Design, mental models & behaviour change

Dan Lockton
WARNING

Please beware of sharp points on the top of the wall!

Do not rest your arms or hands on the top of the wall!
STOP
SEVERE TIRE DAMAGE
Welcome

Welcome to the Electronic System for Travel Authorization.

You are about to access a Department of Homeland Security computer system. This computer system and data therein are property of the U.S. Government and provided for official U.S. Government information and use. There is no expectation of privacy when you use this computer system. The use of a password or any other security measure does not establish an expectation of privacy. By using this system, you consent to the terms set forth in this notice. You may not process classified national security information on this computer system. Access to this system is restricted to authorized users only. Unauthorized access, use, or modification of this system or of data contained herein, or in transit to/from this system, may constitute a violation of section 1030 of title 18 of the U.S. Code and other criminal laws. Anyone who accesses a Federal computer system without authorization or exceeds access authority, or obtains, alters, damages, destroys, or discloses information, or prevents authorized use of information on the computer system, may be subject to penalties, fines or imprisonment. This computer system and any related equipment is subject to monitoring for administrative oversight, law enforcement, criminal investigative purposes, inquiries into alleged wrongdoing or misuse, and to ensure proper performance of applicable security features and procedures. DHS may conduct monitoring activities without further notice.

OK
The Japan Association welcomes you
to the Ishikawa Takuboku meet.
Date: 28-29 November, 2008

Client Name: Japan Association
Title: Greeting

Requirement
A cost effective and impactful way of greeting patrons at an Indo-Japan cultural event (Ishikawa Takuboku meet) organized by the Japan Association in India.

Creative (Panel at the entrance)
A red panel was placed at the entrance of the Japan Association where the event was being held.
In order to read the fine print, every visitor thereby ended up bowing in the traditional Japanese way.

Target Audience
A select group comprising enthusiasts, media persons, delegates, sponsors and students.
RUBBISH BIN! USE ME PROPERLY PLEASE!
I would like to help someone to live after my death.

Let your relatives know your wishes, and keep this card with you at all times.
Organ donation bid to target new drivers

Drivers applying for new licences from July will have to respond to a question about organ donation, as the government bids to increase donor numbers.

Under the "prompted choice" system, applicants must register to donate, say they have already signed up or state: "I do not want to answer this now."

Under the DVLA's current scheme, people can skip the question, but nearly 8m people have still signed up as donors.

It is hoped to increase numbers by making people consider a response.

If the DVLA pilot scheme is successful it could be rolled out to other areas.

Twenty-seven per cent of the UK population are registered donors, but the
“We can never do merely one thing”

Garrett Hardin, 1963
PLEASE DO NOT SIT ON THE HISTORIC STAIRS
When using coins in this machine

BE PATIENT!

Listen to the mechanism work before inserting the next coin.

Please do not rub the coin on the body of this machine – this makes no difference as to whether the coin is accepted by the machine or not.
Touch handle and pull gently
door will now open automatically
If I want to copy and paste my email address into the second box, I WILL GOD DAMM IT! How dare you disable right-click and CTRL+V. And how?!
You must stop what you are doing and acknowledge me now

Click Close to certify that you have read me carefully.
ADJUSTING THE THERMOSTAT

The internal temperature of your Elan is controlled by a thermostat as shown below (Fig. 3).

The dial has 6 temperature settings.

When your Elan was manufactured the dial was set to between 3 and 5, the correct setting for use in normal room temperature. You can adjust the temperature by turning the dial.

Your Freozer makes your food cold as quickly as possible. To achieve this, its usual setting is between 4 and 5. If you use the freezer to store a large amount of food, especially freshly caught fish or venison, you should lower the setting to 2.

After defrosting, the freezer temperature should be adjusted to 3 to 4 before freezing the food. After this, you may wish to adjust the setting to suit your own requirements.
12°C in the icebox in the REFRIGERATORS 450, 550 & 750 and -6°C in the REFRIGERATORS 250) when the thermostat is set between 3 and 5 and should hold these temperatures. If it isn’t, adjust the thermostat dial half a number (e.g. from three and a half to four). See Adjusting the thermostat on page 6. Don’t forget, the thermostat numbers are NOT temperature degrees. The higher the thermostat number, the colder the Fridge or Freezer will be.
Intersection of lots of fields
[As designers] “Behaviour is our medium”

Robert Fabricant, frog design, February 2009
“By looking at how others have used design to influence behaviour it is easier to transpose those ideas to the behaviours that you are trying to change...

We need that idea-generating process to help policy-makers work with designers, behaviour experts and people to make the leap into practice.”

Jamie Young, RSA Design & Behaviour project
More sustainable user behaviour
1.27 TWh wasted each year in the UK simply from unnecessary overfilling of kettles.
“Enough electricity to run practically all the street lighting in the UK” (DEFRA)
Twist

A variable temperature kettle

Consumers are increasingly aware of the environmental impact of their decisions, but many are reluctant to change their behaviour. Technology brings improvements to people’s lives, but some sustainable design neglects the user’s needs, leading many to associate ecological living with compromise. Heating water requires a lot of energy; conventional kettles boil water to around 100°C, but often this is unnecessary. A cup cooling to drinking temperature is a common sight and brewing tea or coffee above 92°C can leave a burnt flavour. The Twist kettle enables the user to easily vary the water temperature, saving energy. The novel but intuitive interface allows users to choose the temperature by twisting the kettle. Its 360° base becomes a temperature dial, setting the temperature is an extension of an existing movement.

