Stephen Spratt and Stewart Wallis[1]

From Old Economics to New Economics: Radical Reform for a Sustainable Future

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[1] Stephen Spratt is Director of the Centre for the Future Economy at **nef**, and Stewart Wallis is the Executive Director of **nef** (new economics foundation)

Executive Summary

The 'End of History' is now a real possibility for humanity, but not in the way envisaged by Francis Fukuyama. The 'End of History' we face is the threat to our continued existence on this planet because of the growing risk of triggering runaway and catastrophic climate change.

And this threat is not restricted to human beings, but extends to the countless other species that we share this planet with. The *'sky is the limit'* but we are not seeing, hearing and doing what is needed.

Alongside the fundamental issue of climate change, we:

- are seeing major and increasing threats to other vital ecosystems such as water and soil;
- are facing looming energy supply shortages;
- will need to feed half as many people again across the world in thirty years time;
- are still allowing inequality to grow and are just not solving the huge problems of serious poverty in many parts of the world.

Also, in so called 'developed' countries, our economic growth is not even translating into greater human well-being, but with our current economic model, resource intensity and levels of inequality, we would need 15 planets to accommodate the growth needed to raise the incomes of the poorest people of the world to just $1,000 per year.

Driving all this is an economic system that has now become the problem. To coin a phrase, it is 'not fit for purpose', but even this is far too mild: our economic system is causing us serious and potentially fatal harm. We keep taking the wrong drugs and closing our eyes to ever growing adverse symptoms and side effects.

The assumptions on which our current economic system is based are totally flawed. To name but a few:

- We believe that we can keep growing the global economy indefinitely when we are now coming up against clear planetary limits. The economy is a subset of the ecosystem!
- We believe that more money or wealth equals more happiness. But past a certain (and low) level of income, there is no correlation!
- We believe that markets are equitable. They are not, unless regulated. Where there are power differentials between participants in a market – and there nearly always are – those with greater power will emerge with even greater power.

This paper explores these and many other 'economic myths' in depth.

To change to a viable path for humankind we need a 'Galileo/Copernicus' shift to an economy that serves people and the planet, not consumes them. Such an 'economy' as Adam Smith would have agreed, needs to be a 'moral economy' founded on clear moral principles.

Such principles would include social justice, including social and economic rights for all, a valuing of the feminine and the 'caring economy', sustainable development for planetary systems and future generations and an active fostering of diversity and resilience at all levels. Markets and enterprise would continue to be vital, but would operate within a system of incentives, measurement and regulation that ensured the wider good. The goal of such an economy would be to increase individual and collective well-being.

In this paper we set out what this economy would look like in detail, including – but not restricted to – the following areas:

- At the global level we must halt and reverse our carbon emissions, introducing a Cap & Share system, which would also lead to a huge redistribution of wealth towards the developing world.
- To make this system work, safeguard our ecosystems and give poor countries the room to develop, those in rich countries need to scale back their carbon-emitting production and consumption: to live more sustainable and less materialistic lives within our environmental limits.
- But this is more of an opportunity than a threat: despite the fact that the wealth of the developed economies has doubled since the 1970s, people are no happier.
- Our interdependence is a cause for celebration, but trade should reflect the environmental costs of production and transport. This would rebalance trade towards that which is really needed and valued, but also inject new life into local markets and local communities, in both developed and developing countries.
- Nationally, businesses should bear the full environmental costs of their activities, but also benefit where this is appropriate. We need to make it pay to be sustainable and fiscal policy is a key component of this.
- By linking sustainable and progressive corporate behaviour to the 'bottom line' it becomes the mainstream, driving innovation and progress.
- The financial system should also be restructured to be supportive of sustainable and progressive business activity. Short-term speculative behaviour would be discouraged by regulation and fiscal policy so that it would not longer 'pay'. Instead the financial system should serve the real economy of the future – and not the other way round as is the case today – with finance flowing to these business activities that society most values.
- Competition is good in some areas but not others, and our economic structures and institutions can encourage or discourage either. We need to develop structures that foster cooperation where this would lead to the best outcomes for society.
- This also extends to the public sphere, where space needs to be opened to provide people with the opportunity to participate meaningfully in local and national life.
- Decisions should be taken at the most appropriate level, and this is as locally as possible in most instances.
- Local communities need to gain democratic control over their public services, but also the economic development of their areas.

Both nationally and globally, we are all in this together and must cooperate to ensure a sustainable future and a positive legacy for the generations to come. In this regard, there really is no alternative…

We have only this one planet to share: the 'sky *is* the limit'.

Introduction

Today we face great dangers, but also tremendous opportunities. Climate change, ecosystem collapse, growing inequality and injustice require an urgent response from us all and from our governments. We need a new approach, one that tackles these global and national problems, but also addresses another key problem: our lifestyles in the developed countries threaten the future of the planet; yet they do not make us happy. So, as well as great danger, our present circumstances also offer an unprecedented opportunity: we *can* reorder our economic arrangements to make life more just and fulfilling for all within our environmental limits.

The economy we see around us is, in large part, the consequence of countless decisions taken daily by individuals, families, communities, private sector firms, third sector organisations and the various institutions of the state. The state in all its forms, at least in theory, is also a manifestation of the collective will of society, charged with mediating between different interest groups, taking decisions that reflect the outcome of this mediation and promoting the 'common good'. We therefore have an economy and society that has been constructed and is maintained by individual, group and collective decisions, all shaped by history, culture, the prevailing institutional framework, society's norms and values, as well as people's different circumstances in life and the varied priorities that may result from these.

We collectively create our own reality: there is nothing 'natural' about the mechanisms and processes we have; our actions (and non-actions) serve to both create and sustain these. However, it is also important to recognise that although we are the ultimate creators of the economy we have, the broader system also shapes us in turn. That is, institutions – taken broadly to mean the 'rules of the game' as well as the organisations that 'play' the game – are powerful shapers of people's motivations, wants and what they consider to be feasible or not.

The starting position for our approach therefore as follows: if this economy we have created, and continue to 'create', is failing to perform the functions that most people would expect of it, the option is open to us to create a different economy. To do so, however, will require fundamental change.

Powerful factors reinforce the current system. For example, our institutional framework encourages certain forms of behaviour and discourages others. In particular, at its heart the economy is primarily structured to maximise profits and income growth, through ever reducing costs and ever increasing revenues. The institutions we have, at all levels of society, subtly – and sometimes not so subtly – encourage behaviour that is compatible with this goal and discourage that which is not. Furthermore, institutions do not always have to directly influence behaviour: they are powerful shapers of motivations and even values, which then influence behaviour, whether consciously or unconsciously. So, environmental impacts are not voluntarily taken into account by companies as this could reduce their competitiveness by adding to costs. Similarly, work-life balance is heavily tilted towards the former, as improving life quality does not add to income or GDP, and may do the very opposite. In both instances, it may simply never have occurred to those taking the decisions that alternative courses of action were even desirable, let alone possible.

Rather than focusing on perpetual and increasing income growth, we believe that the purpose of the economy should be to enhance the well-being of the citizens of the country, in a manner that is both socially just and environmentally sustainable. To achieve this, however, will require a change in both the forces that influence behaviour (i.e. incentives) and, more fundamentally, a change in the forces that shape values and motivations (i.e. institutions)

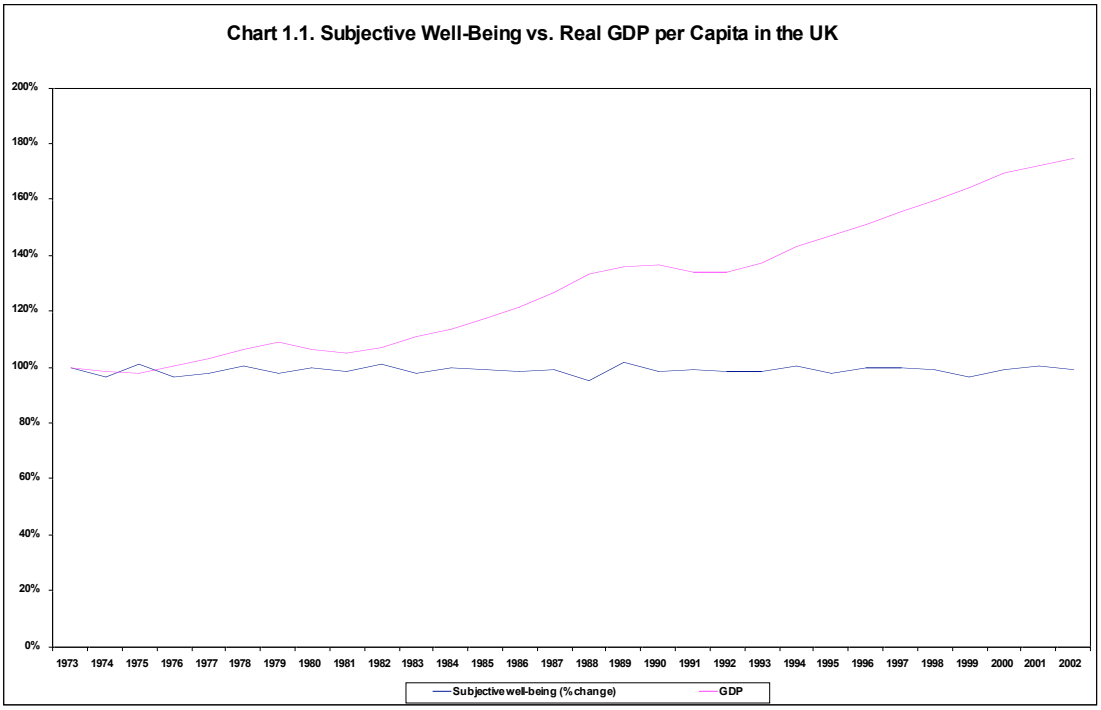
The ultimate goal of the process of change that we hope to initiate is thus twofold:

1. To make it easy for people and organisations to do act in ways that increase their well-being and that of broader society, by changing incentives to encourage certain forms of behaviour and discourage others.
2. To encourage people to *want* to 'do the right thing' and provide the space for them to do so, not least through a shift away from institutional forms that encourage competition and the 'survival of the fittest' mentalities towards structures that encourage people's better instincts, such as cooperation and mutual respect.

We would argue that many people would agree with these aims, but have perhaps been fooled, and even partially 'conditioned', into thinking that what we have today is somehow natural: that 'there is not alternative'.

1. The need for change

It is difficult to find people who think that the economy we have today has no flaws. Many complain of overwork, of being trapped in unfulfilling jobs, of a lack of community life, of a rapidly deteriorating natural environment or of a Kafkaesque state bureaucracy far removed from their everyday lives.



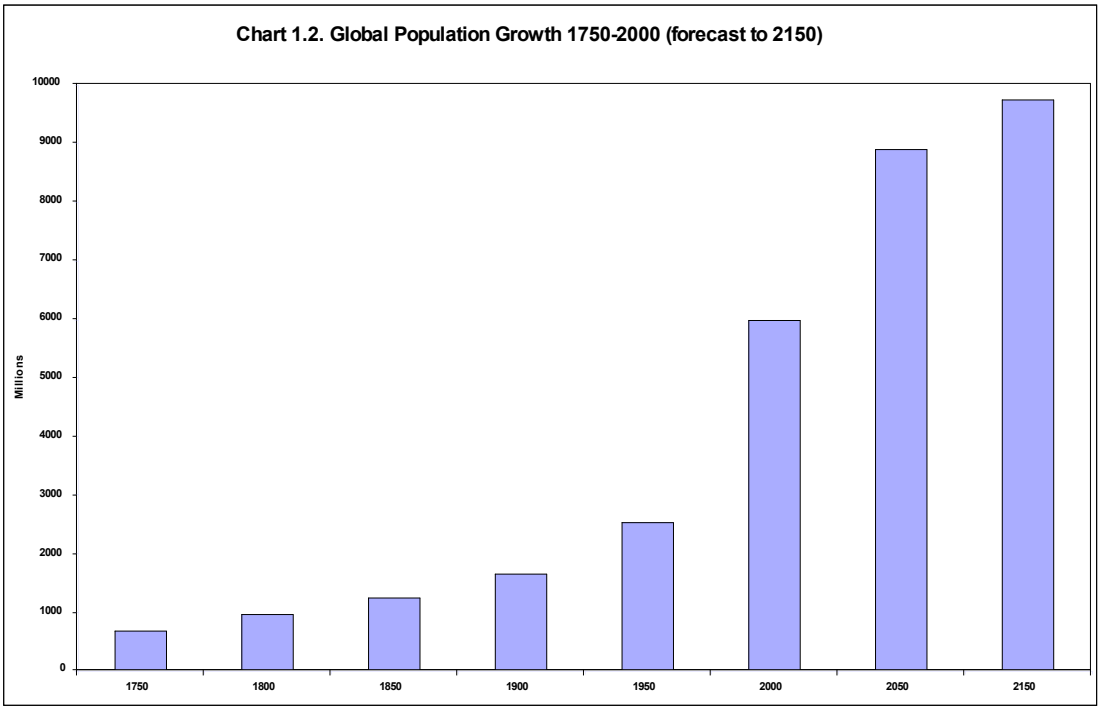
Source: Eurobarometer Survey and World Bank.

