

# **‘Could you tell me about your discipline?’: Exploring scholarly perceptions of knowledge organisation across disciplines**

Student: Hye Lim Joy Nam

Title of project: Mental models of the organisation of scholarly information across the Academy: disciplinary similarities and differences

Affiliation: University of Glasgow and Bodleian Libraries, University of Oxford

Supervisors: Dr Paul Gooding (Glasgow), Prof Lorna Hughes (Glasgow), Dr Frankie Wilson (Oxford)



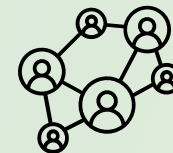
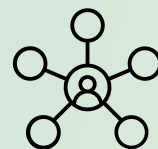
# Contents

1. Purpose of study
2. Existing studies
3. Research question
4. Methodology
5. Pilot studies
6. Limitations
7. Current phase

# Purpose of the study

To investigate the **mental models**\* that researchers at the University of Glasgow and the University of Oxford have of the structure and organisation of knowledge in their own disciplines, and to explore the implications this might have upon scholars' approaches to looking for information.

\***mental model** = concept from cognitive science and psychology that refers to internal representations of external world that people develop and use to interact with the world; cognitive structure that shapes decision making, reasoning, behaviour



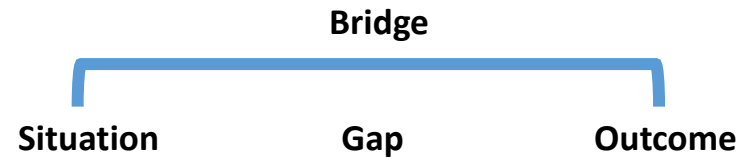
# Project's origins

- Research data gathered by the Bodleian Libraries suggested that a group of scholars in a specific discipline approached seeking information in a distinct way to scholars in other disciplines, and the question that led to this PhD project was 'why'?
- Additional questions:
  - How do disciplines shape information behaviour?
  - Can investigating researchers' mental models of the structure and organisation of knowledge in their own fields help us better understand their motivations and expectations of library search and discovery?

**Bates' berry picking model (1989):** Biological and sociocultural view of information-seeking behaviour whereby, in practice, individuals are not systematic when searching but find and evaluate information in a piecemeal way resembling 'berry picking'

**Ellis' information-seeking model of social scientists (1989):** eight-part model of actions involved in research: starting, browsing, chaining, monitoring, differentiating, extracting, verifying, ending

## Existing studies



### Dervin's sense-making framework (1983)

**Kuhlthau's information search process (1991):** six-stage model of higher education students' information-seeking behaviour: initiation, selection, exploration, formulation, collection, presentation; includes affective aspects in model (feelings, thoughts in each stage)

**Wilson's model (1991, 1994, 1997):** Includes personal, social, and environmental contexts in which information needs arise. These needs are shaped by the interplay of personal factors and external (political, socioeconomic, technological) factors. These can also pose barriers to an individual's search for information.

**Unsworth's scholarly primitives (2000):** seven basic activities of humanities scholars are discovering, annotating, comparing, referring, sampling, illustrating, and representing

# Existing studies

- 2007 to 2011: **Research Information Network (RIN)** commissioned 3 reports on the information practices of UK scholars in the life sciences, the humanities, & the physical sciences (comparative but from 10+ years ago)
- 2012 to 2020: **Ithaka S+R** produced a series of reports that examine North American scholarly practices in ten disciplines: history, chemistry, art history, religious studies, agricultural studies, public health, Asian studies, civil and environmental engineering, indigenous studies, and languages and literature (somewhat comparative)
- These studies shed light on research methods and practices, but lack explanatory power

# The research question



# Method

- Qualitative approach to research: inductive, iterative, grounded
- Use of library UX and ethnography-inspired techniques to elicit mental models --> Let the researcher tell their own story!
  - Cognitive mapping
  - Semi-structured interviews
- Sessions held in person and on campus
- Data collected in the form of audio recordings, drawings, field notes
- Number of (hoped for) participants: 40 researchers
  - 20 in Glasgow and 20 in Oxford
  - 5 scholars each from 4 different disciplines at each site
  - Participant career level: postdocs and beyond ('experts')



# Method

**Data collection protocol:** approx. 60-minute semi-structured interviews

**Part 1:** Introduction and preliminary questions

**Part 2:** Cognitive mapping – 6-minute activity involving drawing on an A3 sheet of paper with 3 differently coloured markers; change of colour every 2 minutes; Prompt: ‘Please draw your discipline.’

This is followed by a request for participant to explain drawing.

