fresh egg

The Dimensions framework

A rubric for conducting heuristic reviews.

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October 2023
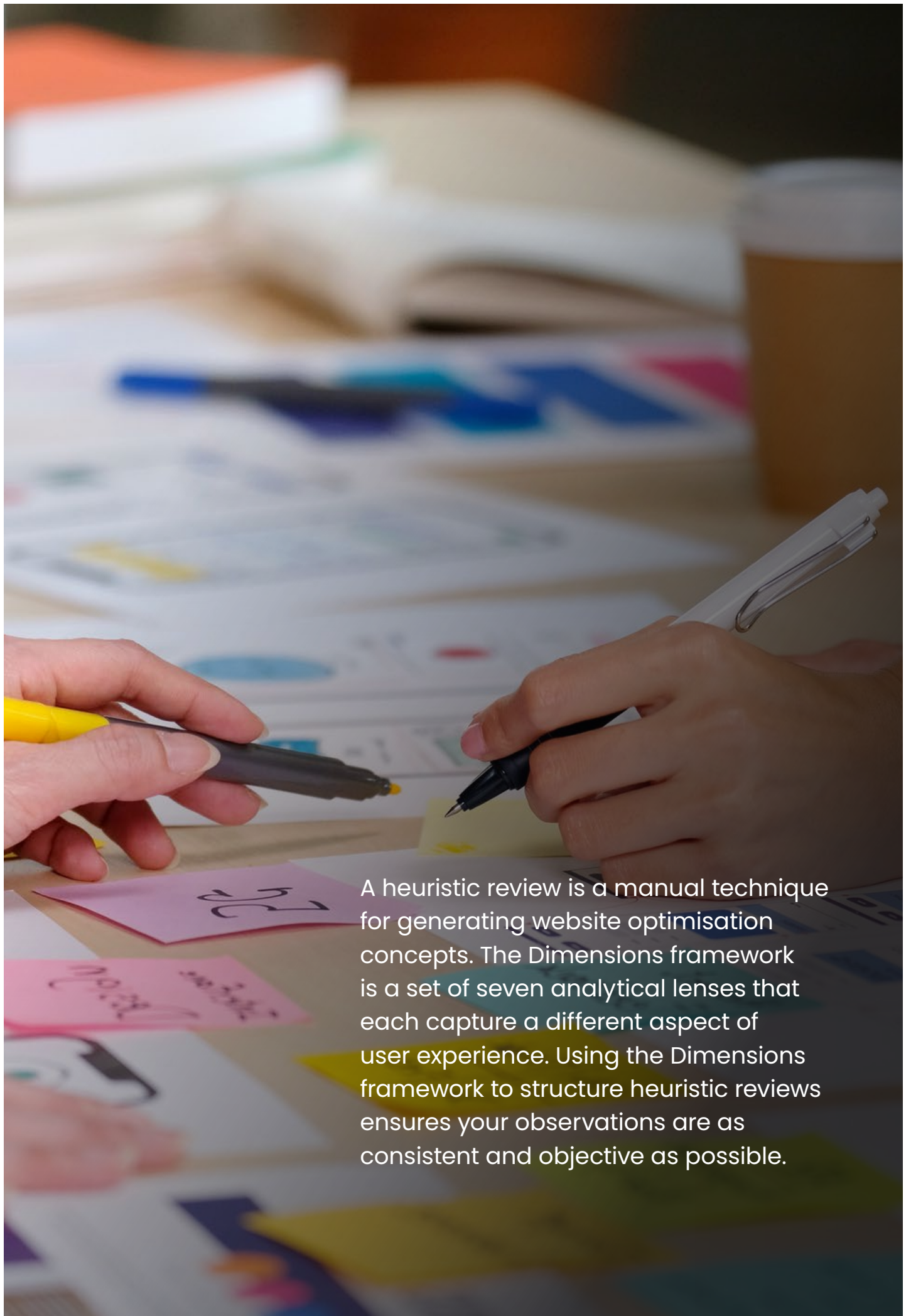
A heuristic review is a manual technique for generating website optimisation concepts. The Dimensions framework is a set of seven analytical lenses that each capture a different aspect of user experience. Using the Dimensions framework to structure heuristic reviews ensures your observations are as consistent and objective as possible.

