user experience
workshop

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http://www.hciobook.com/alan/
key to slides ...

time for an exercise

new topic about to start
why user experience?
emotion matters!

clinical images of technology vs. Facebook?
1980s phone brick vs. iPhone

emotion is part of being human
not new?

from early days (inc. iso 9xxx):

efficiency

effectiveness

satisfaction

often ignored
business value

for employees
  happy users are productive users

for customers
  happy users are buying users!
why UX now?

service orientation

never had it so good?
service orientation
internet => service rather than product
service => more frequent user choice
more choice => usability and UX critical
never had it so good?
Maslow’s hierarchy of needs

- **level 1**: Physical needs, food, water, warmth, immediate escape from danger and pain
- **level 2**: Safety needs (security), shelter, protection from harm and from disease
- **level 3**: Love needs (social), to be loved, cared for, friendship, relationships, sense of family, tribe, class, territory
- **level 4**: Esteem needs (ego), approval, status, prestige, self-worth, self-confidence
- **level 5**: Self-actualisation, creativity, autonomy, learning, personal growth

Pursue higher needs only after lower needs satisfied.
... and for user interfaces?

increasing focus on user experience once ‘lower’ needs are satisfied?
is this right?

western obsession with slimming?

what if I talk on into middle of coffee break?

... Apple strong focus on UX,
  but usability and functionality suffer
when feelings matter
emotion in interfaces

primary goal
  – eliciting emotion is the purpose of the product
    e.g. art, games, entertainment
  – may need more functional support
    e.g. efficient TV remote, Flickr image uploader

secondary goal
  – some other primary purpose
  – but emotions help
    e.g. alertness in repetitive job, motivation in learning

N.B. overlap, e.g. online shopping
systems and emotion input/output

elicit emotion
  – designed to create a feeling
    e.g. dependability for bank, excitement for holiday

detect and respond to emotion
  – detect emotion
    e.g. physiological sensing, language, facial expressions
  – modify and adapt the system
    e.g. if game player bored increase the difficulty

act as conduit for emotion
  – record or transmit users own emotions
    e.g. emoticons in IM
example application areas

games, toys and companions,
education, arts,
home, intimacy
games
emotion is the primary focus, aim to elicit emotion
Snood
like bar-game ‘bubbles’
but the faces make it feel different
education
emotion secondary goal, aim to elicit emotion

- games and edutainment
- extrinsic vs. intrinsic motivation
- persuasive interfaces
the home emotion is the primary focus, aim to elicit emotion

place of frenzied activity and place of calm

work of living and pleasure of life

the right colours, the right designs

big consumer area:

e.g. Philips Ambilight
intimacy
emotion is the primary focus, aim to mediate emotion

• loved ones far away
  – friends, family, partners

• can technology bring people nearer
  – social networking
  – wearable and ubiquitous technology
expressing affect and identity
explicit expression – mediate emotion

• emoticons

• CAPITALISATION

• drawing
expressing affect and identity
expression through action – detect emotion

SenToy

the Splatty
EXERCISE

• individually
  – think of two ‘experiences’ (good or bad)
    • one with technology
    • one without

• in small groups (2-4 people)
  – discuss your experiences with one another:
    • is experience primary or secondary goal?
    • where does the emotion fit in Maslow?
    • (for technology experiences)
      does it elicit, detect or mediate emotion?
theories of emotion, motivation and experience

psychology, physiology, sociality
reason and emotion, Maslow’s hierarchy of needs,
taking play seriously, left/right brain,
experience and enchantment
kinds of emotion

psychologists distinguish:

• emotion
  – physiological and neurological state of the body

• feeling
  – subjective experience

• mood
  – longer term positive or negative feelings
  • based on chemical and other factors in the body
kinds of emotion (2)

• basic emotions
e.g. fear, anger and happiness
  – shared with many animals
  – limbic system of the brain (aka. ‘reptile’ brain)

• complex emotions
e.g. shame, anxiety, and regret
  – higher parts of the brain
    making sense of lower emotions and influencing them
kinds of emotion (3)

• arousal
  – flight or fight response
    heart rate, dilation of blood vessels, adrenaline
  – same physiological state for fear and laughter

• valance
  – direction: positive or negative
  – harder to detect from physiological signs
    can use facial expression, voice, vocabulary (semantic)
reason and emotion

emotion is essential for reasoning
  - Mr Spock? real case ‘Elliot’ tumour cut off emotion
    IQ perfect, but couldn’t make decisions
  - not just random!
    ‘gut’ feelings are heuristic
    ... but fast!

