The Psychology Department

RESEARCH OPPORTUNITIES

11/08/23

Agenda

- How to get involved in research
- Faculty research programs and labs
- Q & A

Academic Year Research Opportunities

Psyc 25. Research Design & Analysis [*abs*]
Research Practicum Courses [*abs*, *SC*]
Psyc 94. Independent Research [*abs*]
Senior Thesis (e.g., Psyc 96/97, Psyc 180) [*SC*]
Psyc 98. Senior Research Project [*SC*]
Research Volunteer [*abs*]

Key:

abs = available to students before the senior year

SC = fulfills the senior comprehensive requirement when taken in the senior year

Summer Research Fellowships at Swarthmore

Work in faculty member's lab for 10 weeks

- Research experience in area of psychology of interest
- Start work that leads into a senior thesis

To apply…
Identify and meet with faculty advisor

- Develop idea for project collaboratively (*not* on your own)
- Reach out to potential advisors soon
- Strong applications take time; Work to develop yours (this semester)

Application is usually due in the first week of February.

Summer Research at Other Institutions

Work in a lab at another university for 10 weeks

- Research experience in area of psychology of interest

To find and apply for opportunities

- See the job/internships section of Psychology Dept Resources page
- Ask faculty in relevant areas of they know of anything
- Email researchers at other institutions whose work interests you
- Apply for position through the other institution

Funding

- From Other Institution
- Swarthmore Summer Fellowship (limited number). **Application is usually due in the first week of February.**

Summer Research
Swarthmore versus Other Institution

Why Swarthmore?

- Rising seniors can sometimes start on thesis work (typically not possible otherwise)
- Typically receive closer mentorship/supervision from faculty member

Why Other Institution(s)?

- Research areas and methods that may not be available at Swarthmore

Junior Year: Lining up a Thesis

Fall semester & early spring semester

- Identify potential supervisors, consider
  - Classes you've taken
  - Areas of interest
  - Lab descriptions
  - Presentations this evening
- Reach out to potential supervisors soon
  - this semester if you are interested in applying for a summer research fellowship
- Meet with potential thesis supervisor(s)
  - discuss opportunities in their lab and your interests
  - Work collaboratively to develop a plan for the thesis

Faculty do NOT expect you to come to a meeting with a plan for your project

Junior Year: Lining up a Thesis (continued)

Deadline for identifying thesis advisor

- If hoping to work in their lab this summer: this semester
- Otherwise: February, if possible
- Final deadline: in advance of April pre-registration
  - *A faculty member must agree to supervise your thesis BEFORE you can enroll in thesis.*

Start the process soon

- It can take time to figure out which lab is a good fit
- You may need to reach out to a few faculty members.
- The faculty member you most want to work with may not be available (sabbatical leave, already supervising 2-3 students, etc.).

Research Practica Courses - Spring 2024

PSYCH 103. RP IN BEHAVIORAL NEUROPHARMACOLOGY (FOBBS)

1 Credit

Prerequisite = PSYC 001, PSYC 025, PSYC 030 or BIOL 022, or permission of the instructor

Days/Times: Fridays 1-4pm, with lab work occurring one or two mornings a week for one hour between 9am-12pm

PSYCH 109. RP IN SOCIAL AND EMOTIONAL WELL-BEING (GILLHAM)

1 Credit

Prerequisite: PSYC 001 or the equivalent and PSYC 025: Research Design and Analysis; PSYC 038: Clinical Psych is strongly preferred.

Days/Times: Tuesdays and Thursday, 11:20-12:35pm

Psych 112. RP IN ENVIRONMENTAL PSYCHOLOGY (JACOBS)

1 Credit

Prerequisite = PSYC 001 , PSYC 025 : Research Design and Analysis, and PSYC 035 Social Psychology, and or permission of the instructor: Mondays, 1:15-4pm

Additional Labs & P.I's Not Presented

➢ **Jed Siev: Swarthmore OCS, Anxiety, & Related Disorders (SOAR) Lab**

- We are interested in the development, maintenance, and treatment of anxiety disorders, especially OCD. A common theme through much of our research is cognition, including meta-cognition (thinking about thinking), information-processing, and decision making in OCD. OCD is heterogeneous, and another emphasis is the symptom dimension referred to as unacceptable thoughts, which includes violent, sexual, and religious obsessions. Contact Professor Jed Siev by email at *jsiev1@swarthmore.edu* for more information.

➢ **Catherine (Cat) Norris: Social Neuroscience Lab (nSNL)**

- We use a broad range of neuroscience methods (including ERPs) to investigate social questions, such as:
  - Are people biased in how they perceive pain on ingroup vs. outgroup members' faces?
  - How do we form first impressions of other people? Is a neutral face really neutral?
  - How do factors like attractiveness, personality, and mental health diagnosis affect how we perceive emotion on others' faces?
  - Can we feel good and bad at the same time? Can we regulate these mixed emotions?

