PERMACULTURE: HOPE AND EMPOWERMENT FOR A SUSTAINABLE FUTURE

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The world belongs to those who give it greatest hope
Teilhard de Chardin

Abstract

This paper examines the values underpinning our current unsustainable way of living and presents the case for permaculture as a powerful design system for conceptualising a sustainable future in all spheres of human development. It contends that permaculture is able to contribute towards the concepts and values of the New Environmental Paradigm, and follows one person's increasing sense of hope and personal empowerment as he begins to adopt and practise permaculture principles in his own life.

Where We Are Now: Unsustainable, Unwise

As we move towards the next millennium, we have arrived at an unprecedented critical period in our history. With good reason the mood of this period has been described as "the best of times, the worst of times", and "the turning point or breaking point". Although since the dawn of the agricultural age human societies have learned to harness and dominate nature, it is only since Rachel Carson's remarkable "Silent Spring" (1962, 1994) that we have become aware of the magnitude of our species' impact on the earth's natural systems. Humanity is faced as never before with critical decisions about our survival on the earth. We have reached the realisation that the earth's ecological systems have limits, that the future is not an open one. The myriad ecological concerns are far from unrelated but are intimately connected inasmuch as the earth's ecosystems are inextricably linked. The linking of global environmental problems, the so-called `global problematique' stems from the very nature and underlying values of global development (Sterling, 1993).

Ecological problems associated with the so-called developed world or `North' which includes Australia and New Zealand, arise largely from high rates of consumption. During the industrial revolution we moved into the high-energy phase of our development. (Boyden, 1991). Now we really came into our own, as culture took over nature, our creativity being able to take full advantage of fossil fuels, using them to inhabit and exploit virtually every niche of the earth's biosphere through our increasingly powerful technologies. We learned how to take natural resources and use energy to transform them into material products on a massive scale, use ("consume") them and finally send them back to nature through the air, soil and water as waste. Such exploitation of natural resources has resulted in widespread destruction of global ecosystems on an unprecedented scale. (Seager, 1995).

In the countries of the North economic wealth became tied to manufacturing capability and the promotion of consumption by linking it to the very essence of what it meant to be a citizen of a "developed" country. Indeed George Bush, when challenged at the Rio Earth Summit in 1992, remarked that "the American way of life is not up for negotiation." (Roszak, 1995). The level of consumption is such that by the end of the twentieth century the human species has commandeered a massive 40 per cent of the terrestrial food supply, leaving only 60 per cent for the other millions of land based species (Postel 1994).

As the standard of living of the world, measured by indicators such as gross domestic product (GDP), continues to rise through development, we move up the food chain. Increasing affluence brings the ability to buy animal products such as beef. Cattle and sheep now outnumber humans and globally two fifths of all grain produced is fed to livestock, poultry or fish (Gardner, 1997). Apart from requiring and degrading huge tracts of land for grazing and producing waste such as methane gas, such consumption is inefficient. It requires around 800 kilograms of plant protein to produce a mere 50 kilograms of beef, protein that could otherwise feed people directly. For the last two decades, in spite of the dubious value of the green revolution, there has been a systematic decrease in total global food production (Postel, 1994). At the same time, both the earth's population and resource consumption continue to rise. The world's population is doubling every 50 years, and it is estimated that more than half the people who have ever been alive were born after 1950, with the equivalent of the population of China being created every 12 years (Trainer, 1996).

We know that resources are finite and that the earth's natural systems, comprising processes occurring in the physiosphere and the biosphere, provide the basis for all life. Not only are we rapidly destroying the earth's ecosystems inequitably during our own lifetime, we are condemning future generations to an impoverished planet on which to live compared with the one we inherited. Co-opting the global ecosystem on this scale for the needs of only one species means that we may have already reached the limits of the earth's carrying capacity. Such resource use, combined with increasing population, is causing an ecological load on the planet's carrying capacity that is rising exponentially and is clearly unsustainable. The Club of Rome publication "Beyond the Limits" forecasts that if we continue with current patterns of consumption, massive collapse of food and resources could occur around the middle of the 21st century (Meadows et al., 1992). Breakdown on a global scale will have an impact on the world's population that we can only image in our worst nightmares. Nature is resilient and will probably recover. The human species may not. The earth can manage well without us. We cannot manage without the earth.

The adoption of a futures perspective as well as enhanced ecological awareness is crucial if we are to begin to conceptualise saner ways forward. Without it we continue to stumble forward blindly, responding and reacting to the limited horizons of those in power, looking forward only to unsustainable growth and breakdown scenarios for the next century.

