


**Human-Computer Interaction  
in the early 21st century:**  
a stable discipline, a nascent science, and the  
growth of the long tail

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wot I'll say



"state of the nation"  
where is HCI  
how can it develop

bit of my own stuff

and how they fit together

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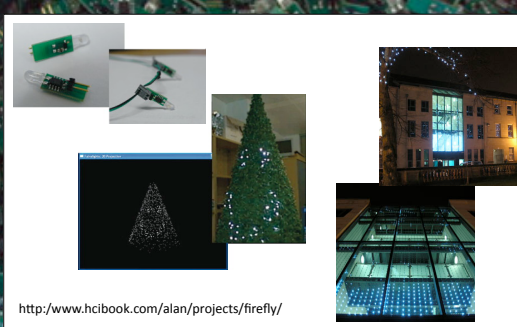
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today I am not talking about ...

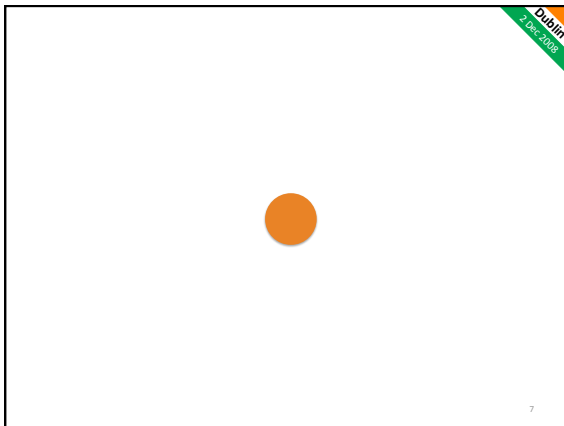
- intelligent internet interfaces, personal ontologies, structure from folksonomies
- situated displays, eCampus, small device – large display interactions
- fun and games, artistic performance, slow time
- physicality and design, creativity and bad ideas + modelling dreams and regret!!




... or even lots of lights



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



21 years ago at Interact '87

Brian Shackel asked  
is HCI a discipline?

yes!

a **community**  
defines a discipline

but **science** goes beyond community  
or academic discipline

from acceptance of knowledge  
to assurance of truth

(c.f. John Long craft, engineering or science)

are we getting there?

2<sup>nd</sup> generation HCI researchers,  
teachers & practitioners

good for community ...

but maybe losing disciplinary roots  
have we found our own?

**strength** of HCI  
research and practice close

**danger**  
we confuse the two

evident in papers, reviews etc.

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### three challenges to develop the academic discipline of HCI

methodology

knowledge

rôles

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### new roots need new methods

need to think **methodologically**

not just adopting methods  
but **understanding why**  
but it is hard!

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### a little story ...

- BIG ACM sponsored conference
- 'good' empirical paper
- looking at collaborative support for a task X
- three pieces of software:
  - A – domain specific software, synchronous
  - B – generic software, synchronous
  - C – generic software, asynchronous

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### experiment

- reasonable nos. subjects in each condition
- quality measures
- significant results  $p < 0.05$ 
  - domain spec. > generic
  - asynchronous > synchronous
- so really want asynchronous domain specific

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### what's wrong with that?

interaction effects

- gap is interesting to study
- not necessarily good to implement

more important ...  
if you blinked at the wrong moment ...

NOT independent variables

- three different pieces of software
- like experiment on 3 people!
- say system B was just bad

**can we fix it?**

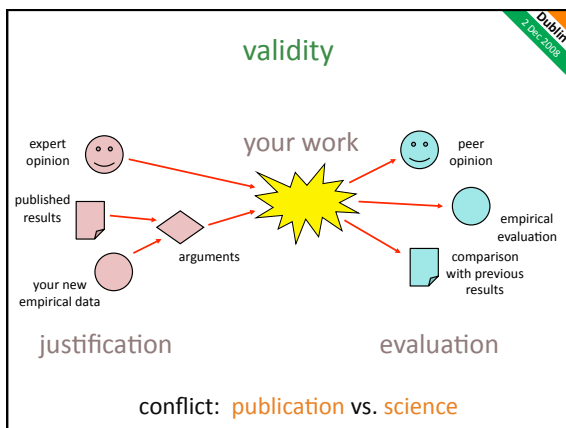
- borrowed psych method
  - ... but method embodies **assumptions**
  - single simple cause, controlled environment
- HCI needs ecologically valid exp.
  - multiple causes, open situations
- what to do?
  - understand assumptions and modify
- both and ...
  - quantitative – what is true end to end – phenomena
  - qualitative and anecdotal – why – **mechanism**