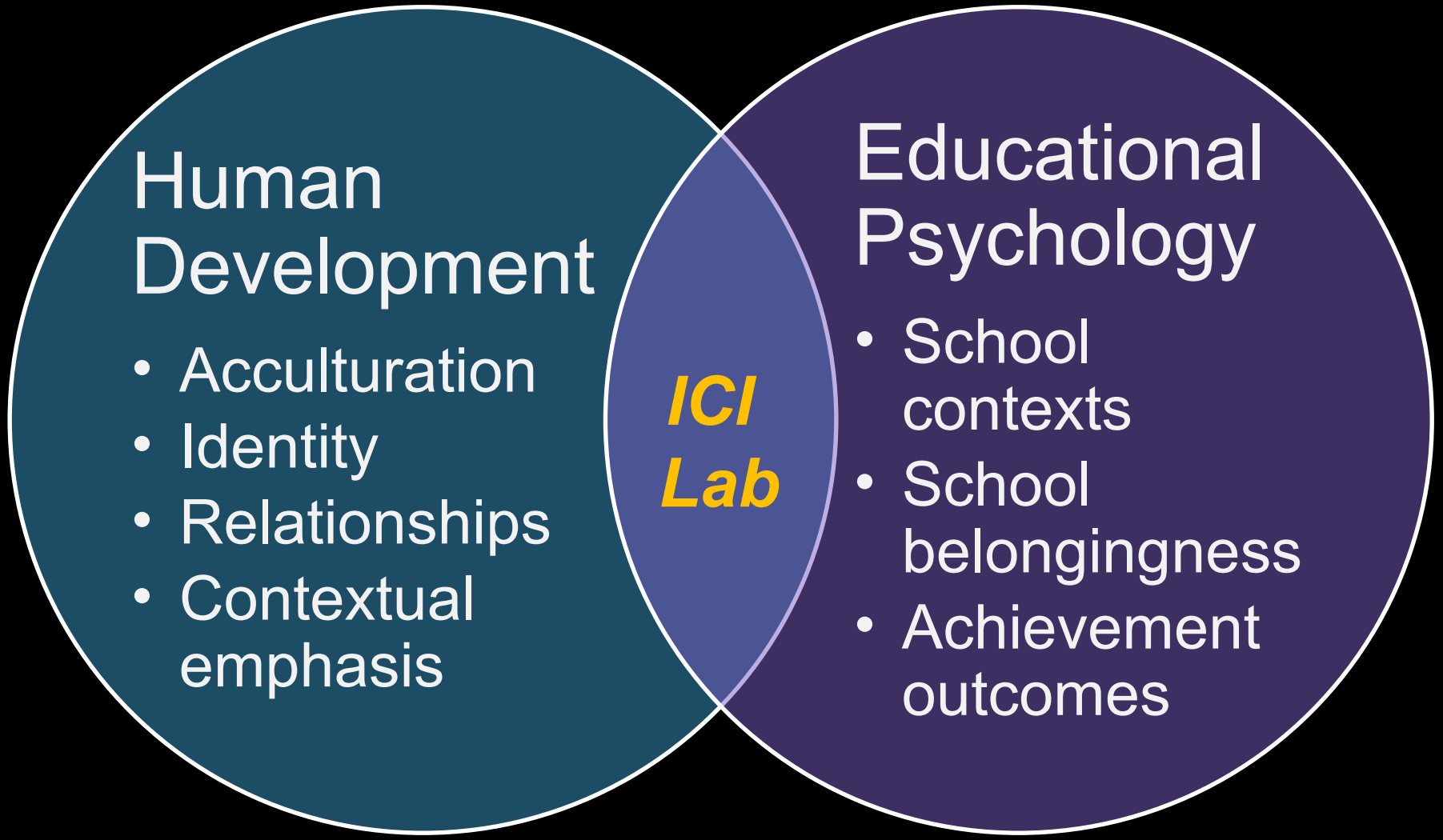
  … we are actively recruiting new lab members!!! Contact cnorris2@swarthmore.edu

Identity, Culture, and Immigration (ICI) Lab

Barbara Thelamour

bthelam1@swarthmore.edu

Multicultural Lens--



4. How do schools, communities, national climate support or undermine cultural adaptation?
Ecological approach

3. What is the relationship between ERI and academic and socioemotional outcomes?
Identity as a protective factor

Cultural adaptation and ethnic/racial identity (ERI) development in immigrant and nonimmigrant ethnic minority adolescents and emerging adults

