

Conducting a literature search for a MA

1 November 2021

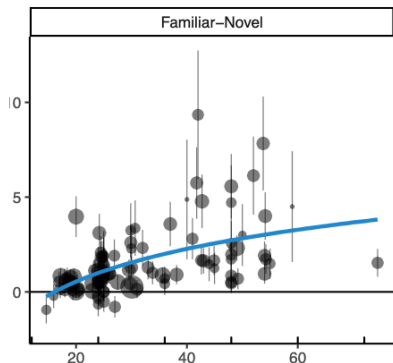
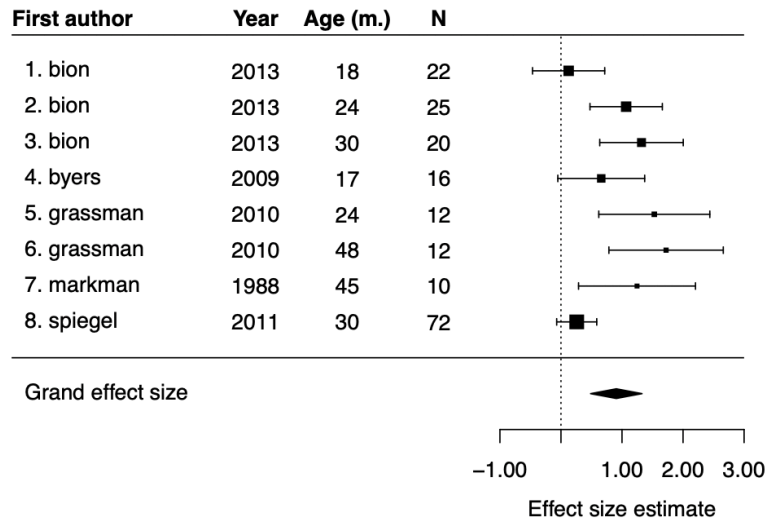
Modern Research Methods

Final Project

- If you don't have a meeting time yet, email me right after class.
- No class Friday (Day for community engagement), give you time to work on your projects in class on Wednesday
- Before your meeting:
 1. Read seminal paper carefully
 2. Brainstorm inclusion/exclusion criteria (will discuss more today)
 3. Brainstorm search protocol (will discuss more today)

Conducting a Meta-analysis

Final product



1. Identify Topic

2. Conduct literature search

3. Code studies and calculate ES

4. Plot and analyze data

5. Report and discuss results

Reproducibility for meta-analyses

- Review: What is reproducibility?
- Why is it important?
- What might reproducibility mean for meta-analyses?

Why reproducibility meta-analysis?

- To evaluate quality of meta-analysis
 - Exhaustive representation of the state of the field (based on a systematic literature search)?
 - Quality of individual studies (peer-reviewed)?
- To evaluate relevance of meta-analysis (for your particular interest)
 - Current state of the field (when was literature search conducted)?
- To enable collaborative meta-analysis
 - Consistency across multiple contributors
- To be transparent to the field and yourself
 - Keep track of your own steps

Steps for a reproducible literature search

1. Define inclusion criteria
 2. Define search protocol
 3. Conduct search
 4. Enter results into spreadsheet
 - scan titles/abstracts
 - make screening decision
 - if exclude, note reason why
- To make your MAs reproducible, we're going to use the [following template](#) (linked on website)

1. Inclusion criteria

- What studies are you going to include in your MA?
- Every MA is unique
- These might change later on as you get to know your topic more

Criteria

- Document type
 - E.g. All literature, journal papers, theses, proceedings papers
- Participants
 - E.g. adults vs. children
- Method
 - E.g., Eye-tracking vs. pointing
- Stimuli
 - E.g., objects vs. pictures



| 100% | \$ % .0 .00 123 | Arial | 10 | **B** *I* ~~U~~ A |

	A	B	C	D	E	F
1	criterion_type	definition				Date_added/revision
2	Document type	All literature, journal papers, theses, proceedings papers				1.1.2017
3	Participants	Children				1.1.2017
4	Participants	Children under 2				31.3.2017
5	Method	Behaviorial only, including Headturn Preference Procedure, Central Fi				1.1.2017
6	Method	No preferential looking				31.3.2017
7	Stimuli	Speech				1.1.2017
8	Stimuli	No artificial languages				31.3.2017
9	Exclusion: Research question	Rule learning, word-object mapping, artificial grammar				1.1.2017
10						
11						
12						
13						
14						
15						

more rows at bottom.



