

## *2.3.2 User behaviour on the web, heuristics & design principles*



# Hick's law

- **The time it takes to make a decision increases as the number of alternatives increases**
- However, if lesser options involve more work, such as reading sentences, the law may not be applicable.
- When you add page loading time, it often becomes much quicker to have more options (hence the preponderance of "information-dense" Web sites around! e.g. [www.bbc.co.uk](http://www.bbc.co.uk))
- Think of the impact of structure, typography etc when designing pages with many options

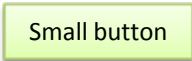
# Flexibility-Usability trade-off

- As the flexibility of a system increases, the usability decreases
- Flexible designs that perform more functions are harder to learn because of increased complexity




# Fitt's law

- The **time required to move to a target is a function of the target size and distance to the target** e. g a smaller, more distant target is harder to acquire than a closer & larger target.
- Here's an [interactive demonstration of Fitts Law](#), and an account of how it was used to [guide some of the design of Microsoft Office 2007](#)

A small, light green rectangular button with a thin black border and a subtle drop shadow. The text "Small button" is centered inside in a black sans-serif font.

Small button

A large, light green rectangular button with a thin black border and a subtle drop shadow. The text "Large button" is centered inside in a black sans-serif font.

Large button

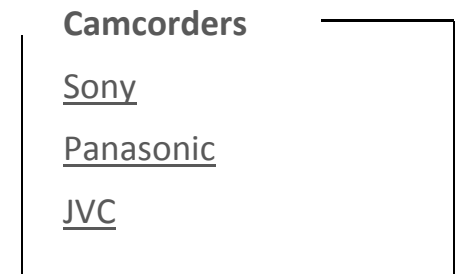
# Information scent

- Based on studies from Xerox PARC on **“information foraging”**.
- When hunting for information, people follow the **same tactics as animals hunting for food**.
- In an information-rich environment people always make **instant analyses of the cost versus the probable benefit** of following a trail.
- **Some links “smell” more strongly** of what you’re looking for than others.
- **Their benefit seems more certain**. So the effort is more worthwhile.

# Information scent

The factors that improve information scent are:

- **Straightforward** links with no puns or made up words
- **Longer link phrases:** don't be scared of using more words for clarity
- **Explanatory information associated with the link** (but be careful what form that information takes). E.g. TITLE attributes in HTML.
- **Nearby links** that have strong scent.
- **“Trigger words”:** The words people tend to think of first when doing a particular task.
- **Adding Boxes & titles** to the list:



# An information scent example

Here's a navigation bar...



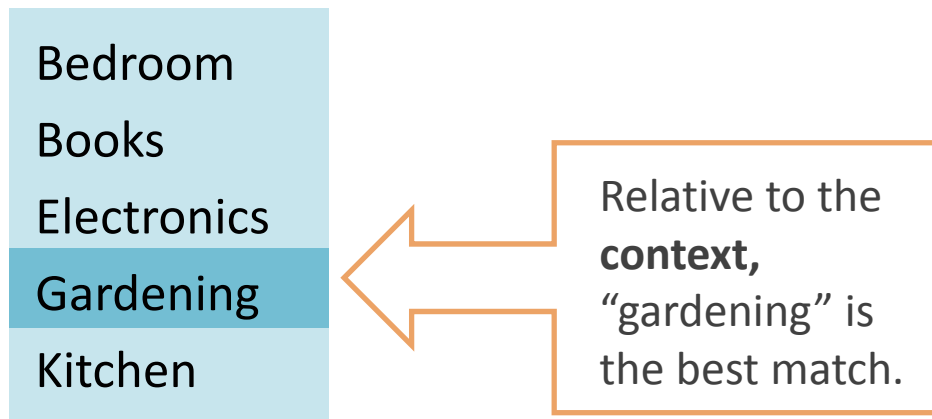
- Bedroom
- Books
- Electronics
- Gardening
- Kitchen

**Task: “Find Wellington boots”**



# An information scent example


Here's a navigation bar...



**Task: “Find Wellington boots”**

# An information scent example

Here's a different navigation bar...