2. How do relationships with parents/peers influence ERI?
Ethnic-racial socialization

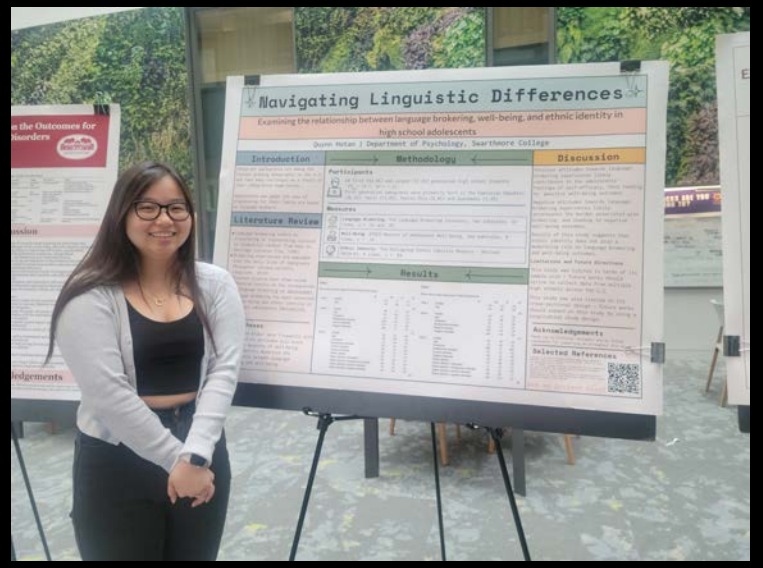
1. What are the pathways to identifying with racial/ethnic groups?
Acculturation

Multi-Methods Approach

- Quantitative
  - Self-report surveys
  - National dataset analysis
  - Sociometric peer nominations
  - Behavioral video coding
- Qualitative
  - In-depth interview
    - Individual: face-to-face and online
    - Focus groups
  - Ethnography/Observation
  - Open-ended questionnaires

Current Projects--

- Immigrant adolescent cross-cultural relationships (mixed-methods; school-based)
- Talking about Race: Framing race and racism using children's books (quantitative; experimental; family studies)



Accepting thesis students, AY 24-25;

Looking for 1-2 students for summer 24

Interested?
Email bthelam1@swarthmore.edu /Visit thelamourlab.com

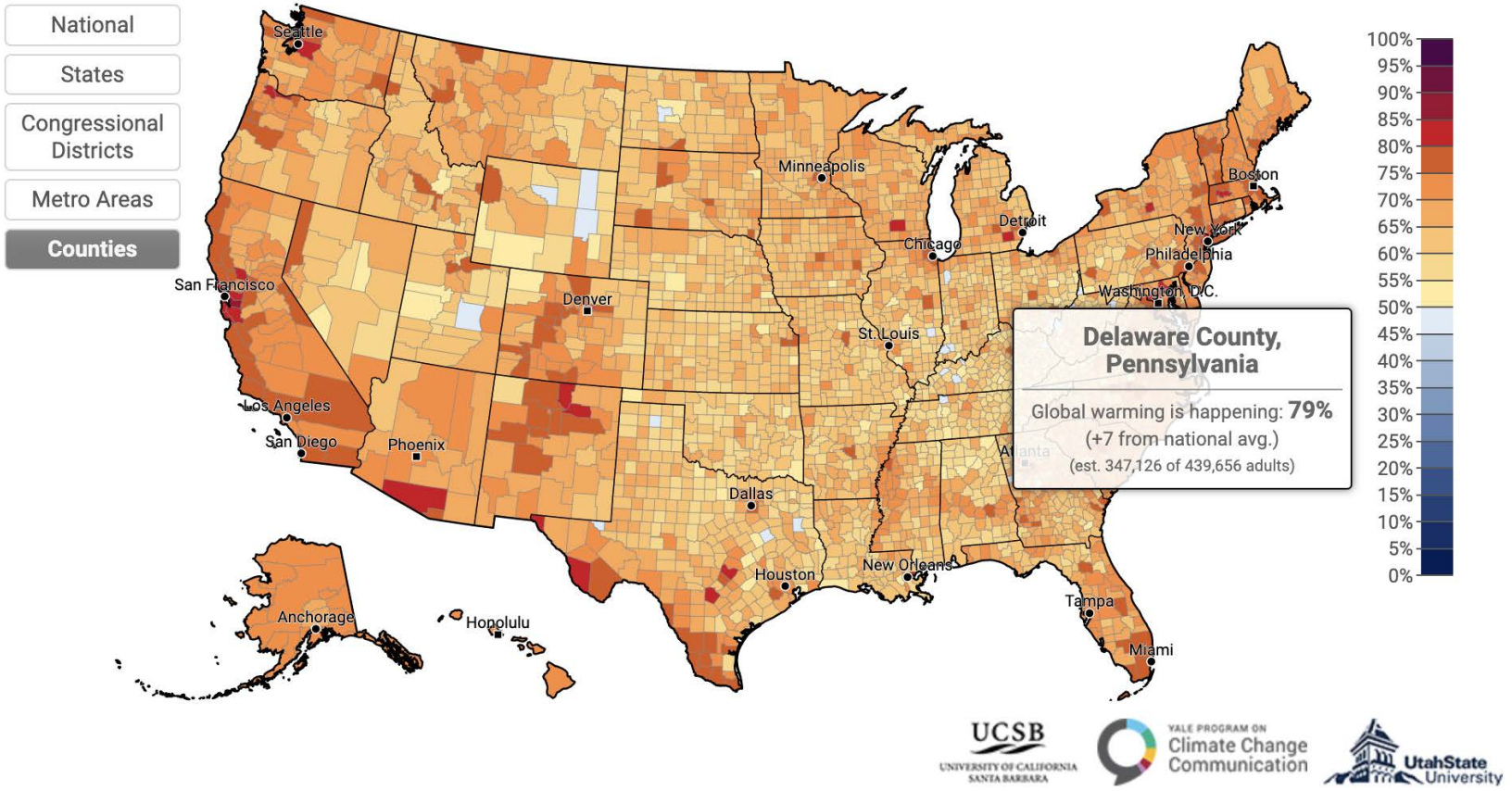
Demonstrating Emotion-Environment Relationships (DEER) Lab