Contents

Dimensions

At Fresh Egg, we structure our heuristic reviews through a set of analytical lenses called "Dimensions". These draw from UX design theory, psychology, and behavioural science.

Motivation

How is the user inspired to take action?

Factors: Price | Effort | Product benefits

Social signals

Does the social context inspire trust or conformity?

Factors: Reviews | Endorsements | User activity

Brain limits

Does the experience overwhelm a user's cognitive limits?

Factors: Simplicity | Focus | Cognitive load

Biases

What kind of mental shortcuts are triggered by the experience?

Factors: Availability | Anchoring | Representativeness

Content

Is all the necessary information accessible, clear, and concise?

Factors: Clarity | Consistency | Comprehensiveness

Friction

Is the journey smooth and easy, or are there obstacles?

Factors: Usability | Accessibility | Customer journey

Affect

How does it make the user feel?

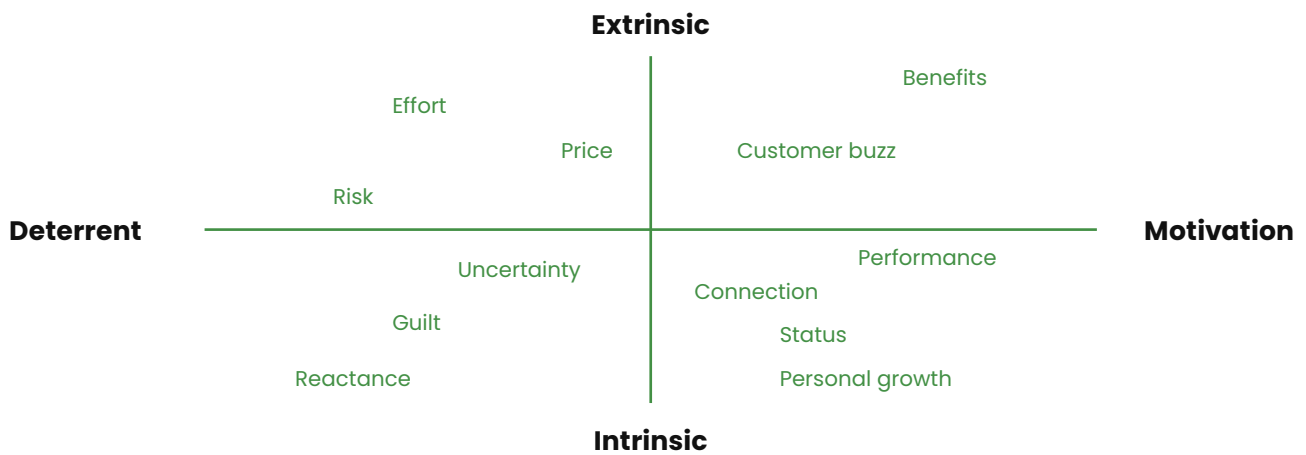**Factors:** Meaningfulness | Mood | Brand affinity

Motivation

How is the user inspired to (or deterred from) taking action?

1

1. Motivation

Motivation captures everything involved in a user's costs vs benefits calculation. Motivating factors are often divided into two categories: "intrinsic" and "extrinsic".

Extrinsic

Effort

Benefits

Price

Customer buzz

Risk

Deterrent ————————————————— **Motivation**

Performance

Uncertainty

Connection

Guilt

Status

Reactance

Personal growth

Intrinsic

Extrinsic motivations are circumstantial, based on environmental costs or benefits. Intrinsic motivations are more deep-rooted and reflect personal beliefs or values. When analysing a user journey, you should ask yourself what might inspire a user to act and what could prevent them from doing so.