**Part 3:** More in-depth questions on...

- Affective aspects
- Setting/environment
- Research practice
- Communication

# Qualitative approach

## 1. Library ethnography

- ‘Ethnography is literally “writing culture” (Clifford and Marcus, 1986), but is often taken to mean the cluster of techniques that researchers engage in to gather **detailed descriptions of everyday behavior**. Ethnographic techniques can include but are not limited to participant (or immersive) observation, structured and unstructured interviews, visually based instruments such as photo diaries, and mapping techniques intended to elicit people’s interpretations of landscapes and social structures. **They provide ways for researchers to gain insight into the logics behind people’s behavior by situating their choices in broader social and cultural contexts.**’
- Lanclos, Donna M., ‘Embracing an Ethnographic Agenda: Context, Collaboration, and Complexity’, in *User Experience in Libraries* (Routledge, 2016)

# Qualitative approach

## 2. Library UX

UX work is ‘a subset of ethnographic practices, as one particular way among many of eliciting qualitative data about user behavior, and more importantly as an avenue to transforming institutional practices and increasing the role of library voices in shaping such practices.’

Lanclos, Donna M., ‘Embracing an Ethnographic Agenda: Context, Collaboration, and Complexity’, in *User Experience in Libraries* (Routledge, 2016)

# Qualitative approach

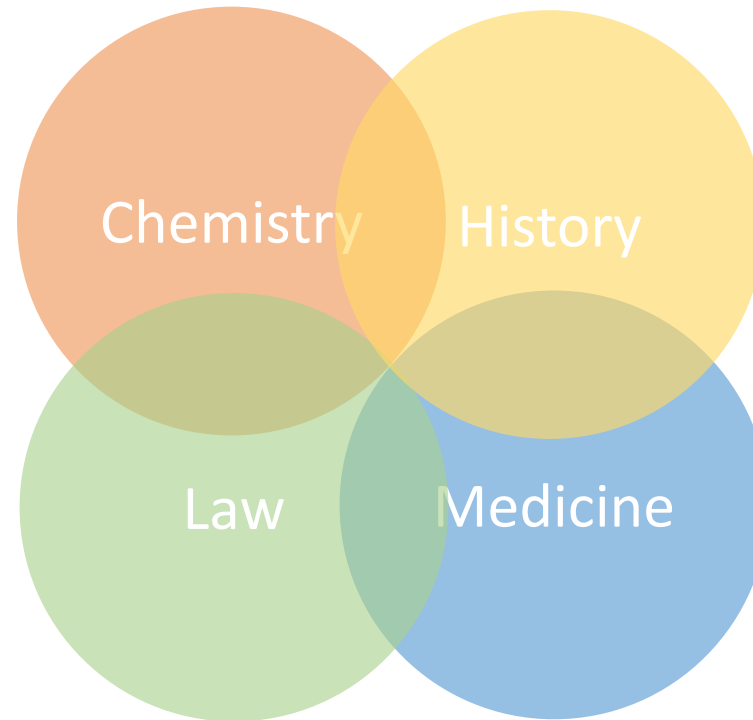
## 2. Library UX

A collection of techniques derived from ethnography, usability, and service design that investigates how users are ‘experiencing’ libraries. It involves an in-depth exploration of user behaviour, which can ‘reveal a more **holistic** and **detailed** picture of the...lives of our users’, providing a framework for libraries to listen and learn from its users to understand why and how they do things. Library UX can lead to evidence-based change.

Priestner, Andy, and Matt Borg, ‘Uncovering Complexity and Detail: The UX Proposition’, in *User Experience in Libraries* (Routledge, 2016)