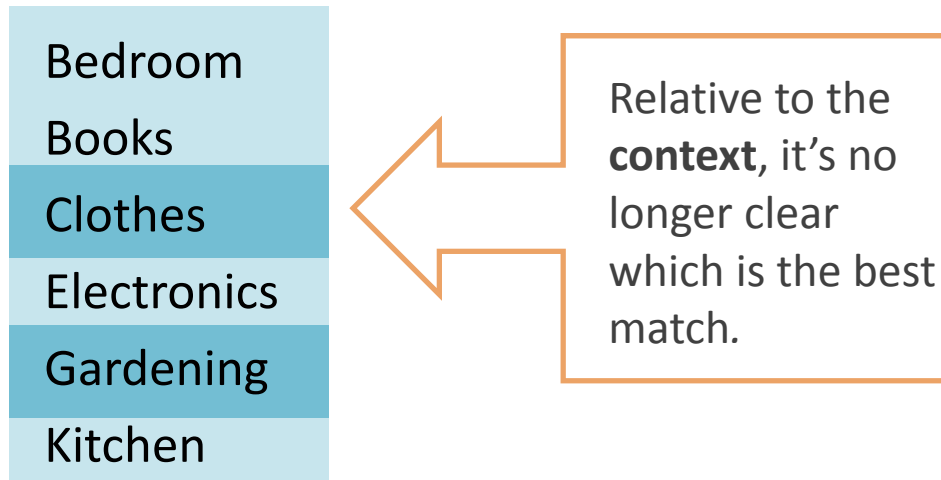


- Bedroom
- Books
- Clothes
- Electronics
- Gardening
- Kitchen

**Task: “Find Wellington boots”**

# An information scent example

Here's a different navigation bar...



Task: “Find Wellington boots”

# An information scent example

Here's yet another navigation bar...

**Bedroom:** Quilts, pillow, covers...

**Books:** Bestsellers, factual, education...

**Clothing:** Jumpers, coats, shoes...

**Electronics:** CD players, TVs, Hi-fi...

**Gardening:** Seeds, plants, pots...

**Kitchen:** Pots and pans, cutlery...

**Task: “Find Wellington boots”**

# An information scent example

Here's yet another navigation bar...



Task: “Find Wellington boots”

# Induction: Examples vs. descriptions

- Human brains are very good at inducing general rules from specific examples.
- We often find it easier to induct information than to read abstract descriptions.



# Induction: examples vs. descriptions

- Examples are often better than descriptions.
- If you choose good examples, you'll score direct hits (trigger words).
- But even if you don't score a direct hit, it's easier for people to induct than to read descriptions.



## Arts & Humanities

[Literature](#), [Theatre](#), [Photography](#)...

## News & Media

[Full Coverage](#), [Weather](#), [TV](#)...

## Business & Economy

[B2B](#), [Shopping](#), [Investments](#), [Property](#)...

## Recreation & Sport

[Sport](#), [Hobbies](#), [Travel](#), [Motoring](#)...

## Computers & Internet

[Internet](#), [Reviews](#), [Software](#), [Games](#)...

## Reference

[Maps](#), [Dictionaries](#), [Phone Numbers](#)...

# Scanning

**We often scan pages, picking out individual words and sentences.**

*“In a recent study John Morkes and I found that 79 percent of our test users always scanned any new page they came across; only 16 percent read word-by-word.”*

Jakob Nielsen

**Help users scan read** by using effective text hierarchy, good layout, and writing for the web guidelines.

<http://www.useit.com/alertbox/9710a.html>



# Satisficing

- It's often preferable to settle for a satisfactory solution, rather than pursue the optimal solution
- Therefore usually we don't inspect all the options. **We choose the *first* option that seems *good enough*.**

## Why?

- We're in a hurry.
- Not much penalty for guessing wrong.
- Experience on the Web teaches us that careful thought doesn't help.
- Guessing is less work.