Further reading

Jack Brehm, "Psychological Reactance", in *Advances in Consumer Research*, volume 16, edited by Thomas Srull (1989), pp. 72–75.

Jack Brehm, *Control, its loss, and psychological reactance* (New York, 1993).

Edward Deci & Richard Ryan, "Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being", *American Psychologist* 55 (2000), pp. 68–78.
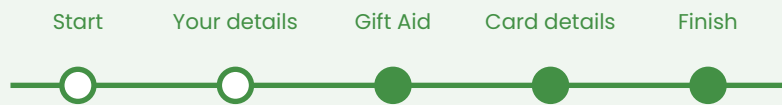
Robert Cialdini, *Influence* (New York, 2007).

Stefano Dominico & Richard Ryan, "The emerging neuroscience of intrinsic motivation", *Frontiers in Human Neuroscience* 11 (2017), pp. 1–14.

Motivation
What to look out for

Disguising effort

Start   Your details   Gift Aid   Card details   Finish

Creating scarcity /urgency

⏰ Only 2 left at this price

👁 10 people are looking at this item

Highlighting benefits

Annual   **Monthly**

🐷 Save money and sleep easy - by paying it all up front

Building desire

- 15 year old Single Malt Whisky from the highest and coldest distillery in Scotland

- Smooth aromatic, heather and honey sweetness

Social signals

What kind of social context is visible to a new user? How is previous activity shown?

2. Social signals

When someone is unsure how to act, they base their behaviour on signals from other people. Because of this, elements like authority badges, reviews, live activity feeds, and identity cues can have a powerful impact on users.

Group influence

Majority opinion establishes a reference point that changes individual perceptions.

"Prestige-suggestion or stereotype plays a considerable part in peoples' judgements... authors rated highly pull up the rating of the passages attributed to them."

Muzafir Sherif
Social Factors in Perception (1935).

Conformity

People often follow the majority deliberately. This behaviour varies between individuals, but most will conform under pressure.

"Despite the stress of the given conditions, a substantial proportion of individuals retained their independence throughout. At the same time, a substantial minority yielded, modifying their judgements in accordance with the majority."

Solomon Asch
"Studies of Independence and Conformity", Psychological Monographs 70 (1956).

Identity

Once people define a self-image, they will go to great lengths to act consistently with that identity.

"The relationship between identity (self) and behaviour is complex and probably reciprocal."

"In role-relevant situations, others respond to the person as a performer in a particular role."

Peter Burke
"The link between identity and role performance", *Social Psychology Quarterly* 44 (1981), 83-92.

Important sources

Muzafir Sherif, *Social Factors in Perception* (New York, 1935).

Solomon Asch, "Studies of Independence and Conformity", *Psychological Monographs* 70 (1956), 1-70.

Robert Cialdini, "Basic Social Influence is Underestimated", *Psychological Inquiry* 16 (2005), 158-161.

Salganik Mathew, "Experimental study of inequality and unpredictability in an artificial cultural market" *Science* 311 (2006), 854-6.

Noah Goldstein, Robert Cialdini & Vladas Griskevicius, "A Room with a Viewpoint: Using Social Norms to Motivate Environmental Conservation in Hotels", *Journal of Consumer Research* 35 (2008), 472-482.

Social signals
What to look out for

Authority signals

WINNER

£

CashExpert
Awards 2023

Reviews, ratings and endorsements

4.5 ★★★★⯪ Based on 463 customer reviews

Live activity feed

👍 9.7k 💬 82

Audience building

JOIN TODAY

Don't just catch up - stay one step ahead
Subscribe now and lead the conversation

Brain limits

Does the experience overwhelm users' cognitive limits?

3. Brain limits

Digital experiences that overwhelm users' cognitive faculties are less user-friendly and lead to errors. Use insights from cognitive load research and working memory to reduce unnecessary difficulty.

Using intuitive patterns, removing extraneous content, and placing similar items in groups can help visitors process information.

