

The flow of life

Education for sustainability would do well to reflect on the rhythms of life itself, moving between sobriety and mirth, wisdom and foolishness, work and play, the scared and the profane, awareness of limits and limitless-ness, hope and despair, suffering and celebration.

Much attention has been focused on the hardware of sustainability but relatively little on the software; on the kinds of people necessary for the trials of building a sustainable global citizen

SusTainAbility could

be seen as a Study of Despair

without a sense of practical solutions. It is the implementation of good solutions which provides hopefulness



Taken from Ecological Literacy - education and the transition to a postmodern world [1992] By David Orr



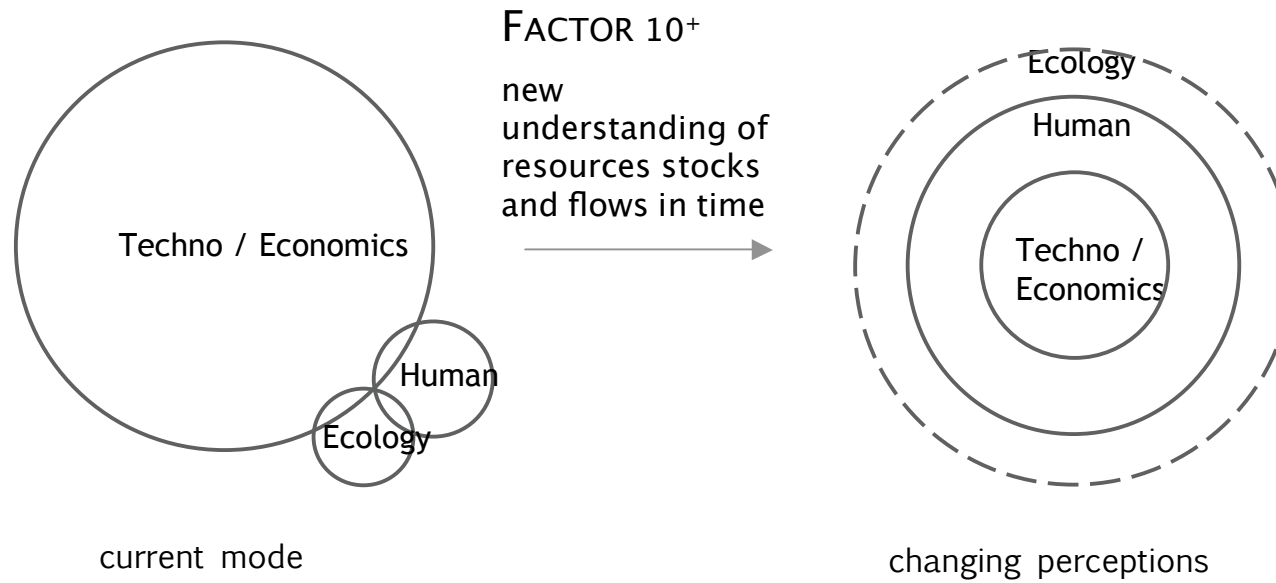
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Cardiff Castle, 20th May 2008



EPSRC Project [2007-8]

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Conventional Education's view of 'the Environment'

It is regarded as a set of problems which are:

1. solvable
2. by analytical tools and methods
3. which create value-neutral technological remedies that will not create worse side effects

Solutions originate at the top of society [from Governments and corporations] and are passed down to passive citizens in the form of laws, policies & technologies.