Dr. Tyler Jacobs

Why Do Environmental Issues Occur?

Is Information Enough?

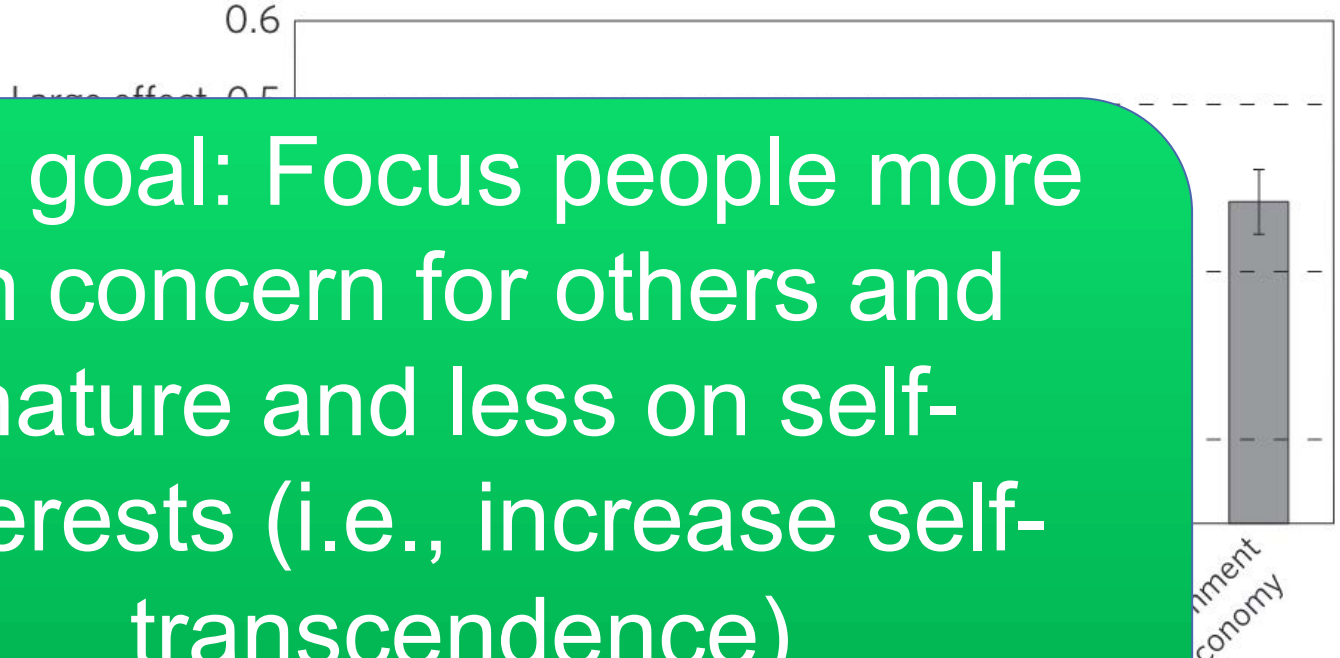
- Most Americans are aware of the reality of anthropogenic climate change (Howe et al., 2019)



UCSB University of California Santa Barbara
Yale Program on Climate Change Communication
UtahState University

