Economics in Perspective*, p.147, citing A.Barton Hepburn, *A History of Currency in the United States* (MacMillan, New York, 1915), p.102

of industry and government; the relations between nations; and so on."[496] Most probably, the same 'real' factors, as well as consensual and personal tunnel-realities, have a greater effect than does the money supply not just on output but also on prices—in the short and long runs. So, at best, monetary regulation can fool only some of the people some of the time.

However, even if the monetarist formula could be treated as appropriate—which means that people's complex pricing behaviour would be regarded as capable of being altered predictably by simple money supply changes—manipulating a real economy in accordance with the quantity equation cannot easily or accurately be done, because the equation's variables have no easily determinable real counterparts.

Consider M: how much money does a nation have? Cash and demand deposits must be counted—in total called M1. If we also include term deposits, the total is called M2. But whether term deposits form part of a *circulating* money supply depends on whether they are treated as locked away in banks for months and years, or loaned to borrowers via fractional reserve credit. Foreign currency and building society deposits complicate the matter further—should they be counted as money? What about credit card accounts, commercial bills (IOUs), stocks and bonds, derivatives, vouchers and discount coupons? "One monetarist listed no fewer than seven… definitions of money… [each differing by the] volume of short-term *assets* included… [which] do not have much to do with transactions except when they themselves change hands".[497]

Once agreement is reached that a horse has no udders or horns or fins, the beast can be attempted to be tamed, but even if a definition of money could be settled upon, accurately altering its growth involves certain practical difficulties. Monetarists advise that the central bank sell or buy bonds, and/or banks make more or less credit available. Neither process ensures that people change their borrowing, spending or pricing habits. Altering interest rates has a greater chance of enticing changes to behaviour, but while most of the efforts of governments to control the money supply since the 1970s have indeed concentrated on variation of interest rates, monetarists warn against it. In Friedman's words, "more rapid monetary growth at first tends to lower interest rates. But later on, as it raises spending and stimulates price inflation, it also produces a rise in the demand for loans that will tend to raise interest rates… [And conversely, also.] This inconsistent relation between the quantity of money and interest rates explains why monetarists insist that interest rates are not a good guide to monetary policy."[498]

But not only M causes trouble. T, too, has its problems. In a large complex national economy, "T, the total transactions, is all but unknown. Thus, a proxy, the national income or product [GDP], has to be substituted for it… [But this makes] the velocity (V)… an illicit hybrid concept".[499] In practice, GDP is measured as the "value" (price) of the total "quantity of final goods and services produced during a year",[500] and does not include the "value" of any "non-income transactions (house purchases, other transfers of assets, realization of paper profits etc.)".[501] But because both sides of the quantity equation must deal with the same thing, to use GDP as T, V must become V_{GDP}, "the average number of times that the money stock is used for making income transactions (that is, payments for final goods and services)."[502] However, V_{GDP}

496 Friedman, *The New Encyclopaedia Britannica*, p.339

497 Balogh, *The Irrelevance of Conventional Economics*, pp.170-171

498 Friedman, *The New Encyclopaedia Britannica*, p.339

499 Balogh, *The Irrelevance of Conventional Economics*, pp.172-173

500 Kennedy, *Macroeconomics*, p.22

501 Balogh, *The Irrelevance of Conventional Economics*, p.173

502 Friedman, *The New Encyclopaedia Britannica*, p.337

will be affected by non-GDP activity, by changes to the velocity of money used in non-income transactions (whichever of money's seven definitions is adopted). For instance, generally higher turnover results from booming (non-GDP) stock and property markets; whereas booming black markets reduce V_{GDP}. So V—the only one that can be used—is not constant, nor predictable. Furthermore, using GDP as T makes a P of retail or wholesale price indices inappropriate because they include non-income transactions such as for property.[503]

Even if an economy had a static V and a measurable and controllable M and P, and people did respond to changes to M consistently (which asks a lot), to slow the growth of the money supply to less than that of the economy first involves knowing how fast the economy is growing. Formal figures for economic growth are usually produced quarterly, and take a few weeks to assemble and calculate (and are then usually adjusted the following quarter). So, guesses aside, any changes to the money supply cannot be made until about four months or more *after* known changes to economic growth; and they will be based on *average* quarterly figures that may hide significant daily, weekly or monthly fluctuations. Very easy to fall out of synch with such an arrangement, especially if two-year time lags apply as monetarists claim.

So, MV may equal PT, but the claim that this can be utilised to economic advantage seems MT. Supply-sider George Gilder neatly summed up monetarism's weaknesses when he wrote that "monetarists cannot conclusively answer the question of whether monetary discipline is always possible, or even desirable; or whether the price level can be easily measured by the conventional tools; or whether the money supply can be easily defined or controlled… A perfectly valid theory may be irrelevant if the real world fails to offer the clear signals and instruments needed to apply it, or if the factors which it treats are not the controlling ones."[504]

Yet occasionally, monetarism can work as expected: if enough people strongly believe that altering the money supply will affect prices, it can encourage them to act in ways which confirm their beliefs—for a while at least. Friedman recognised this enough to recommend that, to deal with the 'side effects' of the monetarist 'cure' for inflation, the "most important device… is to slow inflation *gradually but steadily* by a policy announced in advance and adhered to so it becomes credible… [This] is to give people time to readjust their arrangements—and to induce them to do so… [by changing their] *anticipations* about the likely rate of inflation."[505]

So, the practical effectiveness of monetarism, like money itself, depends greatly—probably most greatly—on what is believed. Somewhat undermining its theoretical capacities, however, belief in monetarism itself has waned considerably since its heyday of the 1970s and 1980s, although governments and central banks, despite Friedman's advice, still vary interest rates in their attempts to deal with inflation and unemployment (see section 5.4).

503 Balogh, *The Irrelevance of Conventional Economics*, p.174

504 Gilder, *Wealth and Poverty*, p.190

505 Friedman & Friedman, *Free to Choose*, pp.323-324