



Holmgren Design
permaculture vision and innovation

Permaculture, a vision of the post oil world

By Yves Cochet

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(Translated by Eugene Moreau and edited by David Holmgren)



More than an agricultural technology, permaculture is a vision of the societies of tomorrow, ours, which will be confronted with the evolution of energy and climate systems. Permaculture is not only another way to garden: it is another way of thinking about and acting on the world, a global philosophical and concrete change, at the same time as a drawing together of strategies of resilience in the face of radical transformations, if not collapses, which are presenting themselves.

The wealth and economic growth of the industrial world rest on unprecedented extraction of enormous quantities of fossil fuels, which have taken some hundreds of millions of years to develop in the depths of the Earth. We have used some of this precious energy source to increase even more, the consumption of resources in unsustainable proportions. The consequences of this overexploitation are being revealed as access to cheap fossil fuels is in decline. David Holmgren underlines the fact that the squandering of so much capital would lead any enterprise into bankruptcy (collapse).

Permaculture offers a break with this waste of energy which is based on an erroneous understanding of wealth. One of its fundamental principles affirms the need to capture and store energy out of concern for the long term. In particular, it is focused on how to maximise the capture of energy from photosynthesis. The laws of thermodynamics have not escaped permaculture. In the second principle, speaking of capturing and storing energy, David Holmgren comes back to the law of entropy: in the universe, energy is dispersed from centres of concentration and tends to dilution. High quality energy is degraded into lesser quality energy thus losing its usefulness. This tendency to dissipation and dispersion affects all systems, living or dead. Living systems are organised in such a way that they maximise their capacities for transforming and storing energy: only the most efficient emerge unscathed in the course of evolution.

All biological and minerals resources can be considered as concentrated energy. All the infrastructures and all the technological tools on which human societies depend, be they simple or complex, are a result of these primary energy sources. Agriculture is nothing other than an age-old way of capturing photosynthesis. For centuries, gardeners and farmers have harvested the energy captured through photosynthesis, in seasonal cultivation. The seeds collected from one year to the next are themselves a dense store of energy, essential for the following harvest.

Because the social sciences, especially economics, are disconnected from the physical sciences, the question of energy has little impact on our understanding of wealth. In industrial societies, energy flow takes the form of food, primary materials and services. This energy is so abundant that its sober usage and its conservation have ceased to be a concern. Systems of information and organisation are seen as

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otherworldly commodities. As long as one has the purchasing power, the meeting of fundamental needs is guaranteed by farmers, engineers, technicians and so on. With the extreme growth of urban ways of life, neither food nor fuel can be stored in apartments, and buying power is tied to credit – which is itself tied to employment. Economic rationalism has led businesses and governments to neglect feeder stocks of food, combustibles, materials and spare parts in favour of the efficiency of just-in-time management with the inherent risk of ruptures of supply and of disasters.

Energy descent and low-tech mindset

David Holmgren insists on this point: in a world in which energy is going to decrease we are going to rediscover the opportunity to harvest and store immediately accessible renewable energies and to re-use the wasted resources in our households and local economies. But it is not just a matter of technical transformation. Running counter to technological mythologies, permaculture is a form of low tech: in opposition to high tech, it offers an array of tools which give autonomy back to its users, while ‘high’ technologies keep our techno-industrial societies on an energy drip.

Thus certain values and attitudes can complement energy descent: value systems of knowledge beyond scientific rationalism, interdisciplinary and vernacular knowledges and direct experience. Bioregions will be the cradle of energy descent. They will be culturally, intellectually and biologically mixed in such a way as to strengthen the hybrid vigour of their human and natural resources. They will be endowed with their own political and economic structures, will reflect the geographical diversity of their lands, and will depend little on centralised technologies. In business and “guilds” of energy descent, diversified and integrated uses will develop on farms, which will be run by collectives.

Feedback of ecological cycles

The soil is where the cycles of carbon, phosphorus and water begin and end. Humus retains carbon and thus contributes to stabilising greenhouse gas emissions. With the help of mulch and swales, water is retained in the soil and then dispersed. Nitrogen, phosphorus, potassium, and calcium are stored and dispersed through soil because of the permaculturist’s focus on the balance and composition of soils, tending to use home made organic fertilisers and compost. The permaculturist is aware that the loss of humus in industrial agriculture is a factor in global warming. All organic wastes must therefore return to the earth. All forms of industrial livestock farming must be proscribed because they consume fossil fuels. On the other hand, large-scale rotational grazing systems are being developed, while the consumption of meat is decreasing a good deal. Legumes must be included in rotations, or better, cultivated permanently in order to rebuild the nitrogen reserves in the soils. The integration of ‘tree crops’ - the fruit of which can be gathered and eaten – becomes an essential component of all farm landscapes.



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Permaculture as reduction of complexity

At the early stage of a change of state, it is important to know how to rid the system of its less important elements, so as to reduce the complexity of its management. Rather than the breaking up of a system into its parts, permaculture favours integration. Rather than competition, a system will be able to endure if it promotes cooperation. Example: the redesign of industrial processes such that the recovery of methane in industrial livestock farming is possible is a first step towards integration, via the idea of associating functions formerly segregated. It will be necessary henceforth to think against the current. Similarly, in a garden, the plants – like the animals – are not necessarily in competition but can, on the contrary, have positive effects on each other.

In a world of exuberant use of energy, permaculture looks like a marginal movement. But in a world of energy descent, the permaculture approach becomes central, because it offers a way of decolonising our imagination and re-calibrating our frameworks of thought and creative strategies, and even a new paradigm which challenges our cultural references.

Yves Cochet,

former Minister of the Environment, Green Member of the European Parliament, mathematician.