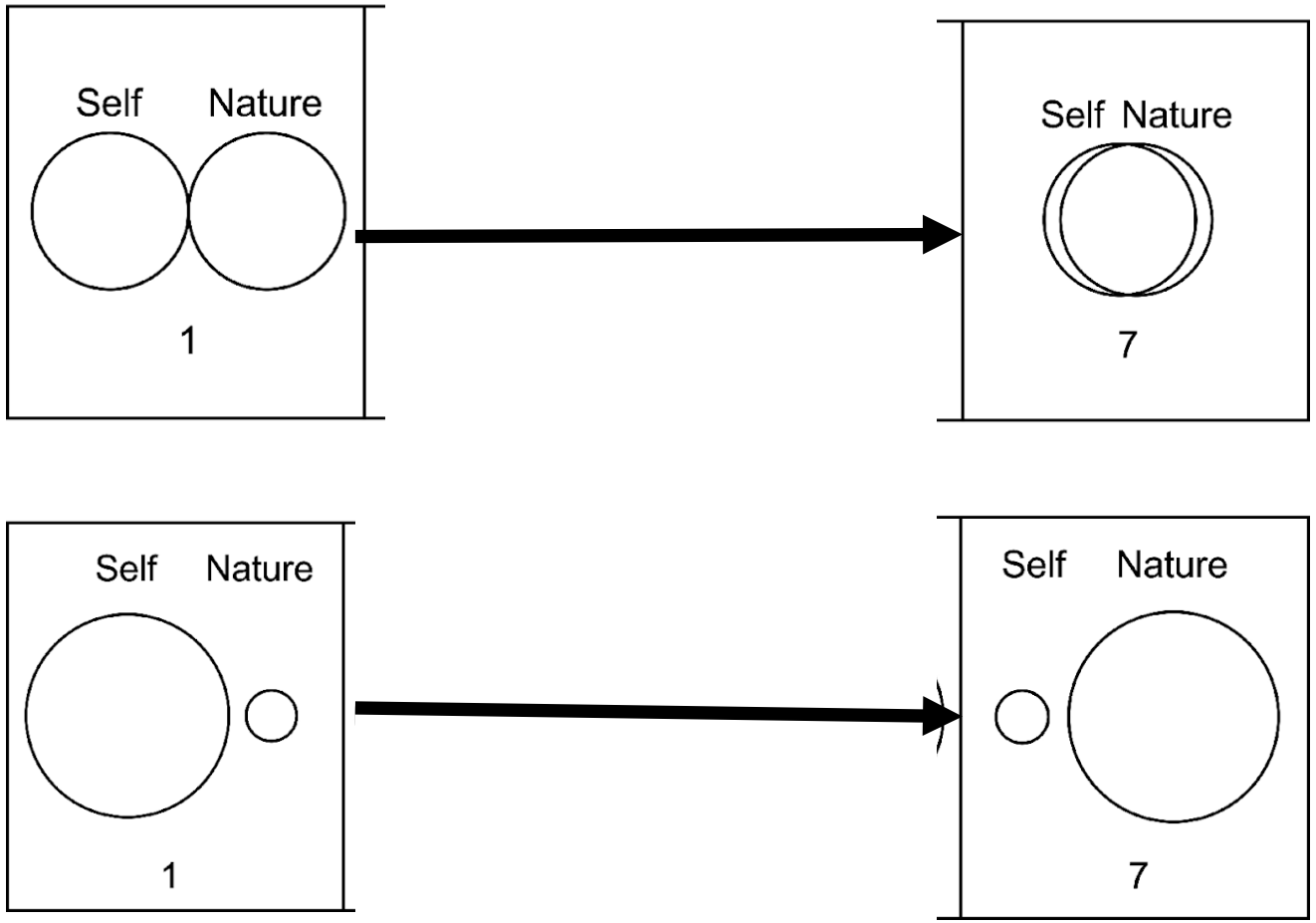
Is Information Enough? (continued)

- Greater belief in climate change only modestly predicts greater individual conservation behavior (Hornsey et al., 2016)



