De-Growth Is Not a Liberal Agenda:

Relocalization and the limits to low energy cosmopolitanism.

Abstract:

Degrowth is identified as a prospective turning point in human development as significant as the domestication of fire or the process of agrarianisation. The Transition movement is identified as the most important attempt to develop a prefigurative, local politics of degrowth. Explicating the links between capitalist modernisation, metabolic throughput and psychological individuation, Transition embraces 'limits' but downplays the implications of scarcity for open, liberal societies, and for inter-personal and inter-group violence. William Ophuls' trilogy on the politics of scarcity confronts precisely these issues, but it depends on an unconvincing sociology of individuation as a central process in modernity. A framework is advanced through which to explore the tensions, trade-offs and possibilities for a socially liberal, culturally cosmopolitan and science-based civilization under conditions of degrowth and metabolic contraction.

> "… in Africa I was a member of a family – a sort of family that the people of your culture haven't known for thousands of years. If gorillas were capable of such an expression they would tell you that their family is like a hand of which they are fingers. They are fully aware of being a family but very little aware of being individuals….(the Gorillas in the zoo …were) no family. Five severed fingers do not make a hand"
>> (The gorilla Ishmael ruminating on what Norbert Elias would refer to as the changing I/We balance in family life, in Daniel Quinn's novel *Ishmael*, 1995: 12)

1. Introduction: The problem of growth and de-growth

If we accept the thermodynamic basis of both economy and ecology, then the growth and expansion of human activities and artefacts on the Earth will come to an end. For thousands of millennia, the expansion of the 'anthroposphere within the biosphere' (Goudsblom, 2002) has been a consistent feature of both human evolution and social development. Certainly the pace changed at various times, increasing with agrarianisation, and even more so with petro-modernisation. Although the balance between extensive and intensive growth has been tilting steadily in favour of the latter, the overall direction has been unwavering (Quilley

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2004).[1] But now it will stop and go into reverse – possibly in my life-time and almost certainly in the life-time of my children.

The end of growth should be blindingly obvious to anyone who has even a vague understanding of the exponential function.[2] But nowhere do the strategic dilemmas of 'de-growth' inform the ping-pong debates of mainstream politics. The reason for this wilful blindness poignantly clear. The future 'politics of scarcity' (Ophuls 1977) is not an enticing prospect.

Over the plus longue durée of social development – from the evolution of language, right through to fossil-fuelled industrial modernisation – humanity has bootstrapped its way to the peak of a 'Mount Impossible'. On this vertiginous plateau we have constructed a globally integrated, complex and expanding

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[1] Livi-Bacci (1992: 31) paints an unambiguous picture of world population growth over the course of the Holocene, but the rise of modern human beings had a much longer lead time (see Megarry 1995: 24-25; Foley 1988). For at least half a million years fire-culture has been perhaps the most significant driver of human demographic and geographical expansion (see Stringer and McKie 1996; Pyne 2001; Goudsblom 1992; Harris 1985). The initially contested, but now largely accepted, 'Pleistocene overkill' (Martin and Klein 1984; Flannery 2001) may have been a case of 'over-burn' rather than over-kill (Williams 2006: 21). This literature substantiates the big picture of extensive and intensive, geographical and demographic growth continuing for hundreds of thousands of years, funded by and at the same time driving an ecological process of 'trophic expansion' (Quilley 2004).

[2] Rockström et al (2009) provide graphic evidence of the extent to humanity is now pressing up against biophysical limits. Demographic growth is already slowing and global population simply can't double again. Nor can the human share of the annual primary photosynthetic product of the planet continue to expand (Foley et. al. 2007; Erb et al 2009). But the outlook of institutions such as the World Bank and the IMF continues to assume economic growth, in perpetuity. The 2005 Global Economic Prospects report estimates 3.1% growth during the period 2006-2015, with no suggestion that this rate won't continue indefinitely (World Bank 2005, Box 1.1 and Fig 1.3). The most recent IMF statement (2011) is more circumspect, but growth is still the default assumption and certainly the aspiration. A 3% growth rate suggests a doubling time of 23 years. Even with the most optimistic expectations of rising intensity and efficient gains of 2% per annum, this still suggests an overall throughput growth rate of 1% or a doubling time of 70 years. The real figure is probably closer to 50 years (based on Homer-Dixon, 2011 and personal communication). Even with large margin for error, the continuation of exponential growth can't continue; throughput can't double, let alone triple or quadruple. Questions remain about the shape and speed of the transition, but not the fact of it. Without the rapid development and deployment of new sources of energy it is difficult to see how it can be anything less than chaotic and traumatic (see Duncan 2001).

civilization which is already too big relative to the biosphere upon which it depends. The mountain won't bear our weight and we need to come down quickly. But captivated by the view, most policy makers and citizens find it hard to focus on the fissures opening up beneath their feet, still less perceive the fragility of this artificial mountain. More clear-sighted individuals (Schumacher, Georgescu-Roegen, Boulding, Daly, Ophuls, Odum to name a few) have drawn attention to the problem, and identified an alternative to compulsive growth. We can even see the place we need to get to – the 'Improbable Valley' – way off down the mountain. The problem is how to get there. Over the last three years, with the global economic recession, the debate has sharpened around a new concept of 'degrowth' defined as 'the socially sustainable and equitable reduction (and eventual stabilisation) of society's throughput' (Kallis 2010: 874; see also Schneider et al 2010, Martinez-Alier et al 2010).

Although, from ecological economists such as Herman Daly we have some idea of what the steady state *economy* might look like, there are enormous questions about whether:

i. the *maximum* scale of economy compatible with biosphere integrity overlaps with the *minimum* scale necessary to sustain the order of social complexity prerequisite for a democratic and science-based civilization;

ii. continuing technological innovation is compatible with de- growth;

iii. a steady-state economy could sustain a global population of 8-9 billion and provide social security for a benign long term demographic transition;

However the institutional and cultural shape of the *polity* is even more opaque and problematic. 'Pregnant with contradictions' and corrosive of ecological and social community, 'the logic of capital accumulation' has long been the target of anti-capitalist and environmental critique. But many of our most cherished institutions and cultural values – democracy, pluralism, social liberalism, disability rights, cosmopolitanism, gender equality, anti-racism – piggy-backed on 500 years of permanent economic expansion. Less obviously, population growth, urbanisation and increasing social complexity also engendered a process of individuation that we

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take so much for granted that it becomes invisible. The highly restrained, individuated structure of personality, regulated by an elaborate superego is a product and driver of industrial modernity to just the same degree as the internal combustion engine (Elias 2011b). And the relative predominance of 'I' identities over 'We' identities (Elias 2011a) provides the psychological architecture for both consumer society and liberal cosmopolitan polities in equal measure. In this way, a condition of permanent economic growth has been a prerequisite for the emergence of liberal, gesellschaftlich societies based on the lattice of interdependent but unrelated individuals and social groups who may not even be directly aware of each other. In short, capitalism, psychological individuation and liberalism emerged together, remain interwoven and mutually dependent in complex ways, and depend absolutely on a continually expanding throughput of energy.

Over the last decade, partly as a direct response to the re-emergence of neo-Malthusian perspectives, there has been a burgeoning literature on cosmopolitanism and related issues in sociology (EJST 2007; BJS 2006) anthropology (Werbner,2008), politics (Habermas, 1998; Held 1995; Dobson, 2006) and philosophy (Pogge 2002; Appiah 2006). Followsing Haller , my own approach starts from a minimal, sociological definition of the cosmopolitan individual and cosmopolitan culture as being 'more "open" toward the world [and]... less bound by territorial attachments and ethnic particularism' (2007: 2). In this view cosmopolitanism is one pole in a continuum of attitudes, affiliations and values which stands in contrast to localism at the other end. Cosmopolitanism is an attitudenal and ideological corollary of Tönnies' 'gesellschaft', an aspect of what Durkheim referred to as 'organic solidarity.'

