Leadership for Sustainability

The Search for Tipping Points

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[–] Abstract and Keywords

Social patterns do not lend themselves to metaphors of abrupt change and persistent shift. Sustainability is difficult to put into practice because humans segment and abuse the deeper meaning of words such as wealth, prosperity, and capital. The transition to sustainable leadership will require leadership throughout society, a recognition that geopolitical instability will trigger insecurity and will damage economic reliability and trade, and hence the very essence of growth and development. The new capitalism needs to be based on ecological and social capital and human well-being. Leadership is a commodity which is desperately in short supply. The transformation to a sustainable and well-being society requires new relationships built on individuals and communities working through moral leadership in behaviour, in compassionate consideration, and in the new normal of localism and community cooperation.

Keywords: tipping points, sustainability, social capital, sustainability leadership, capitalism for sustainability

‘The crisis is in implementation’

(Kofi Annan, 2002)

‘The key challenge is implementation’

(Ban Ki-moon, 2012)

Despite the human preference for the 'quiet life', our lives are nevertheless action-packed, full of events (big and small) that may tip trends one way or another: in love affairs, business dealings, in government. It is the same in any system, be it environmental, human, or a complex mixture, as in how we get food, use energy, or manage finance. Those who see the world from an ecological systems perspective see negative global trends of such magnitude they portend

catastrophe; those who don't (or don't want to) stay absorbed in the hiccoughs and bumps of everyday life.

I don't think it helps to muddle the metaphors of tipping points in the natural systems that sustain life on Earth with those in social or even psychological systems. Because if we hope to find benign ways to mitigate *environmental* tipping points, as discussed in the introductory and final chapters of this volume, then we have to find them in our human systems. The logic here is that as the creators of the institutions and processes (including economic ones) which enable people to live together happily and to thrive, we have the power to change them when they go wrong as well as benefit when we get them right. As evidence demonstrates things are going seriously awry, the question becomes how to intervene in order to steer, if not tip, human behaviour in a direction that has sustainability as an objective? That is the central question I address in this chapter.

First we need to understand why the concept of sustainability is proving so hard to put into practice. Although a larger discussion is merited here, **(p.195)** an important reason is that too many articulations of sustainability 'permit' interpreters (either innocently or wilfully) to maintain clinical levels of separation between its environmental, social and economic components. Yet sustainability, like resilience in social and natural systems, is about relationships, so the task, surely, is to achieve our environmental, social and economic goals *at the same time*. It is the 'at-the-same-timeness' that persistently eludes us. Establishing why economic outcomes consistently trump progress on the other goals will be key to understanding what needs to change.

We also need to reclaim the original meaning of some important words that have been kidnapped by economists to refer solely to money. For example, Tim Jackson (2009) points out that 'to prosper' means to succeed, to do well, to thrive or flourish.[1] The Anglo-Saxon root of the word 'wealth' has a meaning beyond abundance of resources (not just cash): *wela* also means bliss, welfare and well-being. And, although ubiquitously used as a synonym for finance, 'capital' means head (from the Latin *caput*), originally of livestock, but meaning a stock of any resource – as in natural, human or social capital.

This is not just pedantry. Tipping human behaviour, policy, and economic systems based remorselessly on the logic that has locked us into the worst-case scenario advertised by the 1972 MIT report *Limits to Growth* (Meadows *et al*. 1972)[2] will not disappear if sustainability is unable to propose a future that is prosperous and wealthy in the fullest meaning of those words. Nor will any effort to correct for limits emerge unless we stop behaving as if capitalism is a force akin to gravity and so beyond our control.

Can benign tipping points in human behaviour happen in the context of conventional economics?

The answer to this particular question – a necessary element to resolving the central question about how to manufacture multiple sustainability-oriented **(p.196)** interventions – lies in the intellectual chaos amongst economic theories and their policy implications. This chaos was exemplified in speeches on capitalism given by the three main UK political party leaders in January 2012. They more than fulfilled the old *canard* that you always get more definitions of capitalism than there are definers when, between them, Messrs Cameron, Clegg, and Miliband came up with nine sorts of capitalism: three they didn't like – crony, turbo, and irresponsible; and six they did – moral, responsible, popular, productive, balanced, and liberal. No leader considered that the capital behind the 'isms' might be anything but financial. All put growth and

employment as an immediate priority, apparently unaware they were advocating more of the same as a route to something they wished to be different. Only Miliband mentioned a future with a new relationship between finance and the 'real' economy; but he did not elaborate much beyond saying it was a longer-term 'agenda that must be led'.[3]

It is paradoxical that ideas about how our economy might be different from its under-delivering present have ended up in an intellectual quicksand. It is not as if the observation that our dominant economic model has limits is a new one: an argument minted by modern subversive tree-huggers. As Robert Heilbronner (1986: 143–44) points out, all the great economists saw that whatever 'regime of capital' they promoted, every single one had limits:

> Adam Smith describes the system as reaching a plateau, where the accumulation of riches will be "complete", bringing about a deep and lengthy decline. John Stuart Mill expects the momentary arrival of a "stationary state" when accumulation will cease and capitalism will become the staging ground for a kind of associationalist socialism. Marx anticipates a sequence of worsening crises produced by the internal contradictions of accumulation … Keynes thought the future would require a "somewhat comprehensive socialization of investment"; Schumpeter thought it would evolve into a managerial socialism.[4]

 (p.197) So why, regardless of our political stripe or theoretical bias, is it still so difficult to contemplate the probability that our economic system – that which mediates the relationship between capital and people – might not have the capacity to continue, in its own terms, never mind from a sustainability perspective? That it may have reached the limits of its logic? Indeed, so grave have become the negative consequences of political inaction in the face of economic gazumping of the environment and people, that in 2008 the US National Intelligence Council (NIC) elevated the resources and services of the natural world into the heart of international geopolitics and diplomacy when it warned the incoming Obama administration to expect 'scarcity' to dominate US international relations over the coming 25 years – scarcity of land, oil, food, water, and air-space for GHG emissions. From the history of the twentieth century the NIC brought forward three lessons:

- Leaders and ideas matter.

- Economic volatility introduces major risks.

- Geopolitical rivalries trigger discontinuities more than does technological change.

'[T]he greatest of these is leadership' concluded the report: 'no trend is immutable, and … timely and well-informed intervention can decrease the likelihood and severity of negative developments and increase the likelihood of positive ones.'[5]

Without being naive about how power works – internationally and nationally – the positive news is that the way out of the mess we are in is not through thrashing around in rapidly sinking intellectual sands of different shades of conventional economics, but through the creation of a new logic for capitalism, one capable of providing firm ground for making sense of what to do next, and how to do it in a way that does have the capacity to continue.[6] As anyone who tries to implement sustainabilityoriented solutions – intellectually, practically, or politically – knows, there are legions of ready-to-go ideas, policies, and projects capable of being **(p.198)** brought to scale, but which are stuck in the slough of an economy that simultaneously asks for less resource use and more consumption.

A new logic within which to make sense of what to do next

So, starting with Ed Miliband's evocation of a future new relationship between finance and the 'real' economy as a leadership proposition, I would like to elaborate a new logic for capitalism. This is a logic that helps us all make sense of how to decide and act *in* the here and now as well as *for* the long term. And then I shall end by illustrating some ways leadership could work within the new logic to trigger multiple 'tipping points' via policy and other interventions.

Figure 6.2 offers an illustration of the relationships involved in conventional definitions of capitalism. The pale shaded 'CAPITAL' box shows

(p.199) the economically orthodox interpretation of physical capital. The lines and the dark shaded boxes show the circulatory and facilitating roles of finance. The white boxes and thick lines the various relationships people have with physical capital, showing the central relationships (as far as conventional notions of capitalism are concerned)[7] to be with people as labour and as consumers. The state is in close support of that central relationship, doing everything necessary to keep the productive and consuming activities increasing (i.e. growing). Illogically, the purpose of human economic activity – human quality of life, welfare, bliss even – is sidelined, with the state organized to compensate the worst consequences of this marginalization. So when Messrs Cameron, Clegg, and Miliband promise to secure growth and jobs, to restore markets and boost business, production, and consumption, they are trying to repair a capitalistic logic that stops short of serving human benefit (in its fullest sense). Instead they are concentrating on the shallower relationships capital has with people as only workers and consumers. Human well-being has been relegated to a sort of 'spin off' – nice to have but not essential to the success of the economy. Nature is nowhere.
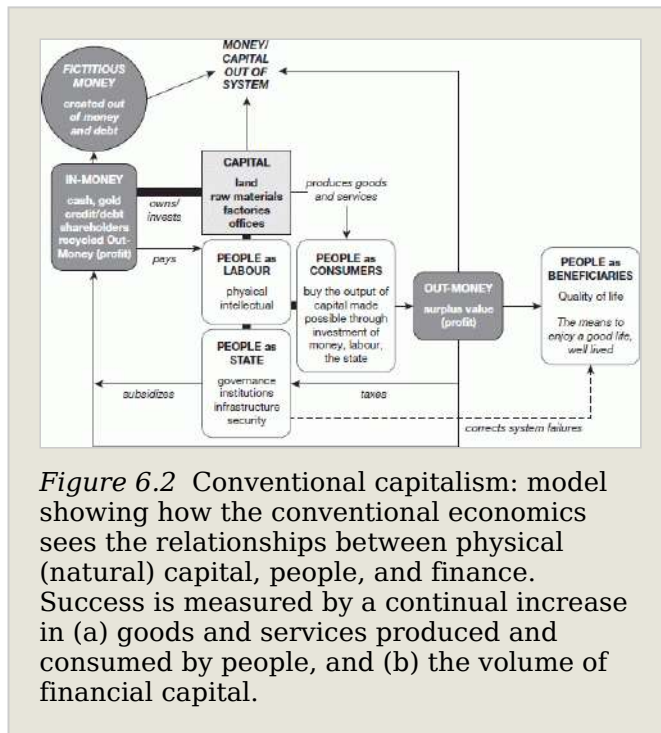

Figure 6.2 Conventional capitalism: model showing how the conventional economics sees the relationships between physical (natural) capital, people, and finance. Success is measured by a continual increase in (a) goods and services produced and consumed by people, and (b) the volume of financial capital.