Chart 1.1 illustrates the relationship between economic growth and well-being in the UK, showing that our growing wealth since the early 1970s has not made us any happier as a nation. If one takes a static snapshot of a country, it is generally true that a positive (although non-linear) relationship can be found between income and life-satisfaction. However, income influences 'happiness' in two ways. First, there are the benefits of additional consumption for the individual; second, there are the influences of relative status effects. In wealthy nations, where material standards of living are high for most people, the positive relationship between income and life satisfaction is largely attributable to status effects. However, status is necessarily a zero-sum game, hence:

"...only the consumption benefit of income remains at the aggregate level. Since the consumption benefit approaches zero as income rises, happiness profiles over time in developed countries are flat."[2]

So our lifestyles in developed countries do not increase our well-being as a nation, but they are increasingly leading to devastating environmental consequences around the globe.

These impacts are multi-faceted and inextricably interconnected. For example, in the last half century, human beings have changed the planet's ecosystems with a speed and depth which is historically unprecedented.[3]



Source: UN (2000)

These impacts are strongly related to the rapid global population growth that we have seen over the same period, with total global population more than doubling in the second half of the twentieth century, as can be seen from chart 1.2. The chart also shows that global population is forecast to increase by a further two thirds between 2000 and 2150. If we persist with our current economic model, the consequences for our natural ecosystems will be catastrophic.

The population growth we have seen has obviously increased the demand for food and water in the last half century, but our greatly increased economic activity (i.e. per capita economic activity) has exacerbated these impacts:[4]

- More land was converted to cropland across the world during the thirty years from 1950 to 1980 than between 1700 to 1850.
- Food production has more than doubled since 1960.
- The quantity of water taken from rivers and lakes has doubled since 1960.
- Since 1960, wood taken for pulp and paper production has tripled and timber production increased by more than half.

[2] Clarke et al (2007: 53)
[3] See the *Millennium Ecosystems Assessment* (2005) for a comprehensive review of the impact of human activity on natural ecosystems.
[4] Millennium Ecosystems Assessment (2005)

- Flows of phosphorus have tripled since 1960.
- Half of all the synthetic nitrogen fertilizer which has ever been used has been used since 1985

The effects have been severe:

- The distribution of species on Earth is becoming more homogenous, with the majority of species across a range of groups declining rapidly.
- Up to a third of all mammal, bird, and amphibian species are now threatened with extinction.
- A quarter of commercial fish stocks are being exploited at unsustainable levels.
- 20% of the world's coral reefs have been lost and 20% degraded in the previous half century.
- 60% of the natural ecosystems studied by the Millennium Ecosystem Assessment project were being degraded and/or being used unsustainably.

The World Wildlife Fund (WWF) warned in 2006 that if we continue on our current trajectory we face a global ecosystems collapse by the middle of the current century, and argue that it is essential that consumption and production is scaled back dramatically in the developed countries if this is to be avoided.

The WWF estimates that current trends of economic growth would mean that by 2050 global demand would be double the environmental carrying capacity of the earth. That is, we would need two planets to accommodate our demands.

Some might argue that such a move would be to penalise developing countries that rely on growth in the developed world to increase their exports. However, research by **nef**[5] has illustrated that relying on global growth to reduce global poverty is both hugely inefficient and environmentally impossible. Every US$1 of poverty reduction in the developed world requires US$166 of additional global production to achieve – this is not so much 'trickle down' as water torture. While the WWF estimates that our current growth projections would require two planets by 2050, **nef** estimates that to increase the income of the global population to just US$1,000 per day would require more than 10 planets to achieve using the current model.

As well as absolute poverty, our current economic model is incapable of addressing relative poverty, or global inequality, which remains shockingly high. Indeed, almost by definition, a development model whereby poor countries get slightly less poor as a consequence of rich countries becoming very much richer can hardly be expected to reduce global inequality.

It is also important to remember the gender aspects of global poverty. Women suffer from poverty to a greater extent than do men. In developed countries, women's participation in the labour force is close to their population share. Despite this, the gender pay gap remains significant at 18.4%, down from 30% in the mid-1970s. In developing countries, however, women remain a minority, albeit a growing one.

Furthermore, when women do access the formal labour market, they generally meet strong barriers to entering the more attractive and well-paid occupations. The United Nations' Millennium Project describes the problem as follows:

Women represent an increasing share of the world's labour force – over a third in all regions except Southern and Western Asia and Northern Africa. However women remain at a disadvantage in securing paid jobs. Wage differentials, occupational segregation, higher unemployment rates and their

[5] *Growth isn't Working* (2006)

disproportionate representation in the informal and subsistence sectors limit women's economic advancement. Sociocultural attitudes, employment policies and a lack of options for balancing work and family responsibilities or for controlling the timing and spacing of births contribute further to inequality in the labour market.[6]

A more fundamental point, however, relates to our definition of the 'economy'. That is, work – in an economic sense – is equated with paid work. Furthermore, 'paid work' is equated with work in the formal economy. Clearly though, many of the activities that take place within an economy – particularly within families and communities – do not fall into this category, yet it is difficult to say that they are not 'work' in any meaningful sense. Feminist economists have been arguing for years that the formal economy is entirely dependent upon this parallel economy to support and maintain it.

Therefore, while it is vitally important to remove the obstacles that exist to women's options in the world of formal work, it is also the case that we need a more holistic approach to measuring what the economy actually consists of, and to devising appropriate ways to reward those whose fundamental contribution has hitherto been ignored.

As well as these income, wealth and gender differences, developing countries are being – and will increasingly be – more affected by climate change than will the rich countries that are the primary cause of the problem: the citizens of the developing world are more likely to live in the geographical areas of the world that will be most affected by climate change; are more dependent on the climate due to the predominance of agriculture as a livelihood; and are more vulnerable and thus less able to adapt to the impact of the changing climate.

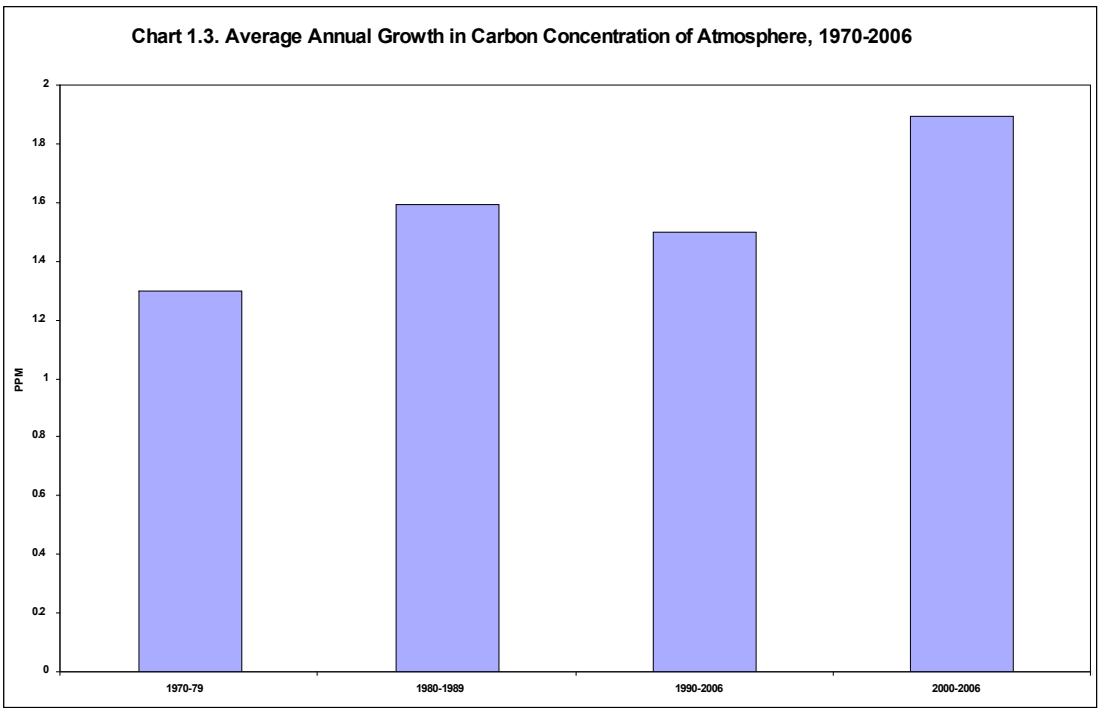
The reality of man-made climate change is now incontrovertible: in its most recent report, the authoritative Intergovernmental Panel on Climate Change (IPCC) describes the rise in mean global temperatures over the past half century as being 'very likely' the result of man-made climate change: eleven of the past 12 years between 1995 and 2006 are among the 12 warmest years on record from the middle of the nineteenth century.

The industrial development we have seen over the past two centuries has resulted in a huge increase in the quantity of carbon in the atmosphere. Carbon concentration in the atmosphere stood at 381 parts per million (ppm) at the end of 2006, and is now increasing at a rate of around 2 ppm per year. The current concentration is far in excess of the natural range of 180-300ppm for the last 650,000 years.

Furthermore, as shown in chart 1.3. below, the annual addition to these concentration levels continues to rise, and the majority of the increase in the last decade can be the growth of the global economy (65%), with the remainder being the result of the greater carbon intensity of the economy (17%) and the decline in the efficiency of our 'natural sinks' (18%)

In the first decade of the 21st century we have already seen appreciable increases in mean global temperatures, as well as greater unpredictability in global weather patterns. If we do nothing and continue on our current trajectory the outcomes are clear: accelerating global warming and a transition to 'runaway' climate change, where feedback loops kick-in to hugely increase the global effects.

[6] UNMP (2006)



Source: Canadell et al. (2007)

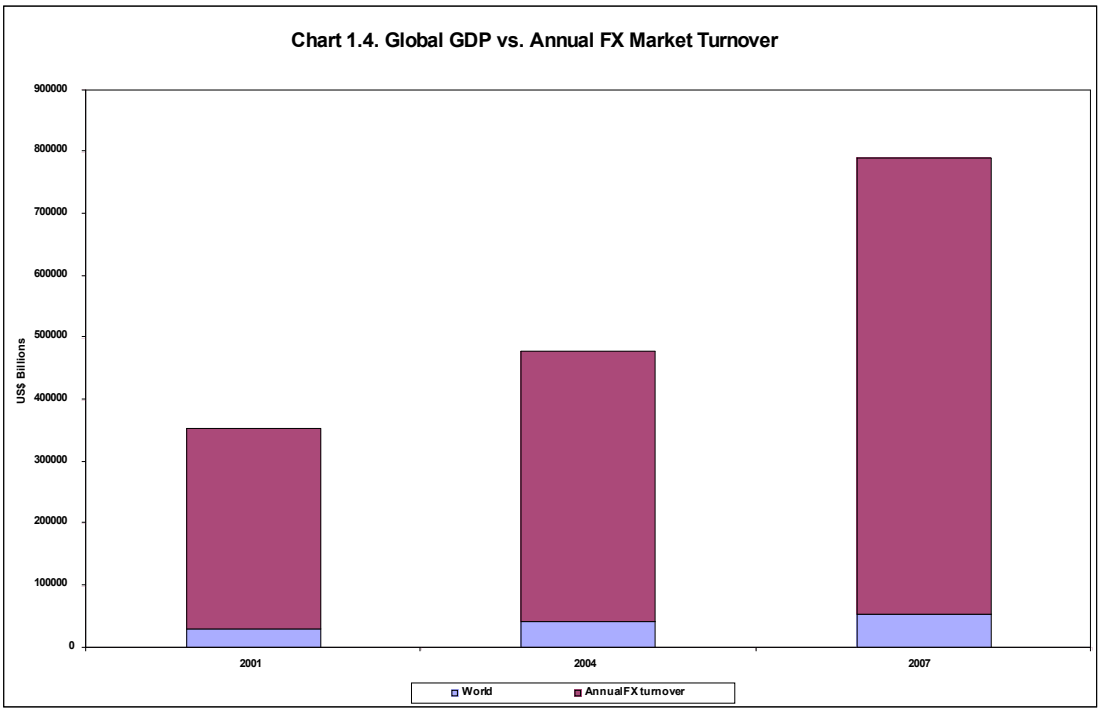
The Kyoto Protocol called for a 60% reduction in global carbon emissions from the 2000 level, to be achieved by 2050. This was seen as the minimum required to keep global warming below 2oC, the figure above which the scientific consensus has argued that climate change creates unpredictable and potentially 'runaway' outcomes. More recently, research from experts such as the Tyndall Centre suggests that greater reductions may be required to achieve this, and many have questioned to extent to which a 2^{o}C rise in mean temperatures is in any way 'safe'.