In what follows, I explore the tensions and trade-offs implicit in the notion of 'low energy cosmpolitanism'. With the notable exception of Andrew Dobson (2006; Hayes and Dobson 2008), the literature on cosmopolitanism is largely silent about metabolic constraints and preconditions. Departing from the tradition of Kantian humanism which insists on diversity as a foundational ethic (Fine & Booth in EJST 2007: 6), I argue that Kantian cosmopolitanism should rather be understood as a symptom and expression of a growing social complexity made possible by a one-off bounty of fossil fuel. My argument is that politics in the context of degrowth would necessarily be defined by such metabolic constraints.

2. Living without growth

So what happens if the fuel stops flowing? What happens if the global circulation of goods, people and information slows or even comes to a halt?

Climate change scenarios suggest that if we burn remaining stocks of fossil fuel disastrous climate change may be sufficient to destroy global civilisation, and even the human species (Lynas, 2007; Lovelock 2009; Hansen 2010; Rockström J. et al. 2009). Peak oil pundits suggest that we are likely to experience an imminent, chronic energy short fall with the peaking of global oil production (Kunstler, 2006; Heinberg, 2005) Neither scenario provides much ground for optimism.

I don't want here to debate whether or not either scenario is possible or even likely, but merely to note that ,for much of the environmental movement, both catastrophic climate change and peak oil collapse have become routine expectations. Just how routine is made clear by the 'viral' growth of the 'Transition Town' movement (Hopkins, 2008).

2.1 Transition and 'resilience through relocalization'

Inspired by Rob Hopkins's experiment in community resilience in Totnes, Devon, hundreds of Transition Initiatives are now springing up across the UK, Europe, Australia, New Zealand, Canada and the United States. The Transition strategy is absolutely premised on both peak oil and catastrophic climate change, and Richard Heinberg, a guru of the American peak oil movement, has now become one of its leading figures. Transition politics is not anti-capitalist nor anti-globalisation precisely because the expectation is that an energy short fall will lead to a rapid relocalization and simplification of economic life within a few decades. Transition speaks the language of localism and sufficiency and taps a deep frustration with consumer society. The expectation is that in the post-carbon, post-capitalist order, citizens will live more familial, authentic and creative 'hand made' lives, recovering a range of artisanal 'Transition skills' (Quilley, 2009) and more rewarding *gemeinschaftlich* forms of community (see Barry and Quilley 2008).

In addition to the plethora of books and blogs there is now a growing academic literature on relocalisation and Transition focusing on the political sociology of the movement (e.g. Seyfang, 2009), the political economy of localism (e.g Ryan-Collins 2011), the viability of more bioregional forms of economy and society (Quilley 2012), discourse and politics (Bailey et al 2010) and the ethical dilemmas associated with exclusively local engagements (Mason & Whitehead 2011). Writing with Ian Bailey and Geoff Wilson, Rob Hopkins presents Transition strategy as a clever discursive bricolage which, although drawing a long tradition of critique in relation to the social and biophysical limits to capitalist consumerism,foregrounds the conjunction of peak oil and climate change as a way of constructing relocalisation as 'inevitable.' By de-emphasising the element of social conflict Transition is able to extend its appeal beyond 'hardcore environmentalists' (Bailey et al 2010: 595). Although generally welcomed as a positive development, the insistently inclusive emphasis on positivity and avoidance of conflictual political engagements in relation to the underlying structures of society has also been the the focus of scepticism and vigorous critique (e.g. Trapeze Collective 2008). In what follows I extend this critique in a different direction, exploring the tension between the taken-for-granted liberal attitudes, values and cosmopolitan outlook of Transition activists on the one hand and the illiberal, less-open and possibly violent implications of the relocalized future they celebrate, embrace and attempt to pre-figure.

In the UK there is no 'survivalist' movement pretty much because there are no hills to run to. Transition is very much a social, collective response geared towards communities and working along side, but not under, local authorities. In many ways it fills the political gap left by the seeming failure of Agenda 21 engagement with climate change mitigation after the Kyoto summit. Most environmentalists recognise an imperative for their own communities to face up to disruptive and possibly catastrophic climate change that is now perceived by many to be unavoidable. But at the same time, the movement is informed by the concept of peak oil. Now, despite the fact that some of the most significant contributions to the technical debate have come from the UK and Europe, the front-stage of peak oil politics has been dominated by American survivalism. Since the height of the cold

war, thousands of Americans have been expecting 'the system' to collapse. There is a whole infrastructure of militaristic training, homesteading and community networking geared to this eventuality – informed variously by fundamentalist Christianity, primitivist anarchism and other strains of environmentalism. Peak oil has now taken over from nuclear war as the primary scenario of collapse (see, for example, Rawls 2009). But what is significant about the last decade has been the proliferation of a more respectable popular and academic literature advancing fundamentally similar scenarios (Tainter 1990; Heinberg 2005; Diamond, 2006; Kunstler, 2006; Rees, 2004; Homer-Dixon, 2006; Hansen, 2010; Lynas, 2006; Lovelock, 2009; Martin, 2007). The message from heavy weight scientists chimes with a resurgence of environmental science fiction (e.g. McCarthy 2007; Theroux, 2009; Wilson, 2009; Scarrow, 2007).

But despite its roots in the peak oil movement, and although premised fairly overtly on the implosion of the global economy and the failure of nation-state institutions, the Transition Network remains obdurately disinclined to focus on the problem of violence. This is surprising. The re-emergence of famine in Western countries combined with a failure of state institutions would certainly result in appalling violence between individuals and communities. This problem would be especially acute in a densely populated country like the UK, which is so dependent on imported food. In any collapse scenario, it is difficult to see how the denizens of Totnes might protect their newly planted nut trees. But at the same time it is impossible to imagine that resource shortages on the scale anticipated by the peak oil and Transition movements would not result in geo-political violence and regional and even global wars.

Since none of this is very pleasant to contemplate, a Pollyanna-like avoidance of the issue is, after all, unsurprising. But in the medium and longer term the prospect of collapse and relocalization also raises the question of what kind of society will emerge in place of the globally-connected, hyper-mobile society of flows that we created on the back of cheap oil (Lash and Urry, 1993). What seems certain is that the spirit of cosmopolitanism is likely to give way to more communitarian forms of political life. In the language of Tönnies, the open and mobile *gesellschaftlich* forms of social life which we take so much for granted, societal forms

underpinned ultimately by relatively disembedded markets, are likely to give way as traditional, socially embedded, highly conventional *gemeinschaftlich* social forms re-emerge. For those modern refuseniks disenchanted with the shallow, unsustainable idiocy of consumer society, there may well be cause to celebrate, with the resurrection of family and community as the primary vehicles of social support and solidarity. Those who survive the prospective 'long emergency' (Kunstler 2006) might well be healthier, enjoy better and more authentic food and perhaps even benefit from more rounded social relationships and a less strained relationship between domestic life and work. Under these circumstances, many would perhaps find fulfilment in the re-invented artisanal roles and functions that once again service a relocalised and more self-sufficient division of labour. But there can be no doubt that, with regard to the long march of political and social enfranchisement, such a neo-traditionalism would be politically and socially regressive. Traditional agrarian society with more and possibly most people working on the land implies a world of landowners and serfs, ascriptive social identities and lives determined by the circumstances of one's birth – class, gender, religion, ethnicity and caste. In this brave new world there would be plenty of work (although no jobs) for sociologists. In his novel, *A World Made by Hand,* Kunstler (2009) is surprisingly honest. He doesn't shy away from what the politics of such a newly agrarian society might look like. Without fossil fuel energy slaves most of the population become peasants and old social hierarchies, including gender inequalities, reassert themselves.

> All the trustees (of the reformed town council) were men, no women and no plain laborers. As the world changed, we reverted to social divisions that we'd thought were obsolete. The egalitarian pretences of the high-octane decades had dissolved and nobody even debated it any more, including the women of our town. A plain majority of the town's people were labourers now, whatever in life they had been before. Nobody called them peasants, but in effect that's what they had become. That's just the way things were. (2009: 101)

But most anti-capitalist, anti-globalisation and environmentalist prognoses of relocalization flatly refuse to engage with the implications of this neo-traditionalist, post-liberal society. Politics and social life will be pretty much like it is now, just more local.