+ [Menu icon] **criteria** ▾ search_protocols ▾ relevant_studies ▾ notes ▾

2. Search Protocols

- Database search
 - Google scholar
 - PubMed
 - ...
- Scanning references
 - Recent paper: Who does it cite?
 - Seminal paper: Who cites it?
- Expert list
 - Direct request
 - Review paper (can be biased)

Search protocols for group projects

- Goal: find as many studies as possible that satisfy your search criteria
- Why is more better?
 - Just like when running participants in an experiments, the more data you have the less variance, and the more precise your estimate
 - A meta-analysis of 50 effect sizes is a lot more precise than a meta-analysis of 6 effect sizes
- Will vary by meta-analysis – some will have a lot more studies than others
- Protocols:
 1. Google scholar keyword search
 2. Who cites seminal paper
 3. Invite you to do others if have time/necessary



Literature Search Template

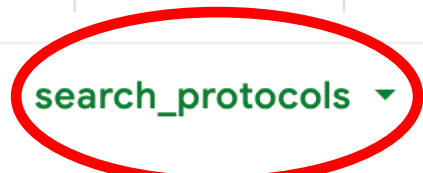


File Edit View Insert Format Data Tools Add-ons Help [All changes saved in Drive](#)

Navigation and formatting toolbar including undo, redo, print, copy, paste, zoom (100%), currency, percentage, decimal, thousand separator, font (Arial), size (10), bold, italic, strikethrough, text color, background color, gridlines, text wrap, text alignment, and text direction.

fx

	A	B	C	D	E	F	G
1	protocol_id	date	source	search_terms	results	results_scanned	notes
2	1	3/31/2020	google scholar	infant word segmentation	over 10,000	first 100	
3	2	4/2/2020	google scholar	papers citing seminal paper	5,000	first 100	
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							



Footer navigation bar with tabs: +, menu icon, criteria, search_protocols, relevant_studies, notes.

3. Conduct search

In Google Scholar (<https://scholar.google.com/>)

The screenshot shows the Google Scholar interface. At the top, the search bar contains the query "mutual exclusivity" "word learning". Below the search bar, the results are displayed in a list. On the left side, there are filters for time range, sorting options, and checkboxes for including patents and citations. The first three results are visible, each with a title, author information, a brief abstract, and a link to a PDF version of the article.

Articles About 2,550 results (0.12 sec)

Any time
Since 2020
Since 2019
Since 2016
Custom range...

Sort by relevance
Sort by date

include patents
 include citations

Create alert

The mutual exclusivity bias in children's word learning [PDF] jstor.org
WE Merriman, LL Bowman, B MacWhinney - ... of the society for research in ..., 1989 - JSTOR
Nearly every recent account of children's **word learning** has addressed the claim that children are biased to construct mutually exclusive extensions, that is, that they are disposed to keep the set of referents of one word from overlapping with those of others. Three basic ...
☆ 🔖 Cited by 520 Related articles All 8 versions 🔗

The principle of mutual exclusivity in word learning: To honor or not to honor? [PDF] jstor.org
TK Au, M Glusman - Child development, 1990 - Wiley Online Library
According to Markman and Wachtel, children assume that nouns pick out mutually exclusive object categories, and so each object should have only one category label. While this assumption can be useful in **word learning**, it is not entirely reliable. Therefore, children ...
☆ 🔖 Cited by 271 Related articles All 14 versions 🔗

Use of the mutual exclusivity assumption by young word learners [PDF] stanford.edu
EM Markman, JL Wasow, MB Hansen - Cognitive psychology, 2003 - Elsevier
... Evidence for the role of **mutual exclusivity** in such indirect **word learning** has been questioned because: (1) it comes mostly from 2 and 3-year-olds and (2) the findings might be accounted for, not by children avoiding second labels, but by the novel object which creates a lexical ...
☆ 🔖 Cited by 330 Related articles All 14 versions 🔗

4. Enter results into spreadsheet

- Record in spreadsheet
- Read title and abstract
- Make inclusion exclusion decision
- Reasons for exclusion:
 - not relevant
 - not empirical (no data)
 - doesn't satisfy inclusion criteria X



Literature Search Template

| 100% | \$ % .0 .00 123 | Arial | 10 | **B** *I* ~~U~~ A | | |

fx

	A	B	C	D	E	F	G	H	I
1	protocol_id	coder_name	date_added	google_scholar_page	unique_id	paper_citation_apa	link	screening_decision	exclusion_reason
2	1	molly	3/30/2020	1	merriman1989	Merriman, W. E., Bowma	https://www.jstor.org	include	
3	1	molly	3/30/2020	1	smith2010	Smith, et al. (2010)	https://www.jstor.org	exclude	not empirical (review paper)
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