It is only when considering a different 'regime for capital' that a new logic capable of tipping capitalism in a more sustainable direction emerges. In his revealing book, *The Mystery of Capital*, Hernando de Soto (2000: 61) points out that 'capital' originally meant the store of wealth represented by a herd of livestock. The endeavour of the stockman/woman is to keep the stock in good enough condition to maintain a flow of benefits (milk, blood, offspring, meat, hide), even in hard times.[8] The goal is resilience. By broadening the idea of capital to mean all natural capital, plus human and social capital, plus that represented in existing infrastructure and buildings, as Seregeldin and Steer, Ekins, and others have done, it is only a short step to seeing the flow of different types of benefits possible if all human activity were concentrated on repairing, maintaining and enhancing those capital stocks – at the same time[9] (Figure 6.3). **(p. 200)**

Crucially, this new regime for capital restores the intimacy between capital and human well-being. As Figure 6.3 illustrates, the economy is no long conceptualized as some elemental force that intrudes between capital and human well-being, but as a feature of social capital which, like democracy, can add directly to the flow of benefit to people and be subject to continually improving processes. In the diagram, people as beneficiaries of a happy relationship with capital are seen as a 'pull out' of human and social capital (as is finance). The circle is thus virtuous and a new internally **(p.201)** coherent logic is created in which the economic process is treated as social capital. Removed are the intellectual and practical barriers to seeing the purpose of life to be human well-being, flourishing, bliss, prosperity, wealth, health, and happiness. Also banished are the impediments to comprehending that achieving those outcomes requires effort to be directed at building all the stocks of capitals to a good enough condition so they provide resilience in hard times and for the longest of times. The process may involve ownership, commerce, and markets, and making and exchanging stuff and services in different ways in different places, but not always and *never* as a moral or a quasi-scientific principle or theory, nor as the motor of the whole system, nor for ideological reasons. Finance flourishes in a facilitating role, instead of floundering in a 'real' capital-usurping role.
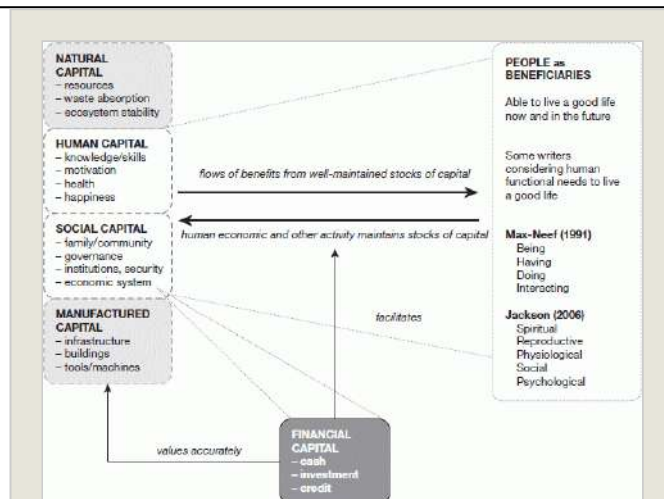

Figure 6.3 Sustainable capitalism: model for a sustainable regime for capital, showing how the relationship between physical (natural) capital, people, and finance would work. Success is measured by a continual increase in the *quality* of human and social capital and of physical capital (natural and manufactured). Finance facilitates rather than drives this model.

References: Manfred Max-Neef (1991) *Human Scale Development* (London and New York: Apex Press) pdf http://www.max-neef.cl/download/Max-neef_Human_Scale_development.pdf; Tim Jackson (2006) 'Consuming Paradise? Towards a Socio-Cultural Psychology of Sustainable Consumption', in Jackson, T. (ed.) *Earthscan Reader in Sustainable Consumption* (London: Earthscan).

Change is in the system: leadership for sustainability

Nicholas Stern (2006) has said that climate change is the greatest market failure the world has seen.[10] He is wrong. As the US NIC (2008) report points out, the greatest failure is a leadership failure. Here I consider what leadership – intellectual and practical – could be doing to steer, hustle, tip human behaviour in a different direction, so that we mitigate the anticipated worst and set course for a sustainable future. Some ideas that 'make sense' from the perspective of the proposed new logic for capitalism are discussed here.

Leadership for sustainability means being able to work against the perverse logic of conventional capitalism and work within a new – internally coherent and timeless – logic for achieving sustainability

Gandhi urged people to be part of the change they wished to see in the world. Others have made the same point differently. For example, the late Vaclav Havel promoted 'living in truth' as the only way to live even under a communist regime, and American philosopher Susan Neiman (2009) argues that if the world is not what it should be, it is up to us to open our **(p.202)** eyes

and close the gap between what is, and what ought to be. If we want moral clarity, we have to put it there.[11] Waiting for a new regime for capital to be installed is not an option; it will only happen if we act as if it were.