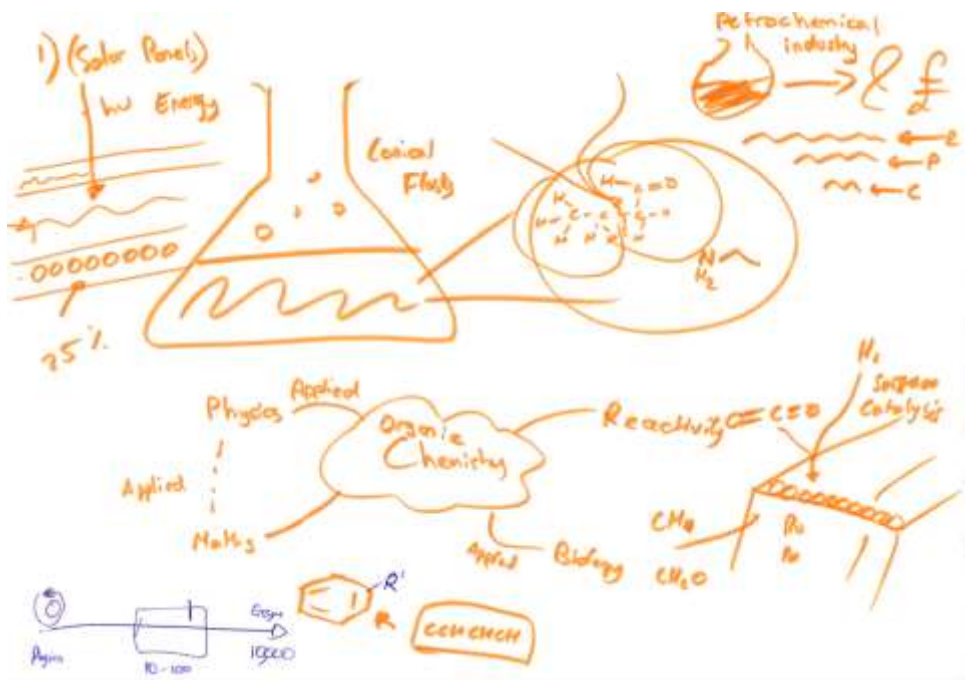
# Case studies

Four case studies grouped by discipline

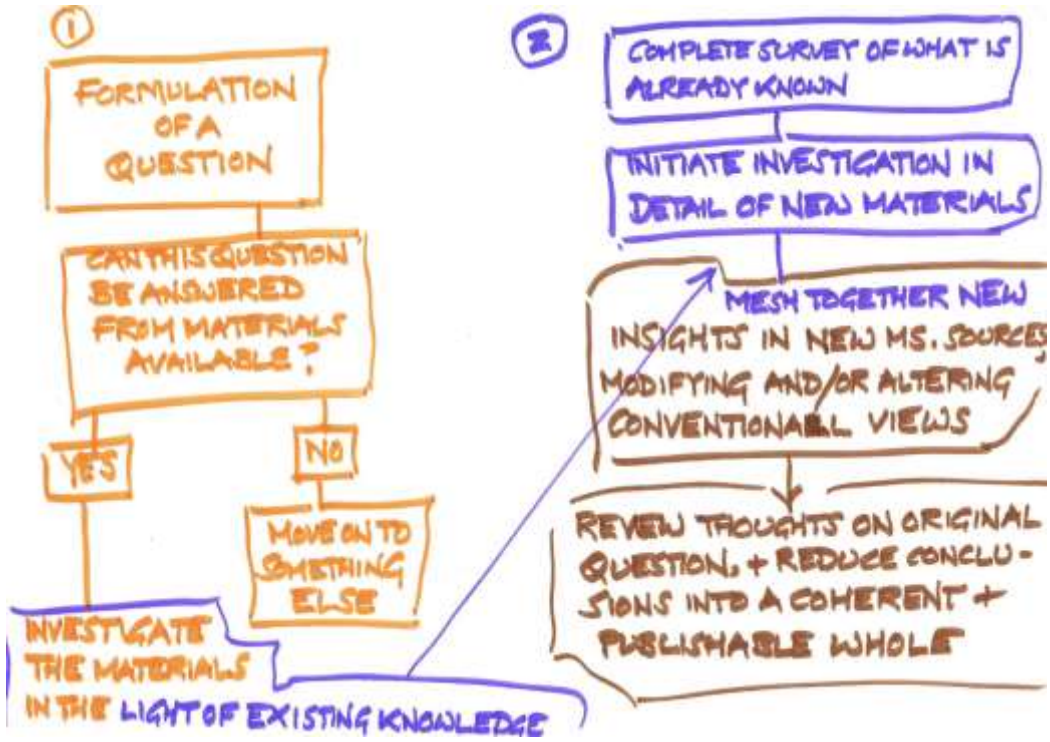


Cross-comparative approach across disciplines and across institutions (Glasgow and Oxford)

# Pilot studies



Chemistry



History



## Limitations/ Challenges

- 'Me' problems
  - Interviews depend on my ability ask relevant questions in a flexible manner.
  - I have my own biases.
- Scope and range
  - Four disciplines
  - Sample size of ten participants from each discipline
- Recruitment
  - Limited timeframe and participant interest/capacity
  - Summer holidays, strikes
- Mental model capture
  - Norman: 'The Scientist's conceptualization of a mental model is, obviously, a model of a model' and therefore only an indirect impression

## Current stage

- May 2023: First phase of data collection in Oxford (10 interviews)
- June – August 2023: second phase of data collection in Glasgow (20 interviews)
- September 2023: final phase of data collection in Oxford (10 interviews)
- Qualitative coding via NVivo



**Thank you for listening.**