



# Employing UX research methods to design better library services

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Cambridge University Library*

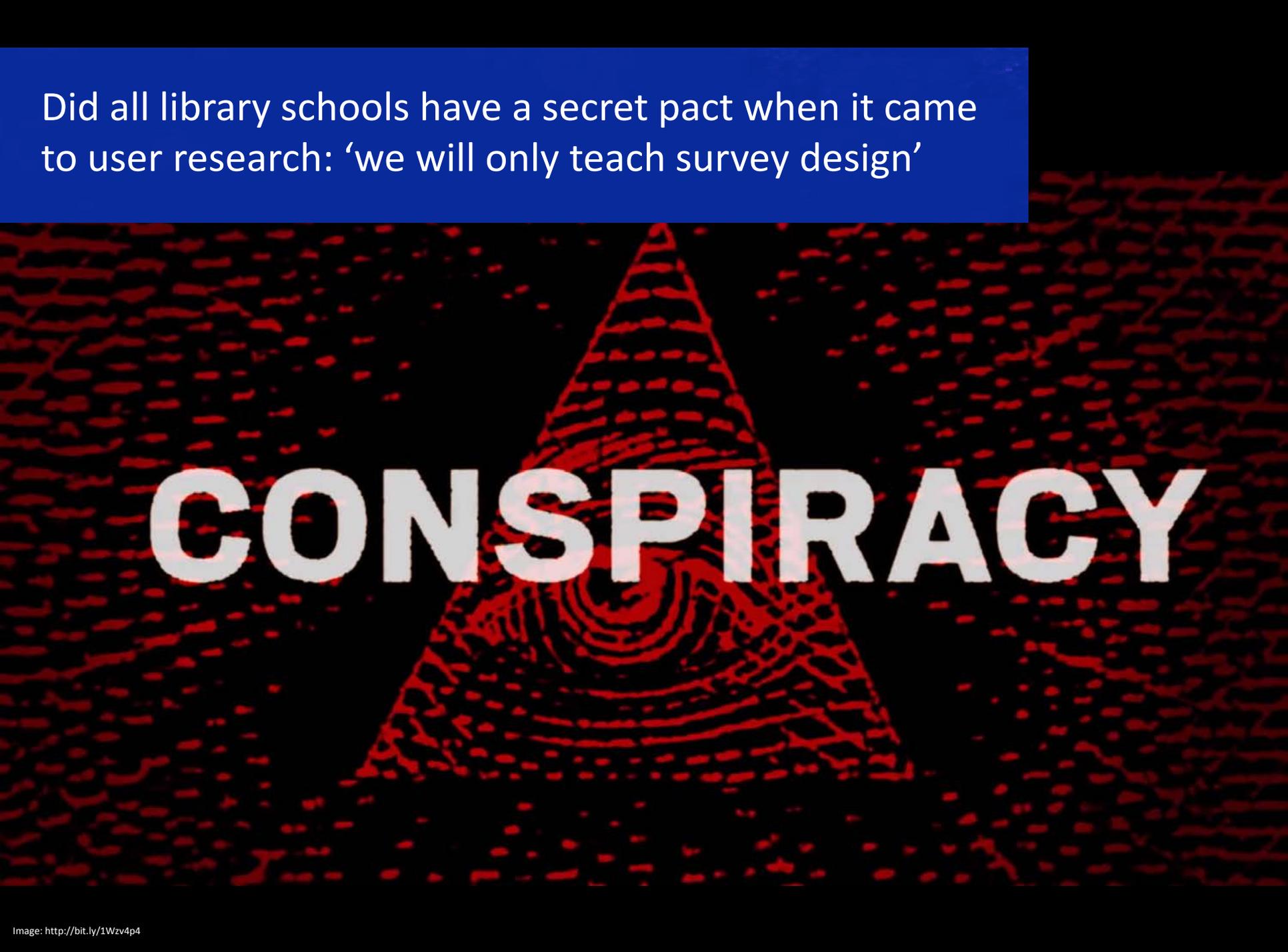


‘Road to Damascus’ moment – there was a whole world of user research methods that I’d never encountered

The image shows the letters 'U' and 'X' in a large, three-dimensional, light-colored font. The letters are set against a dark, textured background that resembles a carpet or a similar material. The 'U' is on the left and the 'X' is on the right. The lighting creates shadows, giving the letters a sense of depth and volume.

User Experience research methods – how users **actually** experience our services, a more holistic approach

Did all library schools have a secret pact when it came to user research: 'we will only teach survey design'

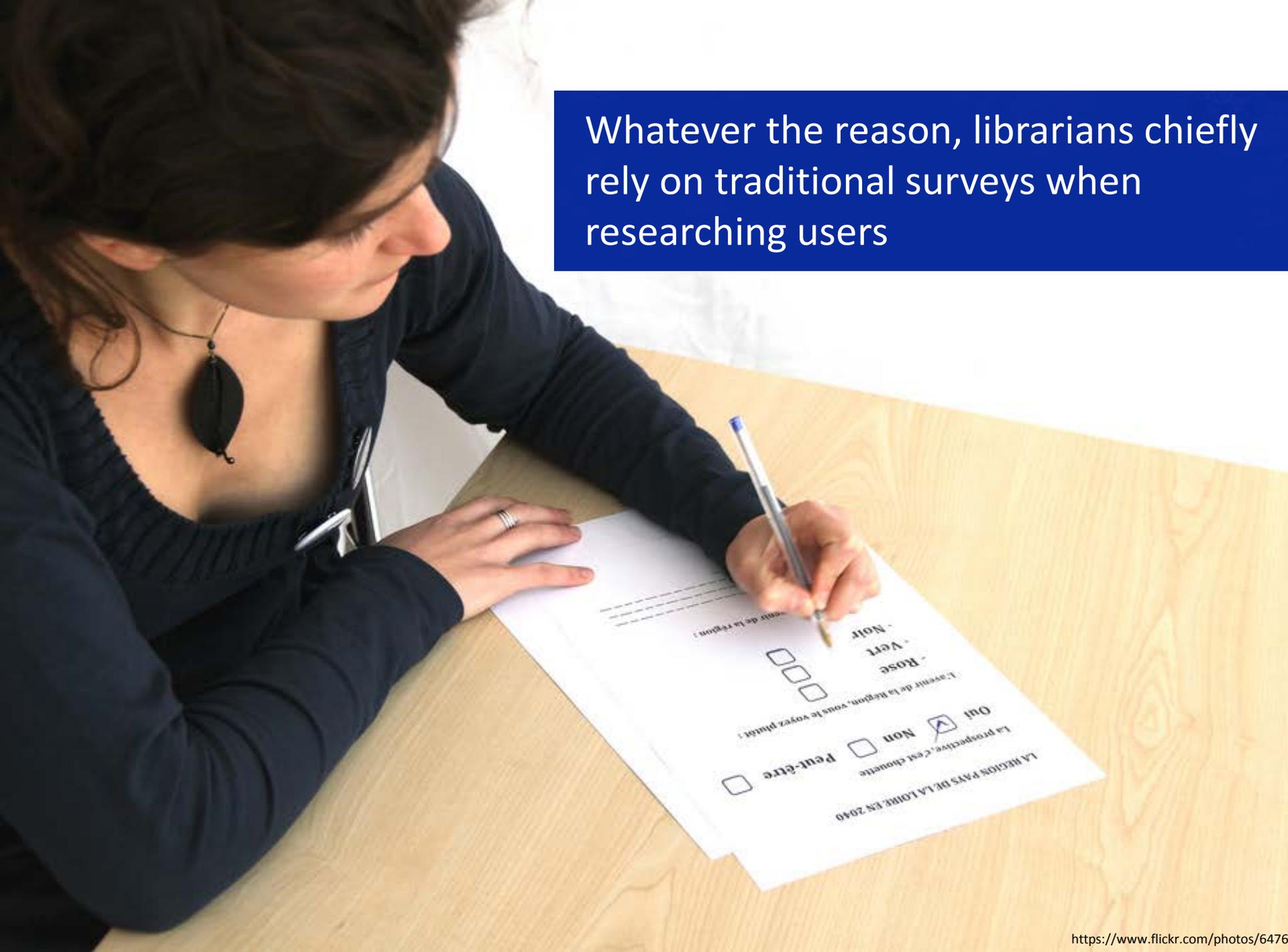


**CONSPIRACY**

Or had they just been lazy,  
complacent, or both?



Whatever the reason, librarians chiefly rely on traditional surveys when researching users





“What’s the problem?”

Business school students would respond to surveys telling us our service was excellent

## Pros

- Quick to produce and fill in
- Straightforward to analyse
- Easy to distribute
- Universal understanding

## Cons

- filled in by pro-library users
- self-reporting is unreliable
- mainly quantitative data
- closed or leading questions
- frustrating to complete
- too long
- survey fatigue
- don't reveal how users truly behave or feel

**‘What people say  
what people do  
and what people say they do  
are entirely different things’**



*Margaret Mead  
anthropologist  
(1901-1978)*

# The story of 'New Coke'



30 years ago in April 1985, the Coca-Cola Company announced a change to its nearly century-old secret formula. The new Coke would have a smoother, sweeter taste to rival Pepsi

They'd done their market research – the majority of 200,000 consumers said they preferred the new recipe – so Coca-Cola were absolutely sure it was going to be an instant hit AND give them competitive advantage over Pepsi-Cola

# The story of 'New Coke'



The American public hated it.