Clearly to have any chance of hitting even this target we need to act decisively and now. As chart 1.3 shows, however, we are going backwards rather than forwards. Therefore, out increased wealth does not make us happier as a country, but it does increasingly threaten our future as the environment struggles to cope with addiction to growth. At some point, we must answer the question: what is it all for?

1.1. How have we come to this?

It was has been argued that fundamentally the economy is geared towards generating ever-higher levels of profits and income, and that this has profound affects in almost every walk of life. Businesses do need to make profits in order to survive of course, but this is not the same as making ever-higher profits, or of maximising *short-term* profits. Similarly financial investors do need to make a positive return over the life-time of an investment, but this is not the same as maximising short-term returns through the continual buying and selling of financial instruments, which are often far removed from the underlying real economic asset upon which they are nominally based, and about which the investor is likely to know little or nothing at all. The recent global financial turmoil that has spread out from the US sub-prime mortgage market via complex and opaque structured financial products is a clear example of such as system, but it is far from being the first. As shown in chart 1.1, the financial markets have come to dwarf the real economy it was supposed to serve, with annual turnover in the foreign exchange market now almost fourteen times greater than total world GDP, and rising: the tail really is wagging the dog.

However, the role of the financial system in the economy goes beyond the direct transactions that occur between financial institutions, particularly with regard to its influence on the private sector. The short-termism of many businesses is, at least in part, a result of the need to a) service debt raised in the financial system, and b) maintain upward pressure on the share price. The requirement to 'maximise shareholder value' is one of practical survival in many instances. Companies that see their share price fall are liable to be a takeover target by a competitor or a private equity firm promising to increase the 'efficiency' of the enterprise and so generate yet higher profits.



Source: IMF World Economic Outlook and BIS Triennial Surveys of FX Market Activity.

The best way to ensure the share price keeps rising is to announce higher profits each quarter, which ratchets up return expectations yet further. Add to this the influence of globalisation, where company profits and financial returns are now compared internationally and expectations are further raised. The key point to make is that in an arms-length world dominated by capital markets, investors do not generally buy a financial asset to hold for the longer-term because they have specialist knowledge about the prospects of the company concerned. Rather, stocks and bonds are bought and sold on the basis of relative movements in financial ratios with little consideration of the underlying rationale for these movements. Consequently, the short-term attitude of investors encourages a similarly short-term approach by the private sector: there is little to be gained from taking a long-term strategic perspective that may only come to fruition some years in the future, if by this time investors have deserted the company due to its relatively poor short-term performance.

In this context, which company will *voluntarily* incur the environmental or social costs of its activities, as this will add to costs and reduce its relative competitiveness? Clearly, much of this discussion relates to large, publicly listed firms. Smaller, privately held firms must also make profits of course, but do not face the full pressure of the financial system to continually maximise short-term returns. However, once a certain size has been reached on the basis of organic growth, companies have little option but to turn to the financial sector – largely to commercial banks in the first instance – who may provide funding but may also require a greater focus on short-term profit maximisation to service this debt, which is likely to attract a high rate of interest given the perceived riskiness of early stage companies.

Alternatively, small firms may attract venture capitalists willing to take a stake in the company (i.e. a proportion of the equity) in exchange for financing to develop the business. Typically, however, these venture capitalists generally look to 'exit' the transaction after a couple of years after having grown the company and its profits to the extent that it can sell its stake for a hefty profit, or having taken the company to a public listing on the stock exchange, again for a healthy profit. In either case, therefore, the need to make profits – and fast – is greatly enhanced.

Many positive exceptions to these broad trends can be found in the wide range of commercially-oriented ethical or sustainable businesses, as well as the social enterprises that have emerged in the relatively recent past, and which offer a glimpse of what could be. Such enterprises face particular problems with regard to sustainability and growth, however:

- Firstly, by incorporating considerations other than straight profit maximisation into their activities, they are likely to face higher costs than are their competitors. As a result, the organic growth of such companies will be limited by the extent to which consumers are willing to pay a premium for their products.

- Secondly, straight financial investors aim simply to maximise returns and are therefore unlikely to look favourably on businesses that do not act in the same way. The presence of socially and environmentally aware investors might be expected to offset this problem, but the size of this pool of potential finance remains very small and at the margin of the mainstream financial system.

- Finally, for those businesses that are able to grow beyond a certain scale, it soon becomes increasingly difficult to avoid becoming a mainstream company like any other. The world is full of large multinationals that started as small, ethically minded enterprises, but eventually succumbed to the 'commercial realities' which engagement with the mainstream financial system demands.

At the heart of this nexus is the inexorable rise in expectations of profits and financial returns, the competitive system and the private ownership and control of financial and real resources, which is supposed to deliver this. 'Survival of the fittest', it is argued, will allow the best and strongest to prosper while eliminating the weakest. As we shall see in the next section, this is not even the case in theory, and the practical results can be seen all around us, as well as in our own lives where, like hamsters on a wheel, we must run ever faster to keep up with the other hamsters who are running just as fast to keep up with us. To extend the metaphor to incorporate climate change, our incessant acceleration is also heating the wheel rapidly. It may soon become intolerably hot, yet still we run.

While the financial system is supposed to serve the needs of the real economy, increasingly the reverse is true. Similarly, while the private and financial sectors are supposed to serve the interests of society, this too is now largely reversed. Increasingly, people's worth is judged on the value they create in the economy, a process which seems to have been internalised – with much encouragement from the institutions of the economy discussed above – so that people often see material possessions as the main source of self-worth. Yet we are no happier.

The state itself is also increasingly subordinate to the needs of business and finance, and openly so. In part this is a logical consequence of the focus on income and profit growth: the business and financial sector are seen as the means through which this can be delivered, and their needs are therefore given priority. Also, the great majority of the state's tax revenue is, directly or indirectly, the result of the activities of these sectors, making their views very important indeed. The combination of these two factors sees the purpose of the welfare state not being to make people healthy and well for its own sake, for example, but because it

increases their productivity. Similarly, education is not a good in itself, but is valuable in that it equips people with the skills needed to 'compete' in a globalising world.

This competitive model interacts with the emphasis on the individual and the private ownership of natural resources to create a situation where each has an incentive to exploit the economic potential of what they own to the fullest extent. In business parlance, this is know as 'sweating the assets'; from an environmental perspective this leads to economic potential trumping environmental degradation every time, particularly as the costs of the negative environmental are generally not borne by those responsible for them.

The consumerist culture that we have now extends into the public service sphere. In the UK, people are largely seen as passive consumers of services, which are 'delivered' to them by service providers. The situation is similar in the environmental sphere, where we 'consume' energy produced by huge energy conglomerates, rather than focus on individual and community conservation, efficiency and decentralised, renewable production. Similarly, people are not encouraged to take responsibility for their own health, and given the tools to do so, but are asked to choose between competing health 'solutions'. When combined with the imperative to deliver 'results', this focuses the health sector on curative rather than preventative approaches, and the education sector on achieving better exam results, rather than on developing a rounded approach to education as a life-long process.

In health, for example, a preventative and proactive approach to encouraging and facilitating healthier lives requires politicians to take a long-term perspective, but the grinding of the political cycle is such that short-term impacts are required. By the time longer-term results might be achieved the politicians may well have been voted out of office for failing to deliver in the short-term. As in the private sector, therefore, the incentive is to focus on maximising short-run policy 'returns', which presents a serious difficulty when a longer-term view is required, not least with regard to the environment of course.

The increasing 'marketisation' of society has also seen the incorporation of private sector concepts and practices into the public sector. The assumption that lies behind this is that people are best motivated by financial rewards (and punishments), and that competition is the best means of both driving up standards and driving down costs. The idea of the public service ethos is viewed as naïve and ineffective as a motivating force. However, insisting on competitive behaviour, and pitting those who should be working in cooperation against each other, is itself guaranteed to undermine the public service ethos – a clear example of how institutional frameworks can shape motivations and then behaviour.

In the UK, this process has also seen third sector organisations encouraged to compete for the right to provide public services. When competing with private sector providers, however, this requires the adoption of measurement and efficiency approaches, making those third sector organisations that succeed and grow increasingly indistinguishable from their competitors in the private sector.

The role of the third sector as the catalyst for change is thus undermined, as it increasingly becomes an arm of the state. Furthermore, this process of co-opting the third sector – including its language – marginalises those more radical groups that argue for fundamental change, who can be portrayed as unreasonable or dismissed as cranks.

The issue of scale, whether it be private sector companies, financial institutions, decisions on public services and how this is delivered, or participation in the political process or in the social movements of the third sector, is of great importance. The pre-eminence of the profit motive sees companies grow so they can increase their profits and grow yet more. This is facilitated by financial institutions who have themselves grown to an enormous scale, but who also profit from arranging mergers & acquisitions in the business world. In the public sector,

cost considerations – and the desire to centralise control – fosters a culture where big is better, and narrow economic efficiency considerations preclude genuine local participation in the provision of public services. Third sector organisations find as they grow that scale efficiencies allow them to undercut smaller competitors when tendering for contracts, enabling them to grow yet more and driving out smaller organisations.

All of these forces move decision-making further and further away from the people who are often on the receiving end of the consequences. This is not to say that small is always best: in some circumstances bigger is certainly better. However, it is certainly not the case that big is always best. Scale appropriate to the task – and compatible with environmental sustainability – should be the aim, but this is far from what we have.

In the next section we briefly consider the linkages between the features of the real economy that have been described and orthodox economic theory to show that these problems are neither natural nor random, but are very often the result of the application of particular theories and occasionally clear violations of these very same theories.

2. Orthodox theory and real-world practice

At the centre of neo-classical economics is the individual: Adam Smith argued that the pursuit of self-interest by individuals specialising in particular forms of production would, like an 'invisible hand', steer society towards optimal outcomes. David Ricardo extended Smith's work on the 'division of labour' into the international arena, arguing that nations too should specialise in areas where they have a 'comparative advantage': the result would be higher (global) output, and therefore wealth, with nations importing the goods and services that they needed with the proceeds of their exports.

John Stuart Mill emphasised the notion of 'utility' in determining value. For Mill, value was largely determined by the utility that a particular service provided for individuals and thus what they are prepared to pay for it. That is, it is demand driven.

In the late 19th century, the fathers of neoclassical economists as we know it today began to build upon this work. The key figures at this time were William Jevons and Leon Walras, who independently developed the concept of 'marginalism'. The marginalist viewpoint remains central to neoclassical economics – with 'Walrasian general equilbrium' being the idealised form of national and international economic organisation. In simple terms, marginalism analyses the decision of whether to buy, consume, invest in, or produce an additional unit of a particular good or service, so as to maximise profits in the case of the firm, or to maximise utility in the case of an individual. For the individual, behaviour was assumed to be that which maximised 'utility' and it was further assumed that the set of preferences which individuals hold was fixed and given: i.e. people's preferences did not change over time through being shaped by cultural or institutional factors.

It was this assumption that saw the early neo-classical economists criticised strongly by what was to become the institutionalist school of thought. The father of this work, Thorstein Veblen, argued that the assumption of rational, utility-maximising individuals was simply incorrect. For Veblen and the later institutionalists, people's decisions are not always 'rational' in this narrow sense and, importantly, their preferences are far from being predetermined and fixed, but in reality are constantly shaped by the institutional framework within which they live. That is, people both shape the institutions they have and are then shaped by these same institutions. Although the institutionalist school was, in some ways, the dominant form of economics in the early part of the twentieth century, and is now experiencing something of a revival, for the greater part of the last century it was the perspective of the neo-classical economics that prevailed.

Within the neo-classical framework returns were seen as inexorably diminishing: the marginal utility of consuming a particular good falls with each additional unit and the marginal returns to companies therefore also fall as the company grows – i.e. diminishing marginal returns to scale.

In this Walrasian world there is thus a limit on the size that firms can grow to, which allowed the assumption that market equilibrium would mean a large number of small firms competing where none had the power to influence pricing in the market: all were 'price takers'. In reality, of course, the opposite proved to be the case: firms found – particularly in the United States – that as they grew the costs of production fell, and the ability to exploit these economies of scale allowed them to achieve a dominant market position and then to maintain it. This directly contradicts the predictions of the early neoclassicals, and ensured that the 'perfect competition' that they envisaged has never been more than an abstract concept.