Thinking about how the future should be, in the shape of a flow of benefits from healthy stocks of all the capitals (see Figure 6.4) translates into the taking of decisions and subsequently acting in ways that contribute simultaneously to restoring or building healthy stocks of all capitals. Figure 6.4 forms a suitable framework for designing policies and projects, as well as analysing problems. This figure shows the headline stocks and related flow of benefits, and reveals interrelationships that have benefit-doubling potential. For example, squeezing waste out of the system makes the economic process more efficient, reduces the need for resource mobilization and concomitant pollution, improves human health, and builds local economies. More and better social organization and human interactions will lead to better governance, more resilient communities and local environments, improved mental health.[12]

There are implications of working for and within this new logic for scientific research and university teaching. While we need to track the potential ecological consequences of human impact on the environment, we run the risk of becoming the only species to have minutely monitored its own extinction. Far more resources need to be shifted into building 'sustainability literate' human capital. As Eugen Rosenstock-Heussy (1888–1973) said: 'the goal of education is to inform the citizen. And the citizen is a person who, if need be, can re-found his [*sic*] civilization.' The scale of change implied by sustainability is evidence that a re-founding moment for the human enterprise is overdue.

There are very many theories and models for organizational and other social change. Strip them back to their basics and they all involve three key steps:

(a) Understanding the need for certain (new) behaviours;
(b) Having the knowledge and skills to behave differently; **(p.203)**
(c) Having confidence that right behaviour is positively recognized and (sometimes at least) rewarded.[13]

As regards to sustainability there is arguably progress on (a), but few would contest that we are next to nowhere on achieving (b), never mind (c).

In the light of the government inaction noted by the US National Intelligence Council, the leadership role of universities gains consequence on a geopolitical level. This is an academic publication about tipping points, so

Stock of capital (resource)	Flow of benefits (if stock in good condition)
Natural Renewable and non-renewable resources Services: climate, nitrogen, waste, other cycles	Food, energy, clean air and water, stable climate, beauty, inspiration, sustainable provision of resources, waste recycling
Human Health, knowledge, skills, motivation, spiritual ease	Adept at relationships and social participation, satisfying work, lifelong learning habits, personal creativity, recreation, healthy lifestyles Trusted, accessible systems of justice,
Social Organizations and associations for living together: families, communities, government, unions, voluntary groups	governance, economy, shared positive values, sense of common purpose, institutions promoting stewardship of natural and human capital
Manufactured All human fabricated 'infrastructure' already in existence: roads, rail, machines, buildings where people live and work, etc.	All infrastructure, technologies, and processes make minimal use of natural resources, maximum use of human innovation and skills
Financial Credit/debt, shares, banknotes, coins	Accurately represents value of natural, human, social, and manufactured capital. Facilitates the restoration, maintenance, and enhancement of those stocks

Figure 6.4 Capital stocks and benefit flows

readers are invited to imagine the almighty shove to social change that could come from a concerted effort by higher education. Given the magnitude of the challenge – and one that lies not in the environment, but with people – where else is the intellectual leadership to come from that will give others confidence to join in?

(p.204) It should be borne in mind that there is nothing more difficult to handle, more doubtful of success, and more dangerous to carry through, than initiating change.

(Niccolò Machiavelli, *The Prince*, ch. 6)

Leadership for sustainability understands this is a social project – about how people behave – so is well versed in the psychological and sociological insights about how change happens – or not

The argument for putting the benefit of people as the purpose of sustainability is not to downgrade the primordial fact that if we do not have a life-supporting environment then we are dead. The point is that proclaiming this in various ways for decades has not encouraged any change in human behaviour sufficient to slow any major negative environmental trend, let alone tip it in the direction of sustainability. On the contrary, the arguments for protecting the environment are being recast as a case for putting people second, and increasingly used to support conventional economic theories and practices. Protagonists of this case range from climate naysayers to those who claim the environment movement is dead. Both are arguing within the logic of conventional economics, and neither gets practical about solutions that will benefit people and the environment *together*.[14] A new strategy is called for. One that puts human welfare (in the fullest sense) and an explicit compassion for people at its heart but which also makes it illogical for the environment to do anything but benefit too.

Compassion can start with the terrible mess that everyone – from scientists to campaigners to government to business – makes of communications around sustainability. Psychologists recognize the cognitive dissonance (and loss of personal agency) that arises from conflicting messages, such as simultaneous exhortations to consume more stuff for economic reasons, but to consume less for environmental ones. Clumsy campaigns also mix up opposing motivating value sets. For example, to say energy efficiency saves money taps into self-interest but also selfishness, **(p.205)** while to say it is good for everyone taps into desires to belong, to share, and to be seen as caring.