In California they collected signatures, in Seattle they set up a hotline, panic buying

Protest groups emerged: 'The Old Cola Drinkers of America' and 'Preservation of the Real Thing' which were relentless in their pursuit of the return of original Coke.

They set up petitions, made badges and t-shirts which had slogans such as 'Bring back original Coke or our children will never know true refreshment'(!)

Bowing to popular demand in July 1985 Coca-Cola brought back original Coke as 'Coca-Cola Classic'. 'New Coke' became 'Coke II' but was later withdrawn, while the word 'Classic' was quietly dropped from the old formula cans.

# The story of 'New Coke'



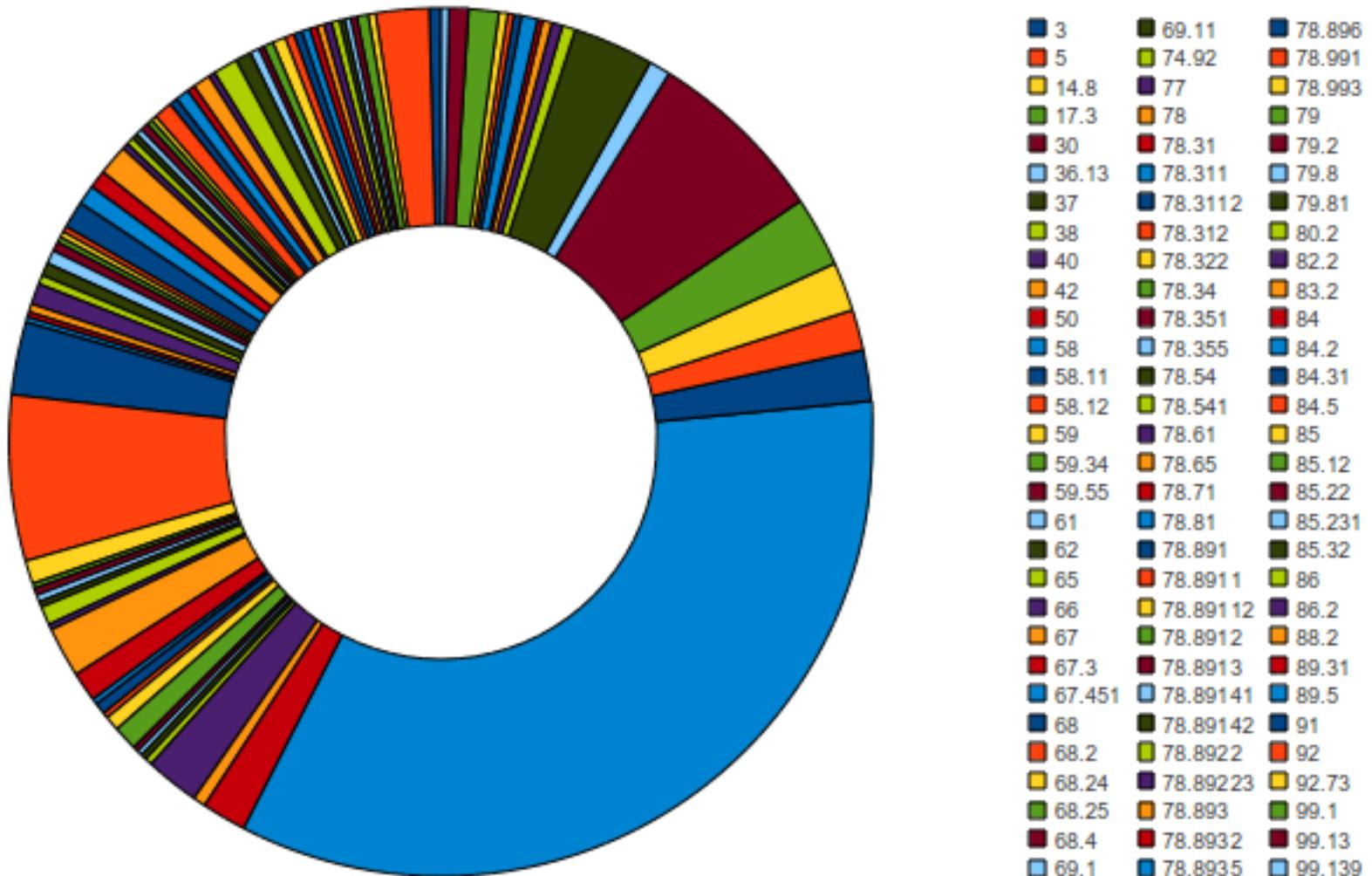
So what went wrong?

200,000 consumer testers had told Coca-Cola they preferred the taste of new Coke

- This preference was not enough – it was far more complex than that
- Emotional bond with the original Coke
- Drinking it from the packaging was a different matter ('it tastes wrong')
- Wanting to please the testers?
- What people tell you they will do (e.g. buy your product) is not necessarily what they will do

Same is true of library survey data –  
**IT IS NOT TRUTH**

We librarians love pie charts and pretty much all data.  
But what does the data we collect really tell us?





library footfall stats - don't tell us  
how successful those visits were

same goes for database visits –  
did they find what they needed?





does a high teaching score equal  
knowledge and learning?



**Focus Group  
(second choice  
after surveys)**

## Typical library focus group...

**Librarian:** So what do you think of the library?

**User:** It's nice, I like it.

**Librarian:** Any particular service you like?

**User:** Most of them.

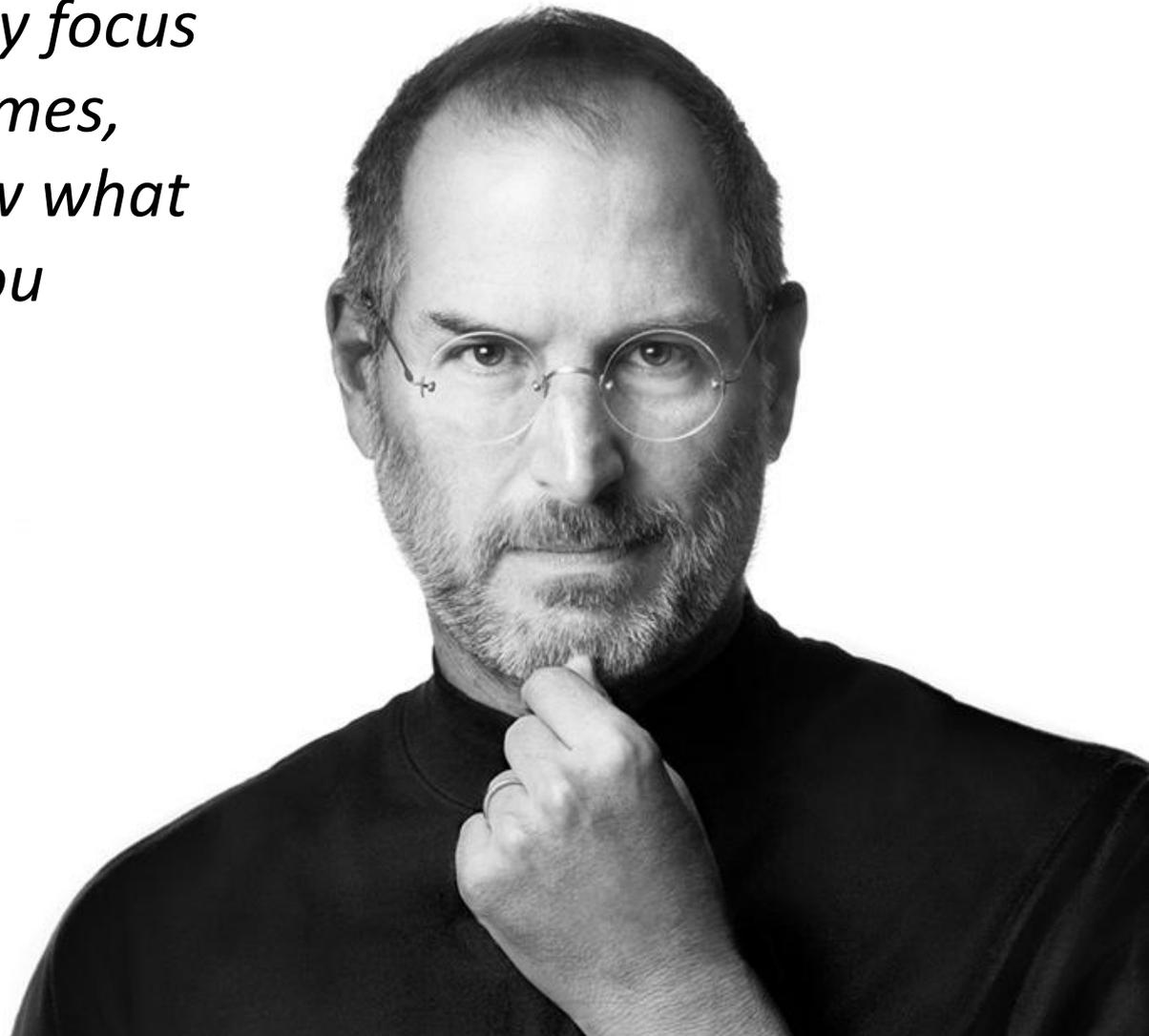
**Librarian:** What about the library staff?

**User:** You're all really nice <slight pause>

Do I get pizza now?