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**three challenges to develop the academic discipline of HCI**

methodology

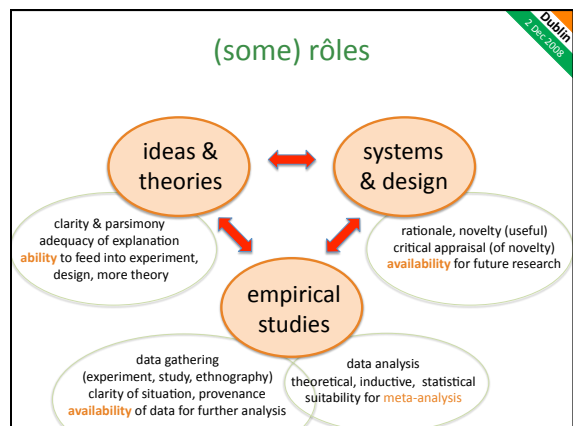
knowledge

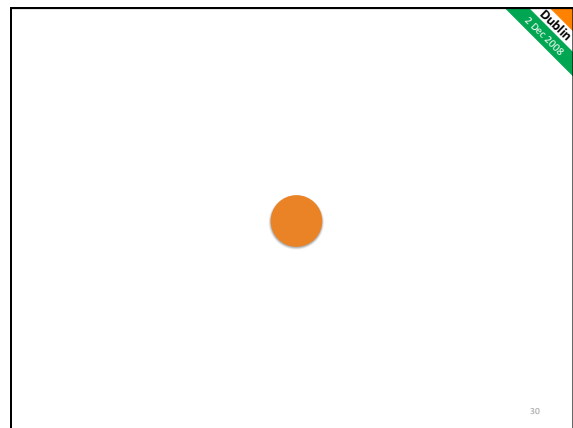
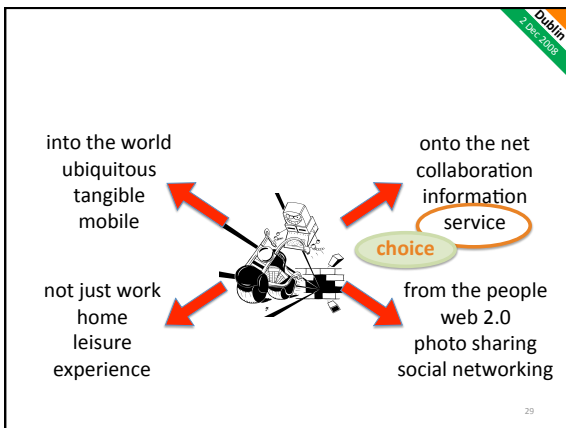
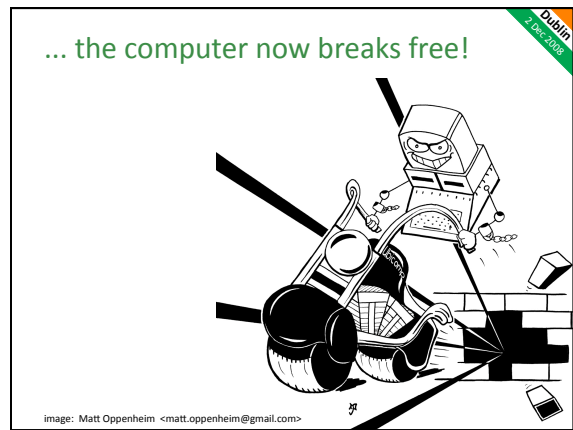
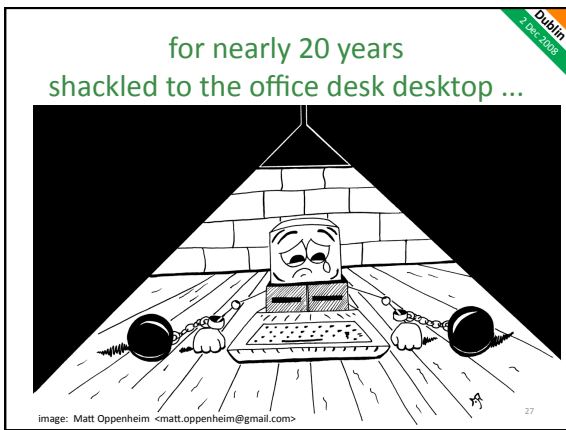
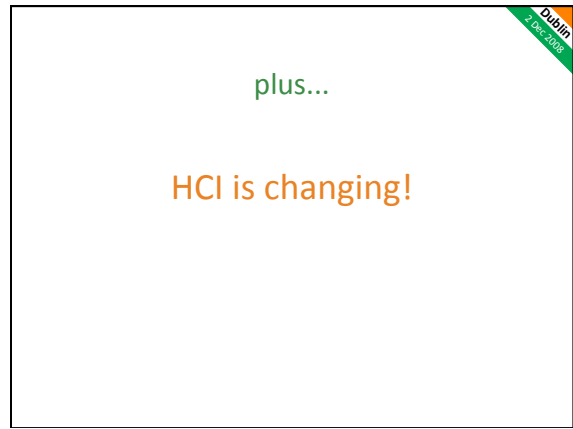
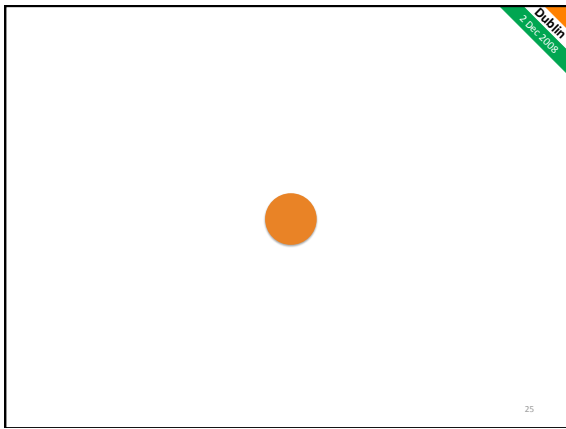
rôles