Reconceptualising the Future: Values and Worldviews

> A sustainable world can never come into being if it cannot be envisioned. The vision must be built up from the contribution of many people before it is complete and compelling.
>
> Meadows et al. (1992)

We could say that our current situation arises because we have been too successful as a species. If reproductive success is a sign of a successful species, we have become tragically successful. (Milbrath, 1996). In the North, the prevailing worldview is one where development has become inextricably entwined with the dominant values of progress through wealth generation and its accompanying consumption. Success is promoted and measured in terms of power and material possessions. and we become ever more dependent on the power of technology to provide solutions in place of turning to each other. We have become, in Slaughter's (1995) terms, a technocentric society, ruled by the perspectives and values of the technocrat. The values associated with this paradigm are consumption, efficiency, winning, productivity, jobs, competitiveness, risk taking and power. Milbrath (1989) terms this the "dominant social paradigm" (DSP) and it remains the dominant worldview of Northern countries and increasingly the aspiration of some in the South. Here, growth is desired and is linear or exponential, its value being promoted and reinforced daily as a narrow economic discourse through advertising and reports on the health of the stock and monetary markets. Global markets dictate value, every transaction involving economic capital is good while the natural capital of the earth's ecology is regarded as an "externality", a resource to be exploited for the human species alone (Hamilton, 1994). In this world there is little distinction between environmental and social costs and benefits. It is a world where road accidents and clearfell logging add to the gross domestic product of a country in the same way as food production does.

While most of us in the North live in a society, which is affluent in material terms, we nevertheless live with an increasing sense of unease, of foreboding and pessimism about the future. We may be employed in jobs, which we are terrified of losing, because we have bought into and are trapped by the economic machine. Our jobs see us working yet longer hours, taking us further from family and community. At the same time, at least 10% of us are unemployed as we live within the paradox of too much work for some, too little for others. We are in danger of losing our social and natural capital at a frightening rate. We feel dependent, disempowered. We are not in control of our destiny.

Our reactions of the way we live appear to manifest in an epidemic of stress and neurosis. In Australia depression is now the fourth most debilitating community disease, and we have one of the highest rates of youth suicide in the world, surely an indication of a sense of loss of hope. Indeed research in the UK on young people's views of the future paints a stark picture of hopelessness; of growing environmental destruction, violence and inequality in an increasingly dehumanised, machine-dominated world (Hicks, 1996). We may appear unbelievably fortunate in the eyes of the world's poor, but many of us have concluded that a high standard of living is anything but synonymous with a high quality of life. The end of the millennium sees us living in an individualistic, competitive, anxiety ridden society with a very narrow worldview. We may be clever but we are far from wise.

This origin of this paradigm has been traced to the Scientific Revolution which heralded the dominance of rationalism over romanticism, where the astronomy of Galileo, the dualism of Descartes, the Laws of Newton and the scientific method of Bacon gave rise to an increasing dominance of a reductionist, mechanistic and deterministic view of the world. (Capra, 1996). Others are of the view that humanity has sought dominance over nature for a very long time, the discovery of fossil fuels just accelerated processes already in train. Deep ecologists such as Shepard (1995) believe that what he terms our "ecocidal habits" can be traced way beyond the industrial revolution to the dawn of the agricultural age, the crucial turning point in our separation from nature. Ecofeminists interpret the domination of nature as patriarchal, the root of the ecological crisis being one of androcentrism arising from a masculinist exploitative attitude with its emphasis on competitive struggle for power and status (Jarva 1996). Others argue that the DSP has a Judeo-Christian origin and look to interpretations of religious texts as the keys to the complex relationship between religion and ecology (e.g. Berry, 1988, Collins, 1995).

Whatever its origins, the DSP presents a narrow view of what it is to be human. We know intuitively that it is deadening and dispiriting. It denies much of what we know is deeply and spiritually important to us - our connection with each other and with the natural world. We know that in order to create a future worth living in, we need to change to more sustainable and human centred ways of living. For many, permaculture provides the vision, ethical base and practical means to conceptualise this.

Towards A Wise Culture: The New Environmental Paradigm

Moves toward ecologically sustainability have been appearing from a number of quarters for some time. They differ both in their reading of the problem and their solutions. Reformist solutions to ecological problems are regarded as those that operate within the DSP. They remain essentially technocentric, seeing salvation in technological answers to specific environmental questions. Reformist views still tend to regard nature as a resource and subservient to the needs of human and economic growth, and have been labeled `the greening of capitalism'. While undoubtedly important in their ability to bring an environmental perspective to the DSP within which they operate, it is difficult to see how reformist views can bring about sustainability (Van Rossen, 1995).