*“It’s really hard to design products by focus groups. A lot of times, people don’t know what they want until you show it to them”*

**Steve Jobs**



*“Users don’t think about libraries all that much. They use them but they don’t think about them. They’ve got much more interesting things to think about than how to help us improve our services”*

**Andy Priestner**



A blue-tinted photograph of a rocky coastline. The image shows waves crashing against dark, jagged rocks. The water is white with foam from the breaking waves. The sky is a pale, bright blue. The overall mood is serene and natural.

**Adopt new  
forms of  
user research,  
specifically,  
UX research**

# a whole new world of techniques



observation  
behavioural mapping  
semi-structured interviews  
cultural probes  
usability testing  
cognitive mapping  
contextual inquiry  
affinity mapping  
diary studies  
card sorting  
photo elicitation interviews  
graffiti walls  
love letters/break-up letters  
touchstone tours  
think aloud protocol

largely hinged on ethnography ('writing culture')  
studying people through observation and participation



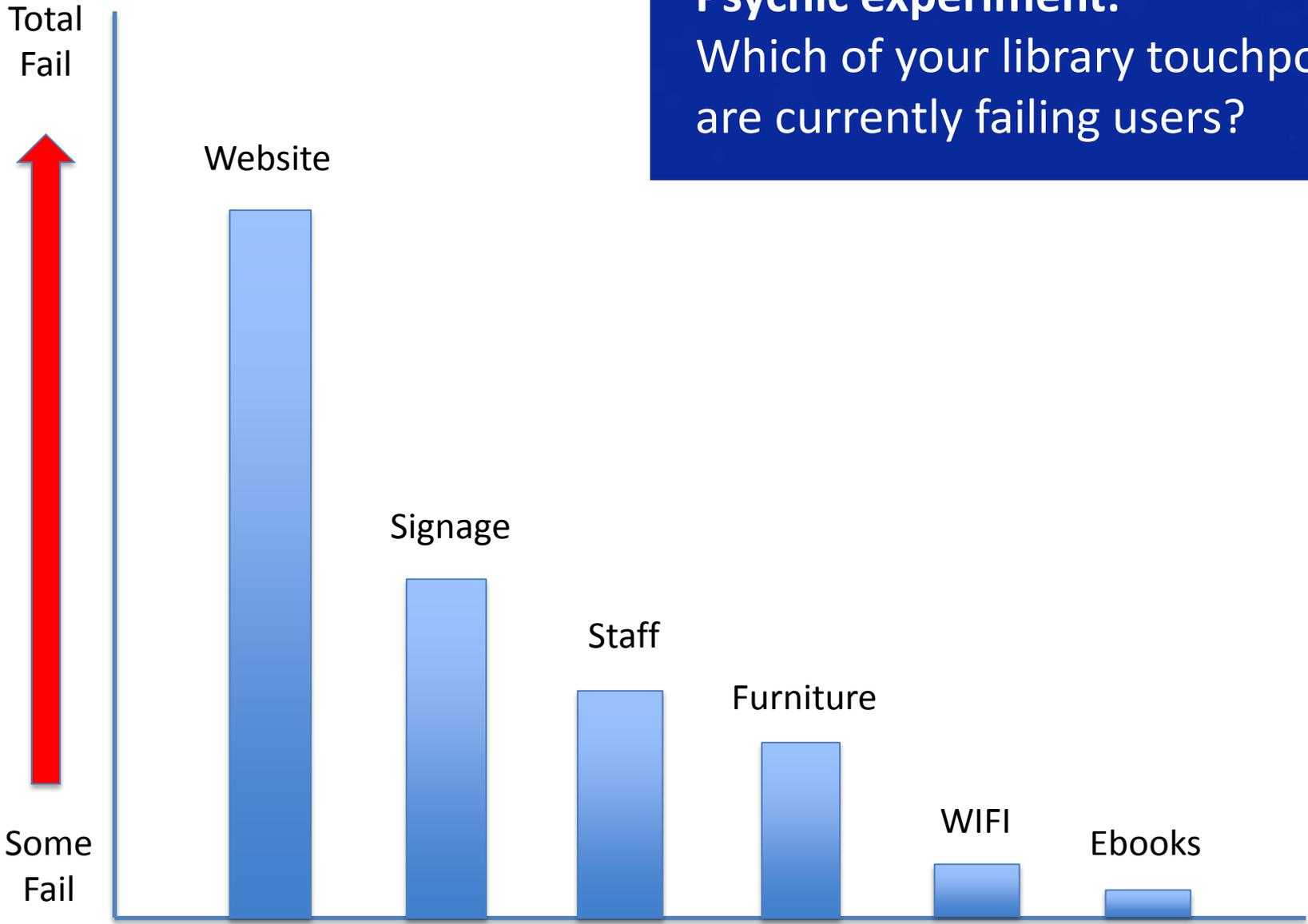


ethnographic research:  
uncovers user experience  
- habits, routines, lives

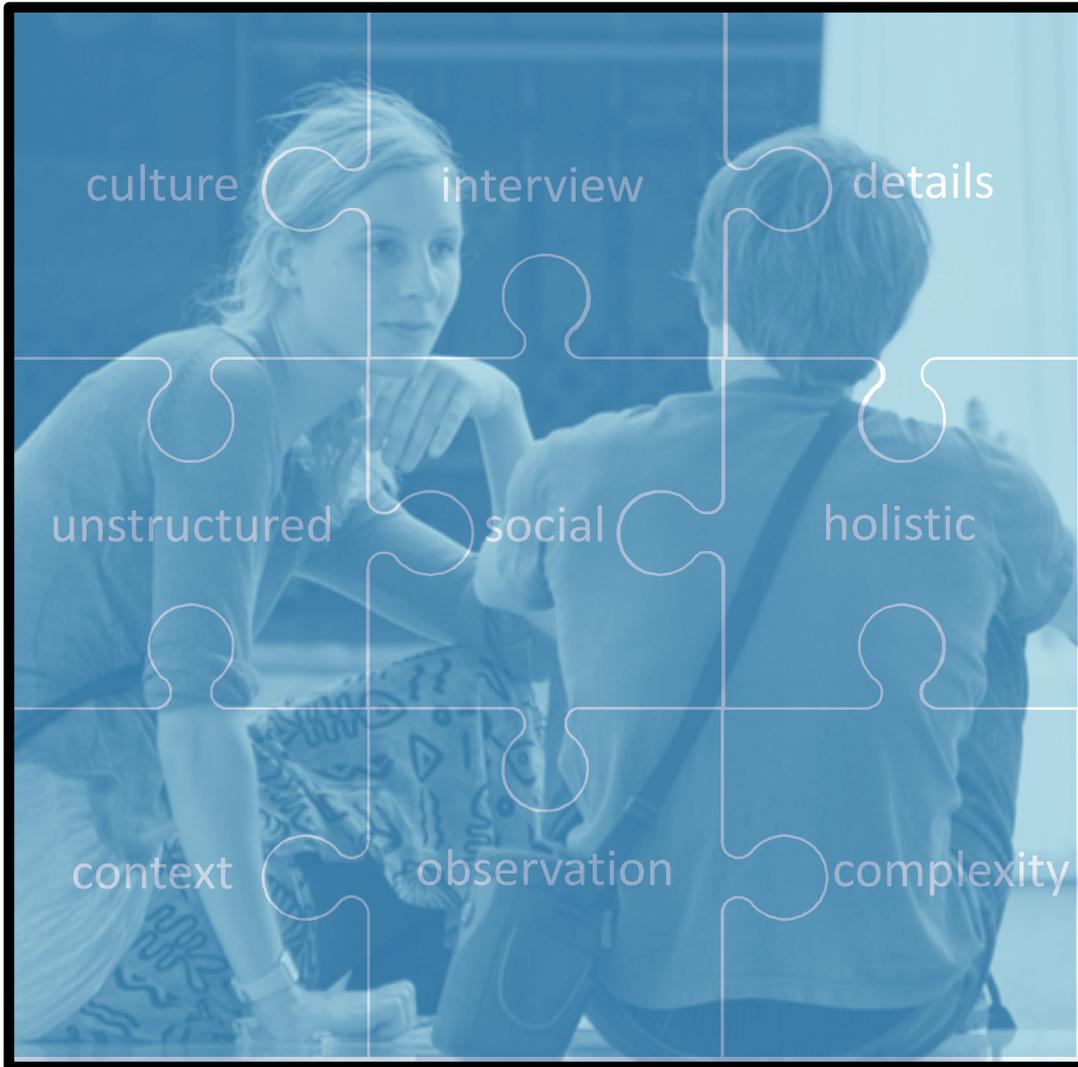
# FAIL

...and crucially in terms of library services those touch-points, or points of contact with our users, that are failing e.g. website, staffing, furniture & layout, signage etc.

