From Idea to Research Question: Developing and Refining your Thesis Topic

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Introductions

Overview

- What is a good research question?
  - Interesting + feasible
- How to generate good research questions?
  - Strategies for reading, writing, and thinking
- Supports in this process
  - Working with your supervisor
  - Other Princeton resources

What is a good research question?

- Interesting + feasible

What is a good research question?

- Interesting
  - If we answer it, would it tell us something **unknown/new** about something **people care about?**

  - **Would anyone care?**
    - **Why should regular people care?**
      - Does it help understand some important but not-fully-understood real-world phenomena, or solve some important real world problem?
        - E.g. ‘how do people learn so well with limited information?’ ‘how do we stop racism?’

    - **Why should people in that field care?**
      - Does answering this specific question speak to broader debates, questions, theories, or approaches in a field?
      - If you answered it, what other beliefs might people in the field have to update?
        - e.g. ‘Does heart rate variability correlate with sleep quality in this sample?’
          - uninteresting on its own but maybe interesting if it tests between two competing theories about sleep quality and stress responses

What is a good research question?

- Interesting
  - If we answer it, would it tell us something **unknown/new** about something **people care about?**
  - Is there something **unknown/new** to learn?
    - E.g. address some gap,
    - extend knowledge to an understudied area,
    - test new or competing hypotheses,
    - solve some problem in a new way,
    - use new methods to better test something,
    - make a new connection,
    - point out a new criticism or counterargument
  - Doesn’t have to be a hugely new thing for your thesis
    - (e.g. testing an existing theory in a new context)

What is a good research question?

- Feasible
  - Is it answerable given the **time, skills, resources, supports, etc. you have available** during your thesis?
    - E.g. ‘How to end poverty?’ (too broad, takes too long to answer, etc.)
  - Is it **clear and precise** enough for it to be answerable?
    - For quantitative work, can you answer it with one or more stats tests/graphs?
    - Are your concepts and terms clearly defined/operationalizable?
    - E.g. ‘Do emotions lead to better memory?’
      - What kind of memory? (E.g. face recognition? Recall of a story?)
      - All emotions? What counts as an emotion? Feeling emotions? Perceiving emotions? Are emotions distinct from other states like liking/disliking something?
      - What counts as ‘better’ memory? Better memory performance on some task? Ability to use remembered information to solve other problems? Overall better functionality in life?
      - May eventually operationalize for an empirical study as, e.g.: “Do people have better recognition of people’s faces if the faces were first seen with an emotional expression (fear or happiness) vs. neutral expression?”

What is a good research question?

- Sometimes interestingness and feasibility can push in opposite directions
  - E.g. broad questions may be more interesting but harder to answer
- The challenge is to try to have both
  - Can often do this by thinking not just of one question, but of a set of nested questions (broader questions + narrower sub-questions)

The typical intro of a scientific paper:

Poverty is widespread and very problematic. How do we get rid of poverty?

Causes of widespread poverty are often structural (e.g. laws, policies), so most work has focused on addressing structural issues.

But even if the main causes are structural, changing personal behaviours (e.g. managing finances) might also help individuals in poverty

Behaviours might often be more easily changeable, but they haven't been considered as much as a target of intervention.

Here we examine whether helping people change their behaviours in terms of better managing their finances might be an effective way to help reduce their poverty levels.

As a first step in testing this, we test whether using a budgeting app might help lower-income people spend less money over the course of a month.

**This example is completely made up,
and I don't know if any of it is true!**

Broad question
(Why regular people should care)

Setting up what is unknown, and why people in the field should care about this

Moderately specific question
(More feasible,
clear why it is new and interesting from above)

Most specific question
(Most feasible: clearly operationalized, testable in reasonable timelines, etc.)

Activity

- Take ~3 minutes and try this for your thesis topic!
  - Write approximately 4-6 sentences going from broader to more specific questions
  - Try to make it clear how its interesting (in general + to field) and feasable
  - It doesn’t have to be good or complete
    - this is just to get you to start thinking, and to notice what parts you need to work more on
  - Let me know if you have any questions, challenges, or things you want to discuss after

How to come up with a good research question?

- Strategies for reading, thinking, writing

Reading

- Reading related work is important! It helps you…
  - Figure out what is known vs unknown
  - Learn about debates, theories, etc. your work can speak to
  - Figure out what is feasibly answerable
    - (e.g. by building on previous knowledge, methods, etc.)

Reading - How to find things to read?

If you don’t know exactly what you need to read, start broad then narrow in

- **Tips for starting broad**
  - To start, try to get a broad sense of what is out there on your topic, and what the useful papers, search terms, or authors are to look into further
    - Find and read **overviews**: reviews, meta-analyses, chapters in handbooks or textbooks, etc.
    - Read a ton of **abstracts**
    - Read the **intro of relevant papers** (preferably recent ones) as they will often cite important past work you can look up
      - Recent papers will also point out potential questions that are still unanswered
        - Often in discussion section of empirical work, or reviews may list open questions

If you don't know exactly what you need to read, start broad then narrow in

- **Tips for starting broad**
  - Some sources that are often useful:
    - "**Trends in cognitive science**" journal (or other 'trends in …')
      - offers short accessible reviews, lists open questions
    - "**Behavioural and brain sciences**" journal
      - offers big picture articles and other people's commentaries on them and the author's reply
      - can help identify debates and open questions
    - **Stanford encyclopedia of philosophy** – overviews in philosophy
    - **Handbook chapters** (e.g. "handbook of social psychology") – useful overviews
      - can search for handbooks in library catalogue, then look at chapter titles
    - **Oxford bibliographies**
      - online lists of key papers in various fields/sub-fields (within philosophy, psychology, etc.)

    - **Often field specific, so talk to your supervisor or subject librarian, look up library research guides for your subject!

If you don’t know exactly what you need to read, start broad then narrow in

- **Tips for narrowing in on a specific topic**:
  - Keep a list of possible papers to read as you go
    - then **rank order** them in terms of which to read first (based on titles/abstracts/what they were cited for)
  - How to make this list?
    - Keep track of **key terms** used to describe topic (e.g. ‘stereotype threat’), then search for other work with these terms
    - Keep track of potentially relevant **citations** from papers you have read, and what they were cited for
      - If you notice a paper being cited a lot in things you read, its probably worth looking at.
    - Keep track of **authors** who do relevant work, look up their other work

Search tips:

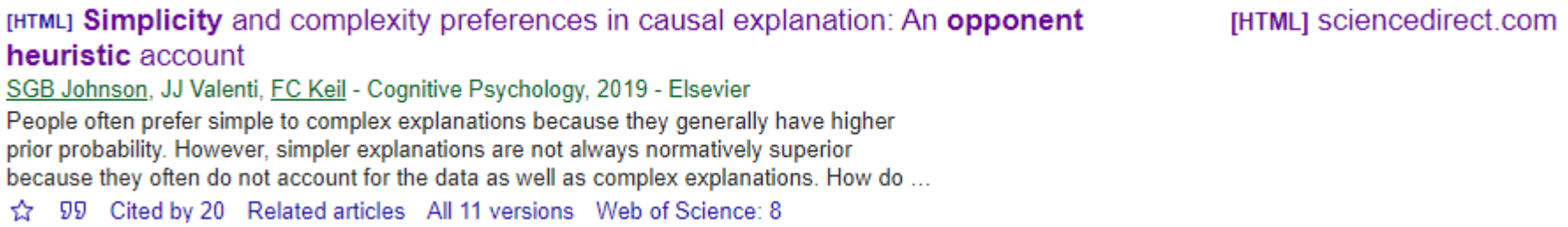
- Mostly should read **peer-reviewed articles**, or academic resources like handbook chapters
  - Occasionally e.g. Wikipedia can help give you an overview and point you to keywords and authors. (Never cite Wikipedia though!)

  - If you are not sure if its peer reviewed, check if published in an academic journal
    - Can also see if its on library website after filtering out non-peer reviewed sources
    - Ask librarian or supervisor if you are still not sure!

- **Where to search:**
  - Main library website
  - Google scholar
  - Field-specific databases of journal articles e.g. PsycInfo (access through library website)
    - **Check out library research guides for your field!