Undeterred by the failure of reality to conform to theory, the 20th century saw a vast edifice of increasingly complex mathematics build upon these foundations, as economists increasingly sought to mimic the 'rigour' of the natural sciences, particularly physics. By the second half of the century, neoclassical economics was increasingly dominant within the discipline – not least because of its seeming rigour – and sought to describe the economy in terms of the interaction of supply and demand curves, built upon the marginalist perspective described above. Crucially, the highly restrictive assumptions that were and are the source of much of the criticism of neo-classical economics were also central to their success. That is, assuming atomistic, utility maximising individuals with fixed preferences enabled economists to develop the complex mathematical models that gives the approach much of its appeal and appearance of an 'objective' science. If these assumptions were to be dropped so that individual decision making was given some of the depth and nuance that it patently has, a large part of this mathematical edifice would no longer be possible.

So, although the methodological 'tail' has long been wagging the theoretical 'dog', and alternative approaches to economics that draw on other disciplines such as psychology, sociology and anthropology can offer far more plausible explanations of economic reality, neoclassical economics *became* economics, and this had major implications.

As Mill had argued in the nineteenth century, the price that a person was willing to pay for something was a direct reflection of how much they valued it - how much utility they derived from it. Once utility is linked to price, it is but a short logical step to argue that utility will be increased if incomes rise. As the ability to purchase goods and services increases, then utility surely rises also, as it is through the ability to do just this that utility is produced within this framework. If we then equate utility to happiness, the result is that more money equals more happiness, and it is this convoluted theoretical abstraction that underpins much of the real-world problems identified in section 1.

Critiques of neoclassical economics have been around as long as the framework itself. Some of the major criticisms are as follows:

- Neoclassical economics assumes that individuals act rationally, which is defined as the taking of decisions that maximise utility. However, this self-interested view has been widely criticised for ignoring the many other drivers of decision-making, such as (pure) altruism or reciprocity, both of which are observably common forms of behaviour, but cannot be explained in a rational, self-interested framework.
- Full rationality in this sense also requires the possession of all relevant information pertaining to each decision faced. This is clearly unrealistic, but this assumption is an essential component of the modelling techniques upon which neoclassical economics depends and must therefore be retained if the model is to retain its force.

- Importantly, the atomistic neoclassical model also precludes any role for wider society and different cultural traditions in influencing this decision-making process. Individual's preferences are taken to be fixed and given, so that culture, social norms and values, and the broad institutional framework within which decisions are taken are assumed to have no impact upon individuals' preferences. Again, in order to be mathematically feasible this is an essential methodological assumption – in this framework, therefore, there really is 'no such thing as society'.
- From a neoclassical perspective, free markets result in equitable outcomes as they coordinate the behaviour of individuals who freely choose to buy or sell at the market prices. However, this is to ignore the fact that rarely, if ever, do two parties to a transaction have equal knowledge or power. When a transaction takes place with very different levels of knowledge or power, the outcomes will tend to favour whichever party was in the ascendancy in this sense. Thus inequality is created and perpetuated.
- Despite this, the inequalities that result from economic activity are seen as the 'natural' result of the competitive interaction of profit and utility maximising firms and individuals. To interfere with these outcomes is both to lower overall social welfare and to disturb the workings of the 'invisible hand'. However, as well as assuming equal positions of knowledge and power in market transactions, this ignores the role played by unequal initial 'endowments', which enable both firms and individuals to maintain and increase these differences.
- Within the neoclassical framework the only limit to behaviour is the individual or firm's 'budget constraint'. In practice, however, the economy is a subset of society and society is a subset of the ecosystem, which sets an ultimate limit on the quantity and type of economic activity that is compatible with environmental sustainability. Therefore, while there are no 'limits to growth' within the neoclassical framework, the reality of climate change shows that this is far from being the case.
- As we have seen, the 'marginalist' approach to microeconomics leads to an optimal level of production, where marginal costs equal marginal revenue. However, there is no equivalent at the macro level: there is no concept of an 'optimal' level of global production, for example, where global marginal costs equal marginal revenue. Of course, to have any meaning, such a concept would have to fully factor environmental costs into the calculation of marginal cost.
- Within neoclassical theory, however, only those things which have a market price are considered. Consequently, environmental degradation has no price and so no cost, but the output resulting from the process has a price and therefore a value. Environmental (and social) impacts are thus considered as 'externalities' within the framework: what should be central to our conception of economics is instead kept safely outside of it.
- Finally, by making income a proxy for utility (or happiness) the entire purpose of economics has been changed. Historically, economics was known as moral philosophy and was unabashed about its ethical dimension: the aim was to reform economic systems to improve human welfare. Now, however, economics does not seek to show how the 'good society' can be built, but rather to show simply how incomes can be continually increased.

nef has long questioned the wisdom of this narrow, desiccated view of economic life. In this paper we take the first steps on the road to the development a coherent, positive and compelling vision of the alternative economy of the future, combined with workable and credible mechanisms to enable us to get from here to there.

3. Underlying principles of the future economy

The starting point of our approach is that money does not equate to human well-being; that well-being can be greatly enhanced in a just and environmentally sustainable way; that the appropriate scale of activity is vital to this goal; and that the institutional framework in which we live can either facilitate or obstruct the achievement of these ends: we *can* live happier,

more fulfilled and more socially just lives within our environmental limits, but only if our economic and social structures are designed to make this possible.

The relationship between money and happiness is far from the straightforward one implied by neoclassical economics. At one extreme, it is certainly the case that insufficient resources do cause severe unhappiness. If people are not able to meet their basic needs, then increasing their income will indeed increase their happiness with life, not least through their ability to sustain it. In developing countries, this is often the result of insufficient resources to go around, regardless of how they are distributed: here equitable, sustainable growth – where local demand and supply increase in tandem and development is not dependent on much faster growth in developed countries – is clearly needed. In developed countries, however, there are more than enough resources to go around, which makes it all the more scandalous that these are increasingly concentrated in the hands of the few, with many struggling to meet their basic needs: here it is not growth, but a more equitable distribution that is needed.

Furthermore, to provide the developing world with the space to grow, those in rich countries need to scale back their carbon-emitting production and consumption: to live more sustainable and less materialistic lives within our environmental limits. But this is more of an opportunity than a threat: despite the fact that the wealth of the developed economies has doubled since the 1970s, people are less happy.

Modern economies, in part built upon neoclassical principles, promote perpetual, carbon-driven growth in developed countries as a means of increasing incomes and so utility, with consumerism seen as the route to happiness. However, people clearly do not only value money and material possessions: leisure, family and community and the natural world, to name but a few, are not measured in monetary terms, but are fundamental to well-being. Yet the modern economy's relentless pursuit of higher incomes directly reduces people's access to these other sources of well-being, leaving us all worse off.

This is not to say that work is unimportant of course. Quite the opposite. Unemployment, for those seeking paid work, is a fundamental source of poverty and misery. Fulfilling and meaningful work, however, whether part of the formal economy or not, is fundamental to human well-being. Unfulfilling, tedious and repetitive work, in contrast, is a source of much dissatisfaction and alienation. This was recognised by Adam Smith himself, when he warned of the consequences of the division and specialisation of labour.

The focus must therefore shift, from growth in GDP to growth in national and international well-being and *all* the factors that contribute to this. Furthermore, individual well-being is inextricably linked to social justice: a just society enhances the well-being of all of its citizens. More unequal societies are less happy societies, and this applies to those at the top as much as those at the bottom.

Finally and fundamentally, the pursuit of ever-higher rates of carbon-driven growth has taken us to the brink of environmental disaster. It is not too late to change this, but we must urgently reverse and then cap global carbon emissions at sustainable levels, and then determine an equitable way of allocating rights to emit carbon throughout the world. The economy is a subset of the ecosystem, and thus cannot expand indefinitely within these finite constraints. The modern economy is built upon the exploitation of fossil fuels to power its growth, and this self-evidently cannot be sustained.

We need to learn to live in harmony with the natural world again, if we are to live at all. Our vision of the economy of the future is one that is explicitly designed to improve: a) the well-being of its citizens, b) levels of social justice, and c) the environmental impact of human activity. Furthermore, while the market has a role to play in some of these areas, this is

certainly not the case everywhere, and even where markets are appropriate, this is only so if the environmental and social costs of economic activity are fully reflected in market prices.

These goals, however, are also underpinned by an implicit system of fundamental principles that we think could provide the basis of the good society. These principles are centred on respect for our fellow global citizens, for the natural world and the legacy we will leave to future generations; and 'trust' in the human spirit, and in the power of collective endeavour to build a better, sustainable future in a way that pure self-interest cannot do: cooperation trumps competition in many instances, but only if the conditions for it to thrive are created.

In many ways these are not new ideas of course. For example, the 'Golden Rule' – which can be expressed as: *do unto others as you would have done to yourself* – is common to all religions from earliest times. As well as religions, the Golden Rule is central to many philosophical or moral and ethical systems, and can be found in the works of Confucius, Socrates, Aristotle, Epicurus and Hume, with more recent expressions by Ghandi and John Rawls, as well as in the Fundamental Declaration of Human Rights of course.

The concept of fundamental human rights provides a firm foundation for our approach, though we see this in a holistic rather than the current partial sense. That is, very little attention is paid to the economic and social rights enshrined in the UN Declaration, yet we see these as a vital building block in developing a more equitable and sustainable economy. We would also go further, however, and argue that the incorporation of environmental rights – when combined with full economic and social rights – would provide a means by which our different needs and objectives could be successfully balanced.

In this respect, modern game theory – building on work in evolutionary biology – has consistently shown that it is 'reciprocal altruism' – or cooperation – that is the optimal strategy in repeated games: we should not assume that pitting people against each other in a competitive environment is the default 'best solution'. We need to use what works best: competition when it provides the best outcomes for society, but cooperation when it does so, not a dogmatic assumption that one is always superior to the other.

As well as these two pillars, a third important building block of our approach – which particularly relates to the relationship between human development and safeguarding our natural environment – is the principles of sustainable development. Within this framework:

> *Sustainable development is development which meets the needs of the present generation without compromising the ability of future generations to meet their own needs.*[7]

This implies three areas of focus:

(i) Economic – where the 'needs' of the present generation should be met equitably. Thus the focus should first be on meeting the basic needs of all, and not allowing a situation to continue where the meeting the 'wants' of some prevents us from meeting the 'needs' of others.

(ii) Social – where all citizens, regardless of have the right to participate meaningfully in political life, locally, nationally and internationally, and high quality social services such as health and education are available to all.

(iii) Environmental – where we operate within the 'carrying capacity' of the natural environment, avoid over-exploiting non-renewable resources, increasingly rely on renewable alternatives and maintain ecosystem stability, biodiversity and a stable atmosphere.

[7] World Commission on Environment and Development (1987)

It is clear, however, that the modern economy is certainly not built upon foundations such as these. Indeed the opposite is true: the institutional framework within which we live our lives encourages motivations and the development of value systems that run directly counter to these principles. Individualism, self-interest, competitiveness, materialism and a 'dog eat dog' mentality are constantly put forward – explicitly or implicitly – as reasonable values upon which to live one's life.

As a result, it is not surprising that when many people face incentives to act in these ways, they often do so. The atomistic nature of the economy and society militates against trust, for example, which is surplus to requirements in an (optimal) arms-length world of commercial contracts and relationships, but is essential to the cooperative forms of behaviour from which we all benefit.

Rather than encouraging people's worst instincts, the structures of the future economy should be designed to encourage the best.

4. Broad outlines of a vision for the future economy

In section 2 the fact that the economy is geared towards the generation of higher levels of (short-term) profits and income was proposed, discussed and criticised. However, it was also argued that this position does not mean that we are against profits. Clearly, private businesses need to make profits, and public and third sector organisations also need to 'balance the books' in order to be sustainable.

However, this does not mean that this should be *only* aim of the economy, or of its constituent parts. We have argued that the primary purpose of the economy should be to enhance well-being and social justice within our environmental limits. The requirement to make profits should therefore be judged according to how it contributes to, or detracts from, these goals. That is, sustainable businesses are necessary to provide jobs, but the pursuit of ever-higher levels of profit in a hyper-competitive environment makes many of these jobs both unfulfilling and all encompassing, in that they preclude the pursuit of much that is enjoyable in life. Similarly, the need to minimise costs in the absence of universal regulations to make firms responsible for the environmental impacts of their activities, leads to a disregard for the natural environment, directly reducing the well-being of us all and threatening our long-term survival.

