

CogLab: Data Collection

WEEK 10

recap

- what we covered
 - linear mixed effects models
- your to-do's
 - work on milestone #5 (checklist + pre-registration)

today's agenda

- sample size considerations
- sona + prolific plan

sample size considerations

- why worry about sample size?
- **statistical power** is the likelihood that you will find the effect in your sample, IF it exists in the population

example

	world truth	
your data	<i>effect exists</i>	effect does not exist
found an effect	HIT	FALSE ALARM
did not find an effect	MISS	CORRECT REJECTION

example

	world truth	
your data	<i>effect exists</i>	<i>effect does not exist</i>
found an effect	POWER	TYPE I ERROR
did not find an effect	TYPE II ERROR	CORRECT REJECTION

how to find optimal sample size

- prior literature
- prior effect sizes
- power analysis
- budget considerations!

provided informed consent. The target sample size was based on both prior studies that used priming measures to assess the effects of other, nonco-occurrence-based routes for semantic integration (Coutanche & Thompson-Schill, 2014; Tamminen & Gaskell, 2013), and prior studies that used other, nonpriming measures to assess the effects of co-occurrence regularities on links between either novel or familiar words (Jones & Love, 2007; McNeill, 1963). Four participants were excluded from

questions to ask/explore

	original	your study
# participants		
trials per ID per level of IV		
within/between		
key effect		

pre-registration + project checklist

- milestone #5:

pre-registration + project
checklist + piloting
(Nov 11)

1. **Data Collection:** Have any data been collected for this study already?
2. **Main Question:** What is the main question being asked or hypothesis being tested in this study?
3. **Dependent Variable(s):** Describe the key dependent variable(s) specifying how they will be measured.
4. **Condition(s):** How many and which conditions will participants be assigned to? Please include an example trial of each type of condition you have in your experiment. Please also specify which independent variable will be within-participants or between-participants.
5. **Analyses:** Specify exactly which analyses you will conduct to examine the main question/hypothesis.
6. **Outliers & Exclusions:** Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.
7. **Predicted Plot:** Please submit a predicted plot for your study based on what you expect the pattern to look like for your main hypothesis.
8. **Sample Size:** How many observations will be collected or what will determine sample size? No need to justify the decision, but be precise about exactly how the number will be determined.
9. **Exploratory details:** Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)

data collection basics

- two pools: Sona (PSYC 1101) and Prolific (online)
- one person per group will lead each pool
 - Sona: Natalie and Mitri
 - Prolific: Lily, Katie
- plan:
 - Sona person should have a Sona researcher account
 - Prolific person will create their own account

cognition.run

- I will add one group member to a new task on cognition.run (“premium” plan)
- your FINAL experiment code should go in here
- this link will be used first for Sona and then for Prolific with some minor changes

The screenshot displays the pricing structure for Cognition.Run, organized into three columns representing different plans:

- FREE:** The basics for all scientists. \$0/year. Features include 4 stored tasks, 60 collected runs per task, 2MB per stimulus, 100 stimuli files per task, and 10 external libraries per task.
- FOR INDIVIDUALS:** Advanced features for individuals. \$990/year. Features include 10 stored tasks, 500 collected runs per task, 100MB per stimulus, 500 stimuli files per task, 20 external libraries per task, 2 collaborators per task, and the ability to set the jurisdiction in which the data is stored.
- FOR TEAMS:** Collaboration for organizations. \$2,990/year. Features include unlimited stored tasks, unlimited collected runs per task, 250MB per stimulus, 10,000 stimuli files per task, 50 external libraries per task, unlimited collaborators per task, the ability to set the jurisdiction in which the data is stored, and Task Live Monitoring.

sona data collection plan

- pre-register on aspredicted.org (after milestone #5)
- create a Sona study
- add disqualifiers to your study
- add survey code to cognition.run study URL in Sona
- modify cognition.run initJsPsych
- send approval request to Donna
- post 100 timeslots
- start working on project analyses!

create Sona study

- create and name your study on Sona

disqualifiers

Disqualifiers

Participants must not have completed or have a pending sign-up for ANY of these studies:

My Studies All Studies

search...

Assistance game (online) (Inactive)
Block game
Connector Word Game!
Semantic Association Task
Semantic Integration Task
Sentence Content Judgement (Inactive)
Sentence Experiment (Inactive)
Sentence Judgements (Inactive)
Sentence Object Recognition (Inactive)



Available

Selected

changing study URL

Study URL

```
https://xz4vnidz3d.cognition.run?sona_id=%SURVEY_CODE%
```

If the text `%SURVEY_CODE%` is included in the URL, the system will replace that with a unique code for the participant, to make it easier to identify who completed the study. You can also configure it so that participants receive credit in the system immediately after finishing the survey. If you are using Cognition, add `?sona_id=%SURVEY_CODE%` to the end of the URL to make use of this feature.

[Detailed Help](#)

copy cognition finish URL

Website	<p>View Study Website</p> <p>Sample Link with Embedded ID Code</p> <p>Cognition Finish URL</p> <p>"https://bowdoin.sona-systems.com/webstudy_credit.aspx?e></p> <p>i Instructions</p> <hr/> <p>You can also configure it so that participants receive credit in the system immediately after finishing the survey. If you are using Cognition, add <code>?sona_id=%SURVEY_CODE%</code> to the end of the URL to make use of this feature.</p> <p>Detailed Help</p>
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change initJsPsych within cognition.run

```
const jsPsych = initJsPsych({
  show_progress_bar: true,
  auto_update_progress_bar: false,

  on_finish: function(data){

    let sona_id = jsPsych.data.urlVariables()['sona_id']
    window.location.assign("https://bowdoin.sona-systems.com/webstudy_credit.aspx?experiment_id=218&credit_token=ecd1a56cc7194604ba296e8e927f57ac&survey_code=" +sona_id)
  }

});
```

delete all runs so far!

Danger zone

Delete collected data or delete the entire task.

Delete all runs

Delete non-finished runs

Delete task

send for approval

- attach approved IRB protocol

Study Status	Not visible to participants : Not Approved ✉ Send Request Active study : Does not appear on list of available studies -- must also be approved Online (web) study : Administered outside the system
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add timeslot

Study Menu


 [View/Administer Time Slots](#)


 Timeslot Usage Summary

 Download Participant List

 Contact Participants

 View Bulk Mail Summary

 Change Study Information

 Participant Study View

 Study Modification Log

 Copy Study

 Delete Study

Add Timeslots : Semantic Association Task

This study was created as an online (web) study. Because a participant may participate in an online study at any time, most researchers create a single timeslot. The single timeslot contains the maximum number of participants who may participate, and has a final participation date of the last date that participants may participate.

NOTE: You are adding timeslots to a study that is **unapproved**, so participants will not be able to sign up for the study.

Final
Participation
Date

Final
Participation
Time



Max. Number
of Participants

Add This Timeslot

next time

- **before** class
 - *submit*: project milestone #5
- **during** class
 - *start*: data collection on Sona
 - prolific data collection
 - poster design