Psychiatrist Elisabeth Kübler-Ross (1969) championed a cycle of grieving that, if amended, offers a way to identify different emotional and consequent practical responses to the huge implications of the sort of change we need to make to our lifestyles and the systems with which we live. For example, she notes that the most common response to hearing one has a terminal disease is *denial*. The next emotion on the way to acceptance is usually *fear*. Consider these two in relation to the response of governments to the idea we should transfer the way we secure the services of energy (heat, power, and light) from one that is centralized around fossil fuels to a system that is localized, hyper-efficient, and based on renewable sources. Despite the evidence of a dangerously changing climate there are deniers still. But many governments accept the evidence and reside uncomfortably at the fear stage. For example, the tax take from the big energy companies is huge, so big that subsidies are considered worthwhile. Can similar sums flow from decentralized systems? If so, how could they be collected? If not, where will they come from? Power and money mobilize strong emotions and behaviours, but fear of loss of control affects governments no less than a person contemplating their own mortality or that of a loved one.[15]

For years, the UK department responsible for sustainability, the Department for Environment, Food and Rural Affairs (Defra), was bamboozled by the gap between people's positive attitude to reducing their known environmental impacts and what they actually did (comparatively little). The belief–attitude–behaviour linear relationship was exemplified by Harry Triandis in 1977, with more recent writers exploring the intention/action gap and expanding on ideas about how

to close it. For example, Elizabeth Shove (2003) underlines the importance of habits. The greater the habitual frequency of past behaviour (in, say, using a car or living in uniformly warm houses) the more difficult it is to change. Others point out that without clear 'facilitating conditions', however great the intention to change, adopting different behavioural practices is logistically – and maybe psychologically – impossible.

The relevant facilitating conditions are:

- Material (infrastructure); **(p.206)**

- Meaning (symbolism);

- Competencies (knowledge and skills).

The classic illustration is the making of a cup of tea. Material inputs include kettles, teapots, teabags, water and means of heating it, with a certain amount of pre-knowledge and skill required to create a satisfactory beverage. But most important is the pleasurable connotations around making and drinking a cup of tea – refreshment, break from work, convivial company – the things that enter people's minds when it is proposed. The Japanese have elevated the symbolism of tea drinking to ceremonial and artistic levels.[16] Apply these three facilitating conditions to behaviours associated with eating local or organic food, using public transport instead of a car, extreme energy efficiency, and it can be seen that the material infrastructure is not there for many people, nor is a level of knowledge and skills that make it easy to operate, even if it were. Consider the debates between the environmental impacts of local compared with long-distance food, whether wind-farms are a good idea or not. Such debates are continually confused by wilfully spread misinformation, government equivocation, and even disagreements between protagonists. Is it any wonder that it is hard to find a meaning embodying pleasure, belonging, or agency behind pro-environmental behaviour?

A comforting antidote is to be found in the growth, despite recessive economic times, of the market for Fairtrade products, though whether they are in addition to, or substituting for, non-fair-traded products, is not entirely clear. Nevertheless, the fact that big retailers are stocking, sometimes exclusively, Fairtrade staples like sugar, coffee, chocolate, and bananas, is evidence of change in the 'material infrastructure' which makes pro-sustainability consumption possible for more people.[17] Perhaps too it is evidence that the connections Fairtrade makes between consumers in countries like the UK and the benefits to people growing the products, *as well as* the environmental benefits, give a deeper meaning to the transaction. Organic cheerleaders, like the UK Soil Association, do make the link **(p.207)** between the benefits to the environment and health of consumers. But the drop in the UK's organic food market share over the same period suggests that, in a world of enforced cost cutting, the benefit to the environment and personal health may not inspire the same depth of meaning as is associated with fairness to poor people through the purchase of Fairtrade products.[18]

Two related observations on the manner in which leadership can act to multiply the chances of benign behavioural tipping points derive from what Samuel Scheffler (2001) calls the 'infrastructure of responsibility', and the need for a more sophisticated approach to localism. Scheffler is neither alone nor recent in discussing how to be a moral agent when structures around you are amoral or immoral. At the most abstract level, he explores 'the capacity of liberal thought, and of the moral traditions on which it draws, to accommodate a variety of challenges posed by the changing circumstances of the modern world'.[19]

For ease of understanding the applicability of his arguments, I propose the unlikely metaphor of a dry stone wall – that is, a wall constructed without mortar and held together through careful positioning of the stones in relationship, one to another. It is the relationships between the stones that create the integrity of the wall – just like the relationships which make up a social system. As an individual member of society, understanding who we are is tightly caught up in the relationships we have with other people, other organizations, and with the rules and processes that govern how we behave, one to another. All our encounters – in shops, schools, golf clubs, concert venues, nightclubs, courtrooms, banks; with government local and national, news outlets, advertising – are structured to reinforce the message that our responsibility is to conventional capitalism as the mainstream, the normal, somewhere to which we unquestioningly belong.