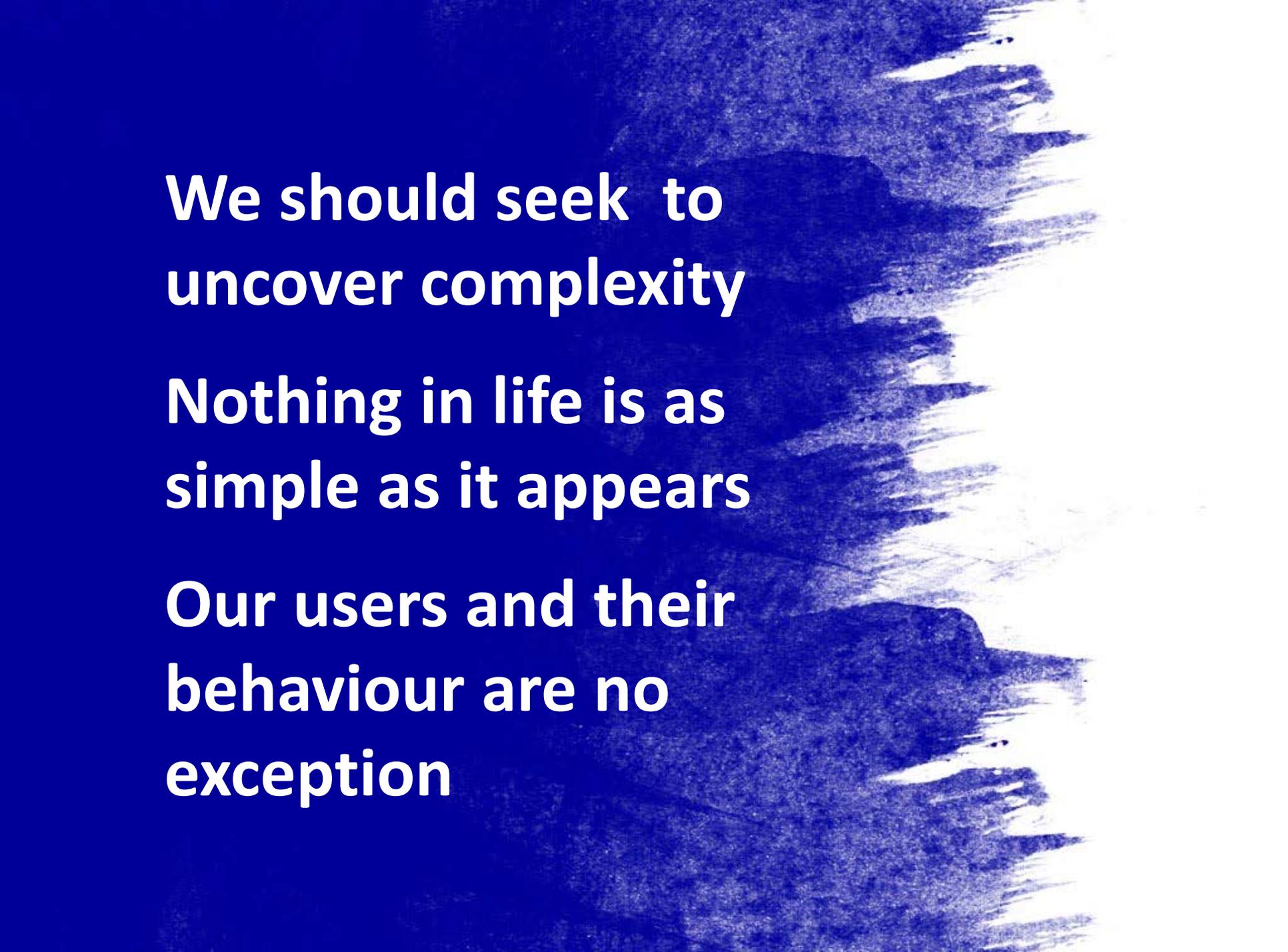
**Psychic experiment:**  
Which of your library touchpoints are currently failing users?



# What does ethnography involve?



Offering a far more complete – and complex – bigger picture of our users' lives, behaviours, and needs



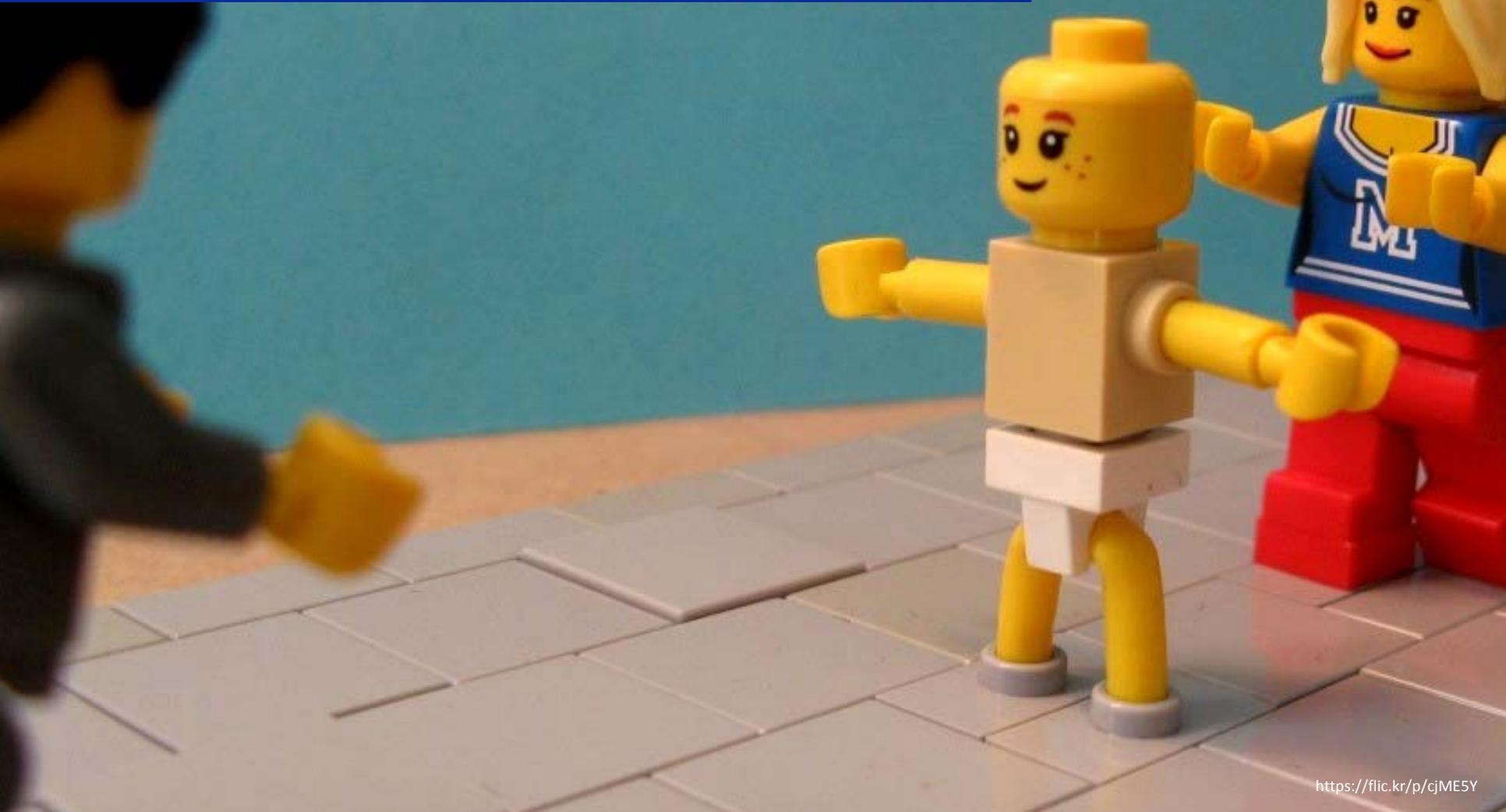
**We should seek to  
uncover complexity**

**Nothing in life is as  
simple as it appears**

**Our users and their  
behaviour are no  
exception**

## my first tentative UX research 'baby steps'

- behavioural mapping (how people moved about the library)
- cognitive maps/interviews (user learning landscape)
- graffiti wall (barrier-less feedback)





Revealed MANY failing service 'touchpoints' that years of surveys had not...

- irrelevant and confusing website content
- inconvenient layout
- lack of PCs
- inaccurate perceptions of BYOD culture
- not enough opportunity for dialogue
- too much library jargon
- air conditioning/heating problems
- uncomfortable furniture
- staff were the main noise problem!
- unrealistic expectations of their activities



# Observation



# Futurelib



UNIVERSITY OF  
CAMBRIDGE

Imagining the future of library services at University of Cambridge.



**A pan-Cambridge innovation programme delivering new library products and services derived from UX research which recently conducted a massive observation project – 317 hours!**



## Method:

- Observe users in a library space for a set period of time at regular intervals
- Make extensive notes on what they are doing, what equipment they have with them, whether they are came alone or with others, if they take breaks...
- Record movement in the space and occupancy/popularity

## Method:

- Note arrival and departure times
- Give everyone a letter code and use that when describing their activities in the observation log (and have some fun people-watching)
- Over several observations, record popularity of seats/furniture

12:29

H switches a lamp on. D is still chuckling away about something. E is typing away furiously