2.2 *Neo-Malthusian versus Cosmopolitan Visions of the Twenty-First Century*

During the 1990s, Kaplan's *The Coming Anarchy* (1994) challenged both the liberal triumphalism of Francis Fukuyama and Huntington's 'clash of civilizations' with a vision of crippling resource constraints, failed states, ecological catastrophe and geo-political disorder. A touchstone for a resurgence of neo-Malthusian thinking, Kaplan's book was informed by the expanding field of environmental security (Levy 1995; Ullman 1983; Matthews 1989; Homer-Dixon 1991). But, whilst the end of the Cold War created an ideological space for environmental Malthusians, the significance of resource scarcity for progressive liberal politics had been already been elaborated at great length during the 1970s. And it has been William Ophuls who has been most persistent and systematic in exploring the political implications of scarcity for liberal modernity. Ophuls work provides a useful lens through which to examine the liberal credentials of degrowth precisely because he foregrounds and makes explicit the tensions between values and aspirations on the one hand, and metabolic and social-institutional preconditions on the other.

2.3 *Plato's Revenge: Small as Bio-regional, Communitarian and Jeffersonian*

With the recent publication of *Plato's Revenge. Politics in the Age of Ecolog*y (2011), Ophuls completed a trilogy on the politics of scarcity. In 1977 he had achieved a certain notoriety among environmentalists by questioning whether ecological integrity could ever be compatible with modern liberal democracy. He pointed out that the entire set of ideas, institutions and practices predicated on abundance would inevitably be replaced by new social and political forms based on scarcity. In 1997 he extended the critique of modern liberalism, arguing that the paradigm of mass politics inherited from Hobbes and Locke, even without ecological crisis, was bound for self-destruction because it abandons the premise that a successful polity must be rooted in an unspoken but pervasive framework of virtue, itself reproduced in the context of a binding we-identity and community (or what Tönnies [1887]called 'gemeinschaft'). In *Plato's Revenge,* Ophuls completes the argument by sketching a possible replacement – a new communitarian philosophy

and political framework rooted in the ideas of Jefferson and Rousseau, but grounded in evolutionary psychology, anthropology and Jungian psychology.

For Ophuls, the process of liberal modernization addressed two of the five great ills of civilisation, namely *economic inequality* and *political oppression*, but only by intensifying two others, *ecological exploitation* and *military aggression*. The response to the fifth, *spiritual malaise*, was equally problematic. The process of secularisation had resulted in a deep-seated demoralisation which, Ophuls argues, has begun to accelerate as late modern societies have exhausted forms of spiritual and moral cohesion left over from the pre-modern era ('this lode of fossil virtue and belief' p17). Such demoralisation was evident in the corruption of morals and shared social mores governing social life; in the undermining of morale, disenchantment (in a broadly Weberian sense) and loss of meaning; and the erosion of solidarity by the winner-takes-all individualism sanctioned by Hobbes, Locke and Smith. Citing Aristotle, Ophuls insists that no stable polity can emerge from an alliance of self-interested individuals. By severing (instrumental) politics from (normative) virtuous community, Hobbes initiated the movement that liberated individuals from Kings and Bishops, but ended in moral decay and the near collapse of civil society. The seemingly inexorable growth of the state, is according to Ophuls (following Tacitus, Burke, Aristotle and Taine) an inevitable attempt to fill the moral void. Citing Burke, John Adams and James Madison, he argues that liberalism is confounded by the paradox that liberty depends on self-controlled citizens, and limited government requires virtuous people.

The erosion of virtuous civil society in the wake of political liberalism is intimately linked to ecological crisis since it was the unleashed, self-interested passions of disembedded individuals who spurred economic development and turned unlimited economic expansion into an overarching societal imperative. As a result the antidote to both political malaise and ecological crisis is the same: a new moral code rooted in natural law and 'written on the tablets of eternity' (20). It is the thermodynamic framework of ecology supported by the 'new physics' (Davies 1992) which provides the outline for this new natural law.

At the heart of Ophuls' thesis is the sense that during the process of civilisation and with a vengeance over the last three hundred years, the human

personality structure has become 'cortex ridden' and dominated by the reasoning, analytical left brain. In the process we have lost touch with what Jung referred to as the '2 million year old man' who resides in every modern human. Modern forms of socialisation seek to repress and exclude the mammalian mid-brain and the reptilian brain stem (87) – sub-cortical layers 'emotionally attuned to symbolic meaning' and craving myth and narratives of cosmic connection (religion). At the same time, the Weberian process of disenchantment, the dissolution of face-to-face, gemeinschaftlich communities, the loss of an ecological connection with place and psychological individuation have combined to sever deeply-felt sense of connection to other people, to other organisms and ecosystems and to the cosmos. It is this illusion of separation which lies at the heart of both political and ecological problems.

Since bad or misleading ideas are held to be at the root of the problem, Ophuls is able to identify a source of salvation in the convergence of recent developments in physics with the new master science of ecology. In both cases the new appreciation for the emergent dynamics of complex systems is leading to paradigmatic recognition of the fundamental connectedness of all human, ecological and physical processes. On this basis Ophuls outlines an essentially communitarian political vision in which 'individuals fulfil social roles rather than aggrandize private interests' (2011: 42). Nodding to a leading exponent of complexity theory, Stuart Kauffman (1996), he concludes 'orphaned no longer, ... [man] would once again be at home in the universe' (43).

Advancing a vision of small-scale, face-to-face society in the image of Jefferson and Rousseau, Ophuls locates his own work in a political-philosophical tradition – including Thoreau, Gandhi, Thomas More, Lao Tzu, Plato and Aldous Huxley – which identifies material and institutional simplicity as a condition for a richer and more meaningful cultural and spiritual life. In the context of fast-converging ecological limits to growth, what has hitherto been only philosophically commendable is about to become politically obligatory. But although unavoidable, the transition will be more benign and less traumatic to the extent that the battle of ideas ('the political struggle of our time') sees ecology widely recognised as the 'master science' and the Gaia concept of Lovelock and Margulis, the 'ruling

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metaphor'. Likening the Hegelian dialectic to an ecological succession, he argues that Gaian science can provide the basis for a new natural religion and by recovering 'the connection with nature lost when we ceased to be savages, humanity will complete an evolutionary journey from the unconscious identification with nature, to a wilful separation from nature, and finally, to a conscious reidentification with nature enriched [by the experience of civilisation]" (2011: 177)

Referring repeatedly to Jung's concept of 'archetypes' as basins of attraction in human behaviour and citing current advances in cognitive psychology, Ophuls argues that humanity cannot and shouldn't struggle to overcome the cognitive limitations and deep-seated affective predispositions of our Pleistocene brains. *Therapaie* starts from the premise that happiness and mental health are served by the reintegration of individuals with other people, in the context of community, and the cosmos, in the context of a new natural religion, a kind of post-scientific animism. *Paidaie is* '*Therapaie* writ large' achieved through patterns of kinaesthetic, aesthetic and spiritual education focused on the civic virtue and the normative vision of the good life. *Paidaie* in turn provides the context for *Politeia* or what Ophuls calls the new politics of consciousness. Because humans are predisposed to reification and concrete patterns of thought. Even in science, our habitual modes of cognition and analysis depend on metaphors and symbols. Only a minority of the population will ever be able to handle abstract thought in a meaningful way. For this reason, argues Ophuls, some kind of cognitive elite must be an inevitable part of the human condition. The majority of the population are likely to find ontological security and meaning in fictions of one kind or another. On this basis he argues 'we are compelled toward a Platonic conclusion – 'Philosophy' for the few, a "noble lie" for the many' (116). Replacing the ignoble lie of liberal mass society (equality in a massively unequal world) with nobler fictions (Gaia, cosmic connectedness, place-bound We-identities) which offer 'the means of long term survival and the prospect of a further advance of civilisation' (135). The new fraternal society will be distinctly communitarian, imposing greater obligations but providing greater support. Ophuls doesn't shy away from the political implications of this line of reasoning, arguing that such a society would be best administered by a 'natural aristocracy.' He is however unclear about whether elite status would be heritable and how this Platonic

governing class would be kept in check in the participative milieu of a Jeffersonian democracy. He does however imply that material simplicity and face-to-face evaluation of leaders by the lead will enforce a kind of primal equality absent in mass democratic societies (189).