**HCI is a diverse discipline**

different **genres** of work  
 need different **criteria** of judgment  
 ✓ recent CHI sub-committees

different **rôles** for people  
 we don't all need to do everything





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PhD student, Fariza Hanis Abdul Razak  
looking at mobile experience

initial study – one user was ‘odd’  
... so looked further at **just her**

learning from the **extremes**

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**studying a single person**  
... initial diary study

the first text ...  
*Dear God Don't need lots of frens! As long as real ones stay with me, so bless them all, especially the sweetest one reading this.*

and subject's comment:  
*this SMS MADE MY DAY!*

John Rooksby:  
messages that need no reply

changed our view of use of mobile

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**research**

- very rich empirical data reveals new issues  
using **personal** understanding
- novelty only needs **one example** (e.g. new species)  
different person different place would find different phenomena  
equally explorer in different place would find different species
- generalisation through reasoning  
abduction and deduction rather than induction

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**generalisation**

never comes (solely) from data

always through **understanding**

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**design & practice**


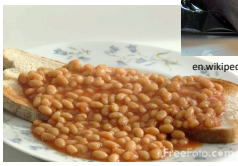
design for a **single person**  
not even five users!

get to know him/her **intimately**  
what would be **perfect** for that person

designing for **peak experience** ...

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**baked bean vs. mars bar design**

en.wikipedia.org/wiki/Image:MBar\_700.jpg  
freefoto.com

**designing for peak experience**  
who wins?

good enough products never win  
for any user, some peak product always better

**designing for peak experience**

how to do it:

- traditional interface design  
user profiles, central personas, average and typical, process and methods, from need to solution
- design for peak experience  
individual user, niches, extreme personas, specific and eclectic ideas and inspiration, from concept to use

when to do it:

- individual choice, user experience,  
the **long tail**: many applications for smaller groups

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single person study  
flouting community **conventions**  
but understanding **methodology**

prompted by changes in HCI  
what is the **same** and what **changes**

the **lens of unfamiliarity** helps us explore the heart

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