TOOLS, SKILLS AND CONCEPTS

Peter Harper, 2004, with a postscript 2008

*With special reference to claims frequently found in the literature of “Permaculture”, suggesting the existence of widely-applicable design principles.*

“Design” is a cool word. Like “Eco”. Put them, or various synonyms, together, and you have something with much intellectual glamour. Professional designers tend to be encased in particular institutional frameworks and are happy to remain that way: product design, landscape design, interior design, graphic design, web-site design. They get on with their jobs, and have no pretensions to each others’ territory. But notions like Ecodesign, Permaculture, Bioneering, Ecological Design (etc), tend to be pursued by amateurs and seekindeed in many cases claim to have foundGrand Principles or Tools of Thought that apply to virtually any activity or field of inquiry. Permaculture is particularly megalomanic in this regard.

Having access to such wonderful tools is an attractive prospect, and I have tried to pay serious attention to these claims. I have to say however, that I have generally found them disappointing and not a great deal of practical use to the beginner, for whom they are intended as short cuts to skill and wisdom. There are no short cuts to skill and wisdom.

 I would like to pursue the critique by comparing ‘tools of thought’ with real physical tools. It seems to me that if we can find a universal box of physical tools, the same might be true of mental tools. But if we cannot, the reasons for failure might be similar. Forgive the autobiographical prolixity.

Here we go then. When I was at school I was a swot and a nerd, yet and I longed to think of myself as tough, handy and practical. I joined the Scouts and acquired a good range of all those practical things you don't learn at school (why on earth not? And why do we learn history and Latin and rugby at school and not in evening classes?) – anyway: cooking, first aid, knots and lashings, woodcraft, camping, road safety, bike maintenance, lighting fires under tricky circumstances. They’ve all been very handy in subsequent years. When I left school I got a job in a builder's yard and fancied myself as one of the lads. In those pre-hydraulic days everything was done by hand and after a few months I got very strong. I remember once unloading a delivery of 5,000 bricks in record time, 12 at once held like an accordion, no gloves, no breaks. By this time I had biceps like Schwarzenegger, I'd learned the lingo, and kept up a running conversation with the lorry driver in that awesome glossolalia of profanities which makes up the South London vernacular. We was just two f\*\*\*\*\*\* workin guys doin a tough f\*\*\*\*\*\* job, wasn't we?. No sweat. When we'd finished we sat on the edge of the empty lorry, quietly proud of our professional skill. He rolled a cigarette, and in an avuncular manner, said simply, "Stud’nt, are yer?"

Oh bollocks! Back to the drawing-board.

I tried again a few years later to become a horny-handed son of toil. Metalwork this time. I did some evening classes, played with lathes and grinders and arc-welders. Some years later again I had the task of stocking an all-purpose workshop in a developing country. From my limited experience I drew up a list of woodwork tools and metalwork tools. Proudly, I showed it to a friend who was a practical engineer. "Not bad”, he said, “What about mechanic's tools?" "What?" I replied, "What are they?"

 Somehow, even after living in the world for thirty years (at that point!) I had failed to recognise the importance of an entire vital class of tools - and indeed, to suss out what was really useful in most situations most of the time. I was living in a deceptive fantasy-world where I thought I knew about tools but had not really lived with them, experienced them deeply enough or discovered their strengths and limitations. I was just not a practical person. The phrase 'middle-class wanker' was embarrassingly appropriate.

The lesson was further rubbed in when I first moved to the countryside hoping for a taste of "the simple life". I was almost grotesquely bad at it, overwhelmed by the range of skills required and how long it seemed to take to get good enough to make any difference. In hindsight, most of what I was learning was only of marginal use, but there was nobody to guide me. Now I know what I think is worth knowing but I'm not sure I could say what it is.