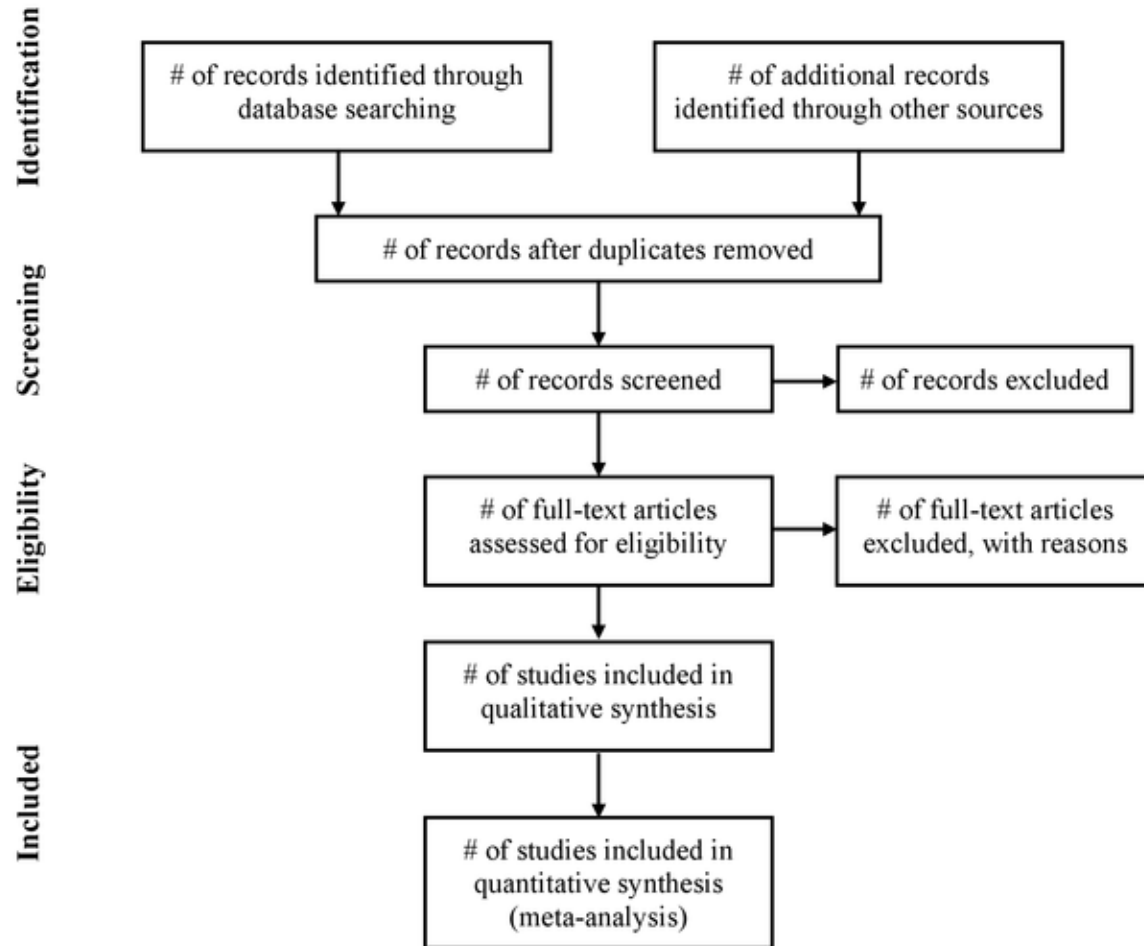


| criteria ▾ | search_protocols ▾ | **relevant_studies** ▾ | notes ▾

Literature search variables

- protocol_id – id number of search protocol from “search protocols tab”
- coder_name – who entered this data?
- date_added – date
- google_scholar_page – what page of search results?
- unique_id – lastname+year of paper (e.g., smith2010), all lowercase, distinguish duplicates with a letter (e.g. smith2010a)
- paper_citation_apa - APA paper citation (copy from google scholar)
- link – link to title/abstract from google scholar
- screening decision – include/exclude
- exclusion_reason – if exclude, why?
 - not relevant
 - not empirical (no data)
 - doesn't satisfy inclusion criteria X

The PRISMA statement



Next Time: Start your own literature searches

Steps for a reproducible literature search

1. Define inclusion criteria
2. Define search protocol
3. Conduct search
4. Enter results into spreadsheet
 - scan titles/abstracts
 - make inclusion decision
 - if exclude, note reason why