



PERMACULTURE: THINKING AND ACTING FOR SUSTAINABILITY

*This paper was presented as a public lecture at Castlemaine Town Hall in February 1998 as the “support act” for a three hour presentation by Edward De Bono organised by the magazine **Green Connections**. The audience was mainly business and public sector managers including representatives of local government and water authorities. It attempts to explain aspects of permaculture to an audience unfamiliar and possibly uninterested in the concept. It was published in an edited form as “Bottom Up Change” in **Green Connections** (issue 17), May 1998. My rhetorical question at the end of the presentation was largely sidestepped by Edward De Bono. His powerful and entertaining presentation of his famous thinking and decision making concepts left the impression that these are “value free” tools accessible to every person and organisation even if the most powerful examples of their use were corporate ones.*



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INTRODUCTION

When Joy Finch from *Green Connections* invited me to talk to you today I told her she should know better than to ask me to do anything during our annual two week residential Permaculture Design Course. But somehow I got here. We did consider bringing our course participants to hear Edward De Bono but our lateral thinking wasn't quite up to splicing that into what is a highly evolved and intensive program.

So why has *Green Connections*, a magazine promoting permaculture brought Dr Edward de Bono to Castlemaine? Permaculture is an environmental concept which has influenced grass roots movements toward self sufficiency in rich and poor countries. What are the links between permaculture, and De Bono's thinking concepts which have become household words and helped organisations and corporations adapt in a rapidly changing world?

It was in the mid-1970's that Bill Mollison and I first developed the systems approach to the design of sustainable agriculture which became permaculture¹. Permaculture is a design system for bottom up change towards a sustainable society. It is based on a set of design principles derived from systems ecology which can guide us toward sustainable solutions.

We believe these principles are universally applicable but the particular strategies and techniques used in permaculture will vary with the environment and situation. The primary focus of permaculture was, and still is, on how we provide for our basic needs of food, water and shelter. Despite industrialisation, these needs are, in the end, mostly met through working relationships with nature. Of all these relationships, agriculture is the most pervasive, important and problematic. Traditional subsistence agriculture was labour intensive, conventional market agriculture is energy intensive. Permaculture systems are information and design intensive. In this sense Permaculture is more about thinking than it is about gardening, chooks or dams.

PERMACULTURE EVOLUTION

In recent years many people involved in permaculture have begun applying the principles to the development of what has loosely been called 'green enterprises'. This expansion from the household to the wider economy follows the permaculture principle of *Use of Succession and Evolution*. In the process, other innovative and positive ideas are being added to the permaculture toolkit including those of Edward De Bono and Ernesto Sirolli.

Green Connections has been at the forefront of facilitating the development of green enterprises in central Victoria. Although the focus has been on environmentally-based opportunities for self employment and small business, it has become increasingly obvious that a wider partnership with local government, semi-government authorities, established business and the wider community is essential if these opportunities are to be realised.

¹ Mollison, B. & Holmgren, D. *Permaculture One* Corgi 1978

GLOBALISATION

At the same time, the impacts of globalisation are increasingly determining local agendas and outcomes everywhere. If local and regional communities are going to maintain, let alone increase, their autonomy and self reliance, then they will need more effective tools for co-operative development; development which serves local needs and interests rather than anonymous powers and forces, with no local commitment.

We hope that Edward De Bono's visit to central Victoria can stimulate positive action and change in local and regional organisations and businesses. Green Connections has no particular agenda other than seeking better outcomes for our community and region through our own efforts. The credibility of Dr De Bono's ideas and methods provides an opportunity to achieve a wide consensus about appropriate directions.

ALTERNATIVE PERSPECTIVE

While recognising the need for mainstream change, supported by community consensus, I also want to take this opportunity to point out that innovative change from the margins is essential to a healthy community and economy. As the capacity to adapt in a rapidly changing world becomes the focus, the value of innovation at the margins will be increasingly important.

