nurturing ecological habits of mind in design

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Image: “nurturing ideas” by Danny Jenkins for the Centre for Sustainable Energy
nurturing ecological habits of mind

IN
DESIGN

EDUCATION
RESILIENCE

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2012 IMPERATIVE
Teach-In
V&A
Monday 12th October 2009
Ecological habits of mind in design:

**EDUCATION**

**LEARNING:** At a simple level, the process through which new knowledge, values and skills are acquired. **At a deeper level, it involves a ‘movement of mind’**.

- Senge, 1990

The difficulty lies not in the new ideas, but in escaping from the old ones …

- John Maynard Keynes
Ecological habits of mind in design:
EDUCATION

A new way of thinking

Reframing (Problem solving)
Synthesis (Analysis)
Holism (Reductionism)
Multiple influences (Closed cause-effect)
Integrative (Atomism)
Extension of boundaries (Narrow boundaries)
Critical subjectivity (Objectivism)
Pluralism / duality (Dualism)
Rational / non-rational (Rationalism)
Uncertainty, ambiguity (Determinism)

Stephen Sterling, 2009
Ecological habits of mind in design: EDUCATION

ECODESIGN
a focus on outcomes

The current boundaries of designing (within [design] limits; but without ecological limits)
**E c o l o g i c a l h a b i t s o f m i n d i n d e s i g n:**

**E D U C A T I O N**

**ECODESIGN**

a focus on outcomes

**SUSTAINABLE INNOVATION**

a focus on process

The current boundaries of designing *(within [design] limits; but without ecological limits)*

Designing in a *sustainability context* that connects everything *(without limits; but within ecological limits)*

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**TEACH-IN 2012 IMPERATIVE**

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Dr Emma Dewberry
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Stephen Sterling, 2009:

**Content and/or skills emphasis.**
Easily accommodated into existing system. Learning about change.

**ACCOMMODATIVE RESPONSE - MAINTENANCE**

**Capacity building and action emphasis.**
‘Living’ and experiential curriculum. Sustainable institutions as permeable learning communities. Learning as change.

**TRANSFORMATIVE RESPONSE - ENACTMENT**

**Ecological habits of mind in design:**

**EDUCATION**

![Diagram showing the relationship between sustainability and design]
Ecological habits of mind in design: RESILIENCE

Unsustainability
The emphasis is on reducing the environmental [& social] impacts of what we do today

Ecological habits of mind in design: RESILIENCE

 Unsustainability
The emphasis is on reducing the environmental [& social] impacts of what we do today

Creating sustainability
The emphasis is on rethinking our goals and visioning different futures and ways of getting there

Ecological habits of mind in design: RESILIENCE

Quick Fixes don't solve Fundamental Flaws

<table>
<thead>
<tr>
<th>The Problem</th>
<th>Quick Fix</th>
<th>Negative Side Effects</th>
<th>Fundamental Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Warming</td>
<td>CO2 Trading</td>
<td>R&amp;D slips: Irresponsibility</td>
<td>Renewable Energy</td>
</tr>
<tr>
<td>Material Use Growth</td>
<td>Eco-efficiency</td>
<td>Eco-system collapse</td>
<td>Industrial restructuring</td>
</tr>
<tr>
<td>Mal-distribution</td>
<td>Tax policy</td>
<td>Irresponsibility</td>
<td>Cultural change</td>
</tr>
<tr>
<td>Unsatisfaction; Alienation</td>
<td>Commodity consumption</td>
<td>Addiction; loss of competence</td>
<td>Self-development; Convivial technology</td>
</tr>
</tbody>
</table>

J Ehrenfeld *Beyond Sustainability* - a Manifesto
http://www.worksavvy.ws/BeyondSustainability.pdf
Ecological habits of mind in design: RESILIENCE

In transition to the ‘long view’ we need to examine the very roots of our culture.
Ecological habits of mind in design: RESILIENCE

In transition to the ‘long view’ we need to

- embrace profound changes in individual behaviour
- fundamentally shift to different concepts of work and reward
- create holistic systems and structures of governance

examine the very ROOTS of our culture
Ecological habits of mind in design: RESILIENCE

ordinary minds everyday

We know what we should do but we don’t think it is urgent or relevant to us – creative interruptions are required to shift societal perceptions and goals
Ecological habits of mind in design: RESILIENCE

ordinary minds everyday

We know what we should do but we don’t think it is urgent or relevant to us – creative interruptions are required to shift societal perceptions and goals.

Designers have the capacity to redraw the story for society; to revision, to make real other, viable and more sustainable lifestyles …

… to REDESIGN concepts and ways of thinking; technology and tools; institutions and infrastructures.
**Ecological habits of mind in design:**

**RESILIENCE**

- **Impacts of Design**
  - Resources
  - Fitness for Purpose
  - En-durability

- **Alternative Approaches to Designing**
  - Co-creation
  - Activism
  - Ownership

- **Material Journeys**
  - Ecological impacts;
    - Resource nature & flows;
    - Distances

- **Labour & Economic Development**
  - Human health & Well-being;
    - Needs

- **Consumption & Product Use**
  - How much STUFF?
  - Perceived 'value' / purpose
  - Real costs
  - Life stories

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Design narratives

Flock knitwear:

a line of knitwear where the fibers can be traced back to specific animals (sheep and goats) and the clothing tag provides information about the animal and its location and breeding.

by Nancy Nowacek From Farm to Closet, Metropolis, December 2006: 52

Designer: Christien Meindertsma
challenging perceptions of personal resource needs
Making the invisible visible

Power Aware Cord

Seeing Personal Energy Consumption

STATIC! INCREASING ENERGY AWARENESS
http://www.tii.se/static/
Disappearing-Pattern Tiles

Expressing Daily Hot Water Routines

STATIC! INCREASING ENERGY AWARENESS
http://www.tii.se/static/
Lunar-Resonant Streetlights
by the San Francisco’s design collective Civil Twilight

Streetlights respond to ambient moonlight, dimming and brightening each month as the moon cycles through its phases. On clear nights they turn off completely saving up to 80% of energy used in street lighting.
Experiencing a different scale

Tumbleweed Tiny House company
http://www.tumbleweedhouses.com
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IN
DESIGN

‘Why is being heard so healing?

I don’t know the full answer to that question, but I do know it has something to do with the fact that listening creates relationship.

We know from science that nothing in the universe exists as an isolated or independent entity. Everything takes form from relationships, be it atomic particles sharing energy or ecosystems sharing food.

In the web of life, nothing lives alone.’

Meg Wheatley Turning to one another: simple conversations to restore hope to the future: 89 (2002)