CASA004/10/12: Dissertation

Writing a dissertation proposal

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What I'll talk about

1) **Why** you should do a proposal for your dissertation, and why you should start early i.e. now

2) **What** you need to include / proposal structure

   – This bit will be quite detailed, I will go step by step
   – Title, research question and objectives, literature review and referencing, research design, timeframe

3) **How** to submit, and then use your proposal

4) **Resources**, including sample dissertations

Why

Why do a proposal?

- CASA makes you do one; it's a **course requirement**

- Helps **match you with the right supervisor**

- **We give you less time** than you may think! **The proposal helps you get ahead**

  - Identify a suitable topic and research question(s)
  - Explore prior work
  - **Identify and start on relevant methods and data**
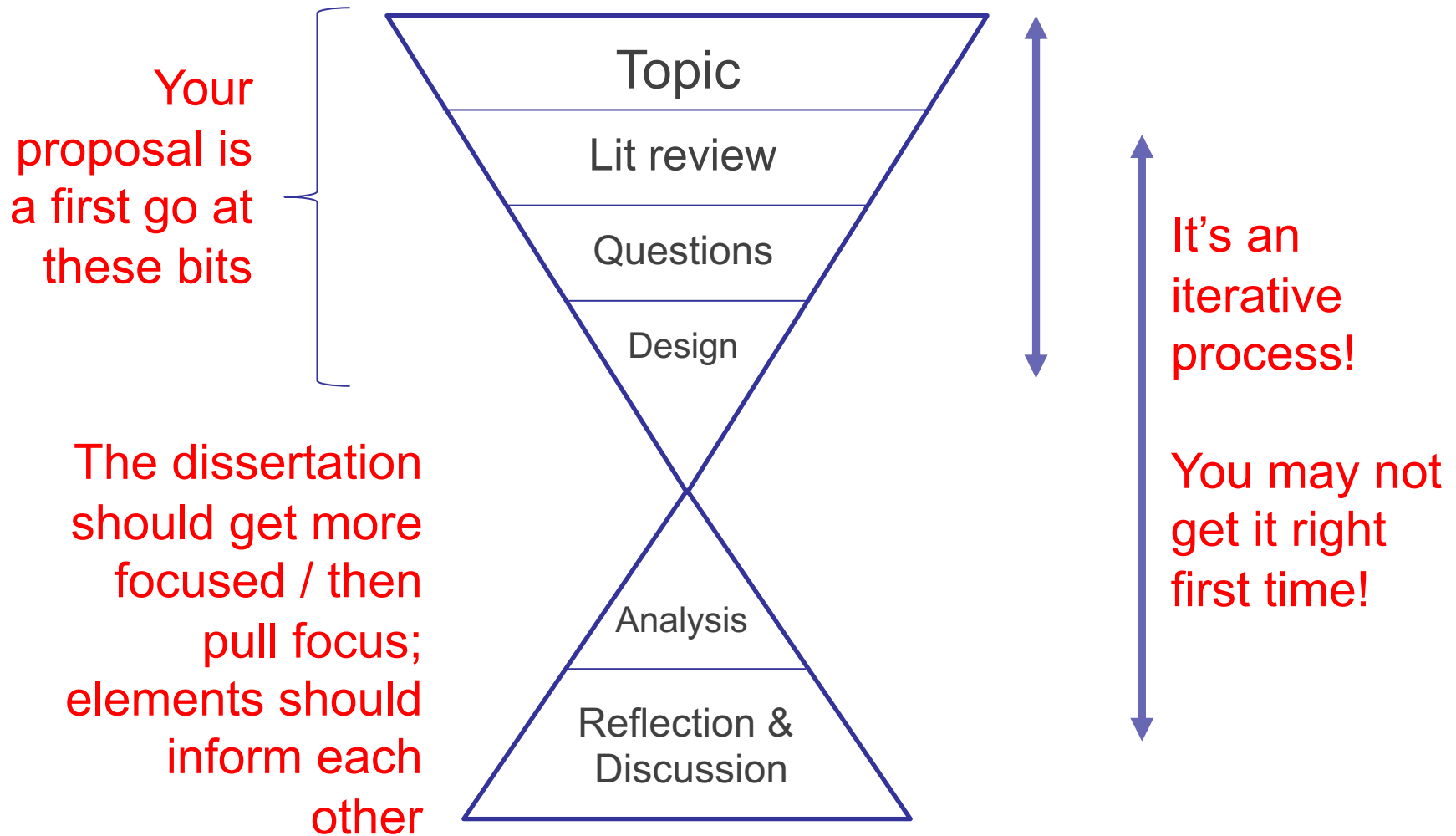 - Plan your time