I want to spend a little time on a few permaculture anecdotes and analysis to reinforce the need for changes in the way we think and the wider relevance of permaculture thinking to important issues we face.

ENVIRONMENTAL DESIGN

In the early 1970's I was an undergraduate student at the Hobart Environmental Design School set up by architect and educator Barry McNeil. In what was arguably the most radical experiment in tertiary education in Australia, there was no fixed curriculum, no timetable, no exams. Instead there was real world consultancy project work, visiting design professionals as lecturers, participatory democracy and self assessment leading to a thesis assessed by peers, staff and professionals. Amongst design professionals, Environmental Design was regarded as either the best course in Australia or the worst.

McNeil's idea was that there was no point in teaching design students the technical skills of the professions because these would most likely be irrelevant by the time they came to practise. Instead, the focus was on real world problem solving and design thinking, much of it in groups. Technical skills were mastered as part of the project work but I never sat at a drawing board and ignored the new fangled computer. Instead, I developed a deep and obsessive working relationship with a brilliant, if somewhat eccentric, ecologist and thinker, Bill Mollison, who had no connection to the school. Out of our intellectual exchange and research emerged an extensive garden and a design system for sustainability which has since spread far and wide.

PERMACULTURE POSITIVISM

At the time I met him, Bill Mollison was becoming disillusioned with environmental activism's focus on stopping what we didn't want. (He had been active in the United Tasmania Group, Australia's first green political party which grew out of the campaign to save Lake Pedder). After three decades of oppositional environmental activism and growth in environmental regulation, even the mainstream environmental organisations now recognise the need to promote positive alternatives to the endless stream of things we don't want. Permaculture, in its design principles and diverse forms and examples, is a positivistic alternative to both strident objections to everything and the strictures of sustainability by regulation and risk management.

DESIGN IN AGRICULTURE

When Bill Mollison and I began explaining permaculture as a design system for sustainable agriculture we received lots of blank looks. Today Landcare and whole farm planning are making design a central activity for farmers along with the traditional concerns of management and husbandry. Design thinking makes possible the consideration of alternative farm layouts, new stock management and crop harvesting systems, new land uses and most importantly integration of new and existing land uses. Traditional farms had designs but they were mostly unconscious, based on slowly evolved practise. Rapid environmental and technology change demands that the design process become conscious.

It is for these reasons that we spend more time in our PDC courses on principles, design methods and group design exercises than we do on teaching organic gardening methods. However a focus on cerebral reorganisation must never get in the way of ensuring that our hands and our hearts are fully engaged.

OBSERVATION AND RELATIVISM

After 20 years of practising and teaching permaculture I am convinced that the ways we observe and fail to see, the ways we think and fail to grasp, the ways we speak and fail to listen are all more important to the long term achievement of a sustainable society than any particular information about appropriate technology, plant and animal species or land management. While information and experience with these elements in the permaculture toolkit are necessary, they do not, of themselves, lead to sustainable systems.

In permaculture there are no fixed techniques, no right and wrong way. It is a relativistic concept in which strategies and solutions are always context dependent. In some cases, careful introduction of available technology or species can help. In most cases the tools of strategic planning and spatial and temporal design are useful, but in almost all cases an attitudinal change works wonders. Hence the slogan "the problem is the solution" often applies. This summarises a key element in our teaching of *Observation* as the second principle of Permaculture.

PERMACULTURE SOLUTIONS

So many current environmental problems which are seen as intractable are, from a permaculture perspective, opportunities². In the late 1970's media popularisation of permaculture focussed on the opportunities to use household, industry and agricultural wastes to create instant food gardens. Sheet mulch gardens spread across the suburbs using everything organic from cardboard to lawn clippings. Twenty years later organic waste is a valued feed stock for large commercial compost production. Much more waste is quietly and efficiently recycled by households via compost heaps, worm farms and backyard chooks; common sense solutions which twenty years ago were regarded as weird, even distasteful, ideas.