The **result** [it is assumed] will be socially, ethically, politically and humanly desirable and the will to live and to sustain a humane culture can be preserved in a technocratic society

Sustainability comes down to whether the public understands the relation between its wellbeing and the health of the natural systems

David Orr **Ecological Literacy- Education and the transition to a postmodern world: xx**



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Six foundations of ecological education

David Orr **Ecological Literacy- Education and the transition to a postmodern world: 89-92**

1. **All education is environmental education** - by what is excluded or emphasised students learn that they are a part of, or apart from, the natural world
2. **Environmental issues are complex and cannot be understood through a single discipline or department** - Part of the task of ecological education is the study of interactions across boundaries of conventional knowledge and experience
3. **Education occurs in part as a dialogue with a place and has the characteristics of a good conversation** - formal education happens mostly as a monologue of human interest, desires and accomplishments. True conversation can only occur if we acknowledge the existence and interests of the other.
4. **The way education occurs is as important as its content** - environmental education ought to change the way people live, not just how they talk. Learning in this view best occurs in response to real needs and the life situation of the learner - students are active agents in defining what is learned and how; teachers function as facilitators
5. **Experience in the natural world is both an essential part of understanding the environment and conducive to good thinking** - direct experience is the antidote to indoor, abstract learning.
6. **Education relevant to the challenge of building a sustainable society will enhance the learner's competence with natural systems** - practical thinking is an indispensable source of good thinking. Good thinking proceeds from the friction between reflective thought and real problems.



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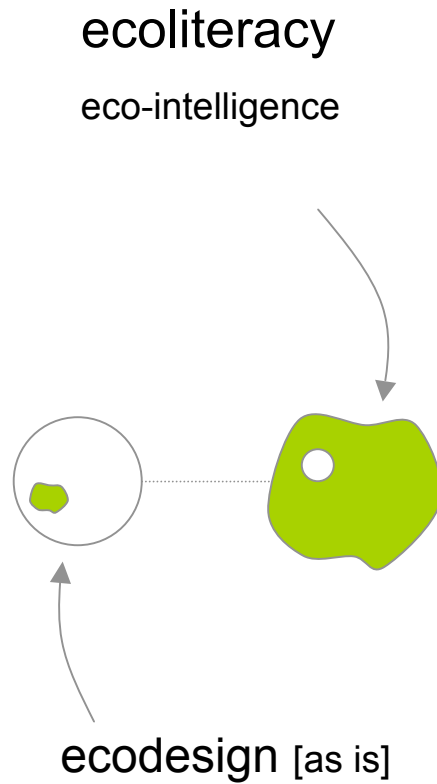
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PM

Building capacity to engage with troubling questions



Growing a more profound approach to design



Specific Issues & Tools:

- Material substitution / minimisation
- Packaging
- Energy efficiency
- Lifecycle



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What is 'deep design' ?

Wann defines it as design that “contributes to a world that is resilient, regenerative, and diverse”; and “design that contributes to our health, security, and equity”.

Deep Design: Pathways to a Livable Future by David Wann - 1996, Island Press,



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“So what does design thinking let us do?”

I think design thinking for a start let's us focus on new problems.

To work on new kinds of design problems where our unique approach can create different kinds of results,

where the human need is apparent,

and that cause us to challenge existing assumptions about business models, growth, resource use and value

and where ultimately hopefully we can achieve new impact.”

Tim Brown, CEO of IDEO: *The challenges of design thinking*
InterSections 07

<http://www.designcouncil.org.uk/en/Design-Council/Files/Landing-pages/Intersections-07/>



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LITERACY THEME	INPUT	OUTPUT
Understanding Needs	'In their shoes' –observation of context and evolution of problem identification	Eloquently meeting the needs identified without violating others' needs
Sensitivity to Context	Germinate new questions to (re)frame problem identification in specific context	Appropriate solutions in terms of scale, place and time
Creating Improvement	A systemic understanding of key stakeholders, their needs, impacts and expectations; mapping innovation opportunities	Products or services that transform for the better, lifestyles, communities and environments; attending to the meanings that a product signifies; deliver authenticity
Delivering Delight	Identify delight factors to evolve solutions that connect deeply to user and context of use	Enhancing the human experience; Encouraging emotional durability; Balancing expectation and reality over time; Sustain empathy throughout product life (build in space for user narratives)
Delivering Function and Utility	Understand the technical requirements to accurately implement appropriate technology for lifetime use	Providing fitness for purpose solutions that fulfil needs over time; Designing so as not to alienate users from product interactions
Designing with Purpose	Look at breadth and depth of design context to understand the potential to generate widespread benefit	Creating solutions and meaning for people now and in the future
Awareness of Impacts of Decisions	Acknowledge a broad range of externalities (social and ecological); practice the precautionary principle	Accountability for resource transitions and the nature of their use



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“There are professions more harmful than industrial design, but only a very few of them. And possibly only one profession is phonier. Advertising design, in persuading people to buy things they don't need, with money they don't have, in order to impress others who don't care, is probably the phoniest field in existence today.”