- Using **wildcard characters** (when searching on library or Google scholar):
  - Environment* will search for e.g. environment, environmental, environments

Some Google scholar search tips (scholar.google.com)


[HTML] **Simplicity** and complexity preferences in causal explanation: An **opponent heuristic** account [HTML] sciencedirect.com

SGB Johnson, JJ Valenti, FC Keil - Cognitive Psychology, 2019 - Elsevier

People often prefer simple to complex explanations because they generally have higher prior probability. However, simpler explanations are not always normatively superior because they often do not account for the data as well as complex explanations. How do …

☆ 99 Cited by 20 Related articles All 11 versions Web of Science: 8

- Google scholar search is sometimes better than library search

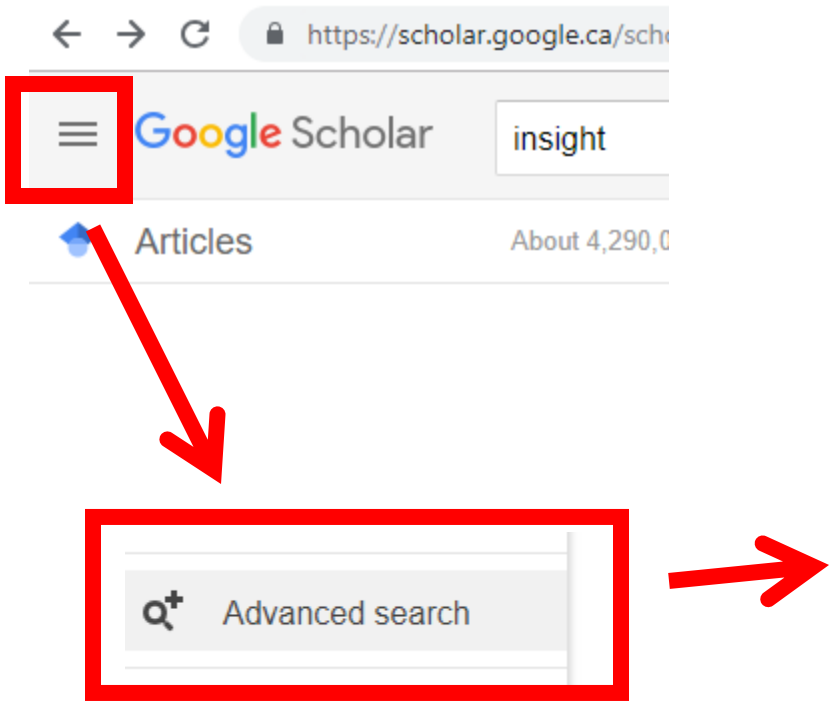
- **To access papers**
  - Often will be listed automatically on the right as html or pdf. If not ….
  - Sometimes if you click 'All … versions' there will be a pdf available even if it doesn't list it on the right.
  - Can search for title on library website
    - If it doesn't show up, try put ONLY the title in search bar (other info like author names can confuse it)
    - Can setup readcube so if its in Princeton library it will show up on google scholar
  - Ask your subject librarian if you still can't find it!

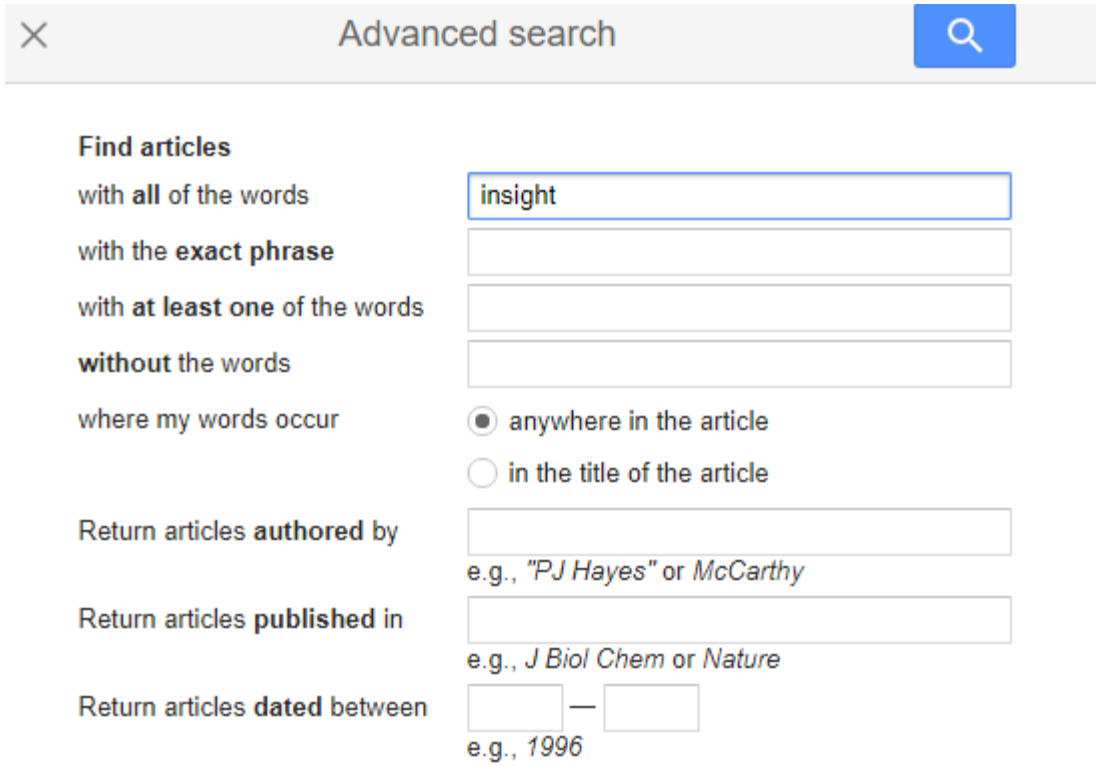
- **To find related papers**:
  - Click 'cited by …' and then you can search within articles that have cited it, can filter by year, etc.
  - Click 'related articles'
  - Click author name if underlined to find author's other papers

- Note: Google scholar gives some **non-peer-reviewed sources**, so check where it is published!
  - (e.g. Can include books, popular magazines, preprints of articles that are not yet peer-reviewed).

Advanced search on Google scholar

(It took me ages to find this)





Reference managers

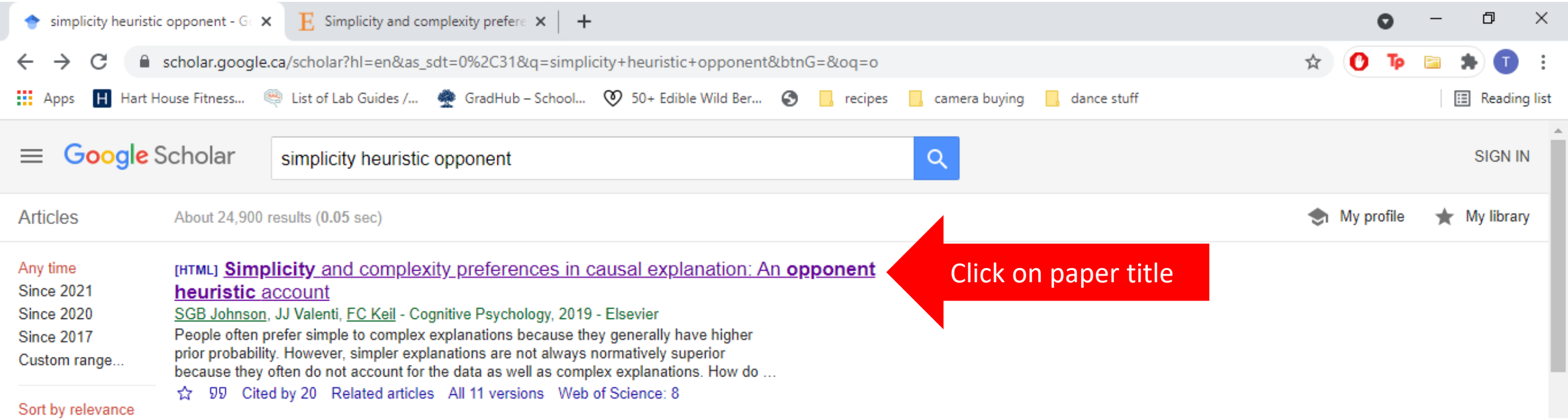
- Tools to:
  - keep track of references,
  - insert and format in-text citations in your final document,
  - and automatically create a bibliography based on in-text citations

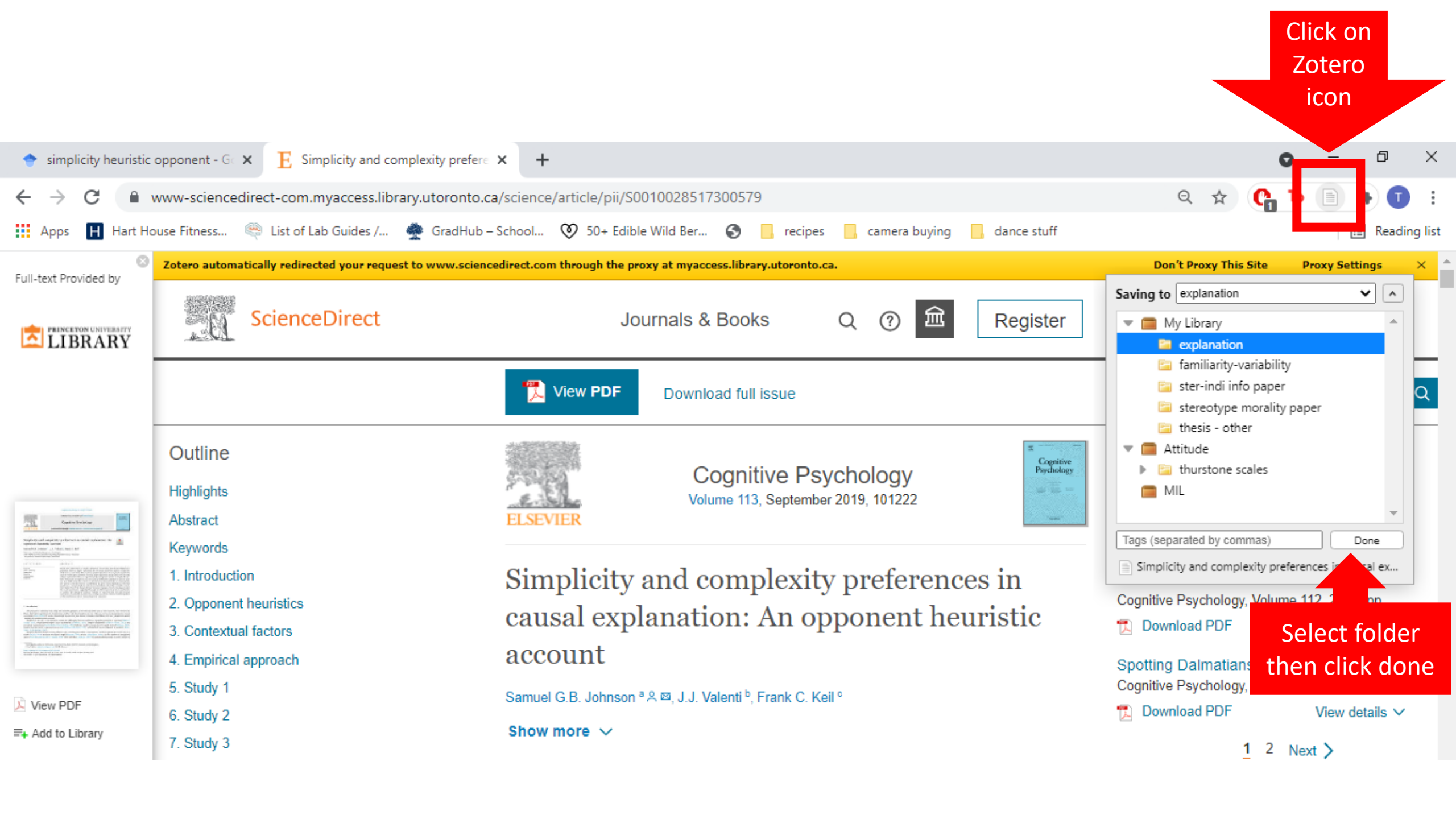
- I use Zotero
  - Endnote and refworks are others