When considering brain limits, look for alternative ways of organising content and user flows to make them easier to digest.

Further reading

George Miller, "The magical number seven, plus or minus two: some limits on our capacity for processing information" *Psychological Review* 63 (1956), 81–97.

Murray Glanzer & Anita Cunitz. "Two Storage Mechanisms in Free Recall" *Journal of Verbal Learning and Verbal Behavior* 5 (1966), 351-60.

Richard Atkinson & Richard Shiffrin, "Human Memory" in *The Psychology of Learning and Motivation*, edited by Spence (1968), 90-191.

Alan Baddeley & Graham Hitch, "Working Memory" in *The Psychology of Learning and Motivation*, ed. Bower (1974), 47-89.

John Sweller & Paul Chandler, "Cognitive Load Theory and the Format of Instruction", *Cognition and Instruction* 8 (1991), 293-332.

Nelson Cowan, "The Magical Number 4 in Short Term Memory: A Reconsideration of Mental Storage Capacity", *Behavioural and Brain Sciences* 24 (2000), 87-185.

Jonathan Evans & Keith Frankish, *In Two Minds: Dual Processes and Beyond* (New York, 2009).

Brain limits
Cheat sheet

Spans and limits
Miller (1956)

Reduce the number of items a user must keep in their heads.

Chunking
Miller (1956)

Use natural groups and patterns to organise items that users must recall.

Highlighting
Von Restorff (1933)

Isolate important elements to guide a user's attention.

Serial position
Glanzer & Cunitz (1996)

Place the most important items at the start or end of a list or paragraph.

Interference
Baddeley & Hitch (1974)

Never overburden a single faculty with more than one task at a time.

Extraneous info
Sweller (1991)

Use as few words or examples as possible to illustrate an idea.

Schema building
Sweller (1991)

When educating users, focus on creating clear mental models.

Word length
Baddeley (1975)

Use short, clearly distinct words in lists or instructions.

Doubt management
Sweller (1991)

Silence user's doubt by giving positive signals for correct actions.

Split attention
Sweller (1991)

Display all the information required to solve a problem in one place.

Single focus
Kahneman (1973)

Remove distractions when a user must complete a difficult task.

Dual coding
Allan Paivio (1969)

Give key information in multiple forms (text and image).

Brain limits
What to look out for

Complex menus

Air	Humidification	Ventilation

Installation
Maintenance
Package Deals
Industrial
Home

Too much choice

Choose your voluntary excess

£200	£225	£250	£275
£300	£325	£350	£375

Difficult copywriting

... Variable rates can track the central bank Base Rate, a near Risk Free Rate (NFR) such as SONIA, SOFR, TONAR or ARRON...

Biases and behavioural effects

What kinds of mental shortcuts are triggered by the experience?

4. Biases and behavioural effects

Most human thought is informal and irrational, based on rules of thumb rather than logic. Because of this, choices and behaviours are biased in ways that designers can anticipate.

Consider how framing, default options, and persuasion might shape a user's choices when analysing a digital journey.
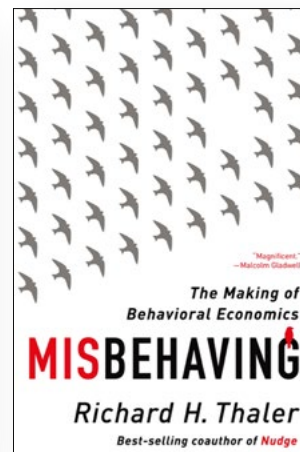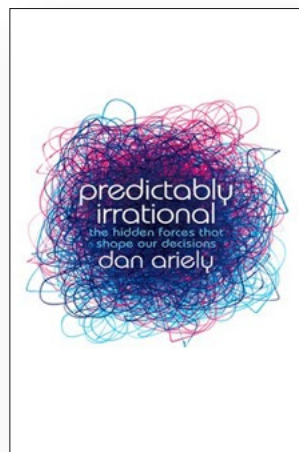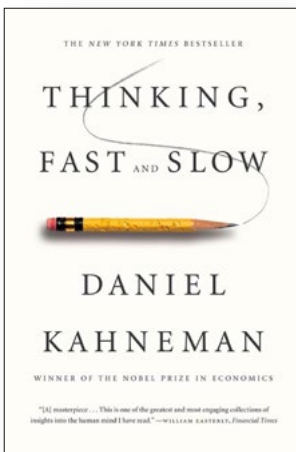
Further reading