Why you should start early

Spend time on your proposal now

Get started early with the research itself

- **January**
  - Gone already 🤷🏻‍♂️
- **February**
  - **Week of Feb 26:** staff-student meetings
- **March**
  - **March 22:** submit project proposals
- **April**
  - **April 2:** supervisor-student project matching
  - **April 12:** submit your Ethics Form A
  - **April 24:** submit your Ethics form B
- **May**
- **June**
  - **Early June:** supervisor check-in
- **July**
  - **July 15:** dissertation mini-conference
- **August**
  - **August 25:** final submission deadline

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What

The big picture

Your proposal is a first go at these bits

Topic

Lit review

Questions

Design

Analysis

Reflection & Discussion

The dissertation should get more focused / then pull focus; elements should inform each other

It's an iterative process!

You may not get it right first time!

Basic ingredients

- **What you'll need to know to write up your proposal:**

    – A clear idea of the topic you want to explore

    – A draft research question or questions

    – Relevant data sources [and any ethical issues arising]

    – An idea of the methods you'll use, including any fieldwork

    – Any external collaborators [projects with CASA partners / CDRC may pre-specify some of the above]

- **You should also:** look at the Mark Scheme to see what CASA values for a) Review and Research Framing b) Research Design

Basic proposal structure

- Working title

- Research question(s)
  - What bits of your topic will you explore?
  - 50-100 words

- Background literature review
  - Brief background to the topic; explain its importance
  - 200 words incl. references

- Research design
  - Methods + analysis / data / ethics
  - At least 400 words

- *Timetable*

Use this basic structure to build your webform answers

You aren't committed to do exactly what's in your proposal!

The working title

- **Concise, engaging, and conveying the general topic**
- CASA uses it to help allocate your supervisor

- Not critical, so don't spend ages on exact wording …
- … **you can change it** as many times as you want later

- Examples:
  - 'Crowdsourced mapping for all? Gender bias in OpenStreetMap'
  - 'A geospatial analysis of the creator economy: where creators live and work, and why'
  - 'Speed 2.0'
  - 'Bubbles'

Research questions

- **The central question(s) you will try to answer**

- **Research questions ≠ topic!**
  – The question or questions need to pick out *what part(s) of your topic* you're going to address
  – Questions should be pertinent and topical
  – Questions should be as specific as possible

- **Use clear / precise language. Examples:**

  – How has the gender bias in OSM contributors impacted the quality of data on OSM?

  – Is there a spatial dimension to the creator economy? Are certain spaces more attractive to creators? What are the attractors?

Background literature review

- **Not a full literature review! That comes later**

- For the proposal, synthesise at least 6-10 sources

- **Sources should be credible** [e.g. academic papers / books; government / policy documents]

  – You can also use e.g. a media report / social media / video ref. to motivate your topic, especially if it's very new

  – Wikipedia is good, but you should mainly use credible sources

- **Use the Harvard format** for references (see handbook)

- **Use a reference manager**, e.g. Zotero, Endnote (see ISD software database)

Harvard referencing scheme

- In the text, it looks like this:

  - According to Dennett and Reades (2023), CASA is the world's greatest urban spatial science group …"
  - "Some assert that CASA is a globally pre-eminent urban spatial science group (Dennett and Reades 2023). Others disagree …"
  - "Arribas-Bel et al (2024) claim Liverpool is significantly better."

- In the bibliography, provide full citations:

  - Dennett, A and Reades J (2023) "CASA is the best", *Urban Studies,* **10**: 300-310
  - Arribas-Bel D, Green M and Singleton A (2024) "You're Wrong: A reply to Dennett and Reades", *Urban Studies,* **1**: 215-220

Research design

- **Your research design = *how* you answer your RQs**
- After the research questions and framing, this is the most important part of the proposal …

- … and where you should put most time and thought

- Three (or four) linked elements:

  – Methods + analysis
  – Data
  – Ethics

- **The mark scheme rewards innovative, appropriate, robust and reproducible choices of methods / data**

Design: methods

- **Linking your RQs to the tools for answering them**

- **Justify your choice of methods**, given your RQs, and what existing studies have / haven't done

- **Then think about: how you *use* these methods**

- Most of you will be using quantitative tools, e.g. clustering, linear regression, ABMs …

  - **Use what you've learnt at CASA**

  - **But your methods also have to fit your questions. So, your methods and analysis may need to go beyond the course**

  - If you're ambitious, this can be good!

