

TRANSITION SKILLS

skills for transition to a post fossil-fuel age

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Production of cheap, abundant fossil fuels is peaking and will soon be withering away... Around the world, numerous sovereign governments are close to becoming dysfunctional – likely with very bad consequences. We are pumping so much of the wrong kinds of gases into the atmosphere that the poles are melting, the seas are rising, the land is drying out and some day soon this planet is going to be very tough to live on. (Whipple 2009)

The twenty first century is going to be different – perhaps more so than most of us had realized. Official commentaries habitually focus on progress – the challenge of matching our increasing scientific understanding of the natural world and the continuing flow of new technologies, with corresponding improvements in our social and political arrangements. But what if change involves systemic failures and geopolitical conflict? What if the techno-economic escalator of development runs into the sand? What if change involves a *decrease* in the complexity of societies and economies? What if globalization falters and is replaced by a more visceral relocalization of human activity? What if the sum of human knowledge, represented by the institutions of modern science, actually begins to shrink? This is the scenario underpinning the peak oil movement and which James Kunstler, in *The Long Emergency* and his recent novel *World Made By Hand*, has elaborated most cogently.

In this chapter I explore this vista of serious rupture and discontinuity and its implications for sustainability education. I provide an overview of the kind of ‘transition skills’ that may become relevant to the survival and well being of our children and their communities over the coming decades. I conclude by suggesting ways in which such skills might be taught along side traditional academic disciplines in a variety of learning contexts.

Transition implies radical discontinuity and upheaval

There have always been tensions at the heart of the concept of sustainability: between the ecological limits to growth and the irrefutable demands for social development in the global south; between optimistic Cornucopians trumpeting the possibilities of ecological modernization and pessimistic Malthusians warning of overshoot. Teachers and lecturers attempting to green their institutions and push the issue of sustainability into both curricula and institutional practice, constantly brush up against these ambiguities and the diverging scenarios that they engender.

Advocates of ‘weak’ sustainability and most non-ecological economists tend to assume that the sustainable re-adjustment of the relationship between human economics and global ecology can take place over a relatively long time-period. They share an optimistic faith in technology and assume that, with the appropriate regulatory reforms and institutional innovations, the sustainable re-orientation of national and global economies can be achieved

with a minimum of disruption. The assumption is that ‘ecological modernization’ is *continuous* with the trajectory of twentieth century industrialism and consumerism.

In contrast, the Transition (see Hopkins 2008) movement is predicated on abrupt discontinuity arising from two factors:

1. The reality of rapid and potentially catastrophic **climate change**.
2. The reality of **peak oil** – an imminent, permanent short fall in oil supply, increasing year on year with massive geo-political, economic and social consequences.

From a ‘peak oil’ perspective, the coming energy crunch will send globalization spiralling into reverse, resulting in a massive reduction in global and national flows of people, goods and information (see Kunstler 2005, 2008). In the long term the effect of this will be to re-create much more localized, ‘bio-regional’ patterns of economic production and consumption. Anticipating global systemic failures, and taking profound socio-economic upheaval, state-failure and (implicitly) conflict as likely, the movement focuses on enhancing the **resilience** of local communities (see Barry & Quilley 2008). Although clearly supportive of mainstream efforts to reduce emissions and to develop more eco-cyclical business models, Transition eschews party politics. Although avoiding the survivalist discourse of many peak oil forums, *The Transition Handbook* does refer to ‘burn out’, ‘collapse’ and ‘overshoot’ as scenarios that are likely to play out in the absence of a ‘planned and urgent energy descent’ (Hopkins 2008: 49). And whether the end of the current global order takes the form of a planned energy descent or a chaotic implosion, ‘the time for seeing globalisation as an invincible and unassailable behemoth, or localisation as some kind of lifestyle choice, is over (p.15)... Small is inevitable’ (p. 68). But at the same time Transition transforms the survivalist discourse of the North American peak oil movement, arguing that positive, up-lifting visions of a more convivial post-oil future are more likely to induce active participation and behavioural change: ‘the Transition approach [demonstrates that] the future with less oil could be preferable to the present’ (p. 53); ‘Our best chance of a successful collective transition will not come from presenting people with the possibility of [collapse/disintegration] scenarios’ (p. 49).