Victor Papanek, **Design for the Real World: Human Ecology and Social Change**,
Thames and Hudson, 1984

Understanding Needs

input

‘In their shoes’ –observation of context and evolution of problem identification

output

Eloquently meeting the needs identified without violating other and others’ needs



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Understanding Needs

4 states of existence

Human Needs		Being	Having	Doing	Interacting
	Subsistence	physical health	shelter	work	social setting
	Protection	care	social security	provide shelter	living space
	Affection	generosity	friendships	make love	intimacy
	Understanding	curiosity	literature	study	schools
	Participation	receptivity	duties	express opinions	neighbourhoods
	Creation	determination	abilities	design	workshops
	Leisure	sense of humour	games	relax	free time
	Identity	assertiveness	habits	commit oneself	social rhythms
Freedom	self-esteem	equal rights	dissent	flexibility	



Sensitivity to Context

input

Germinate new questions to (re)frame problem identification in specific context

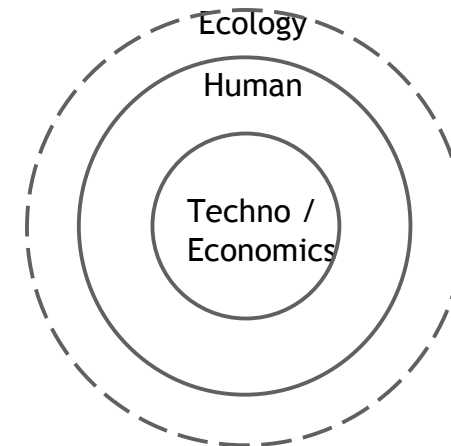
output

Appropriate solutions in terms of scale, place and time

According to Waste Watch, global annual consumption of plastic materials has increased from around 5m tonnes in the 1950s to approximately 100m tonnes today.

FACTOR 10⁺

new understanding of resources stocks and flows in time



changing perceptions



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Creating Improvement

input

A systemic understanding of key stakeholders, their needs, impacts and expectations; mapping innovation opportunities

output

Products or services that transform for the better, lifestyles, communities and environments; attending to the meanings that a product signifies; deliver authenticity

RiverNene  home organic vegbox vegetables home delivery



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Delivering Delight



input

Identify delight factors to evolve solutions that connect deeply to user and context of use

output

Enhancing the human experience; Encouraging emotional durability; Balancing expectation and reality over time; Sustain empathy throughout product life (build in space for user narratives)

Manzini, E, (1994) 'Design, Environment and Social Quality'
published in Design Renaissance (pp35-40), edited by Jeremy Myerson

“Now the challenge for designers is to create products and services which encourage a radically new style of consumption based on social quality [...]

[...] from consumption to care: this scenario implies going beyond the misunderstood notion of the functional which has led to the acceleration of consumption and to the world of disposable objects. Here, design will have to develop products with the technical and also the cultural capacity to survive over time. These will be products which require care and with which the user can establish an emotional relationship.”