  - If you don't like the sound of this, go back to your RQs

Design: data

- **Linking your RQs to the tools for answering them**
- **Again: justify your choice of data**, given your RQs, and what existing studies have / haven't done
- **Iterate:** questions <~> methods <~> data <~> analysis
  - Try: data that's open/public, or which UCL Library has access to
  - Open data also have minimal ethical issues
- Make time in your forward planning:
  - Cleaning / wrangling data to get it ready for the analysis
  - Dealing with data problems, e.g. variables may have a lot of missing observations, or may not tell you what you need
  - ALWAYS read the metadata / manuals!

Some open data sources

- **A few good places to start:**

    – London Data Store: https://data.london.gov.uk/

    – UK Data Store: https://data.gov.uk

    – UK Office of National Statistics: https://www.ons.gov.uk/

    – NOMIS: https://www.nomisweb.co.uk/

    – UK Data Archive: https://www.data-archive.ac.uk/

    – EU Data Portal: https://data.europa.eu/en

    – UCL Library data repo: https://library-guides.ucl.ac.uk/az.php

    – Geocoded global patents: https://www.worldwide-patents.com/

    – PatentCity: historical data: https://cverluise.github.io/patentcity/

    – OpenAlex: scientists, papers, unis: https://openalex.org/

Design: ethics

- Jon will cover ethics in more detail next week

- **Key = you MUST include some discussion of ethics, even if you just say that there are no ethical issues.** You will lose marks if you don't include 'ethical reflection'

- Research involving **human participants** (e.g. interviews, prototype testing) may require ethical review

- Research using **personal information** (e.g. point data / microdata) may require ethical review, data protection registration

Timeline

- **Not formally part of the proposal, but do it now anyway**

- Try: a GANTT chart
- Set milestones
- Tasks can and should overlap
- You can and should iterate certain tasks, e.g. literature review, analysis, writeup