- Princeton has a special librarian that can help you set it up and learn to use it (takes 5-10 min), and online help resources

- You can add papers as you read, or add them later before you put citations in your final thesis document

Quick Zotero demo:

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1. Introduction
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5. Study 1
6. Study 2
7. Study 3
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Cognitive Psychology
Volume 113, September 2019, 101222
Simplicity and complexity preferences in causal explanation: An opponent heuristic account
Samuel G.B. Johnson [a], J.J. Valenti [b], Frank C. Keil [c]
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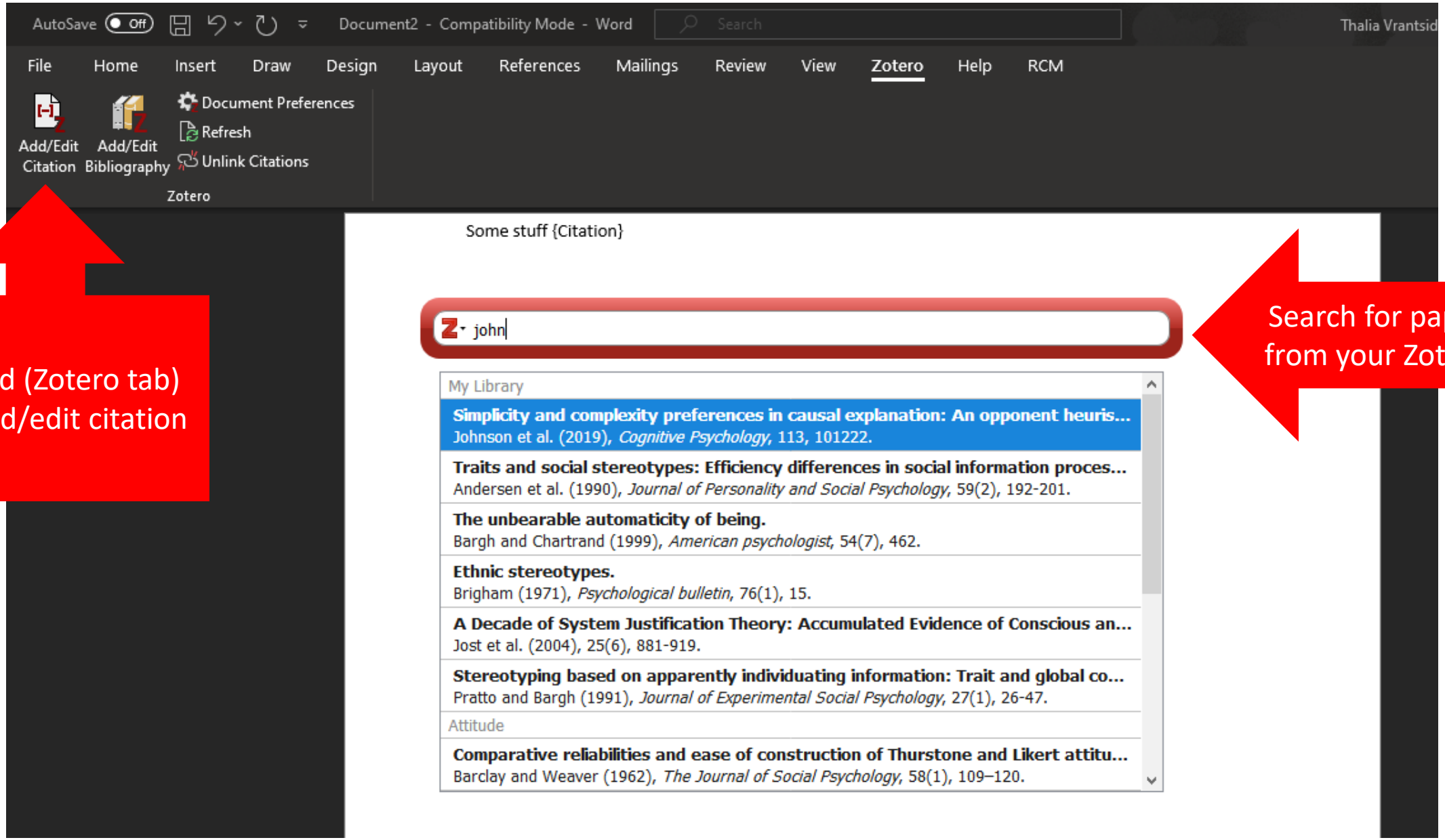
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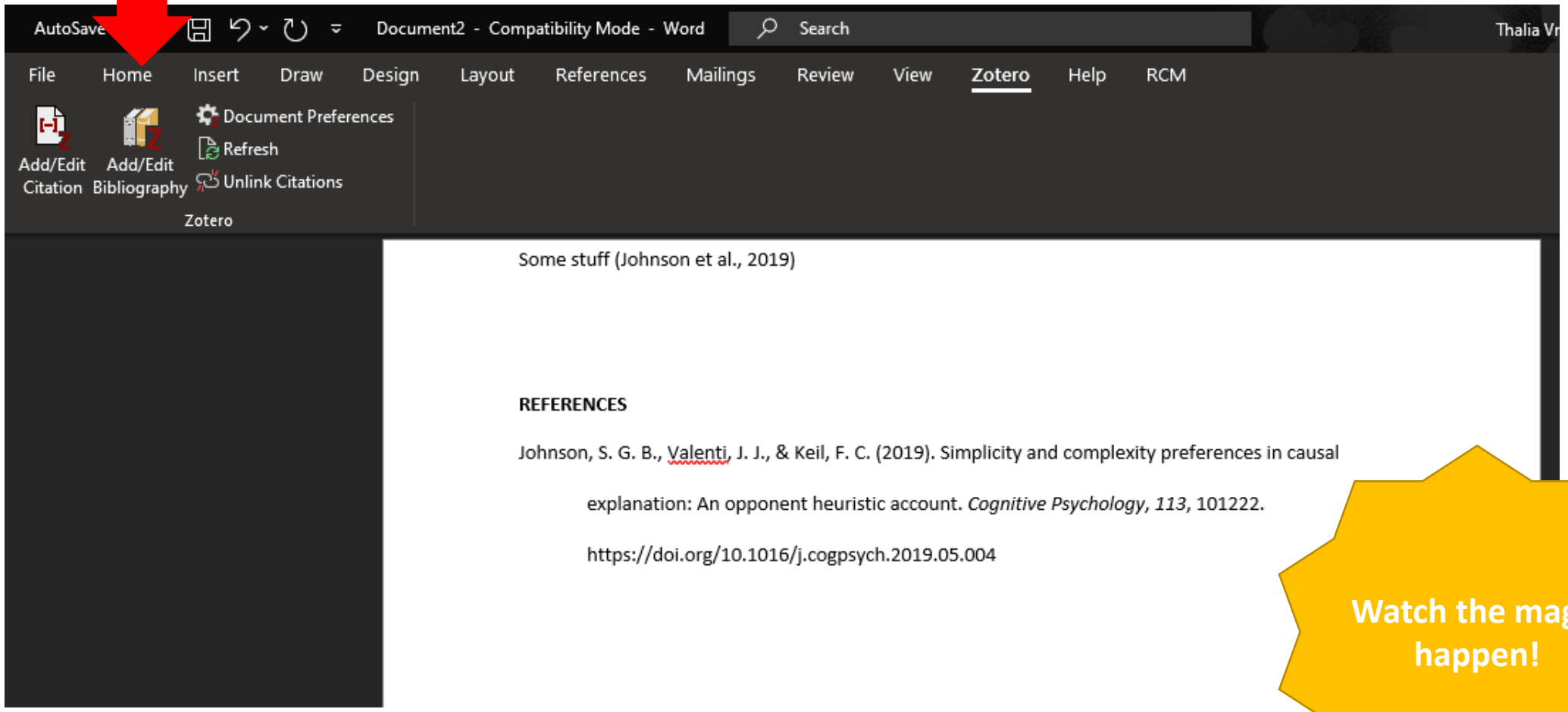
Andersen et al. (1990), Journal of Personality and Social Psychology, 59(2), 192-201.
The unbearable automaticity of being.
Bargh and Chartrand (1999), American psychologist, 54(7), 462.
Ethnic stereotypes.
Brigham (1971), Psychological bulletin, 76(1), 15.
A Decade of System Justification Theory: Accumulated Evidence of Conscious an...
Jost et al. (2004), 25(6), 881-919.
Stereotyping based on apparently individuating information: Trait and global co...
Pratto and Bargh (1991), Journal of Experimental Social Psychology, 27(1), 26-47.
Attitude
Comparative reliabilities and ease of construction of Thurstone and Likert attitu...
Barclay and Weaver (1962), The Journal of Social Psychology, 58(1), 109–120.
In Word (Zotero tab) click add/edit citation
Search for paper to cite from your Zotero library

Can also add bibliography by clicking here



Watch the magic happen!