2.4 Problems with Ophuls' Thesis

2.3.1 Forks in the road, human nature and the role of ideas

As an exercise in political philosophy it is perhaps not surprising that Ophuls' thesis places a premium on the autonomous role of ideas. He argues that moral, political and ecological problems 'have been created by a certain way of thinking' (2011: xii), and that their resolution depends ultimately on the hegemony of different and better ideas. Despite the fact that his latest book relies heavily on a naturalistic and evolutionary account of human nature, the argument ultimately hinges on potentially revocable choices and forks in the road. The first critical juncture came with the adoption of agriculture and humanity's 'decision' to abandon the ecological niche in which it had evolved for a life of toil in the fields. Quoting Jared Diamond to the effect that agriculture was the worst 'mistake' in human history, Ophuls' argument is rather similar to that of Daniel Quinn's *Ishmael* (1995). With the adoption of agriculture humanity broke the universal ecological imperative that 'no part of the system can be allowed to maximise its gains' (2011: 33). For Quinn by breaking the 'Law of Limited Competition' humanity usurped the power to 'decide who and what should live and die'. The result of agriculture was ecological monopoly and burgeoning human populations, at the expense of non-human nature. In Quinn's terms 'leavers' became 'takers' and (quite literally) the rest is history.

Ophuls' second critical juncture took place in early-modern England and is associated with the ideas of Hobbes and Locke which shaped the the modern state, the institutions of liberal-democratic politics and the industrialising economy.

This philosophically idealist framing of 'forks in the road' and 'paths not taken' makes a compelling narrative (exemplified by Quinn, but see also Jensen 2006; Heinberg 1995). It is however not very good anthropology, biology or history.

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Human development has been marked by much greater continuity than this account supposes. Just as industrialism emerged from the technical repertoire of agrarian civilisation, the processes of horticulture, domestication and agrarianisation emerged slowly on the back of techniques and knowledge developed in Palaeolithic cultures over hundreds of thousands of years, not least the domestication of fire (Goudsblom 1992). Unfortunately, the 'ecological Indian' is a mirage (Kreche 2000). The combination of language and fire makes humanity intrinsically and irredeemably ecologically disruptive. We never abandoned an established ecological niche (Quinn's 'Leavers') for a life of ecological imperialism ('Takers'). There was never a fork in the road, and never a momentous choice.

This insistence on evolutionary and developmental continuity is significant for the politics of de-growth in two ways. Firstly it precludes attributing notional blame to particular human groups (e.g. agriculturalists, industrial societies). It is intimates a more troubling view of ecological instability and the potential for crisis as intrinsic to human nature. Secondly it suggests that any attempt to peg technology and social regimes at a putative sustainable level might be run against the deep grain of the 'human career.' On the other hand, as Ophuls rightly insists, it certainly does not preclude a ceiling enforced by external constraints. *'Small and beautiful' was unlikely ever to result from a political choice. It is perfectly conceivable as a response to systemic collapse and resource constraints.*

2.3.2   Liberal modernisation and moral entropy

Ophuls argues that the separation of instrumental politics from normative community is proving to be the Achilles' heel of the liberal state, engendering a process of 'moral entropy'. By legitimating selfish pursuit of private interests, liberalisation has engendered demoralisation and the loosening of moral constraints and a pervasive 'inner lawlessness' (18) which requires ever greater external compulsion – Hobbes' Leviathan state. The liberal project of a politics without a binding moral code, a vision of the good life or any sense of the sacred, erodes the 'inner disposition to behave morally' with the inevitable result that people find ways to avoid, evade, subvert, delay or otherwise frustrate the operation of laws'

(2011:14).

Although replete with many classical references, the case for moral entropy is not buttressed with much empirical evidence. Certainly in a general sense the liberal market economy institutionalises the expression of individual self-interest and the myth of the self-regulating market derives much vigour from Mandeville's (1714) assertion that private vice went hand in hand with public virtue. More concretely, the institutionalisation of the wage-relation during the course of capitalist modernisation involved the erosion and legal demolition of older forms of solidarity, reciprocity and care rooted in place-bound communities and the ties of interdependence and mutual obligation associated with the traditional agrarian social order (Polanyi 1944).

However, to say that the law legitimated self-seeking behaviour is not the same thing as a generalised lawlessness. Rather the opposite has been the case. In *The Civilising Process* (2011b[1939]) Norbert Elias presented an enormous volume of empirical evidence attesting to the regularisation of behaviour according to abstract and formalised legal codes backed by the state (sociogenesis) in tandem with the internalisation of psychological restraints and the emergence of a less impulsive, personality structure governed by a more elaborate superego (psychogenesis). The latter was evident during the early modern period in the diffusion of more mannerly behaviour originating in the upper echelons of court society, and the elaboration of more stringent codes of social etiquette (Elias 2006). More significantly, over the period of several hundred years the increasing complexity of society and the lengthening chains of interdependence between individuals and groups beyond any face-to-face milieu, were accompanied first by a progressively more effective monopoly of violence on the part of the state, but over time by the internalisation of restraints against interpersonal violence. Internally at least, complex, modern, liberal societies are the most peaceable in human history.

For Elias the process of individuation, the shifting I/We balance in favour of the former (2011a), is inextricably bound up with these wider processes of psycho- and socio-genesis in societies which were integrating, becoming more interdependent and institutionally, culturally and socially more complex and sophisticated.

More recently in Jeremy Rifkin (2009) has made made the case for a process that seems, at first sight, to be the diametric opposite of Ophuls' 'moral entropy' , namely the process of empathic civilisation. He says:

> '...each new, more complex energy consuming civilization in history increases the pace, flow and density of human exchange and creates more connectivity between people. Increased energy flow-through [creates more complexity..which engenders] greater differentiation and individuation.... The differentiation process pulls individuals from the collective tribal 'we' to an ever more individual 'I'. Role differentiation, in turn, becomes the path to selfhood' (2009: 23)

...and selfhood facilitates the empathic recognition of other entities – different categories of people first of all, animals like us, species, ecosystems and even landscapes. Rifkin's is an account of progressive, moral elevation albeit achieved at the cost of entropic disorder elsewhere in the biosphere.

It is hard to reconcile accounts like these with Ophuls' notion of moral decline. However with regard to Elias, at least part of the apparent disagreement derives from the fact that Ophuls' notion of moral entropy conflates:

- the willingness to abide by formal and abstract rules, treating strangers and face-to-face familiars on an equal basis;
  with
- the affective ties of emotional identification and solidarity and a willingness personally, to bear the burden of mutual aid.

The former has become more pervasive with the routinisation of civic, legal and contractual norms associated with gesellschaftlich societies. The latter have certainly diminished and this underlies persistent debates about the extent to which state sponsored welfare actually hastens this process.[3]

2.3.3 *Individuation, Alienation and De-Growth*

In his account Ophuls also conflates (i) individuation as a concomitant of modernisation, a sociological process relating to the I/We balance and the average personality structure on the one hand, and (ii) individuation as the self-actualising

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3   This can be seen as a hollowing out of Andrew Dobson's (2006) 'thick cosmopolitanism' leaving as
    a residue Kant's thin, rootless, abstract humanism.

growth and development of individual people. This is very significant in relation to debates about de-growth and relocalisation because proponents invariably tap into a pervasive and long running critique of capitalism in terms of alienation and loss of community.

        Running from the young Marx, through William Morris and Kropotkin, the vision of integral (unalienated) processes of production and consumption, unfolding in the context of place-bound communities has become a staple counterpoint to the rootless anonymity and fragmentation engendered by capitalism. Linked to cross-cutting themes of human dignity, enjoyment, we-group identities, individual self-esteem and self-actualization, community cohesion and authentic aesthetic value, the same rejection of modernisation as rationalisation can be detected in the work of Ebenezer Howard, Élisée Réclus, Patrick Geddes, Lewis Mumford, Mahatma Gandhi, the appropriate technology movement of the 1970s, Schumacher, Ivan Illich, Colin Ward, the associative democracy of Paul Hirst, the bioregional manifesto of Kirkpatrick Sale, and numerous social-ecological writers such as the farmer and essayist Wendell Berry.