4.1. Sustainable business and finance

How can these seemingly intractable problems be resolved? First, it is clearly essential that environmental and social impacts – i.e. 'negative externalities' in neoclassical terms – should be the responsibility of the organisation that creates them. Making organisations bear the financial consequences of their activities would a) strongly discourage them for occurring in the first place, b) encourage innovation in sustainable forms of production and exchange that would avoid these costs, and c) change the relative distribution of profits in the economy, so that sustainable companies would face lower costs than their less sustainable counterparts and therefore have the potential to be more profitable.

Second, as well as negative externalities, there is also a more positive story to tell. Just as organisations should be penalised for producing negative externalities, those that produce positive social or environmental externalities should be rewarded for doing so, ideally through a form of tax rebate, subsidy or credit that would also directly affect relative profitability. We need carrots as well as sticks. In this structure, therefore, profits are good and a sign of sustainable economic behaviour, rather than the opposite, which is too often the case today.

Third, as we have seen, an important driver of many of the problems identified in the private sector is the influence of the financial system. Here, there is an urgent need to reorder priorities, so that the financial system supports the real economy, promotes well-being and facilitates a focus on sustainability. The first step is to lengthen the time-horizons of investors and encourage them to invest for the longer term. A simple and effective means of achieving this would be through a tapered tax system, with the rate inversely related to the length of time an investment is held. In such a system, there would be little purpose in short-term speculation, since tax rates would eliminate any profits. In contrast, the rate would fall with time so that longer-term investors were not discouraged. The second essential step would be to reintroduce selective but rigorous capital controls to regain national policy autonomy from the global financial market, with international capital flows accepted where they contribute to society's goals, but restricted where this was not the case.

Combining mechanisms of this form with the fact that the profitability of companies would now be directly linked to their long-term sustainability and social and environmental impacts has the potential to create a virtuous circle, with increasingly long-term investors seeking out the most sustainable companies as the best investment prospects, providing encouragement for yet more companies to follow this path.

While this could effectively realign incentives, it would not fully address the competitive imperative, and its ramifications that have been discussed. It has been suggested that different institutional forms have the potential to alter this – how might this work?

First, the linking of company profitability to long-term sustainability is the first step, which in time would be expected to make share price valuations reflective of the company's value to society. Second, regulatory requirements to maximise returns (in the case of financial institutions such as pension funds) should be reformed to reflect the changed focus on well-being, justice and sustainability. Third, the duties of directors in company law would need to be revised to require them to take a long-term view and to consider the broader impacts of their activities, not least upon the communities in which they are located. Fourth, unbridled competition at all times – rather than cooperation when appropriate – between companies is a root cause of many problems. While competition is certainly not always bad – particularly when it encourages a 'race to the top' as described above, rather than the 'race to the bottom' described in section 2 – cooperation can often lead to better outcomes, and institutional forms can either encourage or discourage this.

For example, most publicly listed firms obviously seek to maximise their own success, often at the expense of their competitors. The system of share ownership and the classification of businesses as individual entities encourages this process. In Japan, in contrast, company ownership is far more interconnected, with cross-ownership of shares common. In this system, company A is a partial owner of company B, and vice versa. As a result, individual companies have a vested interest in the success of other individual companies, and all have an interest in the success of the system as a whole.

While we are not suggesting this system is directly imported into other countries, which will have very different histories and cultural norms, it does show that institutional frameworks in the financial markets can have a profound impact upon the behaviour of firms.

What is needed is a system that replaces relative uniformity of business model with diversity, and builds in checks and balances. By diversity, we refer to different forms of ownership and different forms of control, such as workers cooperatives, for example, where the structure of the organisation enables all stakeholders to contribute and encourages cooperation rather than confrontation and competition. Similarly, relationships between companies need not be on the arms-length, anonymous basis that we largely see today. Japan and Germany, for example, have a long tradition of cooperative networks – or clusters – where groups of small and

medium sized enterprises cooperate in their activities, which build trust over time as relationships deepen. Importantly, these cooperative networks are supported by a financial system that also prioritises long-term relationships built upon trust, and which too facilitate a long-term perspective rather than just short-term profit maximisation.

The plurality of organisational forms we envisage would also incorporate different forms of working, including part-time, job shares, seasonal working and so on, offering people opportunities to engage with the job market on terms appropriate to their lives, and which thus facilitate a more sustainable work-life balance. The provision of local, affordable and accessible childcare for all is a prerequisite to making this a reality, of course.

4.2. Ownership models, sustainable land use and decentralised energy

As well as diversity in ownership models of companies, there is a need to revisit and rethink ownership of land and natural resources. In the UK a series of Enclosure Acts from the middle of the eighteenth century took land that has formerly been commonly owned or arable land under private ownership. Today private ownership of land is almost total in the UK and the norm throughout much of the rest of the world.

Garratt Hardin's 1968 essay, *The Tragedy of the Commons* provides for some the rationale for a continuing focus on private ownership: if finite resources are commonly owned then there is an incentive for them to be (over)exploited to exhaustion. However, this is to misrepresent Hardin's point, for such an outcome is associated with completely unrestricted access. In reality, common land was generally managed by communities with sustainable practices built up as social norms and sanctions or restrictions imposed for overuse, regulating behaviour. Furthermore, it is likely that private ownership of land, particularly commercial ownership, creates incentives to exploit the economic potential of the land to a greater extent than would well regulated and managed stewardship by local communities.

In the nineteenth century, the cooperative movement initiated an experiment with a return to common land ownership. This ultimately led to the development of Letchworth Garden City in 1903 by Ebenezer Howard, where land was removed from the market and taken into the common ownership of the community, and separated from its use. The community held the 'freehold' on the land, if you like. The model of ownership was to make no more progress in the UK until very recently, but was used in the 1950s by Ghandian land reformers where more than a million acres of land was brought under the common ownership of village communities. This led to the uptake of 'community land trusts' in the United States, with the first being established by the civil rights movement in the late 1960s to provide farmland for sharecroppers. Community Land Trusts are now relatively common in the United States, where more than 130 have been established.[8]

Recent years have seen attempts in the UK to revive the ownership model, particularly in Scotland, but it certainly remains an underused but potentially very effective mechanisms of ensuring that communities are able to benefit from and the value of local land and manage its long-term use. There are also proposals to use the model to develop affordable housing in rural and urban communities in the UK.

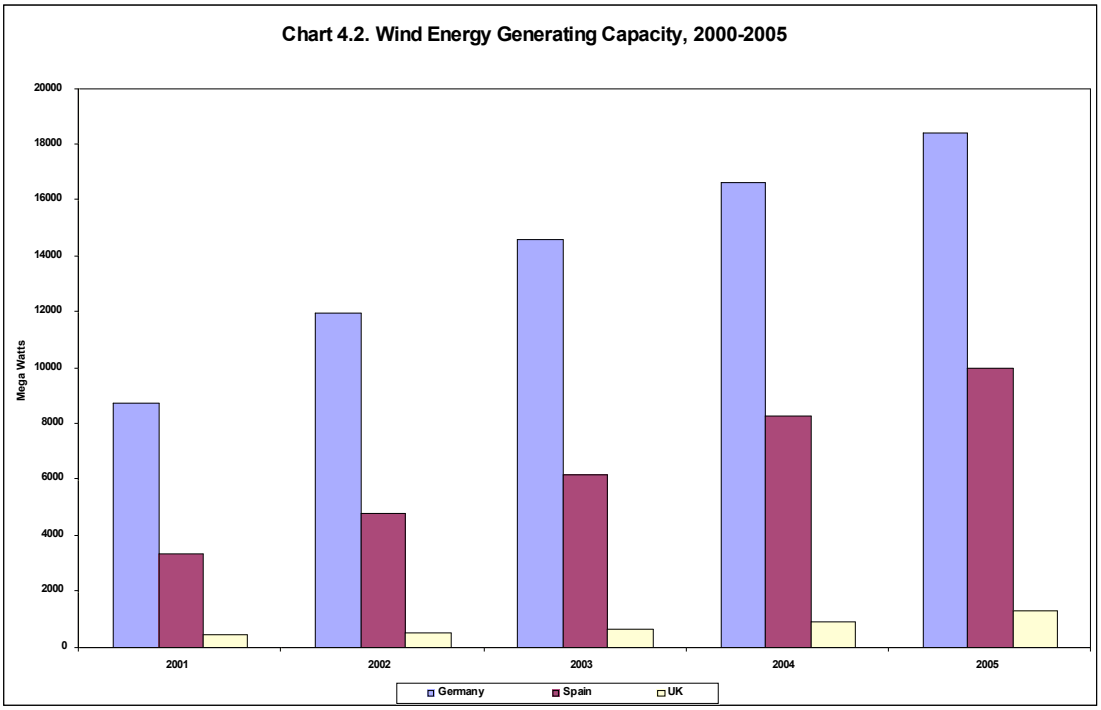
The community land trust model is just one possible form of common ownership, but as with the private sector, we would argue for diversity in form with different models being adopted depending on which would produce the best outcomes for society.

[8] See www.communitylandtrust.org.uk for more details on the history and current efforts to revive the community land trust model.

Community land trusts offer one mechanism of kick-starting economic regeneration, encouraging sustainable land use, and fostering common bonds and interests in local areas. The model would thus seem to offer a 'win-win'.

Another mechanism with multiple positive effects is the development of decentralised renewable energy generation in local communities. As well as the obvious environmental advantages such a process also has the potential to create high-quality local jobs, as evidenced by the rapid growth in employment in the renewable sector in Germany, where 170,000 jobs have been created. The key to the growth of decentralised renewable energy production in Germany – but also in Spain – has been the introduction of 'feed-in tariffs'.

For example, chart 4.2 below highlights the growth of wind power capacity in three European countries, comparing two countries with feed-in tariffs – Spain and Germany – with the UK, which does not operate a comparable system.



Source: Global Wind Energy Council

In this system, the national energy grid is obliged to purchase renewable energy[9] at a fixed price above the market rate, which provides a strong incentive to increase – and mainstream – renewable energy production. The additional cost of the renewable power, which at this stage of development tends to be higher than fossil-fuel generated energy but will fall over time as technology improves, is therefore spread very widely across all consumers strongly reducing the disincentives for uptake.

The key point to make is that positive environmental impacts can be combined with positive economic impacts. That is, the growth of renewable energy production has been associated with significant job creation. If coupled with decentralised production at the community level, this also creates high-quality sustainable jobs *within* local communities, providing work for local people and supporting the development of community bonds. Similarly, common ownership and management of local land provides a flow of benefits – both financial and non-financial – to local communities, again enhancing the sustainability of these communities.

[9] This may be solar, wind power, biomass or geothermal, for example.

4.3. The public and third sectors.

We have argued that institutions – broadly defined as the 'rules of the game' and the organisations that 'play the game' – play an important part in influencing motivations and therefore behaviour. As described above, we can see this with issues of ownership, and it is also more generally the case in the private sector. However, these issues are just as important in the public sphere. In the UK, for example, people are increasingly seen as passive consumers whose 'wants' need to be managed and then met, rather than active citizens, much as is the case in the private sector. Furthermore, decisions relating to public services are taken well away from their local context, creating yet more distance between citizens and the state. We need to regain control and to open up a public space as an inclusive environment where people can come together, resolve their differences, and collectively decide on what they want and how it should be delivered.

Local community control over public service priorities is one important part of this, as is the co-production of outcomes in areas such as health and education. Just as in the private sector, however, it is important to take a longer-term perspective, with the focus on prevention and healthy living in the health sphere, and life-long learning and personal development in education. The discussion of different forms of business enterprise above also relates to the public sphere, where community groups invested with real power – i.e. not just 'consultative groups' – could be constituted in ways conducive to cooperation and inclusiveness. Such a mechanism could provide opportunities for people to engage meaningfully in civic life and developing alternative sources of self-worth to the job market.

Although we argue that local communities should have the power to determine their priorities in terms of public services, there is an important question on whether this could and should extend to raising the finance to fund this. Such a process would run the risk of perpetuating inequalities, with rich areas able to afford high quality services and vice versa. If local fundraising were to be introduced, therefore, robust mechanisms to address this would be needed. In a longer term sense, the economic reforms described above would be expected to reduce inequalities over time, but this would be unlikely to address the problem over the medium-term.

In this regard, inequalities could be further addressed by a) making the national and local tax systems more progressive, and b) levying a windfall tax on those companies that have benefited most from the fact that externalities have not been taken into account, and using the proceeds to redistribute wealth, though providing long-term assets to the poor for example.

Another localising reform to support these changes would be the encouragement of different forms of financing at the community level, in areas such as savings & loans groups for local communities, as well as the expansion of non-monetary forms of exchange such as time banking. Local people could therefore save together and decide on local investments together, again facilitating the formation of trust and long-term relationships within communities.