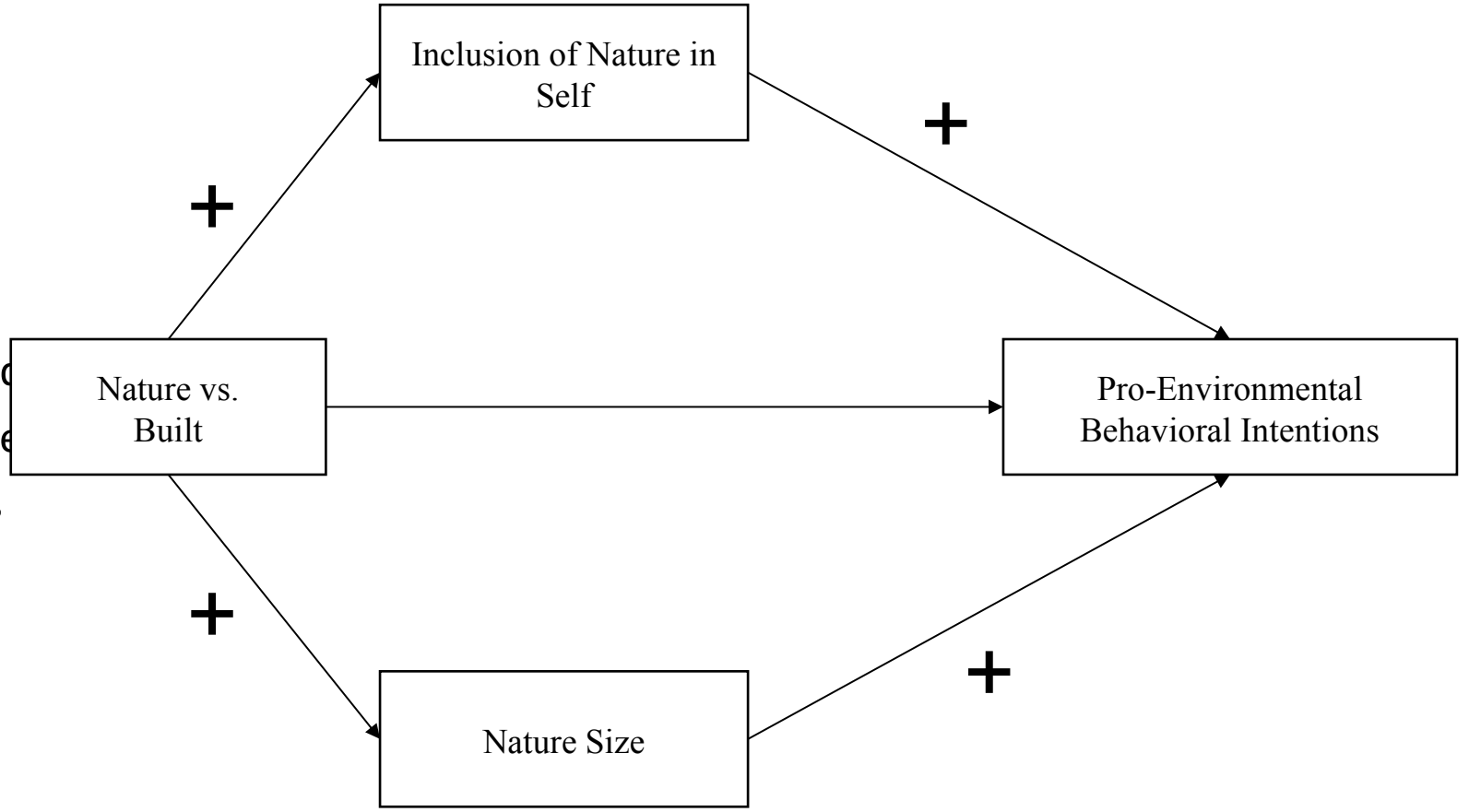
The goal: Focus people more on concern for others and nature and less on self-interests (i.e., increase self-transcendence)

Awe and Nature



Gratitude to Nature

Although many people say “thank you” to other humans, they can also offer their gratitude to locations such as nature. Think of a natural setting to which you are most thankful but to which you have never formally expressed your gratitude towards or thanked. Write a detailed letter of gratitude toward this natural place. Be sure the letter is concrete, in other words, be sure to name specific things the environment provided for you and how those things impacted your life.



DEER Lab

- Other interests:
  - How does climate anxiety relate to pro-environmental behavior?
  - How does exposure to extreme weather affect climate change beliefs?
- Looking for motivated research assistants and potential summer or senior thesis students
- Contact: Dr. Tyler Jacobs (tjacobs1@swarthmore.edu)

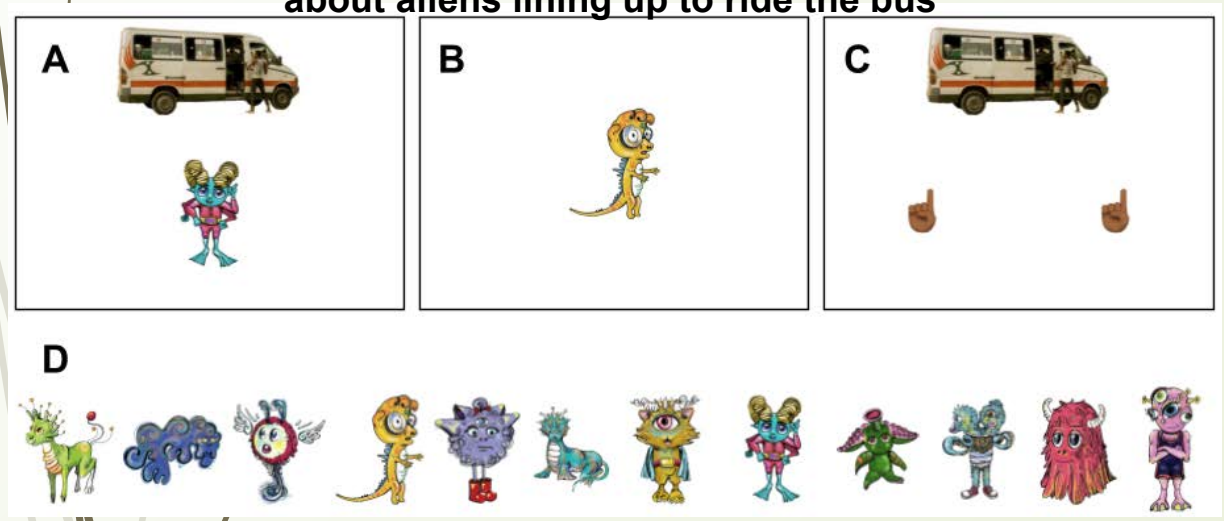
COgnitive NEuroscience of Language And Bilingualism