I didn't seek experience, it sought me! Waves of tools came at me from all directions. I got into wood-harvesting (splitting maul, wedges, block-and-tackle, chainsaw - which has its own subset of maintenance tools: files, depth gauges, angle guides, combination box-spanner/screwdriver...); then wood-turning (bandsaw, wood-lathe, mandrels, turning-tools, grindstone, stone dresser, split-collet chucks....); then gardening (spade, fork, hoe, rake, trowel, secateurs, wheelbarrow etc; mowers, rotavators, strimmers, each with its own peculiar mechanical problems); then specialist landscape construction (bar, maul, cement mixer, stone cutter, masonry tools, level, long tape....); then calligraphy (holders, nibs, inks, papers, pattern-books...); then car maintenance (spanners, sockets, drivers, mole-grips, punches, files, hacksaw, torque-wrench.... etc). Each new skill had its own very specific tools. At a pinch you can improvise, and if you're miles from anywhere you have to (I *do* relish memories of some of the incredible wheezes I've come up with for temporary car repairs on the road!). There are indeed things like first aid kits or Swiss Army Knives that are specifically designed to cope with a whole range of unpredictable problems at short notice. But if you want to do any of these things seriously as a routine part of life, you need the right specialist tools. You cannot do everything all the time with a Swiss Army Knife. On the other hand the acquisition of all the proper tools for any conceivable purpose is out of the question for a single individual. In fact the cost and space taken up by one set of tools may well exclude another set - so you might be faced with a choice of a basic and inefficient all-purpose set or fewer sets of a higher quality. That’s one thing I learned to be grateful for: specialisation, and that I didn’t have to learn to do everything, but could rely on others to do the things I couldn’t, far better.

The incredible Swiss Army Knife. Great for emergencies: no good for routine specialist uses.

Experience will often guide tool-set choices. Take for example the evolution of my car-maintenance toolbox. When I first started I had no idea what I would need, and assembled a motley collection of standard things that I had heard about previously. Quickly I discovered gaps: stubby screwdrivers, needle-nosed pliers, extensions for the socket ratchet, soft hammer, wire strippers, feeler gauges. Then I discovered that some things were used far more than others and it made sense to have them ready to hand at the top of the box (1/2" spanner, cross-head screwdriver, water-pump pliers) while other things were used so rarely it probably wasn't worth having them cluttering up the box (weird shaped files, imperial allen key sets, circlip pliers, drifts - they could all go back in the shed). I also discovered some really useful items which are not normally considered part of a mechanic's kit: large safety pin (actually a nappy pin), toothbrush, Gafo tape, pipecleaners, elastic bandsand lots of rags! You won’t find them in any swanky tool catalogue…

Deciding what’s in the box is only part of the problem. You don't want to have to rummage for five minutes every time you want something. 90% of jobs are done with a half-dozen or so tools, so these should be right there at the top. Of the top four trays, three are allocated each to a single class of tools: grippers, drivers, spanners; while the fourth to miscellaneous small items that would get lost if consigned to the bottom of the box (like the safety pin, also commonly-used nuts and washers, lamp bulbs). Everything else is higgledy-piggledy in the bottom and I have to rummage if I want it, but that's not often. The important thing is a ranking of tools that follows their probable usefulness for the kind of problems they are designed for. The socket set has got its own box so that's easily brought out if required, although if it were much larger it would make sense to have the ratchet drive and three or four of the most-used sockets in the main toolbox. The trolley jack of course is too big to fit anywhere but stays next to the big box and the socket set in a very accessible place, not in the shed.

Now what is all this about? Of course it's not really about tools at all, *but tools of thought*. I like to have systems of thought which are organised like my mechanical tool box: user-friendly, functional, with a logical structure, able to do a wide range of tasks with reasonable speed and efficiency but without undue cost.

It's just such systems of thought that we evolve when we have philosophies. We try to develop a user-friendly, logical structure, without too many complicated ideas.