Another very important reform would to bring planning within the ambit of the local democratic decision-making bodies described above, to ensure that local people could control the economic development of their community.[10]

There are many things that could be done to contribute to local economic regeneration, but one relatively straightforward mechanism that could make a big difference is public sector

[10] See **nef**'s *Clone Town Britain* (2004) for a detailed analysis of the impact of our current planning regime on the diversity and vitality of town centres in the UK, which have become increasingly uniform and dominated by large national and international chains, at the expense of independent local shops.

procurement. In the UK, for example, the public sector spends £125 billion delivering goods and services every year. If just 10% of this was directed towards suppliers in the most deprived areas of the country, this would amount to £12.5 billion income injected into those areas in just a single year, almost 15 times more than the £835 million currently spent on regeneration in the UK.[11]

Whether nationally, regionally or locally, the adversarial political system we have is a very clear example of how institutional forms can affect motivations and behaviour. Politicians have little incentive to collaborate or cooperate for the common good, and the short duration of Parliamentary terms provides a strong disincentive to the taking of a long-term perspective. We propose to move towards a system of dispersed centres of representative political power, both regionally and locally, where the focus is on cooperation and reaching compromise, rather than on polarised debates undertaken from entrenched positions.

As well as just voting, a system that looked like this would offer far greater opportunities for meaningful political participation by a broader range of actors, opening up politics to new voices and new perspectives, reinvigorating civic values and the public service ethos.

The third sector has a vital role to play in all of these areas of public life. The ability to stand outside of the system and argue for change – to think the unthinkable and say the unsayable – is perhaps the most important role that the third sector can play, and one that it is fundamental to producing positive change in societies. An open, fluid and cooperative system of politics would depend heavily on the ability of social movements to propose radical change where it is needed, and it is therefore vital that space is created and maintained for these groups to flourish and to inform the public consciousness. For example, it is clear that commercial advertising is a significant cause of the materialism we see, through its ability to perpetually create 'wants'. While we would not propose that advertising be banned, it should certainly be more strictly controlled, particularly with regards to children where a total ban is justified.

More broadly, however, we need greater pluralism and diversity in our economy and society and this extends to advertising. That is, groups other than commercial corporations should also have the space, opportunity and resources to advertise their vision. Social movements, NGOs, unions and campaigners should, within certain parameters, be given space to put forward their messages, thus presenting a more balanced view of the options that are really available.

People want real options. Too often, however, they are presented with what are called 'choices', when in reality what is on offer is a very small part of what could be possible. The dominance of commercial voices, and the sense that 'there is no alternative' to the economic system we have, can therefore leave people with very few options in practice: choice is not meaningful if the options to be chosen from have been narrowly defined at the outset.

[11] See **nef's** *Public spending for public benefit* (2005) for a detailed analysis of this issue in the UK.

5. Theoretical foundations of New Economics

In fact, it may be discovered that the true veins of wealth are purple – and not in rock, but in flesh – perhaps even that the final outcome and consummation of all wealth is in the producing as many as possible full-breathed, bright-eyed, and happy-hearted human creatures. Our modern wealth, I think, has rather a tendency the other way.[12]

5.1. Grandfathers and fathers of new economics

The idea that there is more to life than the pursuit of money, and that the pursuit of well-being should be the real goal of a society is certainly not new. Neither is the sense that the focus on accumulating material wealth might actually be harmful to people's well-being, both individually and collectively. The quote above is taken from John Ruskin's series of essays on economics from the 1860s, written in response to Ruskin's view that an overly mechanistic approach to political economy was being taken by his contemporaries.

While Ruskin did not pretend that people were never motivated by financial rewards and punishments, he did contend that this was a very poor means of doing so, and that social 'affections' were much the more powerful motivating force. By ignoring these factors, economists give at best a partial picture of reality and, at worse, a distortion:

I neither impugn nor doubt the conclusion of the science if its terms are accepted. I am simply uninterested in them, as I should be in those of a science of gymnastics which assumed that men had no skeletons. It might be shown, on that supposition, that it would be advantageous to roll the students up into pellets, flatten them into cakes, or stretch them into cables…The reasoning might be admirable, the conclusions true, and the science deficient only in applicability. Modern political economy stands on a precisely similar basis. Assuming, not that the human being has no skeleton, but that it is all skeleton.[13]

Ruskin also extolled the virtues of cooperation rather than competition, arguing that the latter was very often a case of 'beggar thy neighbour', which left total wealth – or well-being – less than if the parties where to cooperate. Ruskin's argument finds its modern echo in the work of game theory, where 'prisoner's dilemma' scenarios highlight the same essential point: cooperation often leads to superior outcomes than competition; 'reciprocal altruism' is the most successful strategy.

Ruskin was particularly scathing on the issue of market exchange, which by definition in his view, is a zero sum game where one party's gain is exactly equivalent to another's loss. Given that the parties to an exchange will generally have different levels of information and different relative strengths regarding the transaction, it is inevitable that one party does well out of the deal and other does not.

This is also the case with employment, where employers are taught by the principles of economics that they should pay the minimum required in the market to secure the needed workers. For Ruskin, however, work should have an intrinsic value, where 'just payment' for an hour's work, for example, should be that which enables the worker to purchase the same amount of labour from another person. Where the supply of workers exceeds demand, however, wages will be driven down below this level, enabling the employer to take on more workers at low wages, thus concentrating economic power in the hands of the few.

A requirement to pay 'just wages', in contrast, would disperse economic power throughout a longer 'chain' of people, with each being able to purchase the labour of just one other worker,

[12] John Ruskin, *Unto This Last* (1862)
[13] Ibid.

rather than controlling the economic fate of many. The total number of jobs created is the same, but economic power is dispersed widely rather than concentrated.

Here Ruskin strikes at the heart of the problem. The concentration of economic power brings great benefits to the holders of this power, but in a Darwinian environment is also essential if one is to survive and prosper, rather than being taken over by a 'fitter' competitor. This process, once set under way in an accommodating environment, leads inexorably to ever-increasing economic scale and profits, and relentless downward pressure on costs.

A century after Ruskin wrote his essays on economics another thinker also wrestled with the issue of scale. E F Schumacher had been an early protégé of John Maynard Keynes, and was responsible for Keynes's proposal for a multilateral clearing union as part of the post-War Bretton Woods negotiations. After the War Schumacher spent two decades as Chief Economic Advisor to the National Coal Board in the UK, then one of the largest employers in the world.

Following an advisory trip to Burma in the 1950s, Schumacher began to develop his theories of 'Buddhist economics', taking from Buddhism the concept of 'good work' as being central to human self-fulfilment. The issue of the appropriate scale was central to this work.

For Schumacher, the search for economic efficiency in production, particularly when achieved through maximising economies of scale, replaced workers with physical capital. This was ultimately self-defeating: although more outputs may be produced for a given level of inputs, this was of little benefit if it brought at the cost of people's jobs. Also, the jobs that were available were likely to be 'meaningless' or 'stultifying', which was to put the creation of goods ahead of the needs of people. For Schumacher this was simply wrong-headed.

Like Ruskin before him, Schumacher argued that consumption and material wealth were poor proxies for well-being, and it was therefore irrational to make these the focus of national endeavour.

> *For the modern economist this is very difficult to understand. He is used to measuring the "standard of living" by the amount of annual consumption, assuming all the time that a man who consumes more is "better off" than a man who consumes less. A Buddhist economist would consider this approach excessively irrational: since consumption is merely a means to human well-being, the aim should be to obtain the maximum of well-being with the minimum of consumption.*[14]

In his seminal work from 1973, *Small is Beautiful*, Schumacher argued for the abandonment of the quest for ever greater economic scale, and its replacement with a more human scale of production. By using appropriate, or 'intermediate' levels of technology for production purposes, jobs for all that needed them could be created.

Not only was this an important means of enhancing well-being through fulfilling work, it was also an environmental necessity.

> *Ever bigger machines, entailing ever bigger concentrations of economic power and exerting ever greater violence against the environment, do not represent progress: they are a denial of wisdom. Wisdom demands a new orientation of science and technology towards the organic. the gentle, the non-violent, the elegant and beautiful.*[15]

For Schumacher, modern methods of production, based on the exploitation of non-renewable forms of energy, the search for scale and unbridled competition were fundamentally

[14] E F Schumacher, *Buddhist Economics* (1966)
[15] Ibid.

unsustainable. Fossil fuels will, by definition, run out. Moreover, the capacity of nature to absorb the polluting outputs of production is also limited.

Schumacher was thus an early pioneer of the concept of sustainable development, as well as a key figure in the birth of the ecological and green economics movements.

5.2. Ecological economics

Ecological economics[16] as a discipline was only firmly established from the mid-1980s, but along with Schumacher a number of other key figures laid the foundations for its emergence. Herman Daly, for example, proposed the idea of the 'steady state economy' in the late 1960s, where he argued that continual economic growth would bring ecological disaster. Instead, Daley argued that the pursuit of growth should be abandoned, with a focus on minimising the use of energy and physical material used in the production process, and maximising human well-being for a given level of 'throughput'.

At the same time, K.E. Boulding illustrated the finite nature of our physical environment with his metaphors comparing the 'cowboy economy' (to represent a local, national or regional economy), with the 'spaceship economy' (to represent the global economy). In the former, there are no physical limits to economic activity, as local scarcity or resource depletion can be addressed by relocation. The 'spaceship economy' model, in contrast, takes a global perspective, where resources are finite, and models based on conservation and efficiency of use are the only sustainable forms of economic organisation. As with Ruskin and Schumacher, therefore, cooperative forms of organisation were an essential prerequisite: living in a 'spaceship economy' with finite resources, it is not possible to compete our way to sustainability; we must cooperate to survive and prosper.

From perspective of ecology, the key figure in the genesis of ecological economics was C. S. Holling. Writing in the early 1970s, Holling contrasted notions of 'resilience' common in engineering and economics with those relevant to ecological systems. The former sees efficiency as the ability to return rapidly to a stable equilibrium following a disturbance, whereas the later, sees resilience as the ability to accommodate shocks, to change and evolve, while retaining the same basic functions. From this perspective, ever increasing efficiency in a narrow economic – or engineering – sense reduces the true resilience of a system when viewed in ecological terms.

Holling's work on ecosystem resilience describes a set of cyclical systems interacting at different levels. Within each system there are a number of stages. The first stage is one of growth where, in a forest for example, the number of plants, animals and species first grows rapidly. At the same time, the connectedness and interdependence of the components of the ecosystem also grow. The forest increasingly devises ways to regulate these linkages, with particular species taking on ever more specialised roles that contribute to the stability of the entire ecosystem.

Holling points out, however, that this growth cannot continue indefinitely. The ecosystem is now very 'efficient' in terms of converting inputs into outputs, but its very complexity, interdependence and efficiency has also greatly reduced its 'resilience'. The specialised nature of its development means that, while it is perfectly designed to exploit its natural circumstances, it has almost no defence against a sudden shock to these. A sudden extreme weather event, for example, may be enough to jeopardise the survival of the entire ecosystem.

[16] See Van de Bergh (2000) for an excellent overview of the development of ecological economics, from which this section draws.

Much of Holling's early work focused on forests, but he also stressed the fact that the forest is just one part of a chain of interconnected ecosystems, from the atmosphere above to micro-organisms below. These systems allow each other to recover from most external shocks, but only if their respective cycles are not moving in step. Thus a forest will recover from a fire, but not necessarily if the fire occurs at the same time as a major climatic shift towards drought conditions.[17]

Holling's thinking on resilience and the capacity to adapt has strongly influenced ecological economists' views on economic development, where again the relentless search for efficiency and scale reduce the inherent resilience of the economic system: its ability to adapt, evolve and so accommodate change. Furthermore, the concept of interconnected ecosystems at different levels can also be applied to economics. That is, local communities operate within national economies, which operate within regional blocs, which trade globally. Finance operates similarly, but all operate within an overarching global ecological system. The danger, of course, is that far from moving at different speeds, these different systems are increasingly moving in step. Globalisation – whether in production and trade or in international finance – has massively increased our connectedness and interdependence, but has similarly reduced our 'resilience' to withstand external shocks to this system.

In this regard, Schumacher's arguments about the importance of local scale find another expression: increasing local autonomy would be expected to increase the resilience of the economic system; in contrast, globalisation, interconnectedness and the spread of economic notions of efficiency risks stretching the 'elastic' to breaking point.

In both ecology and economics, therefore, 'efficiency' may result in system resilience being too low to be able to deal with external shocks, so that the risk of systemic collapse rises sharply as resilience falls.

The timing of these contributions was important. The 1970s saw the formation of OPEC and a series of oil price hikes that sent shockwaves through the global economic and financial systems. The reality of our dependence on fossil fuels, and the understanding that this could not last forever was brought home with a vengeance.