There are examples of different types of relationships we could have (ethical banking, green energy firms, rambling clubs, Fairtrade, green theatres, social enterprises, time banks, one-to-one loans, ethical investment, and so forth), but they are not brought together and promoted in a way that inspires confidence that a wall – a whole society – built of them would be strong enough to become the 'new normal', a place where we very much want to belong. **(p.208)**

My final point here is the need for a more sophisticated approach to *localism*. Environmentalists and social entrepreneurs alike laud the focus on local (usually small) initiatives as the bedrock for creating global change. They are right as far as they go, but a broader concept of the role of localism is needed, as is a deeper analysis of how relationships between the local and the global will have to work if resilience anywhere is to succeed. Emily Boyd takes this further in Chapter 7.2.

Figure 6.5 The infrastructure of responsibility: how individuals relate, one to another, to create a strong society.

Take the example of the 'local to local' relationships that make Fairtrade popular with both the rich and the poor. The UK is promoting Local Enterprise Partnerships to promote local economic development. If local economic resilience is the goal, just what are the relevant proportions for locally traded goods and services, and those traded in the wider UK, or in Europe, or globally? Does 60:20:10:10 feel right, or would it be different for different products and different places? Who decides? For example, what are the ethics of Ghana becoming economically dependent on exports of pineapples to Europe, even if they are grown under Fairtrade rules? Should trade – at close and long distance – be governed by rules that support increased diversification as well as other social and environmental outcomes at *both* ends?[20]

 (p.209) Legally, local governments are considered potentially to be increasingly important actors in the emerging global order, not least because they are seen as 'prime vehicles for the dissemination of global capital, goods, work force, and images', and where policy and political ideas are put into practice.[21] Former UN Ambassador Jeremy Greenstock considers disillusionment with the capacity of the nation state's ability to deal with the major issues of our times ('culture, identity and politics are going local'), and points out that it is in local communities that the global challenges of terrorism, crime, or climate change will be addressed

effectively.[22] For most people their locality is the place with which they identify most easily. Boil down the now extensive literature of what it is that makes people happy and/or satisfied with their lives and three things stand out: feeling good about oneself; having a knot of enjoyable relationships with other people; and feeling good about the place we live.[23]

Leadership aimed at stimulating the sort of social changes that will avoid the negative geopolitical consequences feared by the US NIC will need to take a less laissez-faire approach to localism, and how people feel about where they live, if global security (in its broadest sense) is to be constructed on an aggregate of resilient localities – which is the only sustainable option.

Leadership for sustainability means being able to use a broad canvas to diagnose and tackle the 'wicked' problems of unsustainability, and use measures of progress that anticipate (and therefore encourage) scale change

Keith Grint is not alone in pointing out that the job for twenty-first-century leadership is to prevent 'wicked problems' turning into critical ones. 'Tame' **(p.210)** problems are solvable; leaders will probably have met them before. 'Critical' problems are so bad that only a command and adjust strategy will do. 'Wicked' problems are complex, involve a high degree of uncertainty and don't appear to have clear solutions that avoid generating a new set of problems.[24]

Interventions to tip human behaviour towards sustainability fall largely into the 'wicked' category. There are ways, not of taming the wickedness (as many risk strategies try to do) but of increasing the chances that it does not degrade to a criticality. I offer some examples and further references elsewhere (Parkin 2010) though one pathway here is particularly relevant to thinking about tipping points in human behaviour.[25] That is to consider every problem in the broadest possible context. The larger canvas does not necessarily increase the complexity of the problem. On the contrary it can suggest other, perhaps more tangential but nevertheless effective, solutions. For example, the Co-Directors of Princeton University's Carbon Mitigation Institute offer a series of initiatives designed to stabilize emissions of CO_2 by 2060.[26] Only one is concerned with growing natural capital, the rest concern energy efficiency or technological shifts and innovations. None refers to the contribution of human or social capital building, despite the fact that without the participation of people any energy-focused solutions will be impossible to implement. To use one rarely mentioned contribution to mitigating any environmental impact as an example: providing contraceptives for women who say they want them but can't get them. Rich and poor countries alike report 40 per cent of pregnancies to be unplanned. Just meeting that need, without coercion, would mean that global population by 2060 could be 8 billion instead of the projected 10 billion. It would be a very inexpensive intervention to lower demand for the services of energy that also delivers significant **(p.211)** benefits to the health and economic status of women and to the life chances of the children they do have.[27]

Last, but by no means least, the importance of being ready to take interventions to scale, either in size or through multiplication, is rarely seen in organizational or government planning. Preparations for disaster and recovery are there, but not preparations for quick and substantial success. And it is in this direction that social tipping points must go if environmental disaster is to be averted.

The tendency has been either to develop large complex methodologies for capturing data about how an organization is performing vis-à-vis its sustainability impacts, or to focus on just one element – such as CO_2 emissions.[28] Neither, however, is appropriate to systematic promotion of

or response to a rapid shift to pro-sustainability behaviour – that is, speedy building of all capitals, including a full exploitation of positive interconnections between them.