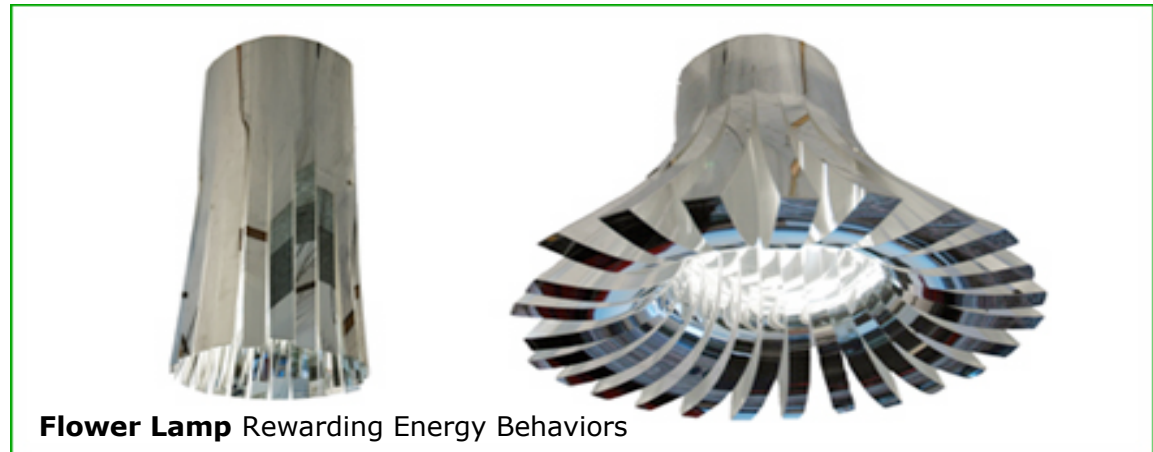
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Delivering Delight



STATIC! INCREASING ENERGY AWARENESS project
Interactive Institute, Gothenburg
<http://www.tii.se/static/>



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Delivering Function and Utility

Datschefski, E. (2001)
The Total Beauty of Sustainable Products,
Rotovision



input

Understand the technical requirements to accurately implement appropriate technology for lifetime use

output

Providing fitness for purpose solutions that fulfil needs over time; Designing so as not to alienate users from product interactions



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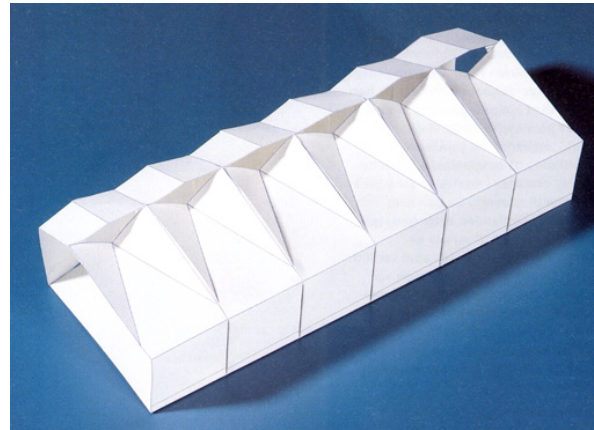
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New values need to provide a rich critique of our present situation through objects that deliver alternative social, cultural, economic, political, environmental and technological values to enable the exploration of numerous alternative realities to conventional design.

[J Chapman 2006 *Emotionally Durable Design*. Earthscan: 139]



The Cardboard School Westborough Essex

Designing with Purpose

input

Look at breadth and depth of design context to understand the potential to generate widespread benefit

output

Creating solutions and meaning for people now and in the future



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Consumption Trends show increases in:

- Smaller households
- Use of electrical & electronic equipment
- Prepacked convenience foods
- Private car dependance
- People travel > distances more frequently (e.g. low cost airlines)

SOURCE: Dr D Maxwell
*Consumers and Choice in a
Throwaway Society*
02 July, 2007, DTI
Conference Centre, London

