

Permaculture: Ethical Design for Living

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It's become a cliché to say that we are living on the edge of eco-disaster — it's also a reality that cannot be overstated. The ecology of Gaia is an interface between land (the Geosphere), air (the Atmosphere), water (the Hydrosphere) and life (the Biosphere), a delicate web of interconnections on the verge of unravelling right before our eyes.

The global eco-crisis is at least partly a consequence of the way that we in the West consume — cheap post war food production policies and a disconnectedness from the world around us have led us to overlook the true costs of what we eat and drink. In the UK farmers have increased food production by 100% since the war, yet the farming labour force is dwindling and the quality of agricultural land is diminishing. In addition, the energy inputs to achieve that production have increased 1,600%. In other words, farming is actually about eight times less efficient now than it was in 1945. Other hidden consequences of this cheap-at-all-costs/live-now-pay-later ethic include massive soil erosion, nitrification of the water table, loss of biodiversity and wildlife habitat, contamination of fruit and vegetables with pesticide residues and the release of greenhouse gasses such as methane and carbon dioxide caused by excessive cattle farming and ploughing. Even the humble cup of tea that you could well be sipping as you read this very article is a product of a complex chain of inputs and outputs, few of which are ever fully ethically or environmentally accounted for...

But it doesn't have to be this way. Is there any good reason why our 'cuppa' can't be sourced as part of a self reliant and abundant cycling system? (OK, so 'tea' won't grow well in the Cool Temperate UK, but there are plenty of substitutes which will, such as lemon balm, chamomile, mint, dandelion, rosehips, raspberry leaves, nettles, etc)

Permaculture is a contraction of **permanent agriculture** (or sometimes **permanent culture**), a term coined in the late seventies by two Australians, David Holmgren and Bill Mollison. Like Anarchy, it's a concept that is beautifully simple, yet can be notoriously difficult to explain. One useful soundbite summary is "Creating abundant and sustainable human habitats by following nature's patterns". Primarily permaculture is a design system — a way of making links and connections, of looking at how elements are placed in relation to each other in order to maximise their efficiency in creating a self sustaining, low input/high output, non-exploiting whole.

At the heart of permaculture is a core set of values or ethics. These can be summarised as 'Earthcare' (recognising that our Earth, Gaia, is the source of all life and respecting her accordingly); 'Peoplecare' (supporting and helping each other to change to ways of living that are not harming ourselves or the planet, and realising that we are a part of the Earth, not apart from it) and 'Fairshares' (ensuring that the Earth's limited resources are utilised in ways that are equitable and wise).

Permaculture design isn't about having to get your head around untold facts, figures, Latin names and complicated techniques, rather it is about careful and contemplative observation of nature and natural systems, of recognising universal patterns and principles, and learning to apply these 'ecological truisms' to our own circumstances. These tools and strategies can be utilised to finding 'Earthright' solutions in all forms of human activity, from energy management, sorting out efficient transportation systems, 'Green' economics and trading ventures, waste treatment, forestry practice and land development to promoting holistic health systems and creating sustainable homes and communities.

However, we all need to eat, and it is the issue of food production where permaculture has its origins. If we are to feed ourselves sustainably we clearly need to be moving away from industrialised agriculture and more towards a gardening philosophy – less high chemical input prairie farming of monocultures and more market and home gardens; places for creating edible landscapes, polycultures, community growing projects and forest gardens. In London alone the potential food growing space includes 14,411ha of agricultural land, 53,600ha of protected open space, 1.4 million households with gardens, 1388ha of derelict land and 980ha of allotments, as well as school playgrounds, rooftops, parks, balconies, etc (figures – NFA/SAFE Alliance). Not many of us would be able to grow ALL of the food we need to live, but all of us could make an often significant contribution to our own diets, and might even have a surplus to share or trade with friends and neighbours. Growing our own not only guarantees a supply of fresh, locally grown high quality produce, but also has many other benefits. These include stress relief, exercise (I particularly like Bill Mollison's description of gardening as a "form of gentle Tai Chi"), a reconnection with the soil and an excuse to simply lean on the spade and philosophise the afternoon away.

The 'pattern language' of permaculture design principles can be clearly demonstrated when applied to our productive gardens, allotments, orchards and small-holdings;

Work With Nature, Not Against...

Francis Bacon's assertion in the early 1600's that we must 'bend nature to our will' has informed our species' relationship with this fragile planet for much of the modern era. Now in these days of desertification, flooding, global warming, ozone depletion and mass extinction we are seeing just how futile and plain wrong-headed such a philosophy truly is. Putting massive efforts into attempting to 'tame nature', such as by damming valleys and flood plains or creating and maintaining bare soil by plough, is not only energy consuming, unsustainable and destructive,

it is also unnecessary when we can meet the needs of people and the environment by working in harmony with, or even directly utilising, natural systems.

Everything gardens, or modifies it's environment — worms dig and aerate the land; leaf fall mulches bare soil and adds nutrients and structure; spreading annuals such as chickweed provide an over wintering ground cover crop; slugs devour dead plant matter and begin the composting process which is continued by bacteria and fungi; bees pollinate and the droppings of birds sew seeds and add fertiliser.

Instead of whipping out the Bug Gun at the first sign of pest damage, why not encourage predators such as ladybirds and hoverflies to do our work for us by planting attractants such as limnathes, nigela or buckwheat? Instead of damaging the soil's structure and straining our backs with constant digging, why not add compost directly to the soil as a surface mulch and utilise the worms' free labour inputs, whilst at the same time suppressing weeds and providing protection from the elements?