Bearing in mind Einstein's mantra, 'not everything that can be counted, counts, and not everything that counts can be counted', three areas are identified where data (qualitative as well as quantitative) should be collected with an eye to stimulating improvement at scale while also tracking it:

1. Contribution to sustainability – What has been done to build stocks of capital (all of them)?
2. Ubiquity – How widespread is pro-sustainability practice (i.e. building stocks of capital) in the organization, government, etc.?
3. Influence – How significant has been the effort (of organization, individual) to influence change in others?

Using these three areas of organizational activity for evaluating progress also offers a good structure for telling a story from which others might learn. Unlike many existing evaluation models, they remain relevant in conditions where progress to sustainability is rapid and/or bumpy. Using the new interconnected logic for capitalism and measuring progress in an **(p.212)** integrated manner sets reliable parameters within which leadership can allow thousands of initiatives and innovations to flourish – while being fairly confident that most of them will be headed in the right direction.

Inevitably, this section is only able to cover a few headline ideas about different models for and approaches to changing human behaviour. The intention is to demonstrate that seeking positive tipping points in human behaviour is a frontline strategy for avoiding negative environmental ones, and to signal areas where more research or trials can hasten change.

Conclusion

This chapter started as a short address to the Kavli seminar which opened by challenging the metaphor of tipping points, arguing (along with Joe Smith and Paul Brown in Part 7) that using fear of negative consequences from environmental degradation has clearly failed to change human behaviour so far. At the same time I promoted psychological and sociological insights into why people decide and act in certain ways, and proposed new strategies for putting human well-being as the lead motivation for pro-sustainability behaviour, along with a range of tools and techniques that leadership could deploy.

I have elaborated on the original talk here, but further argue that none of this will make a difference on the scale needed as long as environmentalist and sustainability scientists and activists argue and operate *within* the illogicalities of conventional notions of capitalism. Instead, by radically reinterpreting the relationship between capital and people, a new logic emerges that is not only internally coherent but also potentially timeless. One that means we all can use this new logic to decide and act straightaway, and so help create the way we want the world to be by acting as if it was so.

At our peril we underestimate the challenges inherent in galvanizing the magnitude and speed of change needed to avert environmental and human catastrophe(s). This places a huge onus on the current guardians of all the necessary intellectual and evidential elements – universities. How will they alter their own practice in order to tackle, *as a priority*, this 'wickedest' of

problems – how to re-found human civilization in a way that is sustainable into the longest of terms? This is a mission of sustainability science that is explored in Part 8.

Notes:

(¹) Jackson, T. (2009), *Prosperity without Growth* (London: Earthscan).

(²) Meadows, D.H., Meadows, D.L., Randers, J., and Behrens III, W.W. (1972), *The Limits to Growth: A Report for the Club of Rome's Project on the Predicaments of Mankind* (London: Earth Island Press). See also Turner, G.M. (2008) 'A Comparison of *The Limits to Growth* with 30 Years of Reality', *Global Environmental Change*, 18: 397–411 for an update.

(³) The speeches can be seen at: Cameron: http://www.politics.co.uk/comment-analysis/2012/01/19/cameron-s-moral-capitalism-speech-in-full; Clegg: http://www.libdems.org.uk/latest_news_detail.aspx?title=Nick_Clegg_speech_on_responsible_capitalismandpPK=3659d490-82ef-412c-80e6-6dd5240659e0; and Miliband: http://www.labour.org.uk/ed-milibandon-responsible-capitalism,2012-01-19.

(⁴) Heilbronner, R.L. (1985), *The Nature and Logic of Capitalism* (New York and London: W.W.Norton), 143–44.

(⁵) US National Intelligence Council (2008) *Global Trends 2025: A Transformed World* (Washington DC: US Government Printing Office), 5, or online at www@dni.gov/nic.

(⁶) Although 'isms' like socialism and communism are conventionally figured as alternatives to capitalism, they are, in reality, just different views on the relationship between capital and people. In that they all consider capital's relationship to be primarily with people as labour and consumers, 'sideline' human well-being in a broader sense, and more or less ignore nature, I view them all as similarly 'conventional'.

(⁷) See note 6.

(⁸) De Soto, H. (2000), *The Mystery of Capital* (New York: Basic Books), 41.

(⁹) Serageldin, I. and Steer, A. (eds) (1994), *Making Development Sustainable: From Concepts to Action (Environmentally Sustainable Development* (World Bank Occasional Paper Series, No. 2), epilogue. Ekins, P., Hillman, M., and Hutchinson, R. ([1992] 2000 edition), *Wealth Beyond Measure: An Atlas of New Economics* (London: Gaia Books). See also Ekins, P. (2000), *Economic Growth and Environmental Sustainability: The Prospects for Green Growth* (London and New York: Routledge). There is a hinterland of innovative thinking about the economy that should be acknowledged, including Daly, H.E. and Cobb, J. (1990), *For the Common Good: Redirecting the Economy Towards Community, the Environment and a Sustainable Future* (London: Greenprint); Schumacher, E.F. (1973), *Small is Beautiful* (London: Abacus, 1975 edition).

