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2011 Digital Creativity Conference October 2011

Understanding Creativity: from bad ideas to personality prosthesis

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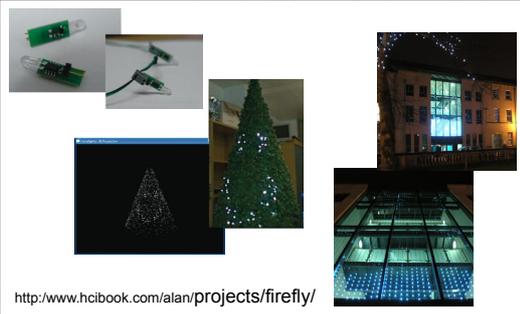
today I am not talking about ...

- intelligent internet interfaces
- fuzzy personal ontologies and structure from folksonomies
- visualisation and sampling
- situated displays, eCampus, small device – large display interactions
- fun and games, virtual crackers, artistic performance, slow time
- physicality and product design
- modelling dreams and regret



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... or even lots of lights



<http://www.hcibook.com/alan/projects/firefly/>

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group challenge

think of a bad / silly idea

e.g. inflatable dartboard, chocolate teapot

or actually 3
to give to other groups ;-)

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prompts ...

<p>THE BAD</p> <ol style="list-style-type: none"> 1 what is bad about this idea? 2 why is this a bad thing? 3 are there any other things that share this feature but are not bad? 4 if so what is the difference? 	<p>THE GOOD</p> <ol style="list-style-type: none"> 1 what is good about this idea? 2 why is this a good thing? 3 anything that shares this feature but is not good? 4 if so what is the difference?
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try different contexts
used car salesman – how would you sell it to someone?

make it a good idea

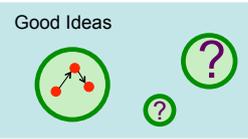
- What is good - keep it
- What is bad - change it
- Change context
- Learn from aspects

why bad ideas?

why bad ideas?

training:
 - low commitment => easier to critique

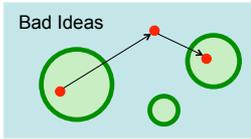
design:
 - large jumps through the design space



why bad ideas?

training:
 - low commitment => easier to critique

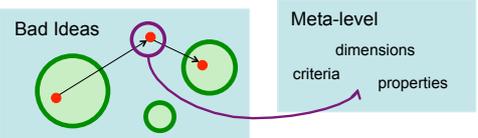
design:
 - large jumps through the design space



why bad ideas?

training:
 - low commitment => easier to critique

design:
 - large jumps through the design space
 - understanding of the design space



plus ...

- other divergent techniques:
 - random metaphors, putting ideas together
- arbitrary constraints:
 - time, materials, etc.
- externalisation
- personality prostheses

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critical transitions and generating examples

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critical transitions and bad ideas

- good uses of bad feature: “what’s the difference”
- similar yet critical difference (good/bad)
- helps articulate (externalisation): dimensions, facets, concepts, criteria
- general technique ...

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critical transitions

- construct a boundary case ...
 - example A in category, example B not in category
 - make ‘path of small changes from A to B
 - where does it ‘cross’ the boundary
 - good for ‘felt’ categories

The diagram shows a green oval labeled 'in category' containing point A. A path leads from A to point B, which is outside the oval and labeled 'not in category'. A yellow starburst labeled 'critical transition' marks the point where the path crosses the boundary of the oval.

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boundaries

- where the action is (wild west, sea shore)
- reductionist – define and delineate
- intuitive – life is fuzzy, categories meaningless

a different way

- define and delineate – for what you learn not the result
- wholeheartedly seek but hold lightly the outcome

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but how to find examples?

- generating examples – hard
- examples from experience easy ??? or is it ???

The diagram shows a blue oval labeled 'old concept' on the left under the word 'past'. A red arrow points from a yellow starburst labeled 'need' on the right under the word 'now' to the 'old concept'. A red box labeled 'experience' has a red arrow pointing to the 'old concept'.

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but how to find examples?

- generating examples – hard
- examples from experience easy ??? or is it ???

The diagram shows a blue oval labeled 'new concept' on the right under the word 'now'. A red arrow points from a yellow starburst labeled 'need' to the 'new concept'. A red box labeled 'generate example' has a red arrow pointing to the 'new concept'. A red box labeled 'experience' on the left under the word 'past' has a red arrow pointing to the 'generate example' box, with the text 'similar surface characteristics' written below the arrow.

but how to find examples?

- generating examples – hard
- examples from experience ... actually harder!

but .. generating examples ...

- take arbitrary concrete example
- morph to new concept
- constant concrete – abstract movement

externalisation

different kinds

- drawings and sketches
- models
- diagrams
- mathematical formulae
- spoken words (learn to listen to yourself)
- written words (on paper, or screen)
- computer programs
- acting

why externalise?

- **informational**
 - passing on to others already formed ideas
- **formational**
 - ideas become clearer by the process of externalisation
- **transformational**
 - thinking using materials
- **transcendental**
 - our thoughts and ideas become the object of thought

informational

formational

transformational

e.g. measure length on diagram

c.f. external/distributed cognition

transcendental

multiple classifications

why multiple classifications?

- taxonomy:
 - things
 - circles
 - red circles
 - yellow circles
 - squares
 - red squares
 - yellow squares

similarity clear (green smiley face)

similarity obscured (red frowny face)

multiple classification

- shapes
 - circles
 - squares
- colours
 - red
 - yellow

	colour	
	red	yellow
circle		
square		

tell you in what ways things are similar and in what way they differ

using multi-classifications

- to spread literature search

using multi-classifications

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- to spread literature search
- to identify gaps

somat or other	somat else
thing-ambob	?

using multi-classifications

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- to spread literature search
- to identify gaps
- to discover trends

?	somat else
thing-ambob	?

using multi-classifications

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- to spread literature search
- to identify gaps
- to discover trends
- to uncover abstractions

?	?
somat or other	somat else
thing-ambob	different again

using multi-classifications

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- to spread literature search
- to identify gaps
- to discover trends
- to uncover abstractions
- to synthesise solutions

somat or other	somat else
thing-ambob	?

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personality prostheses

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a researcher is ...



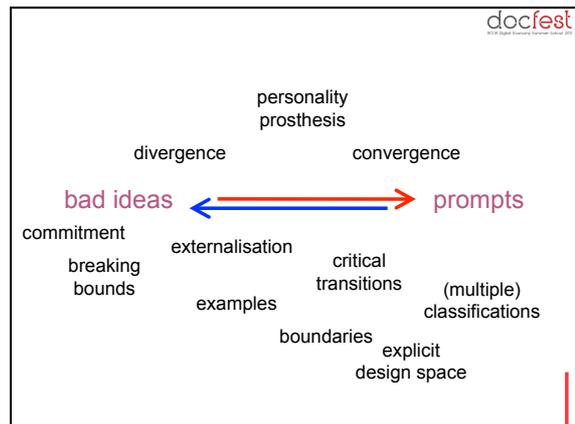
tools to help you given who you are
 (NOT to change who you are)

- physical prosthesis
 - forklift
- cognitive prosthesis
 - calculator
- personality prosthesis
 - N.B. Csikszentmihályi – creative thinkers extreme at both ends of personality traits
 - convergent thinker – bad idea helps divergence
 - divergent thinker – prompts help convergence

don't say:
 if only I were like X
 I could reach my (research) goals

do ask:
 given the way I am
 how do I do things

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plus ...

come to
 Tiree Tech Wave
 3-7 Nov 2011

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