also regulates
  - motivation and focus
    keeps us on the job
  - boredom
    changing tack when stuck
the happy mean

Yerkes–Dobson curve
– best performance at medium arousal

Level of Arousal

High

Low

Performance

High

wakefulness

optimal performance

overstimulation

Low

High
the happy mean

Yerkes–Dobson curve
  – best performance at medium arousal

flow (Csikszentmihalyi)
  – understanding experience
  – between boredom and anxiety

http://www.flickr.com/photos/indywriter/339896763/
the happy mean

Yerkes–Dobson curve
  – best performance at medium arousal

flow (Csikszentmihalyi)
  – understanding experience
  – between boredom and anxiety

zone of proximal development (Vygotsky)
  – education – at the edges of knowledge
experience and enchantment
(McCarthy and Wright)

four threads of experience

• sensual – visual, aural, tactile

• emotional – feelings, relationships

• compositional – integrity, coherence

• spatio-temporal – sense of time and location
experience and enchantment (2)
(McCarthy and Wright)

six processes of sense-making

• **anticipating** – what is going to happen
• **connecting** – pre-cognitive sensation
• **interpreting** – complex emotions
• **reflecting** – looking back
• **appropriating** – interweaving into life
• **recounting** – telling others
EXERCISE

• in your groups
  – do any of these theories help you to understand/express your experiences
designing experience?

crackers – a case study
designing experience

- real crackers
  - cheap and cheerful!
  - bad joke, plastic toy, paper hat
  - pull and bang
designing experience

• virtual crackers
  – cheap and cheerful
  – bad joke, web toy, cut-out mask
  – click and bang
designing experience

• virtual crackers
  – cheap and cheerful
  – bad joke, web toy, cut-out mask
  – click and bang
how crackers work

sender

fill in web form

To: wxv
From: ..

receive email

recipient

close cracker page

open message
closed cracker page
how crackers work

sender

fill in web form

To: wxv
From:..

receive email

recipient

recipient clicks
cracker opens ...
very slowly

open

cracker page

open

cracker page

joke
links

mask

web toy
open cracker page
mask page

Stargazer
how crackers work

sender

fill in web form

To: wxv
From: ...

receive email

recipient

recipient clicks cracker opens ...
very slowly

sender watches progress

open cracker page

open message

joke links

web toy

mask
# The crackers experience

<table>
<thead>
<tr>
<th>Surface elements</th>
<th>real cracker</th>
<th>virtual cracker</th>
</tr>
</thead>
<tbody>
<tr>
<td>design</td>
<td>cheap and cheerful</td>
<td>simple page/graphics</td>
</tr>
<tr>
<td>play</td>
<td>plastic toy and joke</td>
<td>web toy and joke</td>
</tr>
<tr>
<td>dressing up</td>
<td>paper hat</td>
<td>mask to cut out</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experienced effects</th>
<th>offered to another</th>
<th>sent by email message</th>
</tr>
</thead>
<tbody>
<tr>
<td>co-experience</td>
<td>pulled together</td>
<td>sender can't see content until opened by recipient</td>
</tr>
<tr>
<td>excitement</td>
<td>cultural connotations</td>
<td>recruited expectation</td>
</tr>
<tr>
<td>hiddenness</td>
<td>contents inside</td>
<td>first page - no contents</td>
</tr>
<tr>
<td>suspense</td>
<td>pulling cracker</td>
<td>slow ... page change</td>
</tr>
<tr>
<td>surprise</td>
<td>bang (when it works)</td>
<td>WAV file (when it works)</td>
</tr>
</tbody>
</table>
TAPT

teasing apart and piecing together

• refinement of deconstruction/reconstruction
  (developed by Clare Hooper @ Southampton and IBM)
• teasing apart (deconstruction)
  – detailed pro forma
  – divides experienced effects into literal/abstract
• piecing together (reconstruction)
TAPT – detailed pro formas

<table>
<thead>
<tr>
<th>Experience (1)</th>
<th>Description of teaser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brief description of the chosen functionality and the experience of using it.</td>
<td>These focus on intellectual effects to be abstract nouns (‘line’, ‘box’, ‘arrangement of photos’) and adjectives (‘bold’, ‘simple’, ‘complex’) relating to the design.</td>
</tr>
</tbody>
</table>

**Surface elements (2)**

| Exp | These focus on intellectual effects to be abstract nouns (‘line’, ‘box’, ‘arrangement of photos’) and adjectives (‘bold’, ‘simple’, ‘complex’) relating to the design. |

**Literal (3)**

Concrete results such as a loud noise, ‘broadcast information’.