Perhaps more interesting over the same period, is the rise (and I suspect demise) of the romance of industrial paper recycling. Recycling of waste paper has become a fully integrated element of the economy. But recent studies³ of total environmental impact suggest burning paper in fuel efficient furnaces or composting are more environmentally sound than recycling. The simple permaculture "rubbish garden" may turn out to be the most sophisticated of all options. This example illustrates the desperate need for effective environmental accounting methods and their integration into our everyday financial accounting.

Two environmental issues which currently generate a lot of heat and negativity amongst environmentalists, planners, landholders and local government are the spread of environmental weeds and rural resettlement.

ENVIRONMENTAL WEEDS

Consider, for example, the spread of willows along our urban and rural waterways. This spread has been followed in recent years by hysteria (even from sober biological scientists) and Canute-like projects to turn back the tide. The simple fact that willows are nature's adaptive response to hydrological and nutrient changes brought about by our land use tends to be overlooked. Willows are one of the best water filtering plants yet studied and are probably helping to ameliorate much greater problems such as blue green algae.

The permaculture approach to willow infested streams is a design and management system to seasonally harvest the trees for animal fodder and, in the process improve, their performance in water purifying. Secondary benefits of this management would be the opening of ecological niches for revegetation with some appropriate native plant species. This is a truly win-win solution. The fact that Landcare money continues to be wasted on willow removal projects while such positive alternatives are not funded or investigated indicates the thinking revolution has a long way to go. We find the environmental weeds issue so contentious and confusing on our PDC that it is an ideal candidate for group discussion using De Bono's six hats.

² Holmgren D, *Landcare, Permaculture and Revegetation* in Proceedings, Greening Australia seminar Melb. August 25th 1996

³ Reported on ABC Radio National Science Show Feb '98

RURAL RESETTLEMENT

Rural resettlement is another of these contentious and confusing issues. The effects of rural residential development in urbanising the countryside, creating unrealisable demand for services and adverse environmental impacts are ones which have concerned planners for decades. The regulatory response has been to dilute the impacts by larger minimum lot sizes in subdivisions, a very Australian solution - "use more land". Those that can afford to are forced to buy 40 or 100 acres and become so-called "hobby farmers". A perception that rural residential development is bad but hobby farming is just ok changes nothing, so the well off do nothing on 100 acres and while the battlers try to pack endless livestock onto 1 acre blocks.

The current wave of rural resettlement (in all its diverse forms) is the third in Australia's history. Earlier waves under the closer settlement and soldier settler acts were planned by government in response to social pressures. The current wave was unplanned, unpredicted and barely recognised as a major social and economic force. Rural resettlement has been one of the few sources of economic vitality in rural Australia over the last quarter century and is probably, the largest "industry" in central Victoria⁴. The lack of recognition of the economic importance of rural resettlement can be partly attributed to the ways the Australian Bureau of Statistics and other organisations collect and analyse data. As is so often the case, the measures have become more real than the subject.

SITE BASED WASTE MANAGEMENT

Perhaps the biggest single factor driving controls on the spread of houses across the rural landscape is the evidence that septic tanks don't work and that they contribute substantially to the crisis of nutrient pollution in our fragile inland rivers. The solution, almost universally accepted by politicians, planners, catchment managers and waste water engineers is in-fill residential development in our towns and villages, and subsidised sewerage treatment. Thus the failure of an approved technology for site based treatment drives the whole rural planning process and prevents people from settling in rural areas.

This apparently intractable problem of effective site-based effluent treatment arises because every site and situation is different, all systems need monitoring and maintenance, and modern lifestyles reinforce the "pay and forget" approach to everything. For water authorities with a history of centralised treatment managed by professional engineers, the opportunities presented by land capability mapping, new site based technology, distributed management and quality control systems are seen as irrelevant or a threat. For the new privateers, planning to run public utilities, large (preferably newly constructed) infrastructure is simple to value and manage, especially if it comes from London or Los Angeles.