Amos Tversky & Daniel Kahneman, "Judgement Under Uncertainty", *Science* 185 (1974), 1124-1131.

Daniel Kahneman & Amos Tversky, "Prospect Theory", *Econometrica* 47 (1979), 263-291.

Richard Thaler, "Anomalies: Fungibility and Mental Accounting", *Journal of Economic Perspectives* 4 (1990), 193-205.

Ziv Carmon, Klaus Wertenbroch, & Marcel Zeelenberg, "Option Attachment", *Journal of Consumer Research* 30 (2003), 15-29.

Eric Johnson & Daniel Goldstein, "Do Defaults Save Lives?" *Science* 302 (2003), 1338-1339.

Ilan Dar-Nimrod, Catherine Rawn, Darrin Lehman & Barry Schwartz, "The Maximization Paradox", *Personality and Individual Differences* 46 (2009), 631-635.

Daniel Kahneman, *Thinking, Fast and Slow* (London, 2011).

Richard Thaler, *Misbehaving* (London, 2015).

Biases and behavioural effects
Cheat sheet

Availability
Tversky & Kahneman (1979)

Things that are easy to recall seem more common or likely.

Representativeness
Tversky & Kahneman (1979)

Things that look 'right' feel more likely and plausible.

Reflection effect
Tversky & Kahneman (1979)

Preferences can be reversed by switching a negative frame.

Framing
Tversky & Kahneman (1979)

Adjusting reference points and context can shift perception.

Mental accounting
Thaler (1990)

People use informal rules when managing money.

Default effect
Samuelson (1988)

People often conform to a perceived convention.

Decoy effect
Puto (1992)

A decoy C option can reverse preferences for options A or B.

Maximisation fatigue
Schwartz (2002)

The search for a 'best' option can create dissatisfaction.

Option attachment
Carmon (2003)

People try to maintain even less-favoured options.

Zeigarnik effect
Zeigarnik (1938)

People tend to remember incomplete tasks.

Consistency
Cialdini (1984)

People like to stay consistent with previous acts or beliefs.

Scarcity
Worchel (1975)

Limited supply increases perceived value and urgency.

Distance discounting
Tversky & Kahneman (1979)

Emotional distance can reduce the 'pain of paying'.

Isolation effect
Tversky & Kahneman (1979)

Comparing differences rather than options is misleading.

Endowment effect
Thaler (1991)

People overvalue things that they own and are attached to.

Biases and behavioural effects
Things to look out for

Framing

📱 **£335**
- ✓ Basic online
- ✗ Everything online
- ✗ Print

📱 **£365**
- ✓ Basic online
- ✓ Everything online
- ✗ Print

📰 **£245**
- ✗ Basic online
- ✗ Everything online
- ✓ Print

Defaults

☑ Let me know about exclusive sales and offers

Isolation effect

Basic
£10 first 3 months
Then £15 per/m

MOST POPULAR
Premium
£15 first 3 months
Then £18 per/m

Endowment effect

Great choice!
Bosch Power Drill has been added to your bag

Content

Is all the necessary information clear, consistent and concise?

5. Content

Users are less likely to engage with an offer when detail is missing, inconsistent or incomplete.

Unfortunately, it's more difficult to communicate an idea clearly online than it is through printed media. This is because of the way people consume online content:

1. Prior context has a big influence on the interpretation of new ideas.
2. Visitors are unlikely to read your content in a linear way.