(¹⁰) Stern, N. (2006), *The Economics of Climate Change* (London: HMSO).

(¹¹) Neiman, S. (2009), *Moral Clarity* (London: Bodley Head).

(¹²) Examples from Forum for the Future, see project with Technology Strategy Board for example: http://www.forumforthefuture.org/blog/getting-sustainable-innovation-heart-business,

and Parkin, S. (2010), *The Positive Deviant: Sustainability Leadership in a Perverse World* (London: Earthscan).

(¹³) See Kotter, J. (1996), *Leading Change* (Cambridge, MA: Harvard Business School Press), for just one example, and O'Toole, J. (1995), *Leading Change: The Argument for Values-Based Leadership* (San Francisco: Jossey-Bass), for another. O'Toole also looks at why people prefer things to remain more or less the same.

(¹⁴) For a denier, see Lawson, N. (2008), *An Appeal to Reason: A Cool Look at Global Warming* (London: Duckworth Overlook). For environmentalists at war with one another, see the seminal 2004 article by Shellenberger, M. and Norhaus, E. (2011), *The Death of Environmentalism*, along with their 2011 follow-up at their website http://thebreakthrough.org/ (accessed 25 February 2012).

(¹⁵) Kübler-Ross, E. (1969), *On Death and Dying* (New York: Scribner). For adaptation of the cycle for use in understanding human behaviour in relation to news about major environmental problems, see Parkin (2010: 216) (full reference note 25).

(¹⁶) Triados, H.C. (1977), *Interpersonal Behaviour* (Monterey, CA: Brooks/Cole); see also Hargreaves, T. (2008), 'Making Pro-Environmental Behaviour Work: An Ethnographical Case Study of Practice, Process and Power in the Workplace' (Ph.D. thesis, Norwich: University of East Anglia); and Shove, E. (2003), *Comfort, Cleanliness and Convenience: The Organisation of Normality* (Oxford: Berg), and their bibliographies.

(¹⁷) http://www.guardian.co.uk/business/2011/feb/28/fairtrade-sales-rise-despite-recession (accessed 27 February 2012).

(¹⁸) http://www.guardian.co.uk/business/2011/feb/28/fairtrade-sales-rise-despite-recession (accessed 1 March 2012).

(¹⁹) Scheffler, S. (2001), *Boundaries and Allegiances: Problems of Justice and Responsibility in Liberal Thought* (Oxford: Oxford University Press). See also Sandal, M. (2009), *Justice: What's the Right Thing to Do* (London: Allen Lane).

(²⁰) There is no indication of this sort of thinking in the UN briefing document on Trade and the Green Economy published in the run-up to the 2012 Earth Summit in Rio de Janeiro, for example. See http://www.uncsd2012.org/rio20/index.php?page=viewandtype=400andnr=13andmenu=45.

(²¹) Blank, Y. (2006), 'Localism in the New Global Legal Order', *Harvard International Law Journal*, 37 (1): 264–81.

(²²) Greenstock, J. (2008), 'Nations Have to Act Locally in a Globalised World', *Financial Times*, 16 May.

(²³) For examples only of the extensive 'happiness literature' see Layard, R. (2005), *Happiness:Lessons from a New Science* (London: Penguin); Goleman, D. (2007), *Social Intelligence: The New Science of Social Relationships* (London: Arrow Books); Argyle, M. (second edition 2001), *The Psychology of Happiness* (Hove, East Sussex: Routledge).

(²⁴) Grint, K. (2000), *The Arts of Leadership* (Oxford: Oxford University Press).

(^{25}) See Parkin, Sara (2010), *The Positive Deviant* (London: Earthscan), for examples of tools for thinking and deciding from a full sustainability perspective, including: Forum for the Future's Five Capitals decision-making; an expansion of the Impact on Nature = Population x Affluence x Technology (IPAT) to include human and social capital (based on Ekins, P. and Jacobs, M. (1995), 'Environmental Sustainability and the Growth of GDP: Conditions of Compatibility', in Bhaskar, V. and Glyn, A. (eds), *The North, the South and the Environment* (London: Earthscan); an adaptation of Pacala and Socolow 'wedges' (based on Pacala, S. and Socolow, R. (2004), 'Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies', *Science*, 305: 968–72.

(^{26}) Carbon Mitigation Institute, Princeton University, http://cmi.princeton.edu/about/ (accessed 27 February 2012).

(^{27}) http://esa.un.org/unpd/wpp/unpp/p2k0data.asp (accessed 27 February 2012).

(^{28}) Global Reporting Initiative, https://www.globalreporting.org/Pages/default.aspx, and Carbon Disclosure Project, https://www.cdproject.net/en-US/Pages/HomePage.aspx. This is not to criticize such initiatives, which are steps in the right direction, but to question whether, given the speed and scale of change implied by negative environmental trends, they are sufficient.

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