⁴ Holmgren, D. *Submission to Review of Rural Land Use Vic Govt* 1991 [Article Six]

These issues provide an example of the inter-linking of environmental, social and economic problems across administrative and discipline boundaries which besets society everywhere and illustrates the need for new ways of thinking. The now common references to niche markets and “narrowcast” media replacing mass markets and “broadcast” [mass] media are examples of how new solutions are diverse and fine grained. But it is wrong to assume that the thinking and principles which generate diverse outcomes in markets (for sewerage treatment or anything else) will be specialised and disconnected.

PERMACULTURE PRINCIPLES AND SOLUTIONS

In permaculture a limited number of general principles generate the most diverse site and situation specific solutions. The Permaculture principles of *Personal Responsibility*, *Small Scale Site Specific and Diverse systems*, and *Recycling of all Wastes* all reinforce site based waste management as more environmentally sound than large centralised treatment even if the specific systems will vary with people and place.

Proven and effective site-based treatments can be installed and managed for much less than the cost of new centralised effluent treatment infrastructure⁵ but the old solutions continue to prevail. The reasons for this curious situation are no doubt complex and include lack of relevant research and models, cultural and belief systems, established interests and simple inertia of large organisations. But it is the lack of holistic and systemic thinking at the highest levels of decision making which ultimately allow excellent solutions to be ignored. A general knowledge of the concurrent challenge to centralised solutions in many sectors and industries would reveal an emerging pattern which should have implications for the waste water industry.

FRYERS FOREST

The permaculture solutions to the very real problems associated with rural resettlement involve redesigning the way we own and manage land as much as the use of this or that technology. At Fryers Forest, which is our rural residential development here in central Victoria, we have used Body Corporate land tenure models well proven in urban areas but little applied in the countryside. We have clustered 11 freehold 1 acre house sites to form a hamlet within 300 acres of sustainably managed common forest⁶. Rather than detracting from any existing agricultural or environmental values we aim to show how it is possible to enhance these through the sustainable settlement of 11 or more families on what is, by any measure, fragile and marginal land.

5 ***Avoiding Another Tragedy of the Commons. The Bundeena Maianbar WaterCycle Management Study.*** The Port Hacking Protection Society 1997

6 Holmgren, D. Fryers Forest Village in ***Green Connections*** Sept 1996 AND Fryers Forest Research and Development ***Fryers Forest Body Corporate Plan*** October 1997

I believe these systems of land tenure and management are models which can be applied to very diverse land including our best farms. Rural resettlement is one of the few opportunities available to fund the shift towards more intensive and integrated sustainable agriculture. Instead we see State and local governments using planning controls to preserve and entrench existing unsustainable farming on our most productive land.

In-principle support from the Mt Alexander Shire Council for our positive innovations at Fryers Forest have, unfortunately, become muddled through over-restrictive and cautious application of planning, and more particularly, engineering standards during the design and implementation phases of our project. At every turn, the cancer of legal liability has overridden common sense as the final test of all our plans and designs.

Our sobering experience in working through these issues has emphasised that a regulatory approach may be effective at controlling the worst excesses of the marketplace but they also have the effect of stifling any progressive innovation. Recognition of the principle that innovation tends to come from the margins rather than from powerful top-down processes would be a step forward. So called deregulation by state and federal governments has often simply changed the game rules to assist influential large players. What we then need, is to think more carefully about how to recognise the creative opportunities and solutions which benefit the whole community as well as future generations, and then facilitate their adoption.

DE BONO

The questions I have for Edward De Bono revolve around how the thinking revolution can be better applied to take advantage of the diverse opportunities for transition to a sustainable society. The corporate sector provides some examples of success in using its substantial resources towards implementing the thinking revolution in a context of fast moving marketplace determined goals. How can rural communities and their last vestiges of representative democracy in local government use these same tools for positive change in a context of limited resources, diverse and long term goals and the shadow of globalisation?