What's this got to do with permaculture (etc)? Well in a way, Permaculture is a toolbox of ideas. From time to time I am invited to look into toolboxes proudly labelled "permaculture" - or sometimes I just sneak a look while the owner isn't looking. I'm curious and always on the scrounge for improvements and new ideas. I feel we have a chance to help newcomers avoid all the mistakes we made. But - how can I put this? - I have found the experience very disappointing. This is what I have found regarding Permaculture (still speaking in metaphors, I am talking about concepts now, not real tools):

 \* no standardized, tried-and-tested model has emerged; not just the ‘tools’, or the way they are organised, but even the apparent purposes of the box; yet nobody seems to mind, or even to notice much. This suggests they are really toys.

 \* the range of tools usually includes many identical with mine, but also lots of others which I can't see the point of, or which I know don't work or are inefficient or just fancy gimmicks; and enormous gaps of vital tools - just like me when I was starting out.

 \* most boxes are a terrible mess, with no logical order; either you have to rummage for hours or you just grab what looks vaguely suitable and end up trying to strip a cable with a screwdriver. After a long time you can get quite impressively skilled at doing something with the wrong tool, but why don’t we just acknowledge the best way and stick with it?

 \* where there *is* some kind of ranking it usually does not relate to my experience of probable usefulness. The tools might as well be ranked by what planet they are ruled by (and I am sure some enterprising astrologer has gone and worked all this out!).

 \* often the most "available" tools (at the top) are ones that look good in the box but whose tasks can be performed perfectly well with more basic tools ( by analogy, tachometer, strobe) and which displace more useful things.

 \* the tools seem to be used for purposes far outside that for which they were designed, and they don't often do it very well (like using feeler gauges to spread jam, junior hacksaw to cut firewood). Still, some people are often pathetically proud of such circus skills.

 \* nevertheless, most owners of these boxes seem to think the particular selection of tools is very special and gives them great abilities to fix things far beyond mere cars. They think everyone else would benefit from a box like theirs!

\* occasionally, very rarely, I come across a well-ordered box that signals someone who really knows where the shoe pinches; but to my disappointment I find it's more or less the same as mine, so I don't learn a lot;

By now you must be getting the idea. Perhaps the analogy is becoming a bit tiresome. Let me point up some parallels. We're all into sustainable living. In my box that divides up into main trays of horticulture, structures, diet, energy, politics, transport, planning, water, waste.....

There may well be common principles among these, but if there are they are so abstract that on the whole they are of little practical use at the level of a specific subject. Each subject has its own internal rules which have to be largely learned*. On the whole you can't work many things out from first principles*. That's my life's experience, like my tool boxes. It’s disappointing, but (as a bank manager once said to me on turning down my request for an overdraft): there it is.

If general principles are no practical use, is there any sense at all in looking for them? Probably not. Personally I can't resist the possibility that one day I will come across something really amazing, so I shall continue to keep an eye out, but in the meantime I urge respect for real practitioners in each little field and a deep suspicion of anyone who claims to have found an answer to Life the Universe and Everything that will also get stones out of horses’ hooves.

POSTSCRIPT ADDED IN 2008

In fact I *have* discovered some general principles (Hooray!).

But they are still no use to beginners (Boo!)

Examples are found in my own set of principles for carrying out domestic eco-retrofits, and in David Holmgren’s magnificently gnomic set of 12 permaculture design principles. These embody lifetimes of experience, but only work for people who already have a lifetime of experience and can interpret them effectively.

Although full of wisdom, they provide little help for beginners, who don’t know their subtleties and limitations.

Holmgren’s are well-known. Here are some of mine. They are equally gnomic. They can make good sense when unpacked, but are they any use to a beginner?.

Maximise your impact

Keep your eye on the big picture

Know where you’re going

Keep measuring

In the early days of a movement, a result is worth a thousand cabbages

No perfectionism: the best is the enemy of the good:

Quit while you’re ahead.

A sprat to catch a mackerel is OK

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