So Transition is less about politics per se than enabling community self-reliance through relocalization – initiatives which ‘pre-figure’ or anticipate what is seen to be an inevitable reversal of globalization. Awareness of peak oil, climate change and now the global economic crisis is driving ‘solutions-oriented’ experiments in sustainable community. Focusing as it does on very practical issues such as skills/re-skilling, food, energy, transport, land use, cultivation and above all community building, Transition is a form of D.I.Y. geared towards the bottom-up transformation of local communities, preparing them for ‘the long emergency.’

Education for Upheaval

For those who are happy to take the continuity in economic and political life as an article of faith, the agenda of sustainable education is relatively unproblematic. Advances are being made, year on year, with dozens of new sustainability-related courses, impressive green buildings and sustainable campus management systems. However, after the roller coaster year of 2008, the spectre of *discontinuity* – geo-political conflict, social upheaval and systemic failure – seems suddenly plausible and for seasoned peak oil pundits, more than likely.

Transition educators, working within mainstream institutions find themselves in an odd and sometimes awkward position. We find ourselves wearing two hats, and operating with two partially incompatible discourses – one of continuity and development and the other of rupture, discontinuity and survival.

So if we do need to hedge our bets, then what kind of skills should we be thinking about for the long emergency? How do we educate for upheaval? Moreover, how do we combine Transition skills with mainstream sustainability education?

Two central and related features of the post-petroleum age will be the reversal of twentieth century mechanization and automation and the collapse of energy intensive farming and food provisioning systems. The brave new world of localized production and consumption will be, as Kunstler puts it, a ‘world made by hand’ – craft operations dependent on skilled artisans using hand tools combined with a resurgence of animal power (draught horses, oxen etc) and the intensive use of unskilled human labour. Losing our fossil fuel slaves will certainly make life harder in many ways. But Kunstler, Heinberg and Hopkins are not alone in discerning the possibility of a new era of human dignity and self-worth rooted in vibrant, participative and self-sufficient local communities.

Taken seriously, this scenario suggests that we need to develop a completely different kind of education. The system that we have developed over the last one hundred years is designed to develop abstract, cognitive skills and forms of theoretical understanding which equip students to take up ever more specialized functional niches in the economy. Developments in education have run parallel to the steadily advancing complexity of economy and society – what sociologists refer to as the ‘division of labour’. Workers in all areas of the economy have become ever smaller and more dedicated cogs in an increasingly complex economic machine. Underlying these changes in classical engineering and manufacturing employment as well as the proliferating service economy, has been the rapid and totally pervasive tendency towards automation and mechanization. And driving the entire process has been access to unlimited, cheap fossil fuel energy.

The downside of this economic-educational regime has been the systematic downgrading of artisanal and craft skills in manufacturing, in agriculture and even in the service, leisure and domestic sectors. With the reliance on black box technologies and expert systems there has been a corresponding erosion of folk knowledge and expertise. Individuals and communities have lost the power to repair and maintain the material artifacts upon which they depend, they have forgotten horticultural and domestic skills and ‘know how’ built up and passed down between generations over decades, centuries and millennia. And in adapting to the complexity and hyper mobility of the modern world, individuals have become cut adrift from extended family and community, depending to an ever greater extent on the complex systems of state and society to guarantee health and well being.

So what kind of skills and aptitudes should we try to incorporate into a Transitional education system? New Zealand Transitioner Michael O’Brien (2009) came up with a list of two hundred artisan skills that were required to make a Victorian town function effectively. The few that I list here give some indication of the range.

Woodland Crafts. Coppicers, hurdle makers, rake makers, fork makers, besom makers, handle makers, hoop makers, ladder makers, crib makers, broaches and peg makers, clog sole cutters, bodgers, charcoal burners, oak basket makers, trug makers, stick and staff makers, field gate makers, willow basket makers, net makers.

Building crafts. Stone masons, joiners, roofers, floor layers, wallers, thatchers, slaters, lime burners, paint makers, glass blowers, glaziers, stained glass artists, mud brick makers, tile makers, chimney sweeps, plumbers, decorators, bridge builders, French polishers, sign writers.

Field crafts. Hedge layers, dry stone wallers, stile makers, well diggers, peat cutters, gardeners, horticulturists, vintners, arborists, tree surgeons, foresters, farmers, shepherds, shearers, bee keepers, millers, fishermen, orchardists, veterinarians.