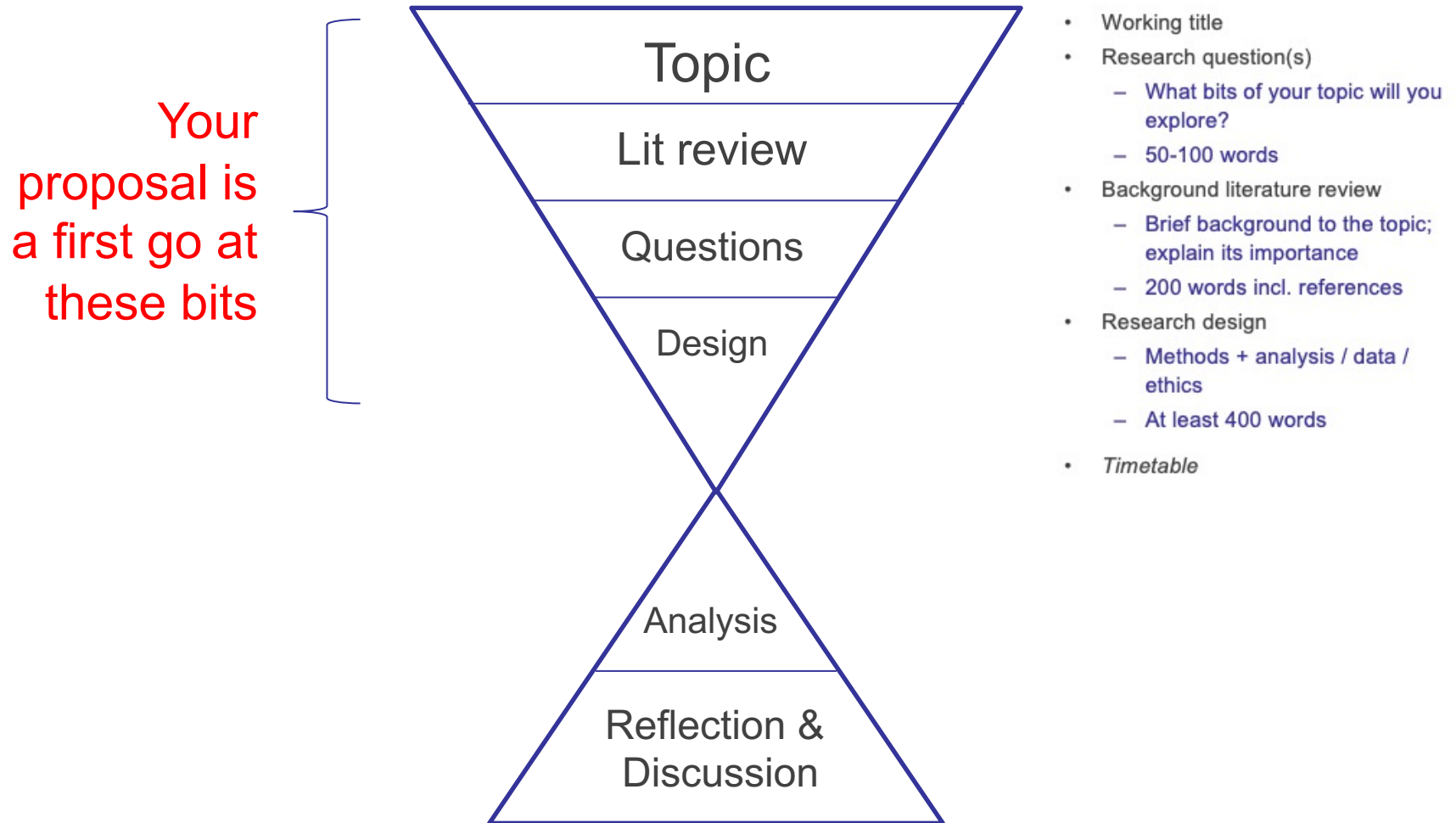https://templates.office.com/en-gb/Simple-Gantt-Chart-TM16400962
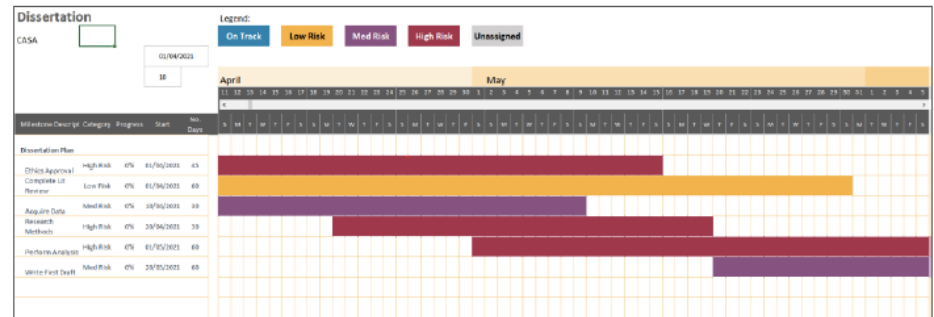
How

Research is messy

The dissertation means doing real research. You don't know the answers yet. Neither does your supervisor.

You'll encounter problems that are hard to plan for.

This can feel un-nerving and stressful!

Research is messy

- **Your supervisor is here to help you with all this**

- **Your project will evolve, and this is fine**

- It is not unusual if you refine or change one or more of

  – Research questions

  – Lit review

  – Focus

  – Methodologies and analytical strategy

  – Datasets …

- **So again: your proposal doesn't commit you**

- **BUT** putting thought and effort into the proposal now *should* minimise the need for future changes

Remember the big picture

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Submitting your proposal

- Iterate using the basic structure shown here

- **Submit your proposal by March 22**

- **Submit your proposal using the Google form (coming soon!)**

- **Matching by 2 April**

- Working title
- Research question(s)
    - What bits of your topic will you explore?
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Resources

Example dissertations

- Take a look on Moodle / sample dissertations for:

    – A list of past dissertation titles

    – Example dissertations which scored pass / merit / distinction

    – This should help you match up effort and desired outcome …

    – For MRES students, there are also examples of articles which got published in journals

Dissertation mark scheme

- Available in Moodle / assessment
- For proposals, look again at review/framing and design

This mark scheme is composed of two parts, the first of which is applicable to all students and **the second only those** on the MRes spatial data science and visualisation (dissertation module CASA0004) who are required to submit a dissertation thesis **and** a publication document.