How to read efficiently and effectively?

- You have limited time and can’t carefully read every paper on a topic
  - How to deal with this?

How to read efficiently and effectively?

- **You don’t have to read every paper front to back**
  - The **more central** the paper is to your argument, the **more in depth** you should read it
  - If its less central, **focus on what you need** for your purposes
    - Do you care about the theory/background? --Then focus on intro and discussion
    - Do you care about the methods? Results? Then focus on these sections
    - If it seems not that relevant, reading just the abstract is ok (can go back for details if needed)
  - If you are citing a paper, DO at least open and skim it for 2 minutes
    - (e.g. look at the methods overview paragraph, figure of results, and results summary in the first paragraph of discussion).
    - **Don’t just read the abstract or rely on other people’s citations!!!**
      - Sometimes things get radically misrepresented and cited for things they don’t say)

How to read efficiently and effectively?

- **You don’t have to read every paper on a topic:**
  - Overviews plus skimming a lot of abstracts can give you a general sense of what’s out there, so there are fewer papers you have to read in depth
  - If there area still too many papers, narrow in quickly to something more feasible
    - It can help to focus on something that you/your supervisor are pretty sure there has been less work on (e.g. connecting previously separate areas)
  - Start writing/outlining early, use this to guide your reading (e.g. where you need more evidence)
- If you are still not sure if what you are doing is new because you haven’t read every paper, just ask your supervisor if it seems good to them and don’t stress about it!
  - There is always some chance you have missed something but most likely what you are doing is at least somewhat different
  - And its just for a course so don’t overstress about this!

Reading

- Do you have other useful strategies for related to reading?
  - E.g. for finding papers, deciding what/how to read, etc?

- Specific questions or challenges?

Writing

Writing - Note taking as you read

- Things to take notes on
  - **Title + author + date** (or full citation) for every paper you look at
  - **Abstract** (all or part of it) or a 1-3 sentence **summary** of the paper's key points
    - This is a helpful reminder of key points of paper if you forget
  - Any **details of the paper relevant to your specific goals**
    - e.g. Methods details? Conclusions?
    - Definitions of key constructs are often useful
  - Any directions for **future research** that you might want to follow up on
    - E.g. if they point out limitations, future directions, unresolved debates in the field
  - Relevant **citations** to follow up on
  - Your own **original thoughts** as you read
    - E.g. relevance to your argument, criticisms or questions, thoughts on its relationship to other papers/theories/ideas?
    - Make sure you clearly indicate what is your idea or not (so you don't cite others for your ideas or forget to cite what was someone else's!)
      - I often write "ME: ….. " to indicate my thoughts

Writing - Note taking as you read

- Other useful advice:
  - **Take notes as you read, or right after** (before you forget)
    - Its way faster than going back and re-reading later once you forgot all the details
  - Paraphrasing vs copy-pasting?
    - Paraphrasing or summarizing in your own words helps to keep things concise, make sure you understand, and avoid accidental plagiarism later.
    - Sometimes copying chunks of text is ok if its faster and the whole chunk is important (e.g. key claims, many relevant citations to look up)
      - ****Always use quotation marks or some way to signal it's a direct quote! (You don't want to accidentally plagiarize later!) ****
      - If you have long blocks of text, bold key parts so you can skim later
  - Tracking your searches:
    - It can sometimes help to keep track of what search terms you have searched on what search engine and how many pages you have looked through, so you avoid redundant searches
      - My searches are usually too disordered for this to be useful

Writing – Organizing as you read

- Try to organize information as you go along and relate it to your work (e.g. possible questions you might want to answer)

Writing – Organizing as you read

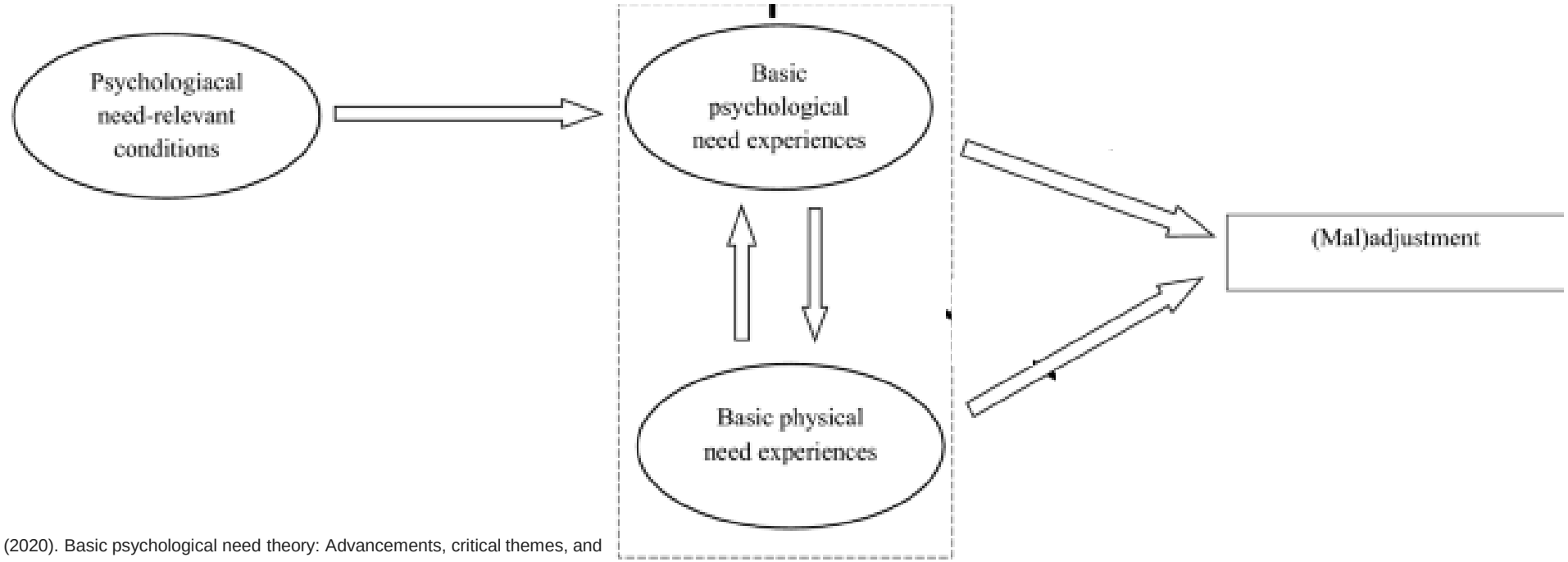
- Examples of ways to do this:

- **Make tables**:
  - E.g. studies that show vs. don't show some effect + key aspects of methods that might have led to these differences

Paper	load effect?	Task	Ster learned pre-load	Ster learned last	Ster learned first	Ster more salient	Ster more diagnostic	Memory compone nt?	Judgeme nt told first?
Biernat, Monica and Kobrynowicz, I	yes	Rate athleticism from male/fe	N	N	N	no	no	N	At same ti
Blair, Judd, and Fallman (2004; study	yes	rate prob that black/white face	N	(only face	(only face	(only face	(only face)	No	Yes
Bodenhausen (1990; study 2)	yes	group (vs no group) + stereoty	no	no	unclear	no	no	No? Minir	Yes
Dijksterhuis, and Van Knippenberg (	yes	learn statements about profes	Yes (given	no	Yes	Yes? (lear	Maybe	Yes	No
Gilbert and Hixon (1991; study 2)	yes	Load (yes/no) during stereotyp	Y (sometir	No	Yes	No	No (?)	Maybe	No (2nd pa
Gordon and Anderson (1995)	no	Black/white target commited t	(All info w	No	Yes	No	No?	Minimal	No (but cc