12:32

E is now writing notes up besides laptop but is no longer typing on it

12:36

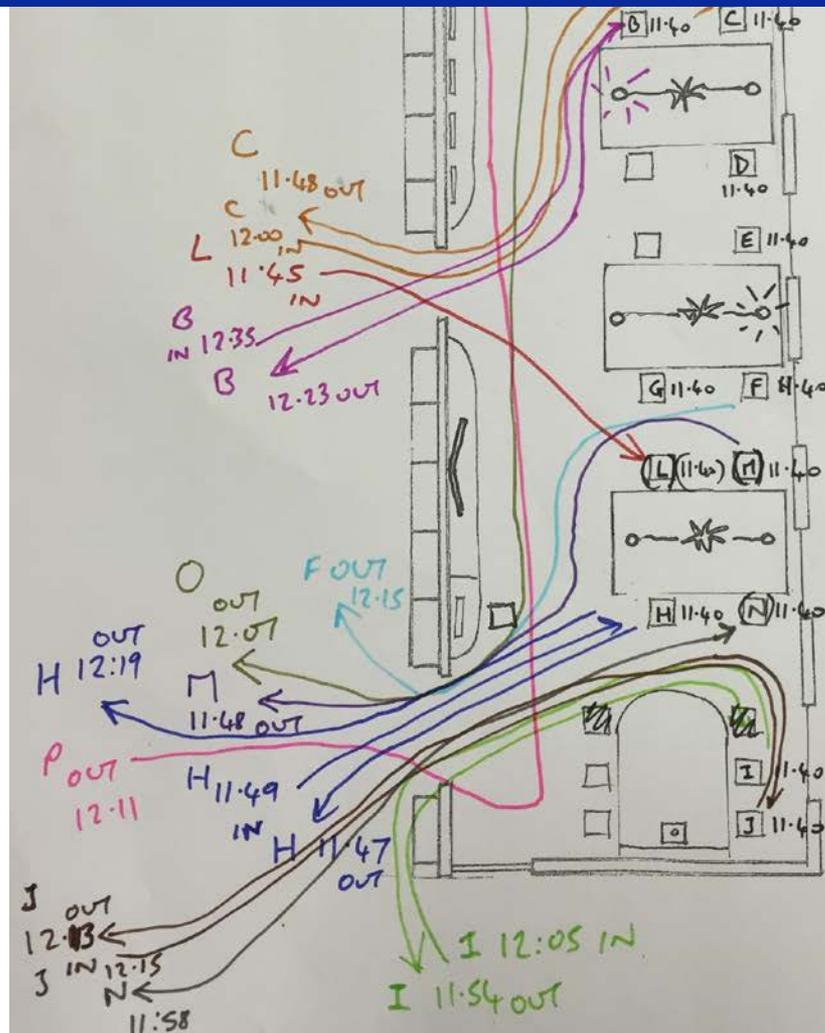
Although lots of people have books with them. Only B and G are actively using them at this time. Actually G is just now on his phone again checking something. He often reads his book by holding it up in the air

12:37

L returns carrying a water bottle. She plugs in her phone, presumably to recharge.

12:39

P arrives and takes the last seat at the 3<sup>rd</sup> desk





### Results of observation at 4 Cambridge prototype spaces:

- Removing seats increased occupancy
- Sofas did not encourage socialising just more relaxed spaces
- Wellbeing dictated people's choice of environment
- Sense of control of space was important even if not acted upon
- People moved between different spaces depending on activity
- Tables were most popular items of furniture in a break space
- We need to provide more medium and low intensity environments

An aerial photograph of a coastline. The left side of the image is dominated by a dark, textured area representing a forested or vegetated landmass. The right side shows a bright, sandy beach with waves breaking onto it. The water is a mix of white foam from the surf and a darker blue. The overall scene is captured from a high angle, looking down at the shoreline.

# Cognitive Maps

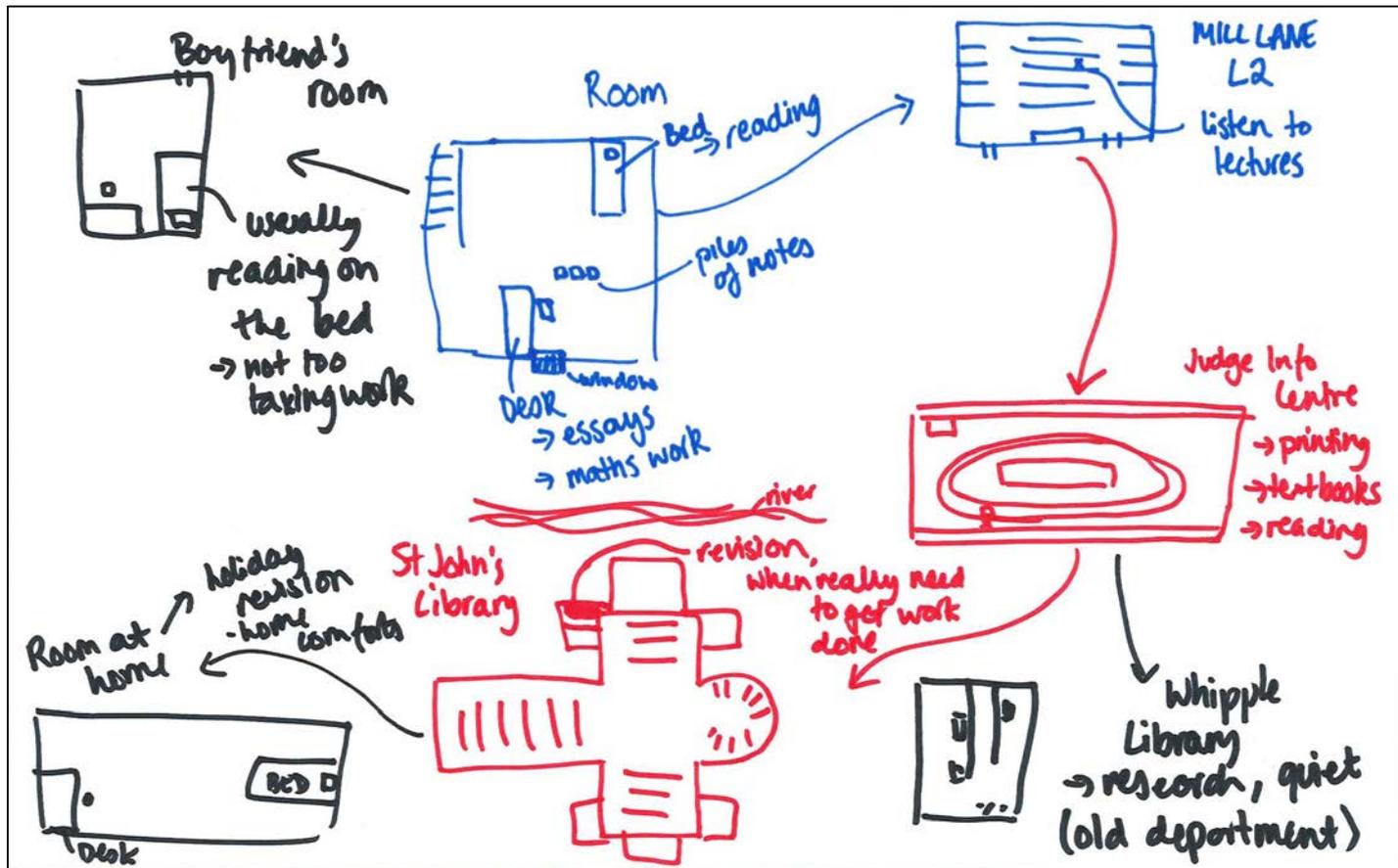
## Method:

- Ask participants to draw a map of their learning landscape: Where they study, how they study, who with etc.
- 6 minutes: 2 minutes with blue pen, then red pen, then black pen
- Ask them to annotate the map with explanatory text
- Analyse the map: What did they draw? What did they draw first? Where did they draw it on the page? What was omitted?



## Results of cognitive map study with business undergraduates:

- Library only part of a wider picture of study experience (parks, bars, cafes)
- My library was not the centre of their lives, not even the centre of their study lives!
- Students chose different libraries for different study activities
- Map proved to be a hugely useful way into a wider discussion of needs and issues



An aerial photograph of a coastline. The left side of the image is dominated by a dark, textured area, likely a forest or dense vegetation. The right side shows a bright, sandy beach with waves crashing against a rocky shore. The water is a mix of white foam and dark blue. The overall scene is captured from a high angle, looking down at the coast.

# Cultural Probes



Nothing to do with alien abduction!



Closest we can get to the ethnographic ideal of following the subject home – finding out how and where they study – over a 2-week period



Mission pack of materials: diary; USB stick; pens; task envelopes, writing paper

Friday 10<sup>th</sup> June

Question: What has conducting this daily study revealed to you about your working practice, if anything? Has it highlighted anything you could improve in terms of your research process? Is there anything you think we could do to improve library services?

Diaries pre-loaded with questions – seeking entries reflecting on their library and study experiences

Tasks: sending a love letter or break-up letter;  
cognitive map; photos of their study life

Futurelib Programme  
Cambridge University Library  
West Road  
Cambridge  
CB3 9DR