Radical or transformative solutions, on the other hand, stem from a much deeper level of concern, deriving from a critique of the very roots of our ecological crisis. Writers such as Birch (1996), Capra (1996) and Milbrath (1989) consider that nothing short of a paradigm shift in our value system - the way we relate to the earth and each other - will ensure that we can conceptualise genuine alternatives for a future which is worth having. In Slaughter's (1996) opinion, the achievement of change on the necessary scale and quality is almost impossible within the current taken-for-granted paradigm. He agrees with Wilber (1996) who considers that it is only through simultaneous recovery and development in what he terms the four quadrants of development, the personal, cultural, scientific-technological and social systems, will we be able to reconceptualise a sane and balanced future. Wilber believes that:

> we cannot build tomorrow on the bruises of yesterday...This means a new form of society will have to evolve that integrates consciousness, culture and nature, and thus finds room for art, morals and science - for personal values, the collective wisdom, and for technical knowledge (p. 336).

Such a massive shift in underlying values and a redefinition of development requires the conceptualisation of a new paradigm; Slaughter's `Wise Culture', (Slaughter 1996), Milbrath's `New Environmental Paradigm' (NEP). The NEP is far from a call to recycle the milk bottles, switch off the lights and use the bicycle more. It is a challenge to rethink the very foundations of the way we live, our system of values which determines our relationships with each other and with the natural world on all levels from local to global. Slaughter (1996) compares the values underpinning the DSP and the NEP. In the DSP, growth is good, limits are not recognised and nature is to be exploited. Technology is used to oppress, and relationships are competitive and hierarchical. In the wise culture of the NEP, growth is reconceptualised with the recognition of natural limits. Technology is appropriate and decentered. Relationships are participatory and emancipatory. Perhaps most challenging of all, nature is resacralised.

For its many practitioners, the set of principles and practices known as permaculture provides the insight and vision to challenge the hegemony of the DSP and to make a significant contribution to both the philosophy and the practice of the NEP.

Permaculture: Framework for Sustainability

Permaculture was devised during the early 1970's by Bill Mollison and David Holmgren. The term was coined as a contraction of permanent agriculture and as it evolved, more recently as permanent culture. From its birth in Tasmania in 1974 permaculture has undergone rapid expansion into a worldwide community with representation in at least eighty-five countries on six continents.

Mollison defines permaculture as:

> the conscious design and maintenance of agriculturally productive ecosystems which have the diversity, stability and resilience of natural ecosystems. It is the harmonious integration of landscape and people providing their food, energy, shelter and other material and non-material needs in a sustainable way (Mollison, 1988).

Permaculture is essentially a system of design that seeks to link the elements in the design to produce a self-sustaining, dynamic system of human settlement. It draws its inspiration from an understanding of natural systems which are highly productive, interconnected and diverse and which recycle matter and use energy efficiently. Permaculture draws from traditional sustainable farming practices and adopts appropriate new technologies to establish low input, highly diverse productive systems with no or minimal resort to chemical pesticides and fertilisers. Permaculture design principles are readily applied in any situation from the placement of a window box or design of the backyard for food production to the design of urban villages or the broadacre farm. It is being adopted throughout the world, its adherents ranging from the rural poor of the South to wealthy urbanites of the North.

It is the ethics and underpinning values of permaculture that place it firmly within the NEP, and the futures orientation of permaculture is clear in Mollison's raison d'être:

> The prime directive of permaculture...the only ethical decision is to take responsibility for our own existence and that of our children. Make it now. (Mollison, 1988).

Permaculture is human centred as opposed to technocentred, and calls for us to be guided in our designs by a sense of personal responsibility for both earth care and people care which are inextricably linked (Mollison, 1988; Watkins, 1993). Unlike environmental messages that refer to global systems and contribute to a sense of powerlessness, permaculture operates in the first instance at the personal and community level.

It is though through permaculture we once again become whole, participating directly in all aspect of human existence, from the very basics of Maslow's hierarchy that of the provision of food and shelter through to self-actualisation. This is deeply satisfying.

Permaculture contains the potential to promote development in all four of Wilber's quadrants. It helps us not only to reconceptualise our understanding of natural and human systems and how we design them for sustainability, but increasingly to involve ourselves in the personal growth that evolves with thinking about development differently, as something that is personal, cultural and spiritual, not just technological and scientific. Through permaculture we recognise limits, not as an abstraction but as a reality as we struggle with inputs and outputs of energy and matter to feed our community and ourselves. We begin to resacralise nature as we experience her beauty, diversity and complexity through participation with natural systems.

We recognise, respond to and flow with permaculture because deep down it touches us, there is a sense of resonance with its principles, it feels right. People learning about permaculture have articulated this feeling as these comments from two participants in a Permaculture Design Certificate (PDC) show:

> Permaculture is common sense, plain common sense, common sense illuminated. I can recognise it, I am instantly familiar and comfortable, I am not fighting any of it.

and:

> I feel I am on the right track, I feel this is the thing that perhaps has been missing all along, this sense of connectedness with the planet. It has become the framework for our future, somehow for me it is a real framework for living.

