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2011 Digital Creativity Conference October 2011

Understanding Creativity: from bad ideas to personality prosthesis

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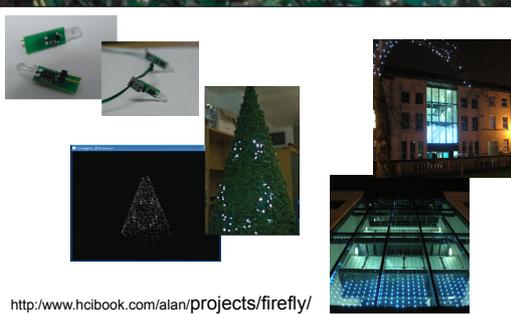
today I am not talking about ...

- 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

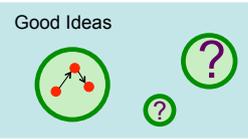
- What is good - keep it
- What is bad - change it
- Change context
- Learn from aspects

why bad ideas?

why bad ideas?

training:
 - low commitment => easier to critique

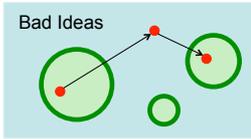
design:
 - large jumps through the design space



why bad ideas?

training:
 - low commitment => easier to critique

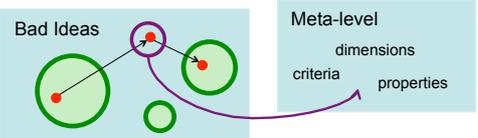
design:
 - large jumps through the design space



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 an 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' on the right to the 'new concept'. A red box labeled 'generate example' has an arrow pointing to the 'new concept'. A red box labeled 'experience' on the left under the word 'past' has an 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)

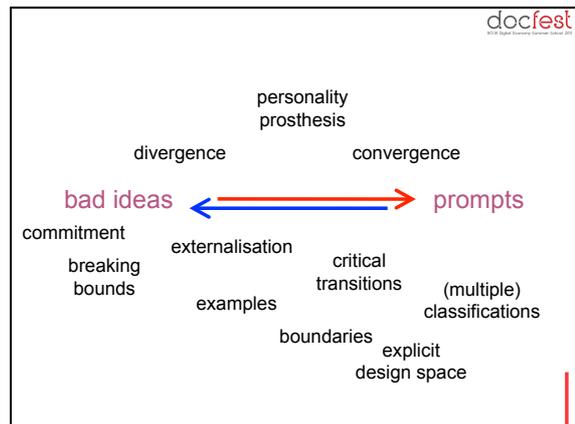
- physical prosthesis
 - forklift
- cognitive prosthesis
 - calculator
- personality prosthesis
 - N.B. Csikszentmihályi – creative thinkers extreme at both ends of personality traits
 - convergent thinker – bad idea helps divergence
 - divergent thinker – prompts help convergence

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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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