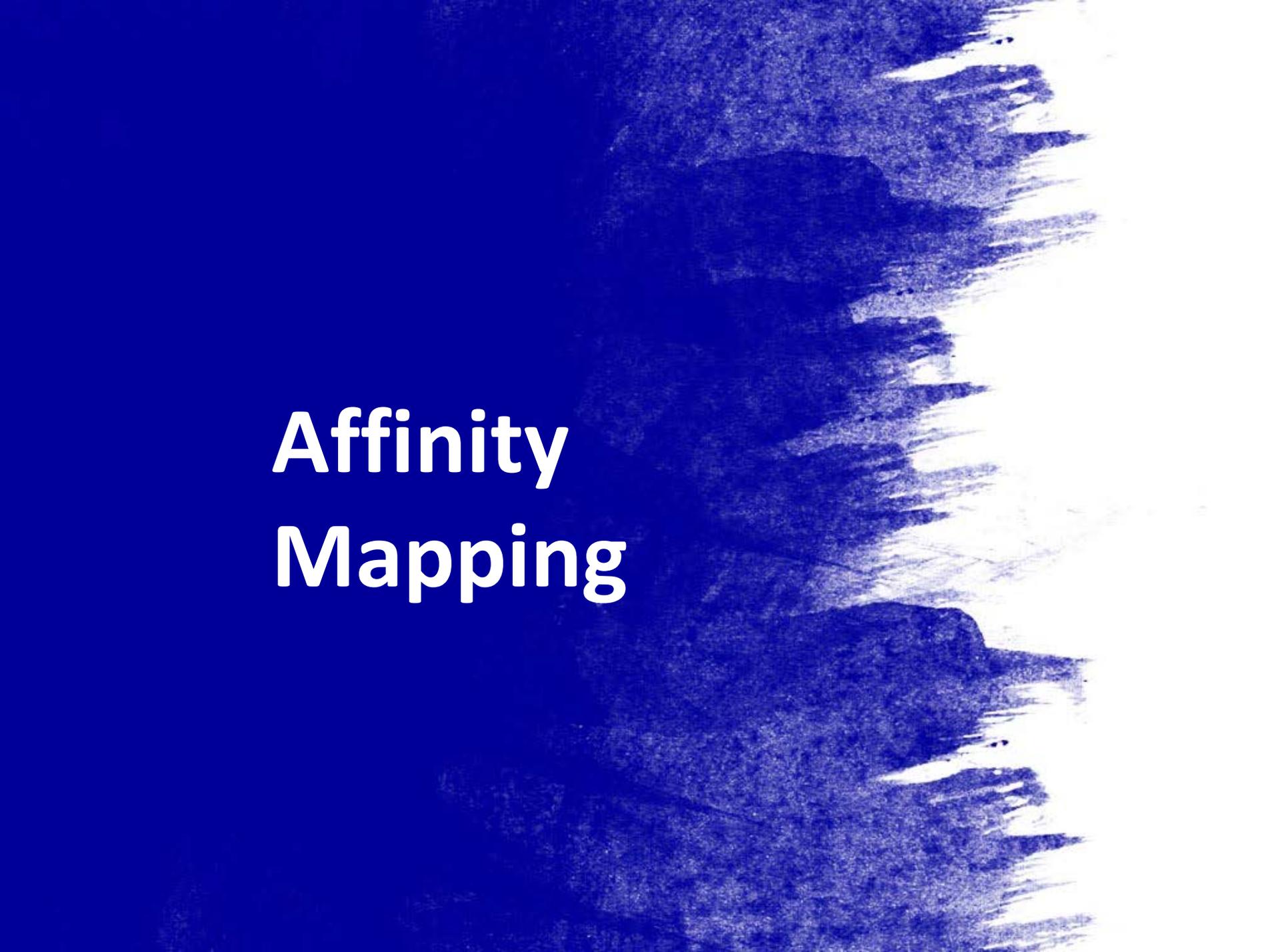
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Cambridge University Library  
West Road  
Cambridge  
CB3 9DR

#Futurelib

**TASK ENVELOPE  
#2**

02 0367 1116

Futurelib Programme  
Cambridge University Library  
West Road  
Cambridge

An aerial photograph of a rugged coastline. The image shows dark, jagged rock formations extending into the sea. White, frothy waves are crashing against the rocks, creating a stark contrast with the dark water. The sky is a pale, hazy blue, and the overall scene conveys a sense of wild, natural beauty.

# Affinity Mapping



Where does 'library' actually fit within the wider student experience of University? And what does that landscape look like?

‘Detail your entire experience of University life – warts and all – with one element per sticky note. Use as many notes as you need.’



*sports*

*eating out*

*shopping*

*clubs &  
societies*

*summer  
ball*

*student  
union*

*cinema*

*sex*

*alcohol  
/bars*

*coffee  
& cafes*

*travel*

*music*

*girl/boy  
-friend*

*drugs*

*theatre*

*town*

*house  
parties*

*friends*

**SOCIAL**

essays

tutorials

course  
staff

IT  
support

printing

readings

study  
space

exams

lectures

practicals

project  
work

data

revision

timetable

library

deadlines

PCs

**COURSE**

communal  
living

managing  
money

your  
room

packing  
&  
unpacking

laundry

health

cooking  
meals

counsell-  
ing

buying  
food

home  
-sick

cycling

disabled  
access

calling  
home

getting  
from A  
to B

stress

**DAY-TO-DAY**

WIFI

laptop

phone

tablet

**TECH**

phone  
signal

power

interviews

CV

job  
search

pursue  
academic  
career

**NEXT**

pursue  
course  
elsewhere

Of these, only around 10 are library-related...

library

study  
space

printing

IT  
support

readings

WIFI

data

revision

PCs

power



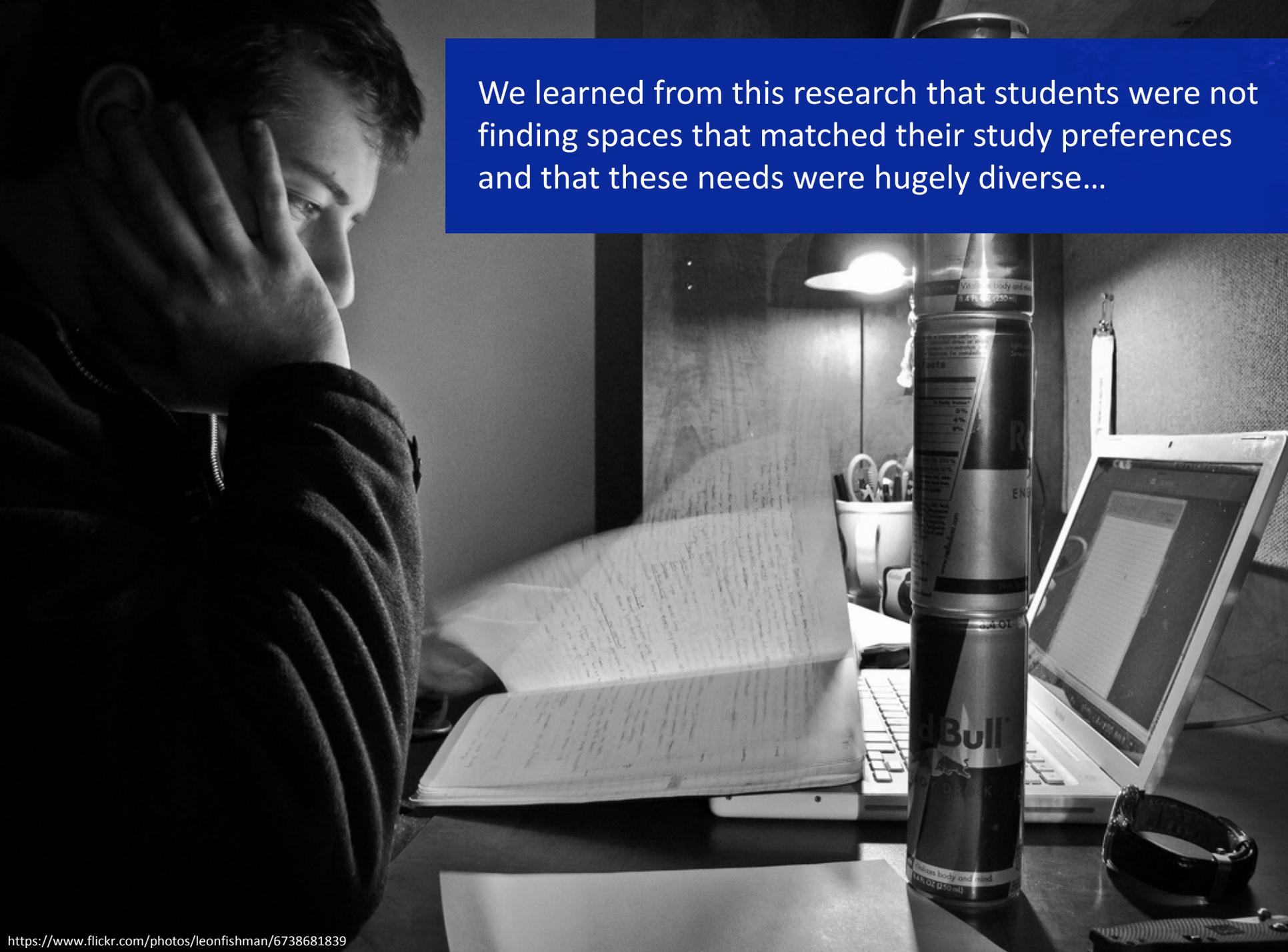
# Spacefinder

A research project not centred wholly on library



Spacefinder idea was derived from ethnographic research:  
diary studies; collaborative design workshops; interviews

We learned from this research that students were not finding spaces that matched their study preferences and that these needs were hugely diverse...



## study preferences

in groups; totally alone; 'together alone'; alone but in crowded quiet reading rooms; alone but in a noisier location





## types of space used

cafes, pubs, parks, common areas (not just libraries)



**Spacefinder would seek to illumine and uncover the University's many spaces and match them to study needs and preferences**



ethnographic / design research was continuous during the project through prototyping, testing and iterating

Search for a space or keyword

CLEAR ALL

I WANT TO WORK...

- Alone, in private
- Where others are working
- With friends
- On a group project

ATMOSPHERE

- Disciplined
- Relaxed
- Historic
- Modern
- Inspiring
- Cosy
- Social
- Friendly

NOISE LEVELS

- Strictly silent
- Whispers
- Background chatter

### Parker's Piece

PARKER'S PIECE

2.4 MI



This wide open space is located between Mill Road and the centre of town, and is easily accessible by foot or bike. There are trees and benches around the edges of the common, and various eateries nearby (including café and chairs at one



### The Free Press

THE FREE PRESS PUB

2.5 MI



A small, cosy pub that is quiet during the day and lively in the evening.