# Muddling through

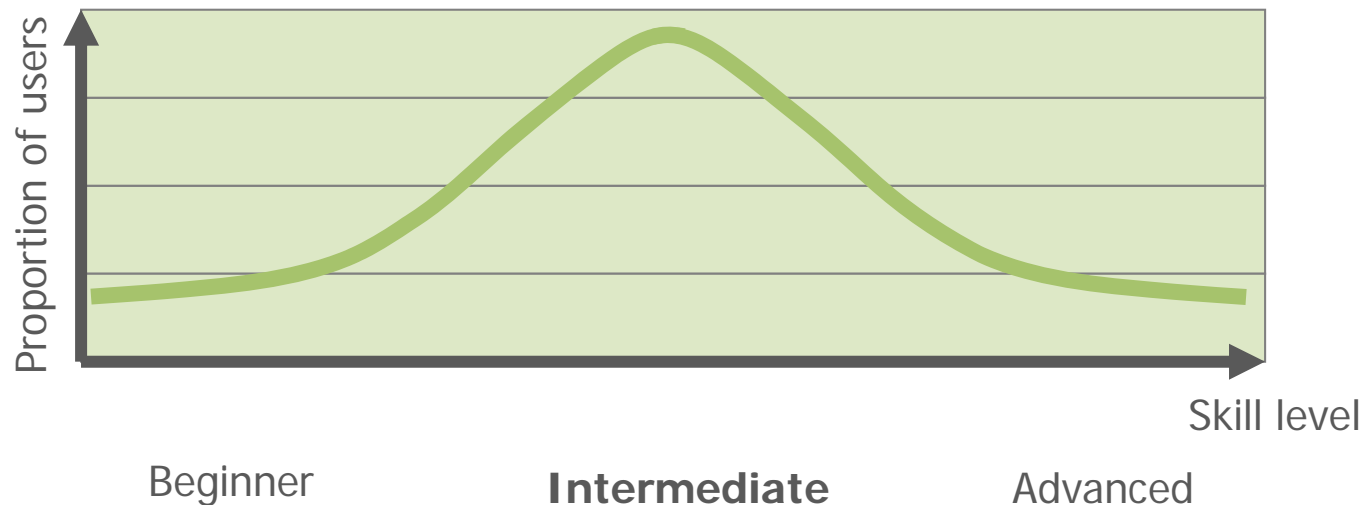
**“Paradox of the Active User”:** People rush in, then suffer productivity losses in the longer term because they don’t really know what they are doing.

## Why do we muddle through?

- People **don’t care enough** to actually go to all the effort of reading the manual.
- People stick with whatever way they first discovered of getting the job done, e.g. Google gets thousands of searches every day for full URLs like *www.bbc.co.uk*.

# The perpetuate intermediate

Because we like to muddle through, most of us stay intermediate users all our lives.



## ..but here are some myths:

- Large pages are bad
- All content must be reachable in three clicks
- Fewer pages in the transaction = higher conversion
- Navigation must contain 7 +/- 2 items

# Large pages are ok...

## ... if the page satisfies user goals

Jared Spool studied user perceptions of ten websites.

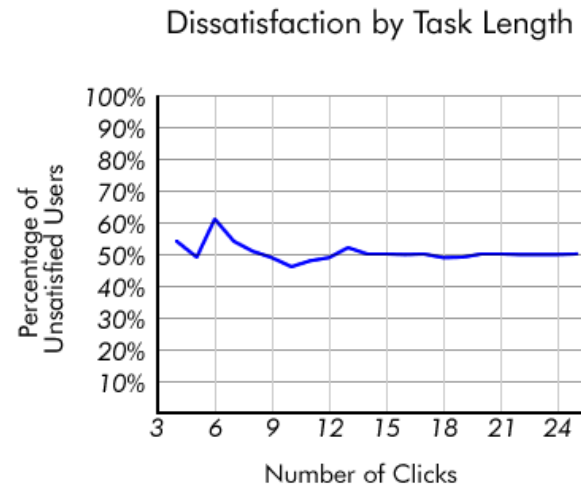
- There was little correlation between people's perception of download time and the actual download time.
- So on some sites, pages downloaded slowly, but users said the pages downloaded sufficiently fast.
- There *was* a correlation between how successful people were and how fast they said pages were.

**Conclusion: (download) time flies when you're having fun!**

# No scientific support for the 3-click rule

*“[User] complaints aren't actually about the clicks. They are really complaints about failing to find something. When users find what they want they don't complain about number of clicks.”*

Jared Spool



# Enough info to make a decision:

*“Shoppers could not ascertain enough information from the product list, so they clicked back-and-forth between the list and multiple individual product pages before deciding whether to select a product for purchase: ‘Pogo-sticking!’*

Jared Spool

When users comparison-shopped using pogo-sticking techniques, they purchased 11% of the time. When they used product lists to evaluate products, they purchased 55% of the time.

# Seducible moments:

Crosslink at the right time, with relevant messages

*“There are specific moments where designers are most likely to influence a shopper to investigate a promotion or special offer. Most of the time, these moments come after the shopper has satisfied their original mission on the site.*

*If we identify the key seducible moment for a specific offer, we can often see over 10 times as many requests.”*

Jared Spool



# Design pages not to need instructions

- Make the title into the instructions.
- Make it obvious what needs to be done from the size and arrangement of items on the page - use “affordances” or “calls to action”.
  - Eg 1-2-3 or arrows.
- Rely on our inductive reasoning abilities