At the same time, developments in computing technology and climate modelling techniques allowed scientists to begin to argue convincingly from the position of strong evidence that emitting ever-more carbon into the atmosphere would inevitably lead to significant warming on a global scale. This work was ultimately to lead to today's scientific consensus on the reality of man-made climate change, but at the time it marked a breakthrough in what had been a hotly contested area of science.

'Ecological economics' differs from 'environmental economics' in some important respects. First, as in standard neoclassical economics, the concerns of environmental economists centre on achieving efficiency in terms of the allocation of scarce resources. In this, environmental resources are no different from any other kind of good: the problem is simply that environmental resources are not appropriately priced, so that the laws of supply and demand and the price mechanism cannot determine their efficient allocation and use. However, in this world of trade-offs, opportunity cost and the search for 'Pareto efficiency', there is little to be said about the optimal *scale* of economic activity. Just as Schumacher argued that the local scale is most conducive to human well-being, so ecological economists argue that the total scale of the economy should be compatible with environmental sustainability.[18]

Herman Daley put it as follows in 2003:

[17] See Homer-Dixon (2006) for an excellent account of Holling's work in this area.
[18] Daly (1992) cited in Van den Bergh (2000)

Standard, neoclassical economics strains out the gnats of allocative inefficiency while swallowing the twin camels of unjust distribution and unsustainable scale.[19]

The 'new economics' that underpins our vision of the economy of the future draws upon the work of these thinkers, but also incorporates other traditions within what is commonly called 'heterodox economics'.[20]

5.3. Heterodox economics

An interested question to pose is the following: given that it is increasingly clear that our lifestyles a) do not make us happy, b) create and maintain huge social inequalities and c) are leading us to environmental disaster, why do we persist in following the same, well-worn path?

From a neoclassical perspective, the answer is straightforward: our behaviour is that which maximises our individual utility, given our set of preferences and within a particular budget constraint. That is, we choose to act as we do because we want to.

From the earliest days, however, critics have pointed out some major problems with this framework. One such critique is the idea that individual preferences – i.e. what people want – are both 'fixed' (in that they do not change over time) and 'exogenous' (in that they simply arrive fully formed).

At the turn of the 20th Century, an important critic of this view of decision-making was Thorstein Veblen, who was one of the originators of 'institutional economics'. Veblen argued that individuals did not take decisions by objectively assessing the relative utility that would result from each in terms of their own fixed preferences. Rather he stressed the importance of 'institutions' – defined broadly as "enduring systems of socially ingrained rules[21]" – in shaping these decisions.

It has long been accepted that:

All processes of rational decision-making depend on acquired cognitive frames for the selection, prioritization, interpretation and understanding of the huge volume of sensory stimuli that reaches the human brain.[22]

Furthermore, these 'cognitive frames' or 'rules' must be learned in a social context. Thus 'preferences' in this sense are indeed partly learned and culturally specific. To some extent this describes the process of the 'socialisation' of children, but an institutionalist would argue that this is certainly not the end of the story. Veblen argued that institutions shape preferences throughout life: 'wants and desires' are therefore not fixed but malleable, and a key driver is the transformation of habit into preference.

Hodgson (2000) describes the role of institutions in this respect as follows:

They channel and constrain behavior so that individuals form new habits as a result. People do not develop new preferences, wants or purposes simply because "values" or "social forces" control them. Instead, the framing, shifting and constraining capacities of social institutions give rise to new perceptions and dispositions within individuals. Upon new habits of thought and behavior, new

[19] Daly (2003)
[20] 'Heterodox economics' is simply that which is not 'orthodox' (i.e. neoclassical) economics.
[21] Hodgson (2000)
[22] Ibid.

preferences and intentions emerge. As a result, shared habits are the constitutive material of institutions, providing them with enhanced durability, power and normative authority.[23]

Although very influential in the inter-War years, particularly in the United States, institutional economics eventually fell into decline as the neoclassical school came to dominate economics. More recently, however, there has been something of a renaissance. Academics such as Geoffrey Hodgson and Ha Joon Chang are prominent members of the modern 'institutional political economy' school[24], which again emphasises the importance of institutions in shaping behaviour.

The central insight is that, just as we shape our institutions so they too shape us.

The idea in neoclassical economics that each individual has a unique set of preferences and rational behaviour is simply that which maximises utility (or 'pleasure') with respect to these preferences has also been criticised by other branches of heterodox economics.
The leading sociologist – and founder of the 'socio-economics' school of thought – Amitai Etzioni – has argued that this 'mono-utility' view is profoundly mistaken, and gives only a very partial picture of the forces that motivate people when they take decisions. In *The Moral Dimension: Toward a New Economics,* Etzioni argued that while people are of course motivated by 'pleasure seeking', this framework cannot explain much observable human behaviour, which is instead driven by values such as altruism or 'doing the right thing'. For Etzioni, people are motivated by both personal satisfaction (the mono-utility of neoclassical economics) and broader *moral* principles.

People are therefore 'divided': the pursuit of self-interest (or 'pleasure') pulls in one direction, while moral commitments pull in another. Furthermore, the neoclassical idea of rational individuals as calculating machines, carefully weighing the relative utility obtainable from different courses of action on the basis of complete information, is at best a very special case:

Most choices are made without the processing of information, drawing of inferences, or deliberations – i.e. they are not decisions…Values and emotions either fully form many choices, or set a context that limits the range of those options that are considered.[25]

Furthermore, as with the 'institutional political economists' described above, socio-economists such as Etzioni stress the importance of social frameworks in shaping the values – or 'morals' – that influence behaviour:

While individuals shape the social entities of which they are members, and these groups and communities shape individuals, each individual on his or her own is more socially determined than determining.[26]

This 'shaping' provides the glue that binds society together, in terms of shared norms and values, and can be related to concepts such as 'social capital'[27] or 'trust'[28] that enable cooperation rather than unbridled competition framed by a series of contracts. It is also related to the idea of the 'Core economy', a term coined by the economist Neva Goodwin to describe the non-monetary economy, which underpins and supports the formal economy. Feminists

[23] Ibid.
[24] So called to differentiate itself from the 'new institutional economics' school, which sought to integrate institutionalist perspectives in orthodox neoclassical theory.
[25] Etzioni (1988)
[26] Ibid.
[27] See Putnam (1995)
[28] See Fukuyama (1995)

have highlighted the 'care' aspects of the core economy, and others such as Edgar Cahn have broadened the concept considerably:

Who teaches children to walk? To talk? To obey the rules? To tell the truth? To avoid harming themselves? To avoid harming others? Who produces a workforce that gets up in the morning, gets places on time, and knows it is wrong to steal and lie? Mothers, fathers, grandparents, families and those institutions that impart moral values.[29]

Furthermore, the quantity and nature of motivators of behaviour derived from moral values – relative to that of self-interest – can strongly influence the form of society and economy that we have, particularly with regard to cooperation vs. competition:

The relationship between social bonds and competition is curvilinear; weak bonds are one factor that allows all out social conflict; tight bonds will restrain, if not suppress, competition.[30]

Thus an economic system that favours cooperation over competition in many instances requires relatively tight social bonds, or shared values or morals in order to function. Moreover, it is important that the formation of these is separated from the economic sphere: if this is not the case, then commercial imperatives come to dominate and themselves shape people's sense of their 'moral commitments'. That is, a pure focus on people's response to financial incentives may, over time, fatally undermine the countervailing principles of morality.

'Doing the right thing' and 'looking out for yourself' become one and the same thing:

Neoclassicals tend to design institutions for knaves, either assuming that all people are knaves or that those who wish to be "good" will do so anyhow, but the others need to be paid or punished…such policies undercut the "good" or normative, voluntary behaviour. Thus, if volunteers read to blind patients in an institution, but its administrators, anxious to secure a more reliable service, will pay for some such reading, one would expect that under such circumstances volunteer reading will cease, exacting a sizeable cost for what increase in reliability is attained.[31]

For socio-economists, this leads to specific policy proposals:

The policy point is that one needs to work not merely on the cost-benefit, deterrence, incentive and police side, but also on the formation of preferences side, via moral education, peer culture, community values and the mobilisation of appropriate public opinion. Factors that neoclassicists tend to ignore, because they take preferences for granted.[32]

If then we are all 'conflicted', all have the potential to be Dr Jekyll as well as Mr Hyde, the task is to encourage behaviour that is good for society and discourage that which is not.

Ruskin, Schumacher and the ecological economists have taught us to value that which enhances the well-being of individuals and communities, and is in harmony with the natural world and environmental sustainability. Institutional economists demonstrate that people's 'preferences' – their 'wants, desires and values' – are not fixed, but are shaped by the institutional framework in which we live. Thus in a world where the pursuit of ever-higher levels of income dominates, and capitalism must create and recreate 'demand', commercial values come to both constrain the choices that people see as feasible and to incentivise them within these narrow parameters. We are, to a considerable extent, thus 'conditioned' to act in

[29] Cahn (2001)
[30] Etzioni (1988)
[31] Ibid.
[32] Ibid.

ways that run counter to our individual well-being and that of our communities and broader society. How can this be changed?

Socio-economists such as Etzioni see preferences as shaped by social frameworks, but also as split between the pursuit of self-interest and the desire to 'do the right thing' in terms of our 'moral commitments'. Furthermore, the relative balance between these two countervailing forces varies between – and within – societies, as does that which is seen as 'moral'.

Our decisions cannot be separated from their social context, which in turn is embedded in its broader institutional context. None of the outcomes that result are 'natural', or 'inevitable', however. We need to address the proximate influences on decisions (i.e. incentives), but we also need to encourage the formation of values – or 'morals' – that ultimately determine many of the choices we make, which are supportive of fulfilling lives, but which must operate within finite environmental limits.

Institutional reform – i.e. of the 'enduring systems of socially ingrained rules' that shape our behaviour – is therefore essential to the creation of our vision of the future economy, where people's best instincts can be fostered and allowed to blossom, rather than being constrained and shaped by commercial imperatives.

Although much of the preceding analysis has focused upon the individual nation state, it is not the case that we are proposing a return to isolationism or national self-sufficiency. Insights from ecological economics suggest strongly that greater autonomy and self-sufficiency is associated with greater resilience in ecological and economic systems. But this is of course a matter of degree, and it should also be remembered that we are all on our 'spaceship economy' together, and so need to cooperate and work together to ensure that the 'ship' does not crash and burn.

The final section of this paper seeks to address these issues, and chart the path towards a future global economy.

6. Towards the future (global) economy

When we start from a global rather than a national perspective, Boulding's 'spaceship economy' metaphor immediately flies into view again. All of us, and all of our descendents, have only this one planet to share: this really is the ultimate zero-sum game.

6.1. Global-level issues

In the context of this paper, the most pressing and fundamental issue that can only be addressed at the global level is the need to reverse the rise in carbon emissions to levels compatible with the stabilisation of global warming.

In economics terms, there are two ways to affect change of this form: price-based mechanisms, and quantity-based mechanism. The former may relate to taxes (on unwanted activities) and/or subsidies (of wanted activities), creating a disincentive to engage in certain forms of behaviour and/or an incentive to engage in others. Importantly, however, it is not possible to know beforehand what the magnitude of the behavioural change will be.

With quantity-based mechanisms, in contrast, the magnitude of the change is known with precision. When we consider limits on carbon emissions at the global level, the science is clear enough and the need urgent enough that only quantity-based mechanisms can guarantee the outcome.

To relate this to the three questions posed at the end of the last section, therefore, it is clear that the decision on planetary carbon limits can only be taken at the global level. The first step is to set an overall limit of emissions now – to at least halt the inexorable rise. The second is to set a clear timetable for a rapid reduction in emissions to levels that the science tells us are sustainable. The third, of course, is to determine how these cuts are to be equitably allocated globally and, in a related way, to allocate rights for future emissions, again in as equitable a way as possible.

No national government, or grouping of governments, can do this alone. Indeed, it is partly this very fact that has stymied attempts to make progress on this vital issue.

A number of global mechanisms have been proposed. The 'contraction & convergence' (C&C)[33] first sets a limit on global carbon emissions and a timetable to reduce the total to a sustainable level – the 'contraction'. The 'convergence' aspect of the mechanism focuses on the equitable ultimate outcome of this process. Initially, emission rights would be based on the current pattern on world output so that richer countries would higher entitlements than poorer ones – the idea being to avoid to abrupt and painful a shift to the new regime. However, 'convergence' is a process whereby emission rights then progressively move towards an equal allocation on a per capita basis. That is, a country would have the right to emit carbon to a level proportional to its population size, though how it chose to allocate these rights within the country would be left for each nation to determine.