Writing – Organizing as you read

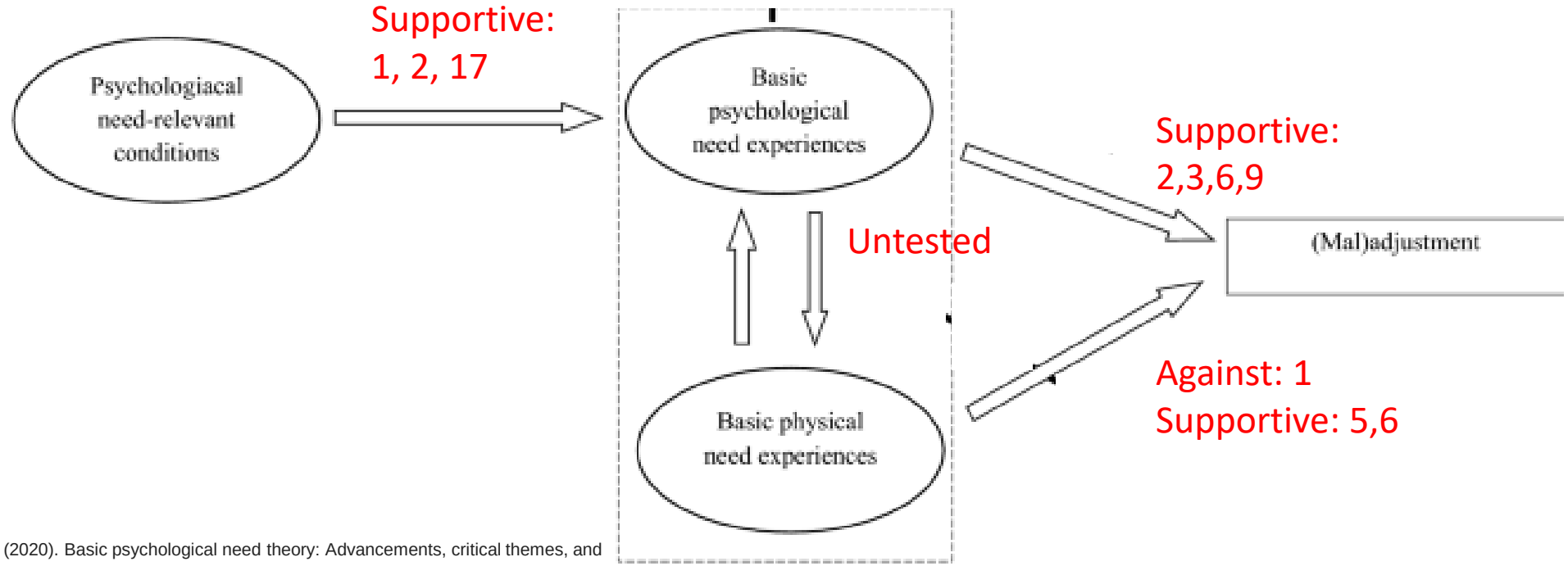
- **Make diagrams**:
  - E.g. flow chart



Vansteenkiste, M., Ryan, R. M., & Soenens, B. (2020). Basic psychological need theory: Advancements, critical themes, and future directions.

Writing – Organizing as you read

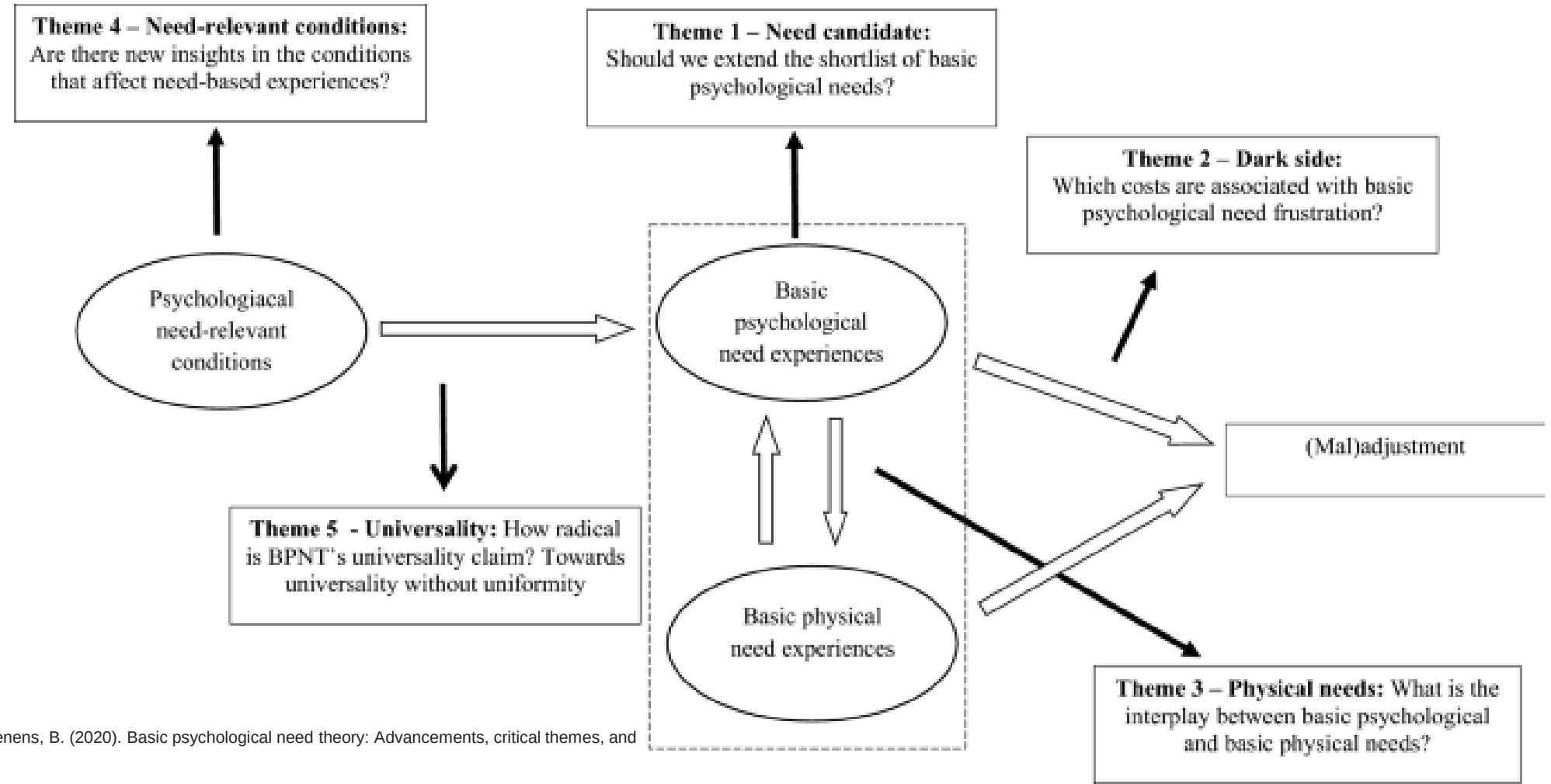
- **Make diagrams**:
  - E.g. flow chart
    - Can add in notes (e.g. numbered citations) for which paths we currently have supportive evidence for (or evidence against).



Vansteenkiste, M., Ryan, R. M., & Soenens, B. (2020). Basic psychological need theory: Advancements, critical themes, and future directions.

Writing – Organizing as you read

- **Make diagrams**:
  - E.g. flow chart
    - Can add in notes (e.g. numbered citations) for which paths we currently have supportive evidence for (or evidence against).
    - Can add in e.g. open questions at different areas



Vansteenkiste, M., Ryan, R. M., & Soenens, B. (2020). Basic psychological need theory: Advancements, critical themes, and future directions.

Writing – Organizing as you read

- **Paragraphs/outlines/paragraph-like point form notes**
  - E.g. write up one or more paragraphs (or point form notes) summarizing evidence for/against some idea,
  - Can add in things about limitations of this evidence, gaps, how evidence is related, etc

- **Write a full outline of your intro**:
  - i.e. broad question, existing research and gap you will address, your more specific question that addresses this gap
    - Can be anywhere from a paragraph (e.g. previous poverty example) to a few pages, that you can expand on later
    - Even if you don't use it in your final version, writing it out in full sentences can help clarify your specific question or hypotheses, see gaps in the logic
    - If can serve as a basis for your paper intro, and writing it while the papers are fresh in your mind is easier

Writing – Organizing as you read

- Make sure that however you organize things, you can **link back to the original sources** so you don't forget later where ideas came from when you want to cite them!
  - e.g. include some kind of in text citation, or use a numbering system that corresponds to where you took notes

Writing – Free writing to generate ideas

- Writing as a way to develop your thoughts
  - Unpolished, just for yourself
  - If its helpful, you can can set a timer for 5 minutes and try to write continuously or with minimal filtering

  - Some things you can write about:
    - What interests you in your topic
    - What difficulties you have in thinking about your topic
    - Questions you think are worth answering
    - Thoughts or ideas from your reading that you want to explore

Writing

- Do you have other useful strategies for how to use writing to develop your research question?
  - E.g. on using writing for note taking, organizing ideas, or generating ideas?