### Geography Library - Computer Area

GEOGRAPHY DEPARTMENT LIBRARY

2.6 MI



A small area with computing facilities. Includes an exhibition area showcasing some of the research carried out by members of the department.



### Geography Library - Reading Room

GEOGRAPHY DEPARTMENT LIBRARY

2.6 MI



Main library reading room





**Lyca mobile**  
Call the world for less



Open weekdays  
9am-5pm

## The website that'll change your studying life forever

Story: [Jemima Jobling](#) Twitter: [jemima\\_jobling](#)

OCTOBER 21, 2015



Image credit: Andy Friesner

Recently around your faculty libraries (or if you were courageous and sharp-elbowed enough to brave the freshers' fair) you may have spotted these rather distinctive-looking, compass-bearing key rings. You may have walked on by, eager to start the term right and get to your impending lecture on time for once. But next time you pass through the library, stop, do a double take and pick up what could be the answer to all your studying woes.

### Related Stories



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“I wanted to write personally, to thank you for Spacefinder, and tell you how useful students are already finding it. This is an achievement which shouldn't be underestimated. I thought you might be amused to know that **the general response has been one of sheer astonishment that the University have helped produce something so up-to-date and relevant to student life!**”

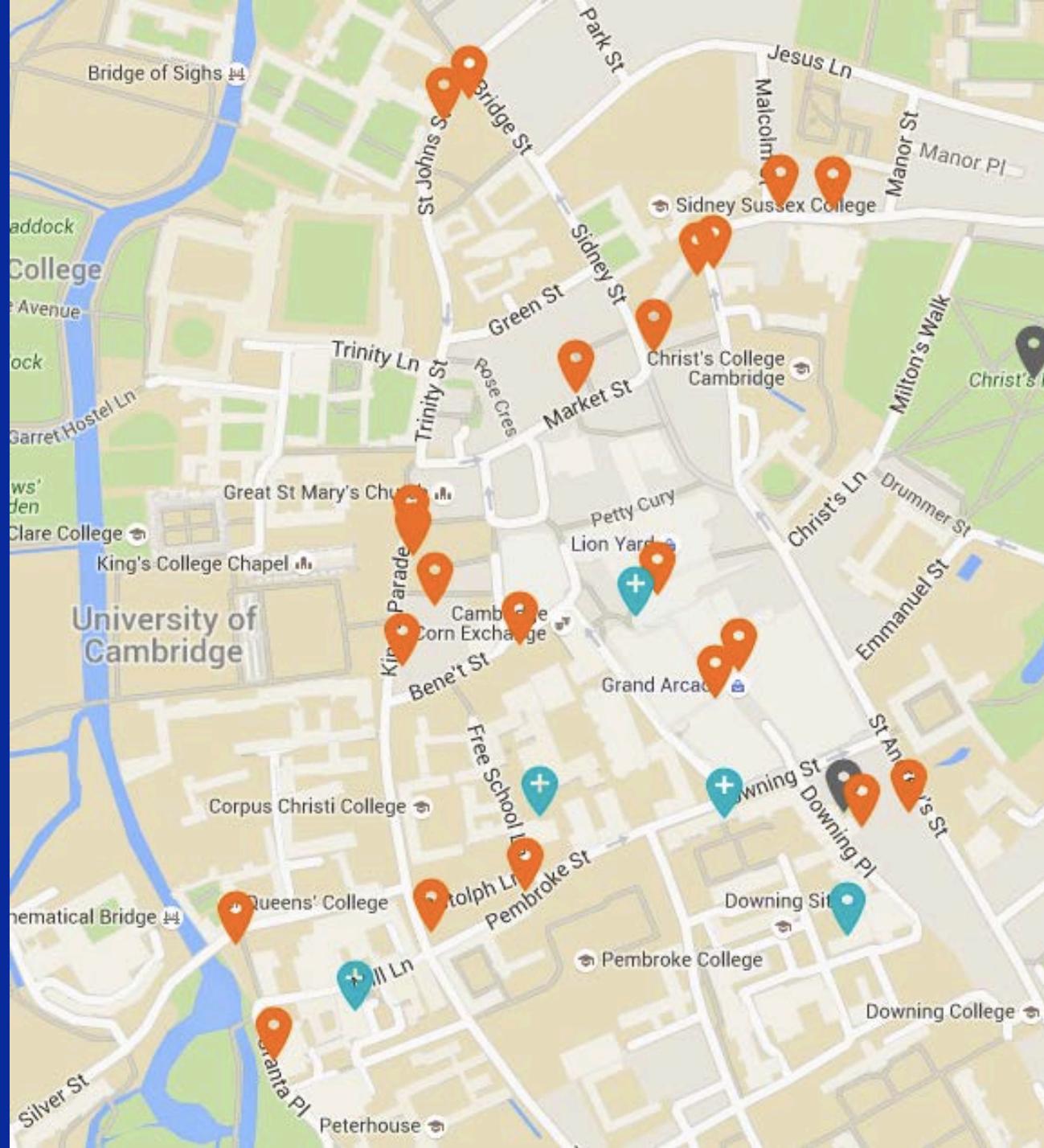
Poppy Logan

(Cambridge University Students Union –  
Welfare and Rights Officer)

Spacefinder is now  
an established part  
of Cambridge  
University life

### Version 2 has:

- **coloured pins**
- **disability info**
- **more facilities**
- **more images**
- **more spaces**



Spacefinder has been so successful because it fulfils many needs beyond library and recognises a broader student experience and learning landscape...

study  
space

getting  
from A  
to B

phone

revision

phone  
signal

library

coffee  
& cafes

friends

PCs

WIFI

disabled  
access

power

laptop

music

cycling

stress

phone  
signal

tablet

eating out

printing

Survey results, quantitative data, and more importantly a focus solely on library would never have led us to Spacefinder

We had to become interested in a wider picture of experience and piece that together through UX research

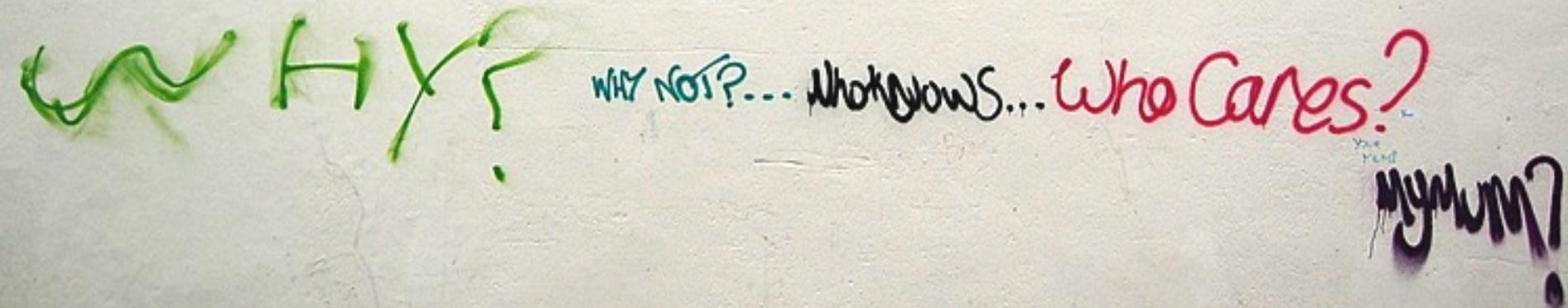


*‘the library in the life of the user not  
the user in the life of the library’*