        Although coming from widely divergent traditions and differing greatly on many points of detail, what links all of these writers is the continuing insistence that the fracturing of humanity from the natural world has been linked systematically to the fracturing of human creativity and the abstraction of the creative process of production from reciprocal processes of consumption. In putting the parts back together, the image of a skilled craftsperson operating in the context of a series of concentric we-groups (family, co-workers, community, *bio-regional ecosystem*[4], national society, *biosphere*) provides a repeated rejoinder to the image of individualised, self-contained, rational individual (*Homo economicus*, or in the words of Norbert Elias *Homo clausus* (i.e. closed person --2011a).

        The script of the down-shifting artisan-farmer is familiar to all of us, and finds regular expression in popular culture. It is central to the construction of relocalization and de-growth as a route to the good life. But as Marx well understood, the alienated worker who is capable of experiencing existential anomie

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4   Ecological communities being we-groups in the sense of Aldo Leopold's (1949) essay 'The Land Ethic' .

was in fact a product of the very same process of modernisation. As Marshall Berman (1987) argues, only under conditions of modernity, as individuals were disembedded from the ascriptive ties of place and kinship, have questions such as 'Who am I?' and 'What could I become?' become meaningful (see also Beck 1992). Modern forms of collectivism rooted in this process of individuation are a long way from the collective unconscious of primitive societies in which individual sense of self is only partially and contingently separate from the 'We.' The individuated personality which finds expression in democratic politics, in liberal contract theory, in the neoclassical myth of *Homo-economicus* and in moral philosophy is not universal. S/he is the product of capitalist modernisation and the division of labour.

This is a paradox with major implications for anyone who dreams of going small and local. Any contraction of the division of labour in favour of a smaller scale, re-localized, less urbanized form of society, would have long-term consequences for the personality structure. With the loss of complexity, the steady-state society would also lose the over-bearing, self-sufficient, highly creative, and often mentally fragile sense of self that defines the modern Ego. It would recover a more muted individuality much more immersed in the binding, inter-woven sense of 'us'. As Norbert Elias (2011a) might have put it, the I/We balance would surely move in favour of the latter. Ophuls' case for Jeffersonian localism as making a virtue of the imminent necessity of de-growth should be more accurately presented as:

- a reduction in social complexity and the division of labour
- more muted individuation at the level of the average personality structure and a shift in the I /We balance in favour of the latter
- significantly less anomie, alienation and mental illness combined with greater opportunities for most individuals to express their nature as human beings in conscious creative activity – opportunities that could be deliberately maximised under the aegis of a Platonic system of (kinaesthetic, aesthetic and artisanal as well as academic) education or *Paideia* (Ophuls 2011: CH5).

2.3.4 Violence and the resilience of liberal values and behaviour?

That doesn't sound too bad. Perhaps the stick does need to be bent back the other

way a little. The re-emergence of a less individuated personality structure might be not only be unavoidable but even a positive development. After all, individualisation has been an important driver in the emergence of consumer society. To the extent that the neoclassical every-man, *Homo economicus* with his/her insatiable appetite for 'utility' (i.e. stuff) has any basis in reality, s/he is a product of psychological individuation.[5]

However small is not necessarily beautiful in every way. In *The Civilizing Process* Elias (2011b [1939]) presented a great body of evidence showing the extent to which violence within states has diminished markedly, and progressively over the last 1000 years in the West. This process of pacification was the blind, unintended consequence of two interweaving dynamics:

i.   the internalisation of constraints at the level of psychological habitus and personality structure,

ii. the extension of the monopolies of violence and taxation associated with progressively more pacified modern states.

The intensifying web of relations between often-far distant but interdependent groups or individuals rewarded affective restraint and created increasing pressures against volatile, emotional and reactive forms of behaviour. Critical narratives about the violence of the modern state are in substance off the mark, but the increasing salience of such critiques is itself evidence of a more pacific structure of feeling. States do use violence and coercion, but the more effective and hegemonic the state (after Gramsci) the more such threats of violence recede from the front-stage of social life. As the monopolies become more effective, external constraints are supplemented and often supplanted by restraints from within. As a result the level of civility and passivity in our every day lives is enormous compared to the violence, volatility and uncertainty of less pacified times. We expect peaceful interactions as a matter of course. However these expectations can only be satisfied to the extent that the state remains an effective monopolist of violence. And at the same time, violence *between* states has increased in potential and actuality, with modern warfare and weapons.

5 On the link between the process of individuation and modernity see Elias (2011a) *and* Ulrich Beck (1992, part II). On individuation and consumer society see Daly and Cobb (1990) and Curtis (2002.)

The implication of Elias's work (and more recently Steven Pinker 2011) was very much that, at least internally, modern complex societies are less violent than preceding agrarian regimes and even more so the face-to-face societies of our hunter-gatherer and horticultural past. The notion of an arc of pacification associated with increasing social complexity flies in the face of what was for many decades an anthropological common sense. Into the breach of a debate started by Hobbes, early 20th century anthropology sided firmly with Rousseau in presenting hunter-gathers very much in the image of the Romantic depiction of the 'noble savage'. Margaret Mead's monographs on Somoa and New Guinea established a template which proved very enduring in the anthropological imagination – connecting a free, easy sexuality among primitive societies with a more generally pacific social life; with the corollary that warfare was a pervasive invention of more complex societies (1940). However in recent years Mead has been subject to compelling critique by Derek Freeman (1999). Others such as Keeley (1996) and Haas (1990), Rosen (2004), Groebel (1989) and Chagnon (1988) have painted a graphic picture of 'war before civilization' which confirms the logic and empirical substance of *The Civilizing Process*.

Environmentalists habitually critique the individualism of modern societies and it is certainly in the frame with regard to the dynamics of consumer society. However, it seems clear that the process of psychological individuation, on the back of the division of labour, is implicated in many of the social and cultural features of modern societies which are generally accepted unthinkingly as uncontroversial facets of progress – notably pluralism, social liberalism, cultural cosmopolitanism and democracy (see below). The division of labour not only drives the process of individuation, it also engenders new types of social solidarity and mutualism based on the embrace of difference (what Durkheim called 'organic solidarity'). It is only in complex, individuated, internationalised societies that Kant's cosmopolitan ethic becomes even comprehensible.

Tönnies famously characterised the process of modernisation in terms of a shift from 'gemeinschaft' to 'gesellschaft' – from place-bound 'communities of fate' to to more mobile, communities of choice. Cosmopolitan, liberal, gesellschaftlich societies emerged on the back of a one-off bounty of fossil fuel and are synonymous

with the ever faster circulation of people, information and commodities. It is hard to conceive of a 'low energy cosmopolitanism' (although see Dobson and Hayes 2008). 'Liberalism in one village' seems just as oxymoronic as Lenin's 'socialism in one country' (Quilley 2011).

We may be happy to see the back of *Homo economicus* but if individuation is also implicated in patterns of psychic restraint that characterize complex industrial societies, then then the social and political life of relocalized societies is likely to be less predictable, less pacific and characterised by greater volatility and less restraint than we currently take for granted.

Looking down from the unstable peak of Mount Impossible, steady-state valley looks safe and attractive. But there is a great deal of evidence that in the long term, smaller-scale societies may be associated not only with less individuation, but less psychological restraint and possibly greater inter-personal violence. In the context of severe resource shortages and populations coming down from levels way over local carrying capacities, a shortage also of psychological restraint and cosmopolitan values intimates a future more brutal than bucolic. From this perspective the future politics of our valley are unlikely to resemble our own. If we are lucky we might hope for some kind of communitarian localism, perhaps modelled on a Jeffersonian understanding of democracy (without slaves). Alternatively a reversion to some kind of neo-Medieval authoritarianism seems to be a definite possibility. Kunstler's peak oil novel envisages a combination of both. A low-energy cosmopolitanism seems to be the least likely, if most desirable, outcome.

2.3.3 Having and eating cake: 'Bali with electronics'

Ophuls ' thesis has become a byword for imminent ecological scarcity and his vision of material life in theJeffersonian republics of the future testifies to this austerity.