A later variant on this approach is the 'cap & share' (C&S) mechanism, which is broadly similar except for the fact that emission entitlements are not accorded to national governments, but to individual citizens of the world. Thus each person would receive an annual carbon entitlement, which they could use as they saw fit. Another difference between the two approaches is that, while C&C starts with entitlements being allocated on the basis of current emissions, and then has a transition to an equitable distribution, the C&S proposal has an equitable distribution from the outset.

Both mechanisms are compatible with various forms of trading of entitlements, though in slightly different ways. With C&C there may initially be no great need for trading, as the global allocation would reflect current global emission. With C&S, in contrast, those wishing to emit more than their allocation would have to purchase extra entitlements in order to do so. The impact of such a mechanism at the global level would be profound. For example, energy companies would have to buy large quantities of emission entitlements to be able to function. Given that there are many more such companies – and emitters of carbon more generally – in developed than developing countries, we would therefore see a huge redistribution of wealth from the richer to the poorer parts of the world.

C&S is at heart based on the idea that we all have an equal right to use our shared global resources: in this case, the atmosphere and the air we all breathe. However, this also raises the question of whether we also need to radically rethink the ownership and marketing of other natural resources, with a redefinition of what is 'public' and what is 'private'?

In this respect, knowledge is clearly a public goal and should not be traded or protected. As well as our common air as described above, the argument can readily be extended to our seas and waterways and to land, as discussed at the national level in section 4.2. Perhaps, even more controversially, we can conceive of minerals and oil as common resources of humanity? In such a world, as in the C&S model, those who wish to use more than their share of these resources would have to purchase the rights of others who do no. Again, therefore, we have a

[33] The Contraction & Convergence mechanism was developed by the *Global Commons Institute* in the early 1990s.

system of global redistribution with enormous implications of social justice and the eradication of poverty across the world.

Having established an overarching mechanism to reduce global carbon emissions to sustainable levels (the 'cap'), and ensured that this is achieved equitably (the 'share'), the next question is what other issues need to be determined at the global level?
From an economic perspective, the major linkages between nations that operate globally are trade in goods and service and financial flows. At present, both the systems of international trade and international finance are tilted heavily in favour of rich countries' interests, as opposed to those of the developing world.

In trade, this is due to:

- Major barriers to developing country exports to developed countries.
- The subsidization of developed country agriculture products with consequent effects on world prices, leading to the dumping of products onto developing country markets;
- The forcing open of developing country markets to make them far more open than developed country markets;
- The agreement on Trade Related Property Rights (TRIPS), which prices out of reach the drugs on which some of the most vulnerable people in the world depend.
- The attempt to impose agreements on investment and services which favour rich corporations and rich countries.
- The dominance of major international companies in many markets and the absence of either international or local competition laws to constrain their behaviour.
- The huge inequalities of knowledge, education, training and access to capital between and within nations, ensuring that there is no 'level playing field' or anything like it in reality.

In finance, this is due to:

- The massive scale of financial flows relative to real economies, particularly in developing countries,[34] so that inflows and outflows can have hugely destabilising effects on smaller economies.
- The inherent volatility (booms and busts) that characterise international flows, largely driven by speculation.
- The tendency for regular – and increasingly severe – international financial crises to devastate emerging and developing economies.[35]
- The tendency for a financial crisis in one country to spill over to other developing economies.[36]
- The asymmetrical nature of the response to financial crises, where the focus is almost solely on what (recipient) developing countries can do to make themselves less vulnerable to crisis, with little or no comparative requirements on (source) developed countries to regulate their financial institutions.
- The fact that capital controls are strongly discouraged by the Bretton Woods institutions, and capital account liberalisation strongly encouraged, despite the reality

[34] For example, US$3.2 trillion is traded every single day in the global foreign exchange markets, which equates to US$750 trillion a year. In contrast, global GDP in 2006 was just over US$43 trillion, while the corresponding figure for developing countries was US$12.4 trillion.
[35] For example, looking at the last quarter of the twentieth century, Eichengreen (2004) estimates that currency and banking crises have reduced the incomes of developing countries by approximately 25% from what would otherwise have been the case.
[36] For example, after controlling for the impact of political and economic fundamentals, Eichengreen et al (1998) find clear evidence that a crisis in another country increases the probability of speculative attack in another by approximately 8%.

of financial crises and the lack of evidence of the benefits of external financial liberalisation.
- The agreement on Trade Related Investment Measures (TRIMS), which prevents developing country governments from insisting that foreign direct investors use some local content in their procurement practices.

Despite these manifold difficulties we do not propose ending trade and financial linkages between countries. As Amartya Sen recently wrote:

To be generically against markets would be almost as odd as being generically against conversation.

The issue therefore is not to argue for or against trade and financial flows between nations, but to examine what constitutes 'good' trade as opposed to 'bad' trade and financial flows, and why. Below we sketch out what this might look like

As with national economies, a radical new international system would need to deliver social and economic rights for all, be environmentally sustainable and contribute to increased well-being for all people, both collectively and individually.

The International Institute for Environment and Development (IIED) in their report on The Reality of Sustainable Trade provided a very good definition from the trade perspective. The IIED argues that: "Sustainable trade takes place when the international exchange of goods and services yields positive social, economic and environmental benefits, reflecting the four core criteria of sustainable development:"

- It generates economic value.
- It reduces poverty and inequality.
- It regenerates the environmental resource base.
- It is carried out within an open and accountable system of governance.

While the IIED's focus here is on trade, the same criteria can of course be applied to the desirability – or not – of international financial flows. Also, to this list we would add the goal that a just and sustainable trading and financial system should add to the sum of human well-being.

For this to become a reality, we see the following as vital prerequisites:

- The achievement of basic levels of social and economic rights for all the peoples of the world.
- The factoring in of environmental costs to all transactions.
- The removal of economic injustices.
- The regulation of trans-national corporations (TNCs)
- The regulation of international financial institutions.
- The development of a system of effective and enforceable capital controls that a) prevent damaging speculative flows that are anathema to sustainable development, and b) encourage positive financial flows that are supportive of sustainable development.
- The establishment of a global governance structure to create and maintain this international system.
- A radical rethink of ownership models and a reversal of the marketization of 'natural resources'.

The absolute starting point for a just and sustainable trading system is that every human being on earth has enough to eat and that Southern agricultural markets are protected and managed to deliver this. It is crucial that asymmetry is built into the global trading system with a clear

recognition that Southern countries must have the right to protect markets and production crucial to food sovereignty.

Closely linked to this is that a just system demands that all citizens have at least the basic level of social and economic rights. Not just enough to eat, but fair wages, health care, and good education. If this is not the case, they cannot participate in markets with any expectation of just outcomes. This will require a major redistribution and investment at both national and global levels. To facilitate this, we need to consider moving to a system of global taxation and redistribution that is both just and progressive.

Just as at the national level, we also need to provide the right incentives in terms of environmental and social goals. All trade must bear its full environmental costs, both in terms of production and transport and, similarly, the terms of financial transactions should reflect the environmental implications of the investment flow.

In such a system, international trade in food products would only be developed where (a) food security is already strong in the exporting country and (b) where that product bore the true costs, both of production and the real 'carbon costs' of any transport. Similarly, the return on international financial investments would also then reflect the environmental implications of the underlying real enterprise.

In a carbon-constrained world of 'cap & share', and one where oil prices are likely to rise progressively from their current historic highs, the air transport of most goods will be effectively non-viable and most shipments will be by sea or by rail. These conditions will lead directly to a rapid and huge resurgence in local markets, with trade within districts and countries being the norm.

Most long-distance trade between nations in the future should be based on two principles – either the export of goods unique to particular regions or climates (e.g. bananas, coffee, tea), or trade in goods whose manufacture genuinely does require such large economies of scale that is would be uneconomical to produce them in most nations or clusters of nations (e.g. aircraft).

Once a cap & share system is established, then a combination of many developing countries having relatively abundant renewable energy sources (e.g. solar) combined with lower wage costs and a greater share in the 'capped carbon cake' and hence a transport advantage, means that the economics of production and distribution of some goods would remain in their favour.

Under such a scheme it would therefore be possible to have many manufactured goods produced in the South and shipped to the North in a way that is environmentally sustainable.

There needs to be recognition that markets are social and political constructs where outcomes are largely determined by the power of the different participants. If people enter markets with radically different levels of power, then those with the greatest power will end up with even more than they started with and vice-versa. Markets therefore need to be managed and regulated. In the international trading and finance system this would mean:

- Removing Northern subsidies.
- Opening up Northern markets.
- Allowing protection of certain Southern markets.
- Large-scale intervention in global commodity markets to enable them to deliver economically just outcomes to all participants – which will require sufficient funds to intervene to manage supply and demand

- Changing the TRIPS regime to allow generic production in Southern countries of life-saving drugs and totally banning the patenting of life forms and seed variables.
- Abolishing the TRIMS regime, thus allowing governments to discriminate in favour of local suppliers.
- Regulating financial institutions in source countries.
- Encouraging – or even requiring, as originally envisaged by Keynes – countries to implement targeted capital controls to discourage short-term speculative flows and encourage longer-term investments supportive of sustainable development.

What about the regulation of TNCs? In this regard, the 2005 UNDP Human Development Report effectively covers the changes needed in market access and removal of subsidies.

First we need strict international competition controls. At all levels (local, national and global) no player should control more than 5 per cent of a market (and less than 1 per cent is preferable). For example, currently four UK supermarkets control 75 per cent of food sales between them; five international trading companies control 90 per cent of world grain trade.

Second, TNCs should be obliged by international law to pay fair wages, provide internationally agreed benefits, and allow the right to organize, and also to pay fair levels of tax in the countries in which they operate. Importantly TNCs should be obliged to ensure that all these apply right back through their supply chain.

Third, similar obligations should apply to international environmental regulations.

Fourth, as well as abolishing TRIMS, all inward investment in a country or a locality should have strict requirements on the investor to ensure value-added benefits accrue to the workers and local community. This needs to cover a requirement for a certain percentage of local procurement, local employment requirements and local training requirements. All the work by **nef** (the new economics foundation) in local economies shows that such measures are vital to structuring thriving local economies. Too often, whether in ex-shipbuilding communities in the north-east of England or export processing zones in Mexico, companies are attracted in by tax breaks and when they leave again (attracted by an even better deal elsewhere) there has been close to zero value added to the local economy.

6.2. Global governance

How would such as system be overseen in terms of governance, however?

As a first step the WTO needs major reform to:

- Apply the above rules and take out of its remit TRIPS, TRIMS and the 'Singapore' issues.[37]
- Provide large-scale technical support to Southern governments to allow them to participate on equal terms.
- Democratize the WTO processes and stamp out the behind-the-scenes threats and arm-twisting, carried out by the 'powerful nations'.

Second, we need major new (and more democratic) global governance bodies, such as:

- A body to regulate international competition and ensure corporate compliance to agreed global environmental and social standards.
- An environment agency to protect and manage the global environment

[37] The four 'Singapore issues' are (i) investment protection, (ii) competition policy, (iii) transparency in government procurement and (iv) trade facilitation.

- A reformed IMF or a new body to deal equally with the problems of countries with excessive chronic trade surplus and excessive chronic trade deficits, as opposed to just the latter at present (as envisaged by Keynes).
- A new body to manage global taxation and spending. This body would seek to ensure the provision of basic social and economic rights for all – the foundation stone of a just and sustainable trading system.
- A reformed and democratic World Bank to handle international development projects not provided by reformed global markets.

Whilst not definitive in any sense, this final section has explored issues of international cooperation and linkages between countries. Global interdependence is both a fact and something to be cherished: we learn much and gain much from each other.

However, we are all in this together and must cooperate to ensure a sustainable future and a positive legacy for the generations to come. In this regard, there really is no alternative.

Concluding remarks

We have seen that the need for change is urgent, and argued that our current economic model is a key part of the problem and cannot – in anything like its current form – be part of the solution.

In this discussion paper we have set out the outlines for a vision of an alternative approach to economic life, one that brings us back into harmony with nature, which focuses on enhancing the well-being of all and which places equity and social justice at the heart of our national and international economies.

It is one thing to have a clear sense of where we want to get to, and quite another to chart a route to take us there. The ambitious nature of the change proposed in this paper is of course entirely deliberate. Big problems require big solutions, and we currently face problems, which to many seem insuperable.

With our current economic arrangements this may well be true. But there is nothing natural or inevitable about the economic system and mechanisms we have. Just as we have created this one it is free to us to create another. However, to do so will require a coming together of like-minded advocates of radical change, but change will not happen until we have credible mechanisms based on rigorous and innovative research.

The new Centre for the Future Economy at **nef** has been established to help chart this route and, to succeed, we must proceed in partnership with our colleagues from around the world.

We therefore invite comments on this discussion paper as a first step on this journey.