80% products thrown away within 6 months of production

Awareness of Impacts of Decisions

input

Acknowledge a broad range of externalities (social and ecological); practice the precautionary principle

output

Accountability for resource transitions and the nature of their use

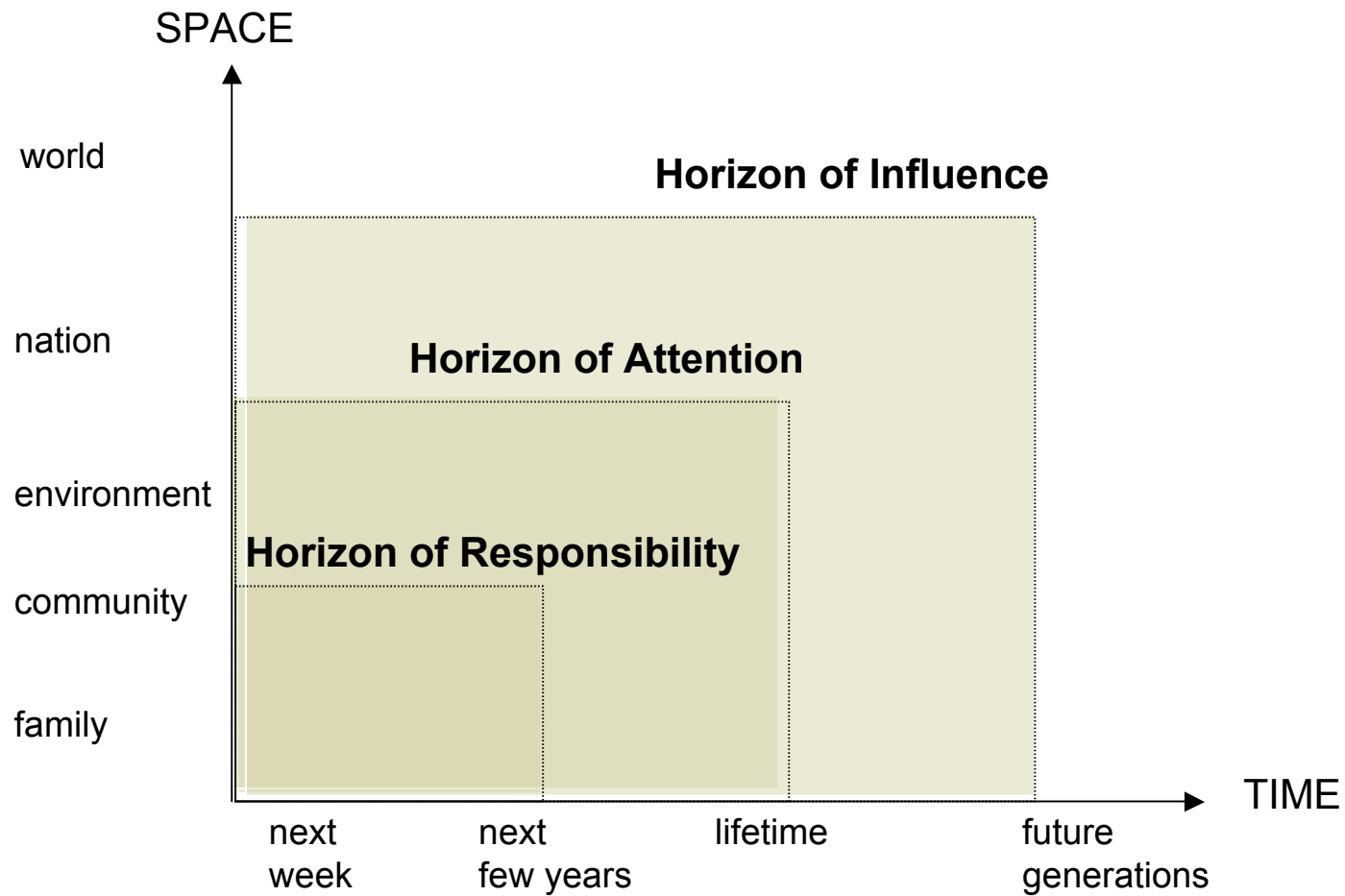


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Simon Bell & Stephen Morse, 2003, *Measuring Sustainability*, London: Earthscan: 13



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THE VITAL SIGNS OF DESIGN IN THE 21ST CENTURY



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