> 'Our future way of life will be of necessity more simple, frugal local
> agricultural diversified and decentralised than at present. Our task must be to
> make a virtue of this necessity'(2011: 138)

But perhaps recognising that the austere lifestyle of the Amish (181,186) is not likely to be palatable to people brought up with all the mod cons of consumer society, Ophuls frequently alludes to the possibility of salvaging the best features of our

global civilisation and maintaining key technologies and systems.

> 'Future generations should also be able to draw on a variety of renewable energy sources and sophisticated technologies to support the most useful and desirable aspects of of economic development such as modern dentistry and communications ...'(178/9)

Although rightly pointing out that the 'main unknown is how much of a technological base we can expect to retain when the energy subsidy ...dwindles' he speculates that we might look forward to an ecological civilisation or 'Bali with electronics'. For reasons elaborated below, wishful thinking of this kind is highly problematic.

3. **Degrowth and societal choices: Constraints and trade-offs in the shape of the Improbable Valley**

The degrowth movement which has emerged in France over the last fifteen years (Latouche, 2004; Fabrice, 2008; Fournier 2008)) clearly draws upon well-established green and left critiques of growth (Scot Cato 2006; Douthwaite, 1992; Trainer 2002) which are rooted ,in turn, in the 'limits to growth' tradition of the 1970s and its codification in ecological economics. Like the original Meadows report, 'decroissance' coincides with a geo-political conjuncture of economic and ecological crisis which has shaken taken-for-granted assumptions about economic growth and progress. Unlike in the 1970s, degrowth has also coincided with a popular movement for relocalisation/Transition with which it has a natural affinity. Because the 'solutions' of both the social-democratic left and the neo-liberal right have been found wanting, there seems to be a real space for thinking the unthinkable. As Fournier argues the degrowth movement's real contribution has been to link 'escaping from the economy' to 'the foregrounding and articulation of citizenship and democracy' (2008: 529). However despite the fact that the term 'decroissance' was formulated in the translation of Georgescu-Roegen's seminal book on the entropic basis for economics (1971 – Fabrice, 2008: 24), the degrowth literature avoids the very difficult problem of the extent to which this articulation is intrinsically dependent on energy throughput. Similarly with Transition, much of the language and the strategic discourse of relocalisation as 'energy descent' derives pretty directly from Howard and Elizabeth Odum's *A Prosperous Way Down.* But it

ignores a truth that emerges clearly from Odum's 'energy hierarchy' which is that every social form, process or artefact is associated with an energy signature or 'transformity.' It cannot be assumed that liberal-democratic and cosmopolitan institutions, attitudes and values can be transposed from into a societal energy regime 'lower down' the energy hierarchy. Here, I want to consider degrowth and biophysical limits not as political ideas but as features of a broader, long-term social-developmental process.

In the literature there is a common assumption that the politics of degrowth will allow the values and agendas of ecological integrity, social inclusion, environmental justice, peace and development in the global south, to be reconciled (Martinez-Alier et al 2010). Emerging in the aftermath of the economic crisis of 2008,it was argued that recession and economic contraction should be seen as an opportunity for radical transformation. Echoing Ophuls, Kallis for instance argues that sustainable degrowth is not only an 'inevitable hypothesis but also a potent political vision that can be socially transformative' (2011:873). But unlike Ophuls, there is very little recognition of the complex constraints and trade-offs between societal metabolism and the broader social and cultural fabric. There is no sense, for instance, that democracy or social liberalism come with a thermodynamic price tag.

So how is it possible to start unravelling the interactions between economics, politics, psychology and culture under conditions of de-growth? It seems clear from the above discussion that any trajectory of metabolic contraction would have implications for every aspect of society, right down to the structure of personality and levels of inter-personal violence. The first thing to observe is that there are likely to be many different 'improbable valleys' i.e. equilibrium configurations differing with regard to the total population, demographic structure, technological level and material/energy throughput etc. The overall scale of human activity is associated in complex and non-linear ways with a wide range of parameters and phenomena, including:

- population size,
- the level of scientific and technological capability,
- the level of technical innovation,
- energy throughput,

- material throughput,

- the extent of technical-social division of labour,

- the extent of individuation,

- the prevalence of restrained, individuated personality structures,

- the effectiveness of state institutions,

- the scale and intensity of interdependencies mediated by economic exchanges,

- cultural diversity,

- democratic voice and traction of minority and marginalised groups,

- the strength and traction of liberal-cosmopolitan values and behaviour,

- the level of interpersonal violence,

- the level and intensity of inter-state violence.

The characteristics of any particular society emerging from a process of radical transition will depend upon in which of the many conceivable 'improbable valleys' it comes to rest, but also the speed and trauma associated with the transformation.

First of all, our valley could be home to a stable population of varying size. Whilst there is some consensus that 9 billion plus is not sustainable in the long run, it is not clear how quickly global population could come down without catastrophic violence or societal implosion. Clearly the maximum size of a population at equilibrium would also be a function of technology and throughput.

From the discussion above, it seems fair to say that individuation is a function of social complexity and the division of labour, and therefore of energy and material throughput. From Elias there is also a strong case to be made that any significant decline in the overall scale of economy, the intensity and complexity of social life, would be accompanied by a process of 'decivilisation' (Mennell 1990), a tilting of the I/We balance in favour of the latter, a diminishing of the socialised restraints on impulsive behaviour, greater volatility and quite possibly a marked increase in the level of interpersonal violence. None of this is incompatible with the utopian-Romantic assertion that smaller scale, gemeinschaftlich communities, though associated with greater levels of fraternal obligation (Ophuls 2011:191), would

provide more opportunities for more people to express more fully their creative and social human nature.

Cosmopolitan diversity is a function of the circulation of goods, people and information, and so the overall scale of the economy. The dynamic, multicultural mosaic and the melting pot of continual migration are bound up with ubiquitous cheap energy which allows for a continual replenishing of the reservoirs of ethnic and cultural difference as well as state interventions to smooth over the fracture lines between communities. Any radical reduction in that circulation would tend to reduce diversity and move political and social life towards more communitarian forms. Combined with the contraction in the scope and capacities of the state, such a development would have clear implications for the politics of diversity. In this context, rapid, crisis-driven change would be more likely to engender communal violence.

More generally, the enfranchisement of a succession of groups marginalised by gender, race, religion, sexuality and disability, the sine qua non of democratic liberal states, should be seen as an investment in social-institutional complexity made possible by the availability of cheap energy (see Tainter 1990). Any assumption that such social and institutional forms would survive the transition to a low-energy regime should be seen as highly questionable.

With regard to the economy, there is clearly a strong, positive relationship between science, technology and innovation on the one hand, and economic/demographic scale on the other. Without specifying the level of technology it is impossible to say anything meaningful about the scale of economy relative to the biosphere. None of the proponents of de-growth are willing to countenance a world without the internet or antibiotics and even Ophuls concedes that old-time Jeffersonians might still need 'modern dentistry'. But any given technology will be associated with a minimum division of labour and overall material/energetic throughput. George Stevenson developed and manufactured steam locomotives in the context of a national[6] coal industry and a population of 30 million. INTEL microchips have been developed on the back of global technical and innovation systems and serving a global market of hundreds of millions of people.

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6   But not 'nationalised'!

We still have no clear idea about how much room for manoeuvre there is, if any, between the maximum scale of global economy compatible with biosphere integrity, and the minimum scale conducive to a given technology-set or desired level of cultural diversity.

Even from a strictly evolutionary-ecological perspective, the trade-offs are highly complex. For instance, scientific-technological stasis might be a precondition for ecological sustainability but it also may circumscribe the human capacity to respond to future threats to the biosphere. In *The Revenge of Gaia* James Lovelock alludes to the importance of sustaining technological complexity and a science base, arguing that such a 'Gaian civilization' might in the end play a positive role in safeguarding the biosphere from devastating external threats such as a potentially terminal asteroid impact.