Evidence from eye-tracking software has highlighted some interesting factors that shape how users consume online content. When analysing the content within a digital experience, you should ask whether a user has enough information at each stage to take the next step.

F-pattern

When given unstructured content blocks, disengaged readers default to an 'F-shaped' fixation pattern.

The first words on the left border get more attention.

Subheadings and bullet points are critical.

Saccades

The visual field is split into Foveal and Peripheral areas. When reading, these are knitted together with saccades.

The first saccade in a series tends to be the longest.

When text is more complex, right-to-left saccades increase.

Error fixation

Readers focus on errors and aberrations more than overall structure and content.

Any published material, especially UI content, must be error-free.

Pattern-breaking should be used strategically.

Visual cueing

Readers react to visual clues about how to direct their attention without realising.

Images of another person's gaze can persuade us to look in the same direction.

Gaze cueing occurs even in peripheral vision.

Further reading

Yellowlees Douglas, *The Reader's Brain* (Cambridge, 2015).

Stanislas Dehaene, *Reading in the Brain* (New York, 2009).

Content
What to look out for

Signposting

Continue to payment

Pay now →

Product details

- Pets allowed?   **Some**
- Available from: **__ / __**
- Minimum tenancy: **12 months**

Names and labels

Basic

3rd Party Only

POPULAR

Comprehensive

3rd Party Only

Friction

Is the journey smooth and linear, or complex and full of obstacles?

6

6. Friction

Customer journeys that require advance commitment without offering guarantees have a lot of friction. Similarly, accessibility failures, hidden steps or inconsistent UX are all design features that prevent a user from progressing within a user journey.

← **Macro**   **Micro** →

Customer level friction

The customer struggles to commit due to the way a product or service is packaged.

Example: *The product has a long contract and a no-buyout clause.*

Journey level friction

The customer struggles to commit due to how a product or service is packaged.

Example: *Customers must pay before they can try the product.*

UX friction

Poor UX design blocks the customer and makes the journey difficult to complete.

Example: *A hidden CTA button or missing help text.*

Ergonomic friction

Physical accessibility issues prevent the user from completing their journey.

Example: *Poor visual contrast or mobile usability issues.*

To identify hidden friction within an online experience, search for obstacles at every scale of the user journey. Start by thinking about the whole customer journey, then zoom in on the most fundamental aspects of the user interface.

Further reading

Jakob Nielsen "10 usability heuristics for user interface design" (1994): *www.nngroup.com/articles/ten-usability-heuristics/*

W3C, "How to meet Web Content Accessibility Guidelines" (2005-23): *www.w3.org/WAI/WCAG21/quickref/*

Friction
What to look out for

Legibility

BUY NOW

Error prevention

⚠ **Something doesn't look right**
Enter a UK phone number without the '+44 country code'

Recovery and 'forgiveness'

← Back one step

Unnecessary hassle

POLICY NUMBER ☐☐☐☐ ☐☐☐☐ ☐☐☐☐
PURCHASE DATE _ _ / _ _ / _ _ _ _
DEPARTURE DATE _ _ / _ _ / _ _ _ _

Affect

How does the experience make a user feel?

7. Affect

'Affect' describes an underlying mood or emotional state. Brands are often evaluated based on "brand effect" (how they make a customer feel). Creating the correct emotional response is an integral part of web design.

Visual identity is made up of lots of elements:

- Colour palette

- Typography

- Imagery

- Layout

Affect is challenging to analyse without user feedback, so comparing your observations to user testing insights or sentiment analysis is helpful.

Further reading

Arjun Chaudhuri and Morris Holbrook, "The chain of effects from brand trust and brand affect to brand performance", *Journal of marketing* 65 (2001), 81-92.

Michael Johnson, *Branding in five and a half steps* (London, 2016).

Donald Miller, *Building a story brand* (London, 2017)

Notes

**Digital marketing
driven by customer experience**

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