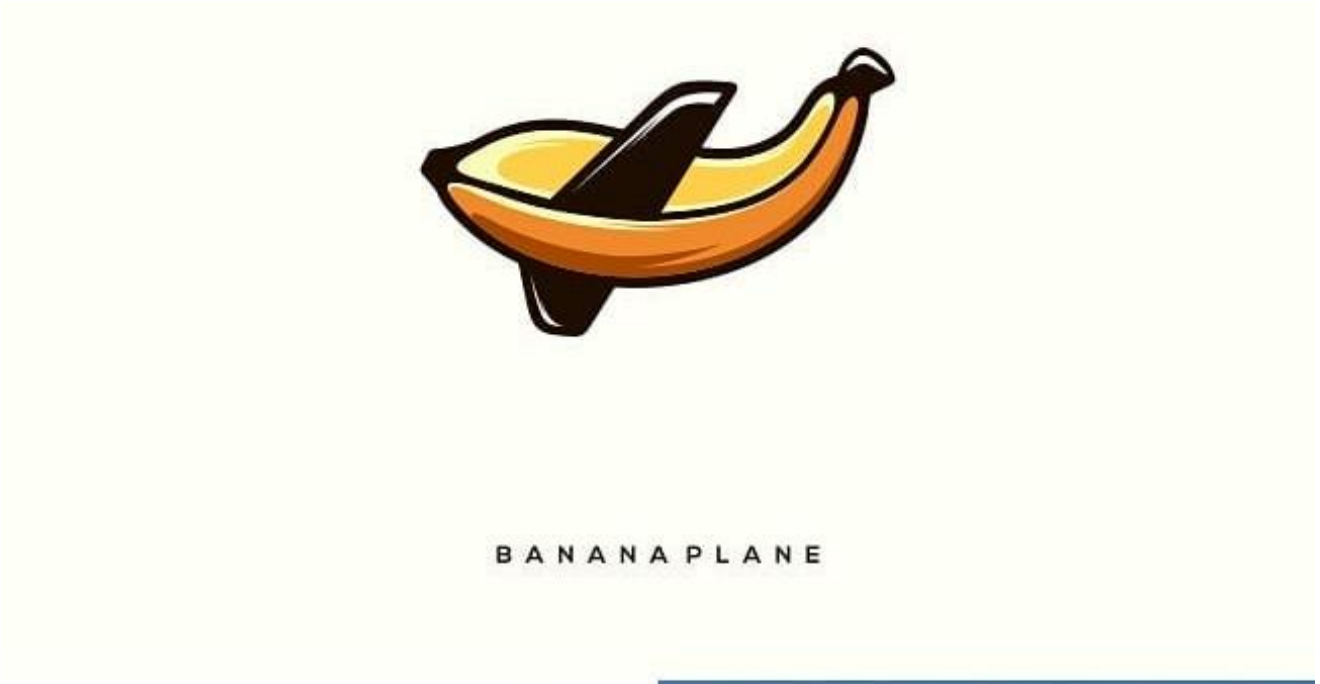
- Any questions or challenges?

Thinking

- Some thinking strategies:
  - Making connections
  - Critical + Constructive thinking
  - Think at both big picture and more specific levels

Thinking - Making connections

- **Combine things that haven’t been combined and see what comes out**

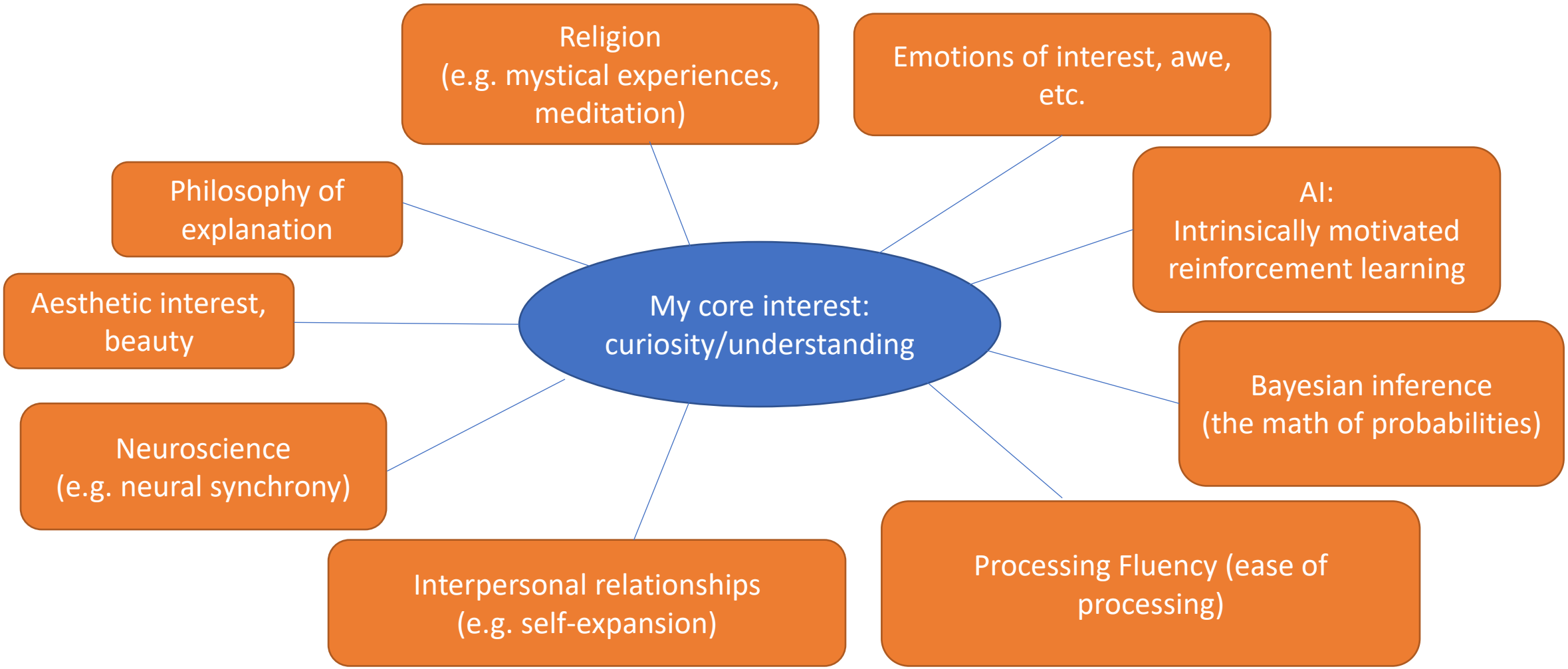


Thinking - Making connections

- **Combine things that haven't been combined and see what comes out**
  - Every time you learn something new ask yourself 'how might this relate to [my topic]'?
  - Look up work in related areas or other disciplines that may not have been fully integrated yet
  - Then try to figure out the details of how these things might be related
    - There may be some work combining them but you can probably still add something new
      - E.g. work on stereotyping mostly draws on memory research from the 1980s, but linking it to more modern memory research could give us some new ideas

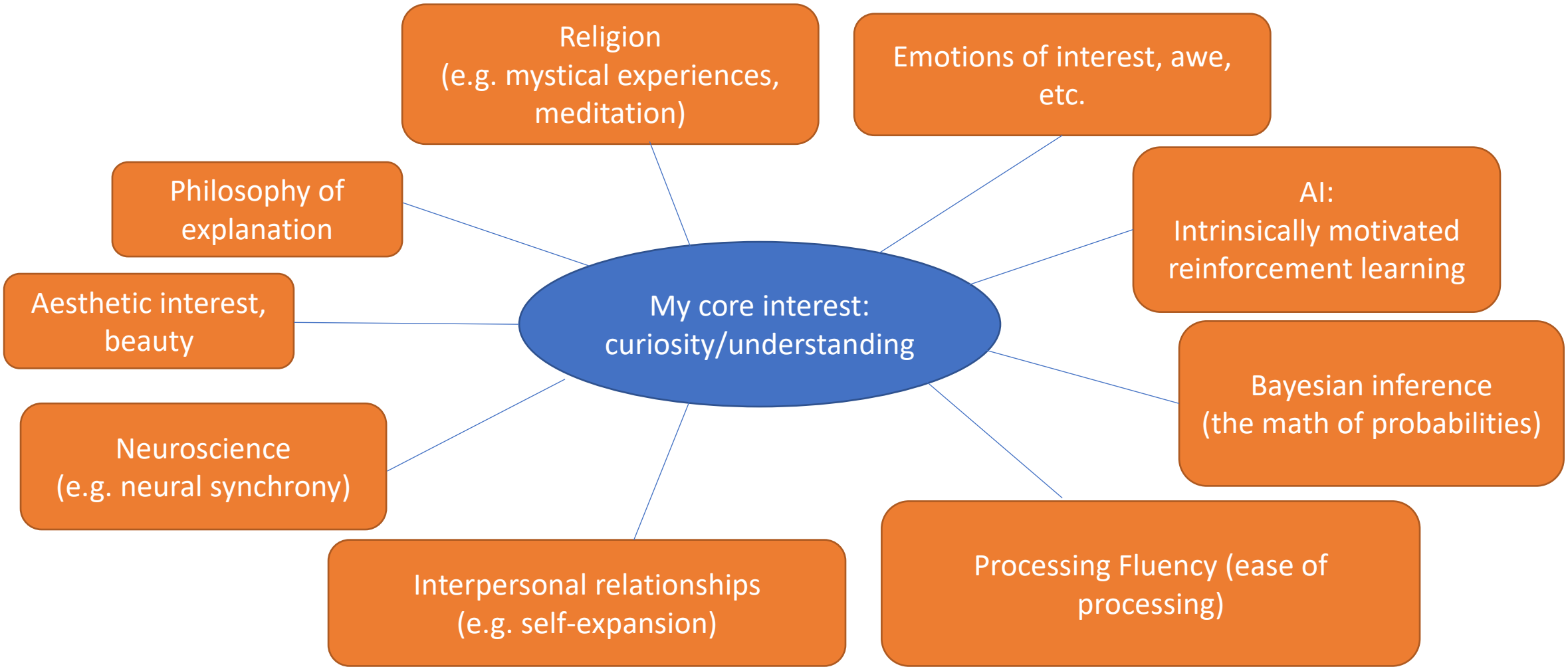
Thinking - Making connections

My interests:



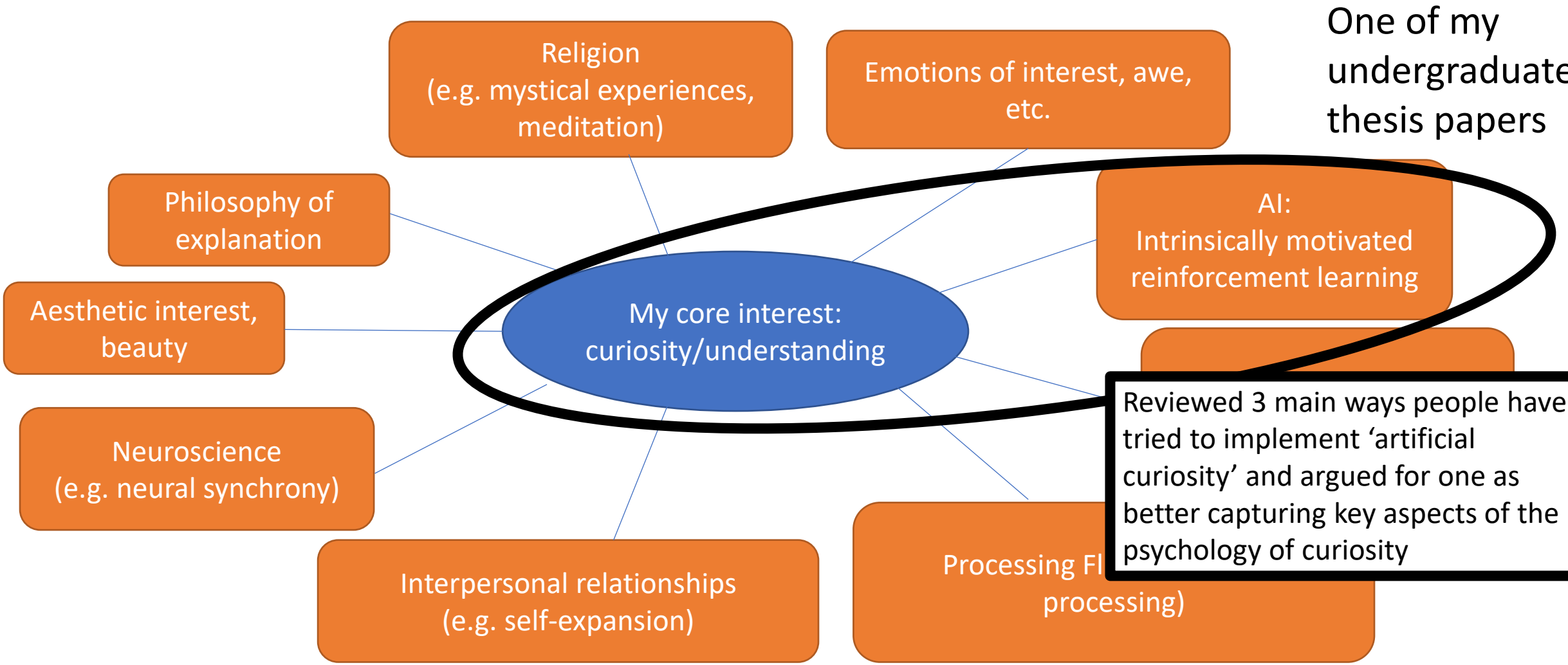
Thinking - Making connections

To get thesis topics, pick one or two of these connections and try to flesh them out



Thinking - Making connections

To get thesis topics, pick one or two of these connections and try to flesh them out

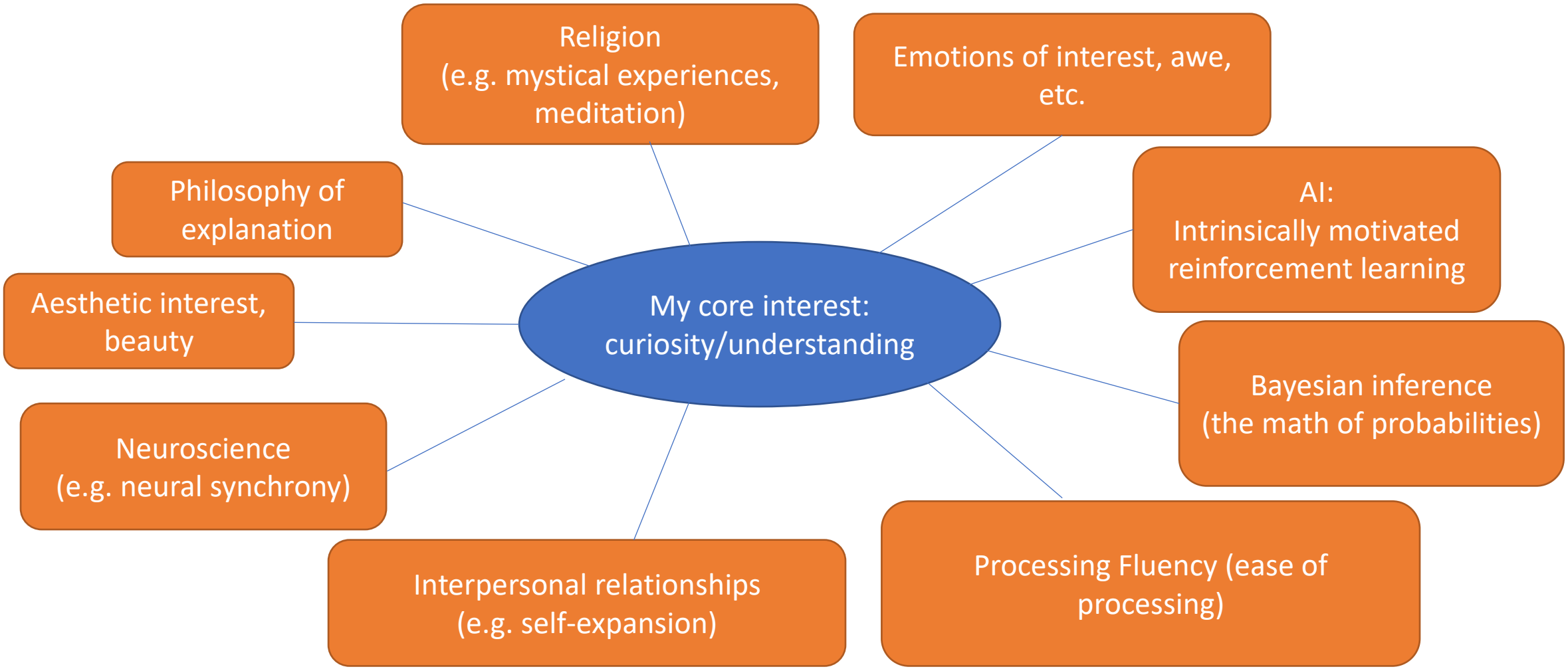


One of my undergraduate thesis papers

Reviewed 3 main ways people have tried to implement ‘artificial curiosity’ and argued for one as better capturing key aspects of the psychology of curiosity

Thinking - Making connections

Your supervisor's interests and expertise can guide what parts to focus on!



Thinking - Making connections

- True interdisciplinary work can sometimes be difficult if you go beyond your supervisor's expertise
  - Consider practicalities of what you can learn yourself vs. need more guidance on
    - Its easiest if your supervisor is familiar with anything that is hard for you to learn/do by yourself
      - (e.g. complex methods, unfamiliar statistics, background knowledge if you are unfamiliar with the field)
    - Consider what knowledge and skills you have from other places:
      - e.g. it can be easier if you draw on knowledge from your other courses, papers you wrote for other classes, computer or other skills you have already
    - Your supervisor can maybe point you to people to talk to (e.g. in their lab) or resources to help you if something is beyond their expertise

Thinking – Critical + Constructive thinking

Try to consider both ‘**pros**’ and ‘**cons**’ of things you read

If you notice yourself tending towards one side, try to **balance** it out by thinking about the other side

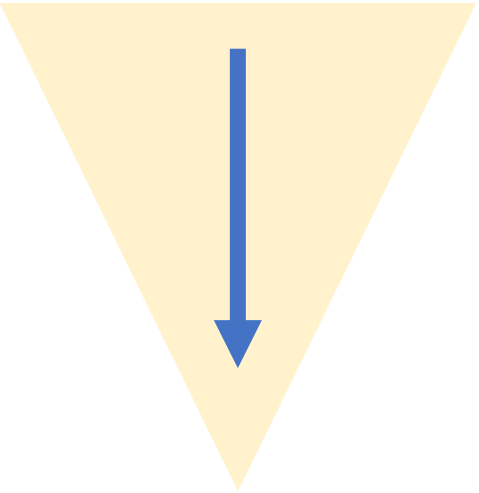
Examples of things you might think about:

- **Are there any issues with the paper?**
  - What isn't fully convincing? What do you disagree with?
  - Do the methods answer the question?
  - Do the interpretations of the results and broader conclusion seem legitimate?
  - Are there alternative explanations that haven't been ruled out?
- **What hasn't been fully understood about the broader phenomenon?**
  - Might this apply differently in different contexts?
  - Perhaps hasn't addressed mechanism, function, etc.?
- **What was valuable from this paper?**
  - What is convincing, important?
  - Are there important insights you should to add to your current thinking?
  - Were there aspects of the methods that were particularly good?
- **How can this help you learn about other things you are interested in?**
  - Can you apply the methods to another question?
  - Use this theory to make new predictions or better explain findings in another area?
  - Apply similar conceptual distinctions to another area?
  - Are there important insights that you can develop further?