Finally, for all that we can identify these parameters, it is certain that they do not vary and interact in a linear fashion. We have good historical evidence of a relationship between the I/We balance and the process of individuation, and the increasing energy throughput associated with economic activity. But we have no historical examples of this process moving in the reverse direction. We don't know to what extent the 'superstructure' of liberal, cosmopolitan ideas and values might carry over and endure in the context of much smaller societies with attenuated divisions of labour

So what does all this say about getting down to that Improbable Valley? The prime directive of ecological economics (e.g. Daly & Farley 2004) is that market efficiency should be subordinate to distribution (justice) which should be subordinate to scale (ecology). The defining rationale of the steady-state economy is that the throughput of energy and materials and the spatial extent of human activities should be stabilised and gradually reduced. In short, the economy of our Improbable Valley must be significantly smaller than that of Mount Impossible. But the smaller our Valley:

- the more likely its political and social culture will be illiberal and marked by higher levels of interpersonal violence,
- the more difficult it will become to sustain the institutions of science and build on the existing stock of scientific knowledge. There will be a

threshold below which the institutions of science will ossify and even collapse, with the resulting vacuum filled by competing religious sources of meaning and truth,

- the slower the rate of technological progress.

Beyond a certain threshold, a steady state economy will lose cascades of technological and manufacturing capability. Knowing in theory how to build a silicon chip is a long way short of real manufacturing capability which tends to reside as much in the organisational memories, routines and tacit knowledge of corporations as in books. If the Valley stops building certain classes of artefacts, eventually (perhaps quickly) knowledge of how to produce them will also disappear.

On this basis , it would be a good idea for ecological economists, peak oil commentators and collapse theorists to try and work out if there is any room for manoeuvre between the maximum scale of economic flows compatible with the long term integrity and resilience of the biosphere, and the minimum scale for a moderately liberal, science based civilisation retaining a capacity for continuing technical innovation (albeit at a slower rate) and a broad based manufacturing capability.

REFERENCES:

Appiah,KA (2006) *Cosmopolitanism: Ethics in a World of Strangers* (New York: Norton)

Bailey I Hopkins R Wilson G (2010) 'Some things old some things: the spatial representations and politics of change of the peak oil relocalisation movement' *Geoforum (41): 595-605*

Barry, J. and Quilley S. (2008) 'Transition Towns: 'Survival' 'Resilience' and the Elusive Paradigm Shift in Sustainable Living' in *Eco-Politics Online*, 1 (2): 12–31.

Beck, U. (1992) *Risk Society* (London:Sage)

Berman, M. (1987) *All that is Solid Melts to Air* (London: Verso)

British Journal of Sociology [BJS] (2006) 'Special Issue on Cosmopolitanism' 57(1)

Chagnon, N.(1988) 'Life Histories, Blood Revenge and Warfare in a Tribal Population' *Science* 239 No. 4843 (Feb 26 1988): 985-992.

Curtiss, A. (2002) [Director] *The Century of the Self* BBC TV Documentary Series (London: BBC)

Daly, H. and Cobb J.B. (1990) *For the Common Good* (London: Green Print)

Daly, H. E. and J. C. Farley (2004) *Ecological Economics: Principles and Applications*. (Washington DC: Island Press)

Davies, P.(1992) (Ed.) *The New Physics* (Cambridge University Press)

Diamond, J. (2006) *Collapse: How Societies Choose to Fail or Survive (*Harmondsworth: Penguin)

Dobson, A. (2006) 'Thick Cosmopolitanism' *Political Studies* 54: 165-184

Douthwaite, R. (1992), *The Growth Illusion: How Economic Growth has Enriched the Few, Impoverished the Many and Endangered the Planet* (Dublin: Lilliput Press)

Duncan,R.C. (2001) 'World Energy Production, Population Growth and the Road to the Oldulvai Gorge' *Population and Environment* 22(5): 503-522

Elias, N.(2011a [1991]) *The Society of Individuals.* Collected Works, (Dublin: UCD Press)

-- (2011b [1939]) *The Civilizing Process*, rev. edn, Oxford: Blackwell (*On the Process of Civilisation*, Collected Works, vol. 3, forthcoming).

--(2006) *The Court Society*. Collected Works, vol. 2 (Dublin: UCD Press)

Erb, K-H., et al (2009) 'Analyzing the global human appropriation of net primary production — processes, trajectories, implications. An introduction' *Ecological Economics* 69: 250–259

European Journal of Social Theory [EJST] (2007) 'Special Issue on Cosmopolitanism' eds Fine, R. and Boon, V. 10 (1).

Fabric,F. (2008) 'Conceptual roots of degrowth' Paper given at First international conference on Economic De-growth for Ecological Sustainability and Social Equity, Paris, April 18-19th 2008 Available from. http://events.it-sudparis.eu/degrowthconference/themes/R%E9sum%E9s/Flipo%20F%20Degrowth_18apr08_EN.pdf – Accessed 27th Feb 2012.

Flannery,T (2001) *The Future Eaters. An Ecological History of the Australasian Lands and People.* (New York, George Braziller)

Foley,R. (1988) 'Hominids, Humans and Hunter-gatherers: An Evolutionary Perspective' in Ingold,T et al (eds) *Hunters and Gatherers Vol. 1, History, Evolution and Social Change* (Oxford: Berg)

Foley, J.A. Monfreda, C. Ramankutty, N. and Zaks, D. (2007) 'Our share of the planetary pie' *Proc. Natl. Acad. Sci. U.S.A*. 2007 July 31; 104(31)

Fournier,V (2008) 'Escaping from the economy: the politics of degrowth' *Int. J. Sociology and Social Policy* 28(11/12): 528-545.

Freeman, D.(1999) *The Fateful Hoaxing of Margaret Mead: A Historical Analysis of Her Samoan Research* (Boulder, CO: Westview Press)

Fry, D.P.(2005) *The Human Potential for Peace: An Anthropological Challenge to Assumptions About War and Violence* (Oxford University Press)

Georgescu-Roegen, N. (1971 *The Entropy Law and the Economic Process* (Harvard University Press)

Goudsblom, J. (1992) *Fire and Civilisation (*London: Allen Lane)

-- (2002) 'Introductory Overview: The Expanding Anthroposphere', in De Vries, B. and Goudsblom, Johan, *Mappae Mundi: Humans and their Habitats in Long-Term Ecological Perspective*. (Amsterdam: Amsterdam University Press)

Groebel, J. (1989) (Ed) *Aggression and war; their biological and social bases* (Cambridge, Cambridge University Press)

Haas, J. (Ed)(1990) *The Anthropology of War* (Cambridge Cambridge U.P)

Habermas,J (1998) *The Inclusion of the Other: Studies in Political Theory* (Cambridge MA: MIT Press)

Haller,W. (2007) 'Cosmopolitans and Locals in World Society; Is there a European Exceptionalism?' Paper presented to the 2007 CRONEM conference 'Nationalism and National Identities Today', University of Surrey, June 12-13th

Hansen, J. (2010) *Storms of My Grandchildren: The Truth About the Coming Climate Catastrophe and Our Last Chance to Save Humanity* (Bloomsbury)

Harris,J.W.K. (1985) 'Fire and its Roles in Early Hominid Lifeways' *African Archaeological Review* 3: 3-27

Hayes, D and Andrew Dobson (2008) 'A politics of crisis: low-energy cosmopolitanism', *Open Democracy* 26 October
http://www.opendemocracy.net/print/46561 – Accessed 1 January 2010.

Heinberg, R. (2005) *The Party's Over: Oil War and the Fate of Industrial Societies*, 2nd edn (Forest Row: Clairview).

-- (1995) 'The primitivist critique of civilisation' –
http://www.primitivism.com/primitivist-critique.htm (accessed 20 January 2009)

Held,D. (1995) *Democracy and the Global Order* (Cambridge: Polity Press)

Homer-Dixon, T. (2006) *The Upside of Down: Catastrophe, Creativity and the Renewal of Civilization* (Washington DC: Island Press)

-- (1991) 'On the Threshold: Environmental Changes as Causes of Conflict' *International Security* 16(2),76-116.

-- (2011) *Unconventional Wisdom: Economies Can't Just Keep on Growing.* Jan 2011. Available from http://www.homerdixon.com/2011/01/01/unconventional-wisdom/ -Accessed 27th Feb 2012.