(Step 5) Review the lists of literal and abstract effects, and identify effects that seem especially important, unique or key to the experience. Underline them.

information rather than ‘showing’ it, because ‘showing’ implies a visual broadcast.
EXERCISE

• in your groups
  – use TAPT forms to analyse the non-computer experiences from the last exercise
  – do you feel you have learnt from this?
  – does it give you ideas how to create a similar digital experience?
  – ... or maybe inspiration for a novel one.
designing for peak experience

mars bar vs baked bean design
why peak experience always wins
how to design for peak experience
baked bean vs. mars bar design
• baked bean design
  – things others others choose for us
  – things we have to share
  – corporate software – inc. universities!
  – office systems, government web systems

• mars bar design
  – things we choose for ourselves
  – games, entertainment
  – some web services
who wins?

good enough products never win
for any user, some peak product always better
how to design for peak experience

• 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 seek peak experience

• individual choice
• user experience central

• the long tail
  many applications for smaller groups
EXERCISE

• in your groups discuss:

  – are your experiences peak experiences?

  – if you were designing technology to emulate or support the non-technological experiences, can you think how you might seek a peak experience product?
extended episodic experience

mars bar vs baked bean design
why peak experience always wins
how to design for peak experience
extended episodic experience

work with Haliyana Khalid from her PhD on photologs


also related to Facebook experience (with Corina Sas et al.)

basic issue:

- experiences are not singular and unrelated
- but instead a flow, a stream, a thread

how to understand this?

- no fixed answer
- but exploring and seeking the right question
understanding user experience

• Csikszentmihalyi – Flow
  – between boredom and anxiety
  – focused attention, immediate feedback, loss of sense of time

• McCarthy and Wright – technology as experience
  – anticipating – prospective
  – connecting, interpreting
  – reflecting, appropriating, recounting – retrospective

• Dix – deconstructing experience
  – analyse experiential elements (deconstruct)
  – reconstruct in new way

but easy to forget other factors ...
but all about a single ‘experience’
much of our experience is:

extended – happening over protracted periods

but

episodic – composed of (linked) discrete events
EXERCISE

• in your groups discuss:
  – do the experiences you have discussed fit into bigger extended experiences?
  – try to think of as many different kinds of extended experiences that you have or know about

  – write me a list 😊
related:

Chan’s *Social Interaction Design* foregrounds the flow of individual actions

work on *long-term interaction*

gaps, pace, cross-organisational flows

Giaccardi: *pauses* and *duration* in cultural heritage

Steve & Gabriella: *temporal trajectories*
moving towards a theory of extended episodic experience

- interlinked events
- intertwined threads
- significant places
interlinked events

each event is Janus-like

looks back to past experiences (retrospective)
looks forward to future ones (prospective)

c.f. McCathy & Wright
generosity and reciprocity

“...I bothered to link them; they should bother to link me. It’s like Friendster, we put testimony, and they have to put testimony. If this person didn’t link me, it’s like she is being choosy of friends...”
eee & model of mind

first order – direct
enjoying a picture during browsing

second order – reflective
both prospective “will she feel happy to see this picture?”
and retrospective “why did he write that narrative”

higher order – reflexive
“How will others view my actions/intentions now”
one participant regarded others’ posts as self-exhibitionist (retrospective)
and so worried that she might be seen so (prospective)

c.f. theory of mind
intertwined threads

threads of communication with people
repeated visits to places

crossing media
meeting one another
intermixing contexts

N.B. body chemistry shifts slowly
significant places

place or space?
  – Harrison and Dourish
  – Augé: non-places and supermodernity shopping malls, airports, ...

spaces of experience become places of significance
  – walking to work through the park each morning
  – viewing friends’ status on Facebook each day
  – Brief Encounter

... also ongoing experience with people
EXERCISE

• in your groups:
  – analyse your extended experiences using the concepts above
  – do they help explain them?
  – what do they miss out?
THE END

you have

– seen why user experience is important
– thought about some theories of emotion
– deconstructed an experience
– looked at peak experience
– and extended episodic experience

and I hope .... had fun 😊