Part 1: applicable to all students

| Criterion	80-100% (A*)	70-79% (A)	60-69% (B)	50-59% (C)	40-49% (D)	1-39% (E)
Review and research framing	Extensive and systematic background research evaluating a multitude of credible sources (e.g. academic and policy) using an in-depth and thorough narrative that seamlessly leads the reader to an innovative globally pertinent or topical research question. There is unambiguous attribution of ideas and no inaccuracies.	A broad range of background research evaluating a multitude of credible sources (e.g. academic and policy) using an extensive narrative to produce a convincing framing of a highly pertinent or topical research question. There is clear attribution of ideas with few inaccuracies.	A range of background research evaluating multiple forms of credible sources (e.g. academic and policy) with an adequately developed narrative to produce a legitimate farming of the pertinent or topical research question. Attribution of ideas is mostly clear with some minor inaccuracies.	Background research considering several credible sources to produce a plausible framing of the somewhat pertinent or topical research question with a fairly adequate narrative. A more appropriate variation of the research question could have been proposed. Attribution of ideas is basic and irregular with some inaccuracies.	Limited background research considering few credible sources, producing an implausible framing of a vaguely pertinent or topical research question with no narrative. The research question should be reconsidered. Attribution of ideas is insufficient with major inaccuracies.	No evidence of relevant background research, with an illogical and irrelevant and/or untopical research question. The section requires a full re-write. There is no attribution of ideas.
Research design	An innovative, expertly explained and fully, easily reproducible research design that is based on an exceptionally robust choice of data	An original, refined, fully explained and fully reproducible research design that is based on an entirely appropriate choice of data and methods. It	A robust, well explained and mostly reproducible research design that is based on a well justified choice of data and methods. It demonstrates	A sound and adequately documented, broadly reproducible research design that is based on a plausible choice of data and methods. It	An unclear and insufficiently documented research design that is based on an ill-justified choice of data and methods. . There is very limited	An incomplete or highly deficient research design marked by an unjustified or inappropriate choice of data and methods.

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Dissertation handbook

- **A crucial resource, please download it, use it often**
- Available in Moodle / assessment

**Centre for Advanced Spatial Analysis
Masters Dissertation Handbook[i]**

2023/24
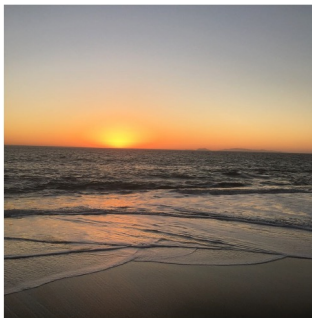
Module convenor: Dr Neave O'Clery

Thanks to UCL Digital Humanities for publishing their MSc Dissertation handbook upon which sections of this guide have been based and others adopted. [i]

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Questions?

Appendix

Research objectives

- **Not formally part of the Google form**

- May help you with planning the proposal

- Will be important for wider planning / writeup

- **Key = ensure objectives are linked to your research questions, logical, clearly explained**

Research objectives

- **One useful tool you could try: SMART**

  - **S**pecific: state what you need to achieve ~ link to RQs

  - **M**easurable: how will you know if

  - **A**chievable: based on your experience so far

  - **R**ealistic / relevant: doable in the time available, and remembering that this is an MSc thesis not a 3-year project

  - **T**ime-constrained: when should objectives be completed to get the thesis done

- Don't get too hung up on ticking off each of these – your actual research will evolve from the proposal

Is there a spatial dimension to the creator economy? Are certain spaces more attractive to creators? What are the attractors?

1) Review existing academic / business / policy literature on the 'creator economy' to identify key features

   [wide literature, fuzzy terminology, needs pinning down ~ pull key features around RQs]

2) Develop a conceptual framework, definition of 'creators'

   [use this to identify creators in the core datasets used; validate build etc]

3) Show the spatial distribution of creators across cities, and any regional variations, using data visualisation and statistical analysis tools

   [think about data and tools you'd need to answer your RQs, also definition of cities and regions in your data]

4) Explore the factors explaining the spatial distribution of creators, through statistical analysis

   [what tools would you need to answer your RQs; use the literature to identify push/pull factors and go find datasets that cover these]