Thinking – Think at both big picture and more specific levels

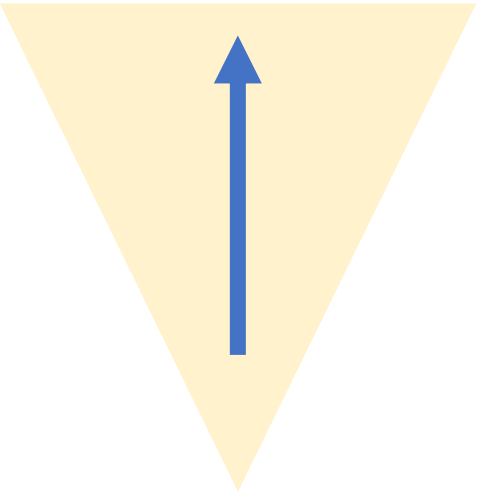
- Some people tend to think mainly in terms of **big picture questions**
  - E.g. ‘how does the psychology of curiosity relate to AI?’

- If you tend to do this, it can help to constantly ask yourself:
  - **What predictions this idea does this make? How could I test this?**
    - You don’t have to test everything, but it can help you find more feasibly answerable questions



- Some people tend to think in terms of more **specific questions**
  - E.g. “I could change this aspect of these methods to test this better”

- If you tend to do this, it can help to constantly ask yourself:
  - **Who would care about this? Why? What implications does this have?**
    - You might not have a great answer for everything, but it can help you find more interesting and important questions



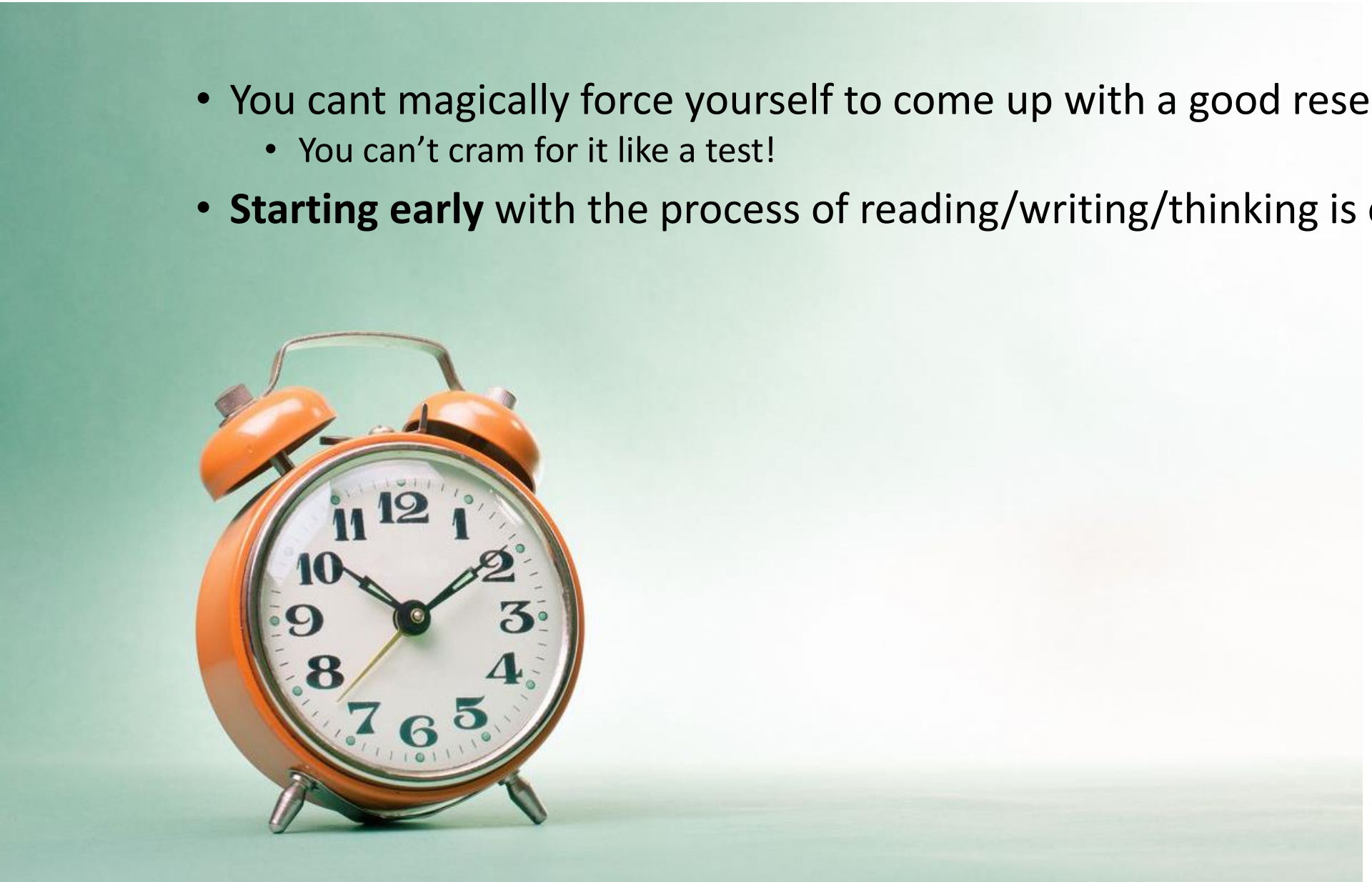
Thinking

- Do you have other useful thinking strategies that might help in generating a research question?

- Any questions or challenges?

General advice – Give yourself time

- You cant magically force yourself to come up with a good research idea overnight
  - You can’t cram for it like a test!
- **Starting early** with the process of reading/writing/thinking is essential!



General advice – Give yourself time

- Another reason to start early:

- Once you have given your brain some things to play with, it can help to give yourself time to **mull on things unconsciously/semi-consciously**

  - E.g. spending 30 min trying to write, even if I make zero progress, makes it way easier to write a few hours later or the next day

  - E.g. if I read a ton sometimes and my head feels full of stuff, after taking a nap I start generating a lot of ideas

- Pay attention to when mulling is useful (vs procrastinating!)
  - Above examples wouldn't work if I didn't try to start writing, or do all that reading before
    - There is nothing for your brain to play with yet

  - Breaks of longer than a day are probably not super helpful for mulling on things
    - Need to keep the ideas fresh in your mind or you'll just forget

Pep talk

- This process takes time and effort, but it can be really fun!
  - You get to learn about anything you want
  - You get to come up with ideas that no one has ever had,
    or discover something that no one no one in the world knows

Other supports

Working with your supervisor

- Ideally your thesis topic should lie in an **overlap** between you and your supervisor's interests and expertise
  - If you have no idea what your interests are, just go with your supervisors interests!

- Your supervisor can help with all aspects of this process:
  - They can brainstorm, give feedback, guide you towards interesting, feasible ideas
  - You can ask them for pointers of what to read (e.g. keywords, authors to look up, good papers to read)
  - You can ask for advice on regarding skills, challenges or issues
    - (e.g. "How do I know if I have read enough?" "How do I approach these complicated papers with a lot of math?")

  - Depending on your supervisor they might not always think to tell you these things, so **its always good to ask**!

Working with your supervisor

- In general, it is useful to get clear on their **expectations** for you and what you can expect from them
  - (e.g. how often to meet, how often they will read over your work, what a reasonable timeline is for your work)

- **Talk to them if you are struggling**! They are here to help you, and can either help you themselves or direct you towards other resources

- Contact your departmental representative or residential college dean if you are experiencing challenges with your independent work or in working with your adviser.

Other Princeton resources

- **Library resources**
  - **Subject librarians -** Email/zoom/in person **meetings** (https://library.princeton.edu/staff/specialists)
    - – e.g. can help you find certain sources, come up with a search plan or keywords, etc
    - If you are struggling to find something for more than 15 minutes, just email!
  - **Online discipline-specific research guides** (https://libguides.princeton.edu/index.php)
    - Concise useful resources for library research
    - E.g. lists useful databases or places to find overviews for your subject, sources for psychology tests, etc
  - **Zotero/reference managers -** library has online resources and a dedicated librarian who can help you set up and learn to use it
    - (https://libguides.princeton.edu/Zotero, https://library.princeton.edu/help/citation-tools)
- **Data and statistical services (http://dss.princeton.edu/dsslab/)**
  - They have workshops, one-on-one consultations
  - Can help with quantitative data analysis, visualization, finding datasets to use
- **Writing center** (https://writing.princeton.edu/undergraduates/writing-center)
  - A grad student in your department can read part of your work at any stage of the process and give feedback
  - Not just for 'bad writers' -- you can always improve your writing and learn from feedback!

Other Princeton resources

- **Office of undergraduate research** (https://undergraduateresearch.princeton.edu/)
  - Workshops (e.g. statistics, strategies for efficient reading) https://undergraduateresearch.princeton.edu/calendar
  - Get funding for your research
  - Present your work at the Princeton Research Day in May

- **Survey research center** (http://www.princeton.edu/~psrc/)
  - Can assist you in designing and implementing your own survey research project.
  - Provides consultation and guidance on study design, sampling, instrument development, data collection and data processing.

- **Undergraduate thesis bank** (https://undergraduateresearch.princeton.edu/independent-work/thesis-archive)
  - Look at examples of previous undergraduate theses in your area
  - Great to see e.g. what scope of question is feasible within your timeline

- **Princeton's junior thesis handbook**
  - ~20 pages. Has a lot more useful advice. Not field-specific.
  - https://writing.princeton.edu/sites/g/files/toruqf621/files/2021-04/jphandbook.pdf

- **Discipline-specific thesis guides** (https://undergraduateresearch.princeton.edu/independent-work/guides)
  - Specifies thesis expectations in each department and has other guidance

Questions?

- Let me know if there is something you would want a workshop on in the spring related to your thesis!
- Please fill out feedback form before you leave!!
- Contact: tvrantsidis@princeton.edu

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