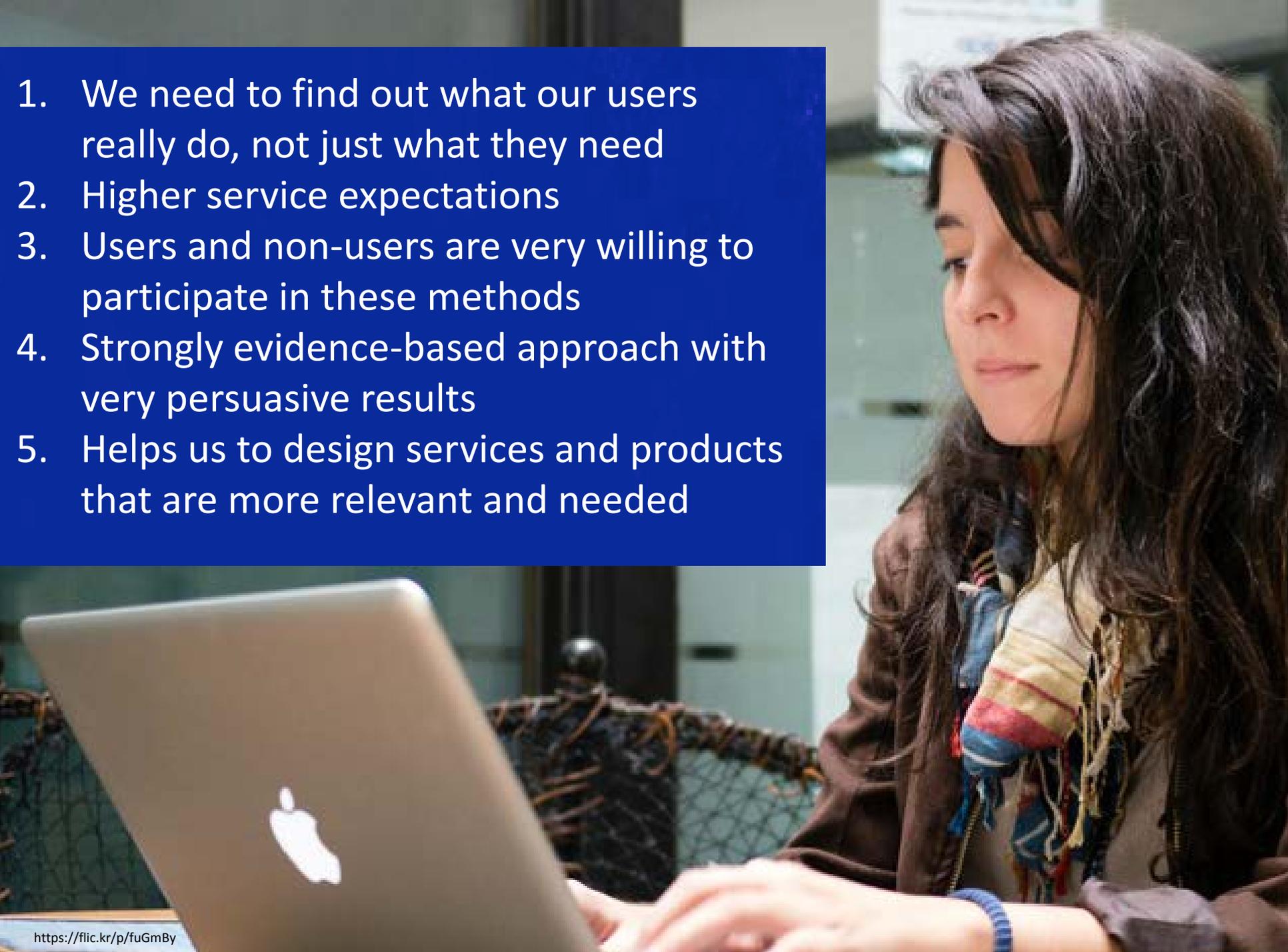
**Lorcan Dempsey**



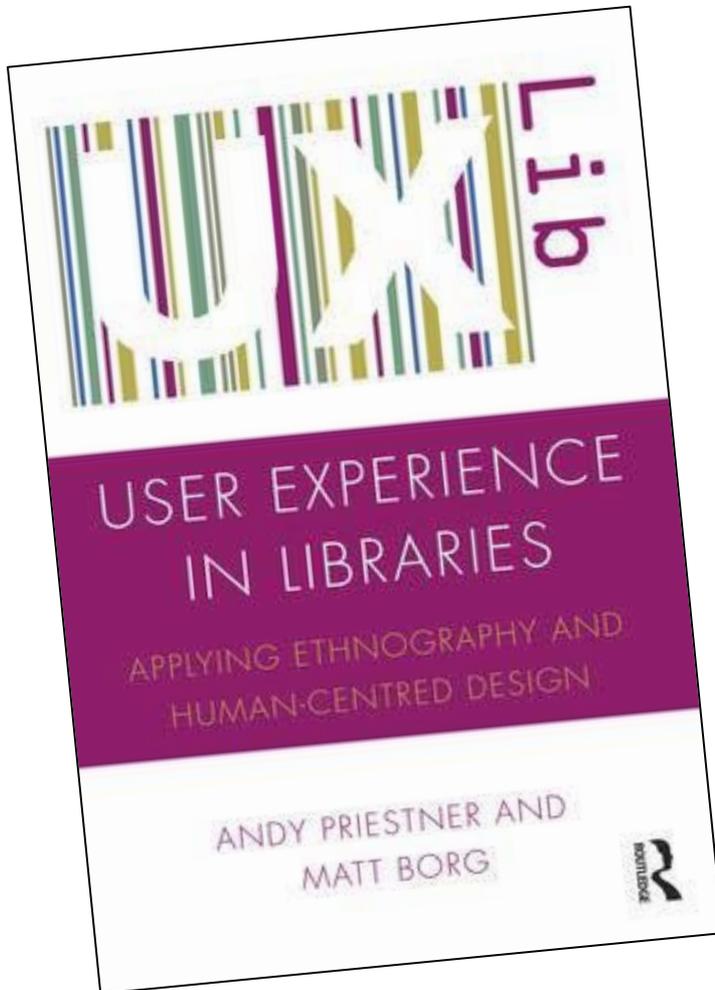
Why does UX matter now?  
Yes, it's interesting, but so what?



1. We need to find out what our users really do, not just what they need
2. Higher service expectations
3. Users and non-users are very willing to participate in these methods
4. Strongly evidence-based approach with very persuasive results
5. Helps us to design services and products that are more relevant and needed



## New book 'UX in Libraries' published 3 days ago by Routledge



Case studies, theory and techniques,  
written by

- Library UX practitioners
- Anthropologists
- Designers

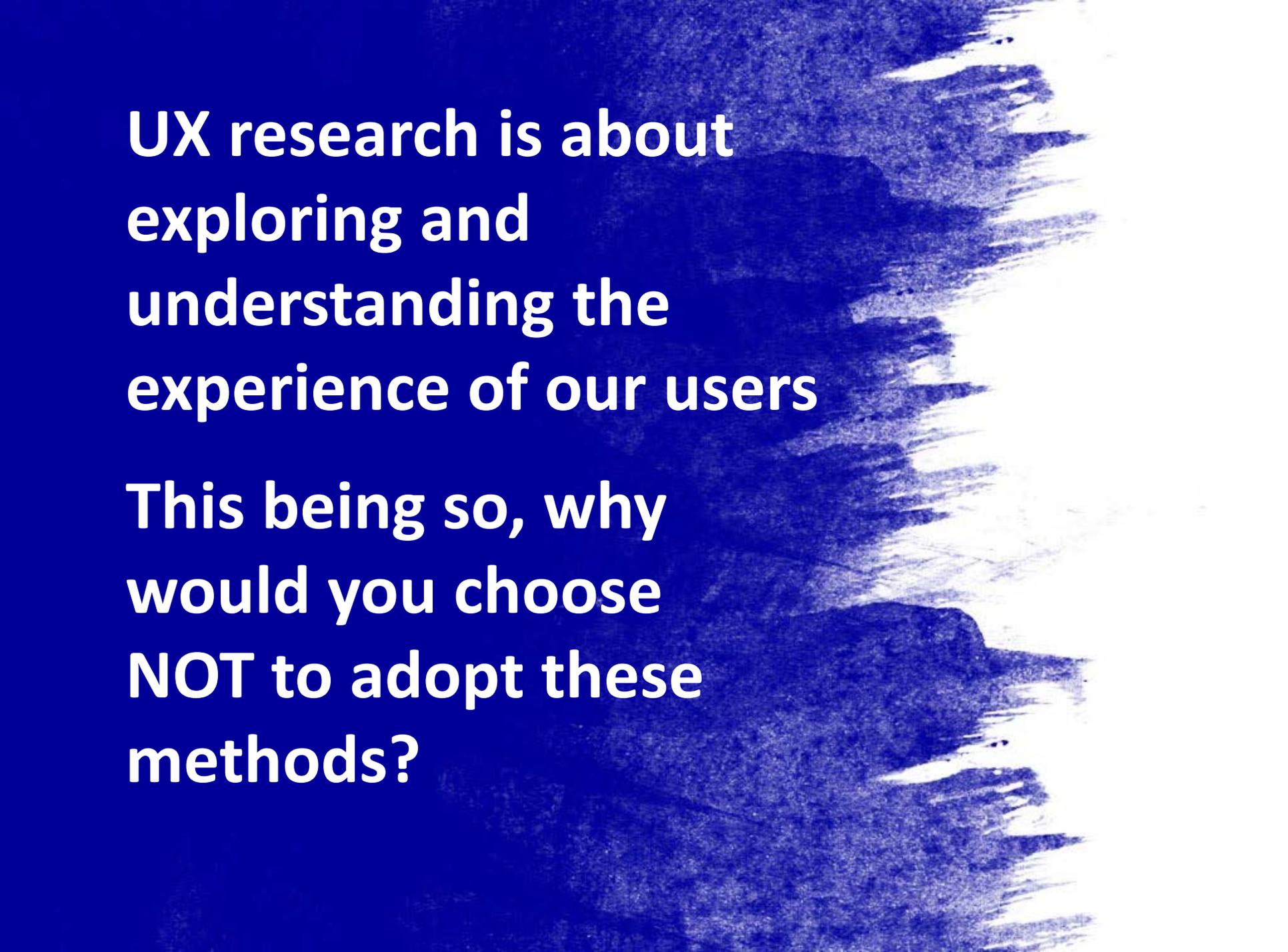
*'User Experience in Libraries is an engaging combination of library UX theory and practice. Both those new to the subject and those with more experience will learn from it'*

Aaron Schmidt, Principal,  
Influx Library User Experience

# a whole new world of techniques



observation  
behavioural mapping  
semi-structured interviews  
cultural probes  
usability testing  
cognitive mapping  
contextual inquiry  
affinity mapping  
diary studies  
card sorting  
photo elicitation interviews  
graffiti walls  
love letters/break-up letters  
touchstone tours  
think aloud protocol



**UX research is about  
exploring and  
understanding the  
experience of our users**

**This being so, why  
would you choose  
NOT to adopt these  
methods?**



**Thank You.**

**Andy Priestner**

*Andy Priestner Training & Consulting  
Cambridge University Library*