Alexander Ambridge
Product Design BSc
From midnight on 16 Sep to 12:07 on 22 Sep, 1 Horse Guards Road has used:

129139 kWh
Energy use
115364 kWh in Electricity
13775 kWh in Gas
Average 768 kWh per hour

£9565.84
Energy cost
£9164.19 from Electricity
£401.64 from Gas
Average £56.94 per hour

64889 kg
Carbon impact
62360 kg for Electricity
2528 kg for Gas
Average 386 kg CO2 per hour
Fan speed button (FAN)
Push this button to select the fan speed.
When you select AUTO, the fan speed is automatically adjusted according to the room temperature. You can also manually select the desired fan speed from five available settings. (LOW, LOW+, MED, MED+, HIGH) (A receiving beep is heard.)

Please, do think of others before making any changes, thank you.
CAUTION

- Inspection is required if the OPERATION lamp or the MALFUNCTION code flashes. Notify the flashing MALFUNCTION code to the service personnel. As to the content of malfunction indication, refer to manuals of the unit.

- button is used for the inspection.

- If indoor unit does not have a function, “NOT AVAILABLE” is indicated when pressing buttons for the function.

- When is indicated, cooling/heating cannot be changed over.

- When is indicated, ON/OFF, temperature setting, and timer operation, etc. are sometimes impossible to control.
Do not adjust the controls on this unit
Business School
STAFF ONLY
PLEASE
WASH YOUR OWN DISHES.
THE CLEANING SERVICE DOES NOT PROVIDE THIS SERVICE.
THANK YOU!

-Karen-
That is your job
QUIT BITCHING
Hosts are watching dish-leavers.
This light is often on all day.
Lights - too sleepy when low

Lights always on
What does this do?
What can this bin accept?
This always seems to be on - creating an echo.
Mental model diagrams of the HVAC system

Participants generally seemed happy to produce diagrams using Post-It notes, although some struggled to fill in the gaps.
As designers]
“Behaviour is our medium”

Robert Fabricant, frog design, February 2009
Explore the medium:
Do we try to:
- ignore
- work with
- change users’ mental models?
IGNORE users' mental models
Choice editing

Can you edit the choices presented to users so only the ones you want them to have are available?

*Choice editing can be driven by legislation, e.g. leaded 4-star petrol being phased out in the EU by 2000 (when this photo was taken)*
Interlock

Can you set things up so one action can’t be performed until another is completed?

Most modern cash machines don’t dispense cash until you remove your card, making it less likely you’ll leave it behind.
WORK WITH users' mental models
the new way to dispose of your chewing gum

STICK YOUR GUM HERE!
STICK YOUR GUM HERE!

3 DAYS

3 HOURS

3 MINUTES

ONE RECYCLED TIN WOULD SAVE ENOUGH ENERGY TO POWER A TV FOR?

www.gumtarget.com
Your Litter Here Please
Simplicity

How simply can you structure things, to make it easier for users to do what you’d like them to do?

EcoButton allows a user to put a computer into a low-power state with just one press, making it much easier for users to save energy.
CHANGE users' mental models
If these blinds are closed, it's to stop the sun coming in not you.
Skeletons and The Department Of Transportation
posted by Dino Gaskins on May 16, 2011 at 05:15 AM

The New York City DOT came to us with a startling statistic: When a pedestrian is struck at 30mph by a vehicle, there is an 80% chance they will survive. If a pedestrian is struck at 40mph, there is a 70% chance they will survive. The seemingly small difference is the difference between life and death for a pedestrian.

As part of the DOT’s “slow to save” campaign, the barbarians took to the streets. Using the DOT’s warm matrix sign, a speed radar, and 9x16 dot matrix (think microsoft paint), we created a speed board to remind New Yorkers to slow down. The speed board displays a graphic of the familiar pedestrian walking man, with the posted speed limit of 30mph.

The on board radar detects passing cars speed, and if a car breaks the limit, the pedestrian changes to a skeleton, with SLOW DOWN in giant letters.

Honey Lal came up with the skeleton graphic. This was an exercise in classic video game illustration, adhering to just a simple dot-matrix with little non-lipl pixels. Originally we had created hopping animations for each state of the pedestrian, a walking man, and a walking skeleton.
Welcome to the CO₂ calculator. Find out what your carbon footprint is and how you can make some simple changes to help tackle climate change.

More about your CO₂ calculations - FAQs.
Real-time feedback

Can you let users know how what they’re doing is affecting the system?

Energy meters can allow householders to see which appliances use the most electricity, and how much this is costing.
Can you give users a report on what they’ve been doing, or its effects?

GreenPrint, software that reduces wasted prints through better usability, provides users (and their bosses!) with a summary of resources saved.
Peer feedback

Can you give users feedback on their behaviour from other users of the system, equal in status to themselves?

Peer feedback on comments and stories is central to sites such as Slashdot (‘karma’ scores) and Digg (‘digging’ and ‘burying’).
Simulation & feedforward

Can you give users a preview or simulation of the results of different actions or choices?

Interactive savings / loan simulators such as this from Yahoo! are increasingly common, and can influence customer decisions.

Start ahead and stay ahead
Problem

Define target behaviour

Mental models: ignore or try to understand?

Mental models: work with or try to change?

understand

ignore

work with

change

Relevant design patterns

Relevant design patterns

Relevant design patterns
Thanks for listening!

Get in touch:
dan@danlockton.co.uk
Twitter: @danlockton

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designwithintent.co.uk

Consultancy:
requisitevariety.co.uk
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