The Problem Is The Solution

Or, in the words of Bill Mollison, “You haven't got an excess of slugs, you've got a duck deficiency...” It is how we look at things that make them advantageous or not. For example, a 'weed' is often described as any plant that is growing in the wrong place. Yet with a small shift in perspective we can change our definition to “A plant whose virtues have not yet been discovered”. Nature abhors a vacuum, and any soil that is left bare will quickly be colonised by native wild plants. Rather than constantly battling to eradicate these 'volunteers', why not adopt a more tolerant approach? Although 'weeds' can compete with our food crops, and given half a chance would very quickly return cultivated land to wilderness, allow some to grow between productive areas. They increase biodiversity, act as 'dynamic accumulators' (that is, they mine the sub soil with their roots to bring up minerals that may be deficient on the surface), attract wildlife and can be harvested for compost or mulch material. Many are even edible or medicinal, or have a host of other uses and properties our post Victorian/Cramphorns haughty-culture have largely forgotten...

Maximise Diversity

As we enter the twenty first century the world largely relies on some twenty or so staple crops. Yet the Cornwall based permaculture growing and research project

Plants For A Future list over seven thousand species of plants that are edible or otherwise useful to peoplekind that we can grow in the UK alone.

In a permaculture growing system each function should be supported by many elements. In other words, nothing should be indispensable as it's loss or failure can be disastrous. A person who has had only one well paid but highly specialised job throughout their working life would be less able to cope with redundancy than somebody who has several small incomes earned from a variety of sources. In the same way, the farmer who grows a wide and diverse range of edible plants as possible (a polyculture) still gets to eat if some of them don't make it to harvest. On the other hand, their neighbour who gives all of their land over to one crop (a monoculture) starves if it fails.

The other side of the coin is that every element in the system should have many uses. Permaculture people tend to spend a lot of time emphasising the importance of planting trees. This is because of the multiplicity of their yields and functions. Not only do they provide food crops in the form of fruit, nuts, berries, beans and leaf protein, they also supply bio-fuels, timber, coppice, medicines and fibre as well as a myriad of beneficial effects for wildlife and on planet wide systems.

Everything Cycles

In the natural world, there is no such thing as 'pollution'. Within an ecosystem, every 'waste product' is useful elsewhere within that system. Examples include the Nitrogen, Carbon and Hydrological cycles. Yet industrialised society seems to be all about breaking these feedback loops. Nowhere perhaps is this more clearly typified than by our habit of flushing our bodily wastes out to sea every time we pull the toilet chain. Not only are we causing pollution, we are wasting a valuable resource. Composting our faeces mends the cycle of fertility, producing 'humanure' which, after a year or so to ensure that pathogens are destroyed, can be used as a fertiliser for trees or fruit bushes rather than crops which are consumed directly such as leaves or salads.

We have also broken the cycle of time by changing to a linear perception of it's passage. For our ancestors, events were not singular but recurrent, governed by the movements of sun and moon, the passing of the seasons, of sowing and harvest, summer abundance and winter scarcity. Nowadays we see no reason why we shouldn't have spring lamb and fresh strawberries in December, but even though our calendars might run in straight lines, our bodies are still attuned to respond to nature's patterns. Christmas feasting was originally about stocking up with the last of the previous season's harvest in preparation for the lean months ahead. Yet goosegrass, one of the first plants to appear the following spring, acts as a natural

tonic when drunk as a tea, flushing out the body toxins that build up over the winter. Returning to eating what is locally and seasonally available repairs another cycle and puts us back in touch again.

Correct Placement

Permaculture design is about maximising the beneficial connections between elements, in other words, putting things in the right place. There's not a lot of point in planting 'Cut And Come Again' lettuces on your allotment two miles away from your house if you only visit it once a week. When you are knocking up a salad for tea, human nature and the law of minimum effort dictates that you will pop round to the greengrocers and buy a lettuce whilst your crop sits running to seed... Permaculture designers therefore use the concept of 'zones' to help them decide where things best belong. Zones are numbered from 0 to 5, and can be thought of as a series of concentric rings moving out from a centre point, where human activity and need for attention is most concentrated, to where there is no need for intervention at all. Zone Zero is the house or home centre. In terms of food production this might be about using energy efficient cooking and storage methods, or designing an ergonomic kitchen layout. Zone 1 is your immediate back garden, the place nearest the house where "the gardener's shadow" most often falls. This is the place to put crops that require frequent attention, those 'Cut and Come Again' saladings, herbs, strawberry plants, espalier trees, seedlings in trays, as well as your greenhouse, worm compost bin and cold frames. Fruit trees and bushes might be in zone 2, whilst maincrop vegetables that require weeding and watering on an occasional basis will be a feature of zone 3 (perhaps that once a week cycling distance allotment?). Zone 4 is semi-wild, for example coppice managed woodland used for forage and gathering other wild foods and timber, whilst zone 5 is the wilderness, where there is no human intervention apart from the observation of natural eco-systems and cycles.

Permaculture provides a framework upon which to base Earthright thinking and practice whatever one's lifestyle choices or belief system. To me, however, it's ethical philosophies and principles sit well with Anarchist thought, particularly concepts like mutualism, collective networking, decentralisation, autonomy, and placing an emphasis on personal responsibility. The other thing that I like about permaculture is that it asks us to start from where we are now; "at the end of your nose," as Bill Mollison says. You don't have to wait until 'After The Revolution' to sprout a jar of mung beans on your kitchen shelf or join your local LETS. Nor do you need to be able to afford to buy acres of land to plant a windowbox full of herbs or support your nearest Farmers Market. Starting an organic allotment

or planting an apple tree are tremendously empowering acts, and positive steps towards creating healthy self-reliant communities. At its essence, permaculture is about making real that other 'green truism', "Think Globally But Act Locally". For cliché or not, that is where the future lies if we are to have one.

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