Hopkins, R. (2008) *The Transition Handbook: From Oil Dependency to Local Resilience* (Totnes: Green Books).

IMF (2011) *World Economic Outlook Tensions from the Two-Speed Recovery Unemployment, Commodities, and Capital Flows* (Washington: IMF)

Jensen, D.(2006) *Endgame Vol 1: The Problem of Civilisation* (Seven Stories Press)

Kallis, G. (2011) 'In Defence of Degrowth', *Ecological Economics* 70:873-880.

Kaplan,R. (1994)'The Coming Anarchy. How scarcity, crime, overpopulation, tribalism, and disease are rapidly destroying the social fabric of our planet' *The Atlantic Magazine,* Feb 1994

Kauffman,S. (1996) *At Home in the Universe: The Search for the Laws of Self-Organization and Complexity* (Oxford University Press)

Keeley, Lawrence H. (1996) *War Before Civilization: the Myth of the Peaceful Savage* (Oxford, OUP)

Klare, M.T. (2001) *Resource Wars: The New Landscape of Global Conflict* (NY: Metropolitan)

Kreche, S. (2000) *The Ecological Indian: Myth and History* (W. W. Norton & Company)

Kunstler, J.H.(2009) *A World Made by Hand* (Grove Press)

Kunstler, J.H. (2006) *The Long Emergency: Surviving the Converging Catastrophes of the 21st Century* (Grove Press)

Lash, S. and Urry, J.(1993) *Economies of Signs and Space (*London: Sage)

Latouche, S. (2004) '[Degrowth Economics: Why less should be so much more](#)' *Le Monde Diplomatique*. Available from http://mondediplo.com/2004/11/14latouche - Accessed 27th Feb 2012.

Leopold, A. (1949) 'The Land Ethic', p 201-226 in *A Sand County Almanac* (Oxford University Press)

Levy, M.A. 1995. "Is the Environment a National Security Issue?" *International Security* 20, No. 2 (Fall 1995)

Livi-Bacci,M.(1992) *A Concise History of World Population* (Oxford: Basil Blackwell)

Lovelock, J. (2007) *The Revenge of Gaia (*London: Penguin)

-- (2009) *The Vanishing Face of Gaia: A Final Warning*. London: Allen Lane.

Loyal, S. and Quilley, S. (2005) 'Eliasian sociology as a "central theory" for the human sciences', *Current Sociology* 53 (5): 807–28.

Lynas, M. (2007) *Six Degrees: Our Future on a Hotter Planet*. New York: Harper.

Mandeville, B. (2010 [1714]) T*he Fable of the Bees: Or, Private Vices, Publick Benefits: With an Essay On Charity and Charity-Schools* (Nabu Press)

Martin, P. and Klein,R. (1984) (eds) *Quaternary Extinctions* (Tuscon: University of Arizona Press)

Martin, J. (2007) *The Meaning of the Twenty-First Century (*London: Eden Project)

Martinez-Alier, J., Pascual,J., Vivien, F.D., Zaccai,E. (2010) 'Sustainable de-growth: Mapping the context, criticisms and future prospects of an emergent paradigm'

Ecological Economics 69(9): 1741-1747.

Mason, K. & Whitehead, M. (2011) 'Transition Urbanism and the Contested Politics of the Spatial Practice' *Antipode* **(In press)**

Mathews, J.T. 1989. "Redefining Security," *Foreign Affairs* 68, No. 2 (Spring 1989): 162-177.

McCarthy, C. (2007) *The Road* (London: Picador)

Mead, M. (1940) 'Warfare is Only an Invention – Not a Biological Necessity' in Barash, D. P. (2000) *Approaches to peace ; a reader in peace studies* (New York : Oxford University Press).

Megarry, T.(1995) *Society in Prehistory. The Origins of Human Culture* (London: Routledge)

Mennell, S. (1990) 'Decivilising processes: theoretical significance and some lines of research', *International Sociology*, 5 (2): 205–23.

Odum, H. (2007) *Environment, Power and Society for the 21st Century* (NY: Columbia University Press)

Odum, H. and Odum, E. (2001) *A Prosperous Way Down: Principles and Policies* (University of Colorado)

Ophuls, W. (1977) *Ecology and the Politics of Scarcity* (San Francisco: Freeman)

– (1997) *Requiem for Modern Politics* (Boulder: Westview)

– (2011) *Plato's Revenge. Politics in the Age of Ecology* (London: MIT)

Pinker, S. (2011) *The Better Angels of Our Nature: The Decline of Violence in History and its Causes* (London: Allen Lane)

Pogge, T. (2002) 'Cosmopolitanism: A Defence' *Crit. Rev. of Int. Soc. and Pol. Phil.*5(3) 86-91

Polanyi, K. (2001[1944]) *The Great Transformation* (Beacon Press)

Pyne, S.J. (2001) *Fire A Brief History* (Seattle: University of Washington Press)

Quilley, S. (2004) 'Social development as trophic expansion: food systems, prosthetic ecology and the arrow of history', *Amsterdam Sociologisch Tijdschrift* 31 (3): 321–48.

-- (2009) 'Transition skills: skills for transition to a post fossil-fuel age', in Arran Stibbe (ed.) *The Handbook of Sustainability Literacy: Skills for a Changing World (*Totnes: Green Books)

--(2011) 'Entropy, the anthroposphere and the ecology of civilization: An essay on the problem of 'liberalism in one village' in the long view' *The Sociological Review*,

Vol. 59, 65-90.

-- (2012) *Resilience through Relocalisation: Ecocultures of Transition?* Ecocultures Working Paper, University of Essex.
http://www.ecocultures.org/category/author/stephen-quilley/

Quinn, D. (1995) *Ishmael (*New York: Doubleday)

Rosen, S. (2004) *War and Human Nature* (Princeton University Press)

Rawles, J. W. (2009) *How to Survive the End of the World as We Know It: Tactics, Techniques, and Technologies for Uncertain Times (*New York: Plume)

Rees, M. (2004) *Our Final Century: Will The Human Race Survive the Twenty-First Century (*London: Arrow)

Rifkin, J. (2009) *The Empathic Civilization* (Cambridge: Polity)

Rockström J. et al. (2009) A safe operating space for humanity. *Nature* 461, 472-475 (24 September 2009) | doi:10.1038/461472a; Published online 23 September 2009.

Scarrow, A. (2007) *Last Light (*London: Orion)

Schneider, F., Kallis,G., and J. Martinez-Alier (2010) 'Crisis of Opportunity? Economic degrowth for social equity and ecological sustainability' *Journal of Cleaner Production,* Vol. 18: 511-518.

Scott-Cato, M. (2006) *Market, Schmarket: Building the Post-Capitalist Economy* (Cheltenham: New Clarion Press)

Seyfang, G. (2009) Green Shoots of Sustainability: The 2009 UK Transition Movement Survey. (Norwich: University of East Anglia)

Stringer,C and McKie,R (1996) *African Exodus* (London: Jonathon Cape)

Tainter, Joseph A. (1990) *The Collapse of Complex Societies*. Cambridge: Cambridge University Press.

Theroux, P. (2009) *Far North (*London: Faber)

Tönnies,F. (2001 [1887]) *Community and Civil Society* (Cambridge Texts in the History of Political Thought) (Cambridge University Press)

Trapese Collective (2008) *The Rocky Road to Transition: The Transition Towns movement and what it means for social change (*Trapese Collective)

Trainer, T. (2002), ''Recognising the limits to growth: a challenge to political economy'' *Journal of Australian Political Economy*, Vol. 50 No. 2, pp. 163-78.

Ullman, R.H. 1983. "Redefining Security," *International Security* 8, No. 1 (Summer 1983): 129-153.

Werbner, P. (2008) (ed.) *Anthropology and the New Cosmopolitanism. Rooted, Feminist and Vernacular Perspectives* (London: Berg)

Williams, M. (2006) *Deforesting the Earth, From Prehistory to Global Crisis. An Abridgement* (University of Chicago)

Wilson, R. C.(2009) *Julian Comstock: A Story of Twenty-Second-Century America*. (New York: Tom Doherty Associates)

World Bank (2005) *Global Economic Prospects* (Washington: IBRD)