Workshop crafts. Chair makers, iron founders, blacksmiths, wheelwrights, coopers, coppersmiths, tinsmiths, wood turners, coach builders, boat builders, sail makers, rope makers, wainwrights, block makers, leather tanners, harness makers, saddlers, horse collar makers, boot and shoe makers, cobblers, clog makers, knife makers, cutters, millstone dressers, potters, printers, typographers, calligraphers, bookbinders, paper makers, furniture makers, jewellers, mechanics, boiler makers, boiler men, soap makers, gunsmith, sword smith, brush maker, candle maker, artist, sculptor, firework maker, cycle builder, bone carver, musical instrument maker, clay pipe maker, tool maker.

Textile crafts. Spinner, weaver, dyer, silk grower, tailor, seamstress, milliner, hatter, lace maker, button maker, mat and rug maker, crochet worker, tatting and macramé worker, knitter, quilter, smock worker, embroiderer, leather worker, felt maker.

Domestic crafts. Fish smoker, bacon curer, butter maker, cheese maker, brewer, cider maker, wine maker, distiller, herbalist, ice cream maker, butcher, fishmonger, pie maker, pickle maker, baker, barrister and coffee roaster, homeopath, reflexologist, osteopath, naturopath, storyteller, teacher naturalist, historian, jester, actor, administrator, philosopher, labourer, poet, writer, midwife, publican, bookseller, librarian.

To these we might add a new sector – *Repair, Maintenance and Salvage* – that we might expect to feature in any imploding post-carbon economy. During the 1970s radical educationalists such as Ivan Illich often remarked on the fact that in developing countries one could always find untutored, practical and effective know-how – people who could repair radios, keep an old engine running, make, mend and salvage. As the expert systems upon which we have relied break down, we will need to rediscover this confident, practical, experimental attitude to machinery and technology – not least because for many decades we may be dependent on salvaging and reconditioning the technological detritus of the petroleum age.

Hedging our Bets

My wife and I have two young boys who are just coming up to school age. Clearly we want them to have the same educational opportunities as we have had. And I am certainly not going to deny them the chance of a university education just because Jim Kunstler has speculated that industrial civilization might crash and burn. On the other hand I am worried. I worry about whether they will be able to avoid being conscripted into someone else's army or militia, about whether they will be tough enough to survive in a chaotic and possibly violent world, about whether they will have the skills and independence of mind to enable them to thrive in a simpler and more self-sufficient world.

Our own strategy will, I think, be to find somewhere where we can home educate the boys and so, hopefully, combine the pursuit of academic qualifications with the development of an ambitious array of craft and artisanal skills and aptitudes. But this is a personal solution. As a professional educator, I am also aware of the opportunities and benefits that might arise – in schools, universities, colleges, hospitals, prisons – from combining traditional forms of learning, with a resurgence of craft and artisanal skills, from wainwrighting and cooperage to home brewing and saddlery. As a university lecturer it occurs to me that we need to re-invent the notion of apprenticeship – and find a way of making educational bifocal, such that academic degrees and secondary school diplomas are consistently combined with the learning of practical craft skills.

With regard to institutions, one obvious point of entry is the food provisioning system. In the UK, Jamie Oliver and Hugh Fearnley-Whittingstall have paved the way. Schools, universities and colleges are now ripe for experiments in permaculture and self-provisioning. Many campus universities and some schools have sufficient land and student labour to move in the direction of food self-sufficiency, with the growing and processing of food at the core of the student experience.

Finally, we might think of more ambitious educational experiments, specifically designed to promote an array of Transition-related self-sufficiency skills. I am developing my own ideas for a post-graduate *One Planet Institute* in this mould (see below). However, outside of formal education we might think in terms of developing short courses, perhaps building on what people are already doing in areas such as bushcraft and appropriate technology. What matters is not so much what we learn individually, but the range of skills and experience available within communities – the social stock of knowledge. In the context of Transition, we must all become apprentices – to each other and to master craftsmen and women – as well as reflexive observers of the ecological and material patterns of our lives

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The Energy Bulletin. <http://www.energybulletin.net> [the main clearing house for peak oil and transition related news items – a brilliant and comprehensive resource]

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