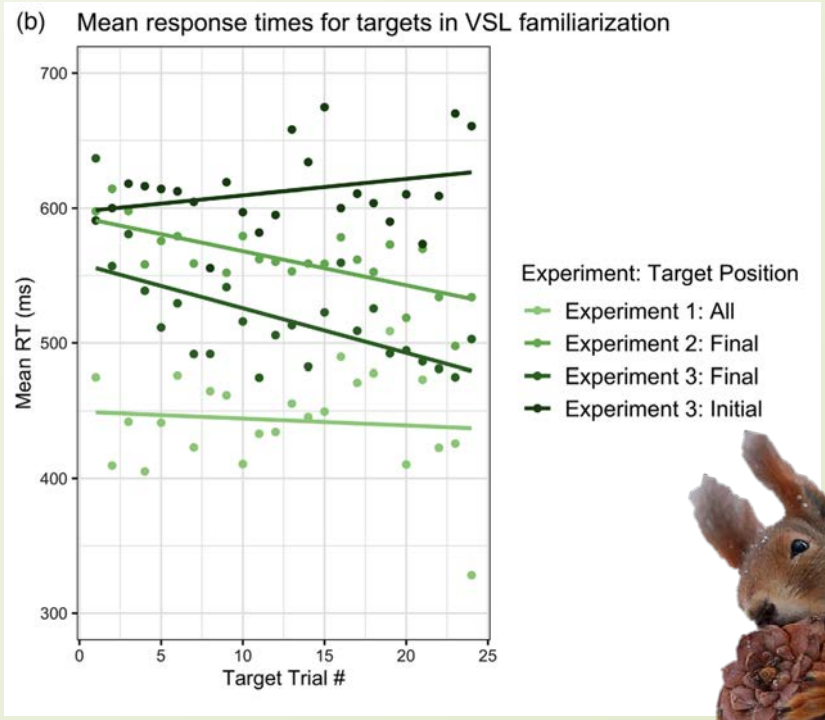
Benjamin Zinszer

Our recent projects

Looking for connections between children's sequence-learning skills and their literacy skills

Children learn sequences while playing a game about aliens lining up to ride the bus





Children's *improvement* in response times during the game is associated with their scores on language & literacy tests.

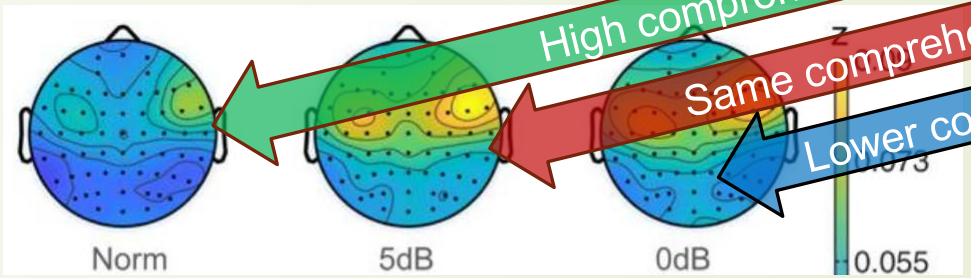
- In rural Côte d'Ivoire, this game does *not* predict literacy in French (children's 2nd language).
- ***But*** it does predict other language skills