As well of offering an ethical life-enhancing framework, permaculture's strength also lies in the practical skills it offers, from design to building a garden to energy conservation. People can immediately begin to improve their level of sustainability. It is not surprising, then, that permaculture has been described as personally empowering by many of its advocates. Take, for example, these comments collected at the end of a PDC:

- I feel inspired, more optimistic, hopeful, enthusiastic, enlightened, more direction.
- I feel as though I have had my eyes open to new hope
- I see my life and contribution to the earth's environment and my community on a much broader scale
- It has given a whole new perspective to the future
- Because of what I've learned I have a responsibility to use the knowledge widely. I feel empowered by this experience and more hopeful for the future

One comment in particular sums up the feelings expressed by many:

> The permaculture course was almost like a religious experience. I felt inspired with hope, excited that I could make a difference, touched by the realisation that I could be in control, empowered.

This sense of empowerment develops in so many who learn about permaculture. Consider the journey of one young man, Dave (not his real name). Like others on the road to personal empowerment, the decision to embark on a PDC through a ten-day intensive course, was not made lightly. And like others, Dave already had a high level of environmental awareness. What had started as a growing sense of disquiet about modern society had built up to a point where action was to follow.

Dave had happened to hear a friend talk about permaculture. What he heard was enough to make him want to embark on a PDC. He was seeking more ethical ways of living within the parameters set by nature, having a critical view of the consumer society, which he regarded as wasteful and exploitative of people and nature. From this perspective, Dave was particularly attracted to the "perma" part of permaculture. The presence of like minded others during the course was a powerful source of support and strength as shared meanings evolved within the group. After the PDC, Dave's newly acquired knowledge and skills were able to help him formulate action plans for when he returned home. His new knowledge fitted his worldview. It gave him a framework for practical action, a direction for the future in terms of a critique of the DSP and a way forward to the NEP - a means to independence from the DSP, which fitted his ethical framework.

By putting permaculture design into practice, action informs understanding. Over the period of 18 months since the PDC, Dave has been able to move forward in a number of ways. He has designed and implemented changes on his block. He is an advocate of permaculture in his community and is becoming involved with the local council to help them examine alternative approaches to an expensive sewerage development scheme. Dave continually seeks further knowledge and insight into permaculture by reading and discussion with like minded people. Here we see the unfolding of the hallmarks of the empowerment process - the development of effective strategies, networks, sources of support and information, a growing ability to engage in critical reflection on effort, development of direction and advocacy (Kieffer, 1984). Dave has grown in confidence, able to take any failure in his stride and recognise the importance of making mistakes. As he develops participatory competence, the concepts and principles of permaculture become incorporated into his worldview, his very being.

Clearly, Dave's journey demonstrates the empowerment process he has undergone, giving him a framework for living, a direction and more importantly, hope for the future within the NEP. In his words:

> Every morning when I get out of bed I know what I'm doing and what I'm working towards...I'm always moving forward, confident. You've got to make it happen.

Conclusion

As we move into this most critical of centuries as far as the future of human life on earth is concerned, as part of a futures perspective we need the sort of practical framework offered by concepts such as permaculture. It is easy to become despondent, overwhelmed by the enormity of the global economic machine which has turned food production away from the holistic community based activity it once was to a commodity controlled by agribusiness. But chinks of light are appearing on many fronts as people grapple with and try to make sense of their growing perception that all is not well at the end of the millennium. There is concern and disillusionment about a range of agricultural practices and products. There is an emerging but yet unfocussed discontentment with the economic system. The movement towards considering small communities as the basis for human settlement is growing, and through the use of the Internet, information about movements such as the ecovillage network is finding voice worldwide. Permaculture design courses globally continue to produce graduates. Throughout the world, permaculture is moving into schools, and young children once again are being taught the old skills of sustainable food production. In Zimbabwe, there is a move to introduce permaculture into all primary schools. Increasingly voices in the South are rejecting the model of development offered by the North, and food security through traditional practices is once again being valued and taught. (Khumbane, 1996).

While it is still too soon to begin to see permaculture and related concepts becoming a real challenge to the juggernaut of globalisation, chaos theory teaches that small drips can become giant floods. While permaculture is not without its challenges and dilemmas, its power lies in its ability to give people both a vision and the practical means to take back control into their personal lives, generating a renewed sense of hope and purpose for a sustainable future that is worth living for. After all, we are all responsible for the future of this planet. Our task requires, to borrow from William Ruckelhaus (in Meadows et al, 1992):

> a modification of society comparable in scale only to two other changes - the agricultural revolution of the late Neolithic and the Industrial revolution of the past two centuries.....This (revolution) will have to be a fully conscious operation, guided by the best foresight humanity can provide...If we actually do it, the undertaking will be absolutely unique in humanity's stay on the Earth.

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