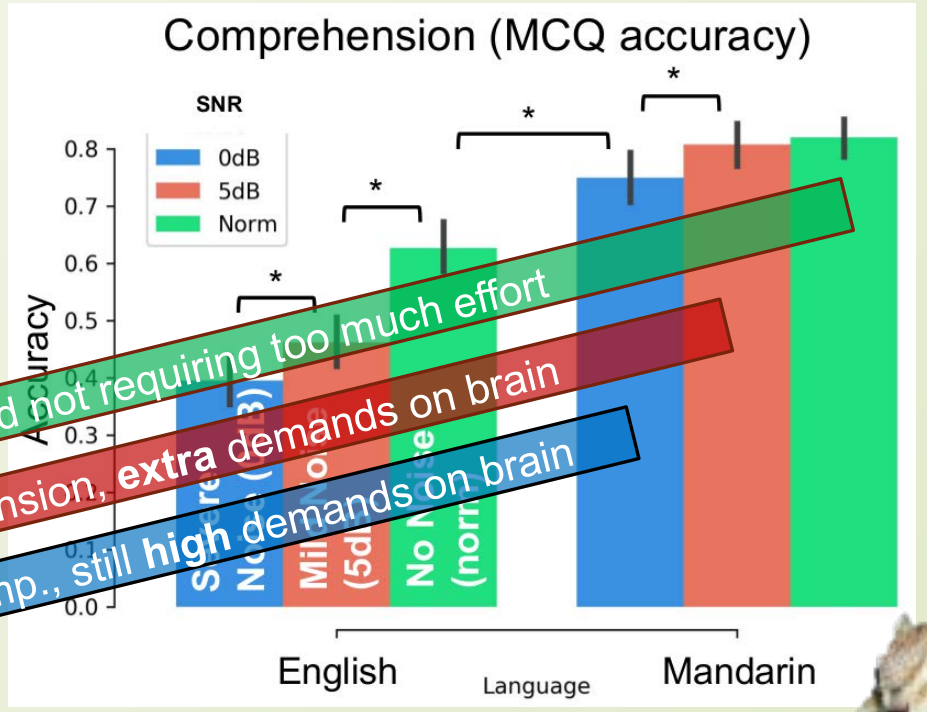
How does the educational experience of these children differ from others?
Can this approach be adapted to understand children's different individual routes to reading?

Our recent projects (part 2)

Measuring how people attend to different aspects of continuous speech

60 minutes of audiobook in English or Mandarin





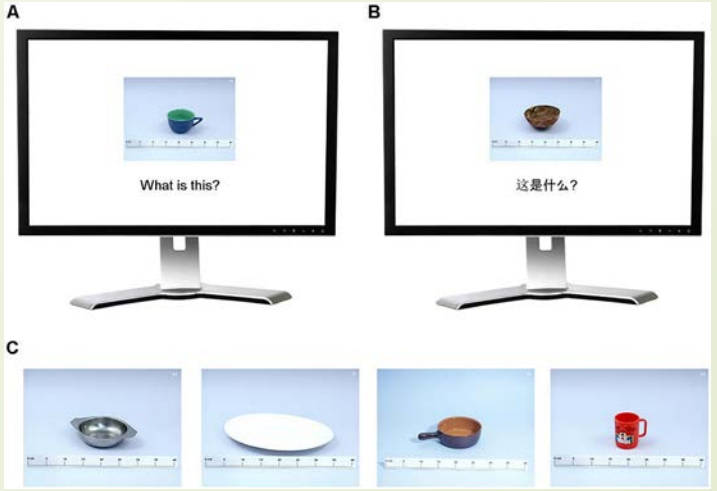
High comprehension, and not requiring too much effort

Same comprehension, **extra** demands on brain

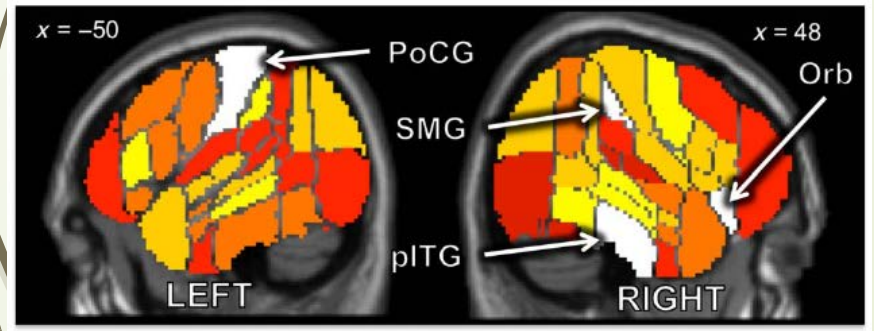
Lower comp., still **high** demands on brain

Our recent projects (part 3)

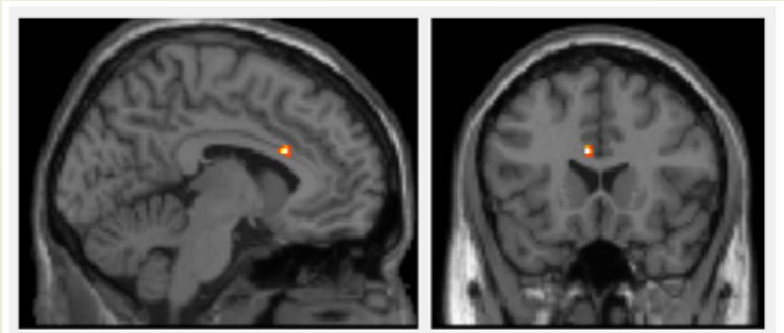
Comparing how speakers of Mandarin Chinese and American English categorize objects, and how differences between these languages are managed by the people who speak both



Some brain regions are good for translation



Other brain regions respond to translation mismatch



How to get involved with CONELAB

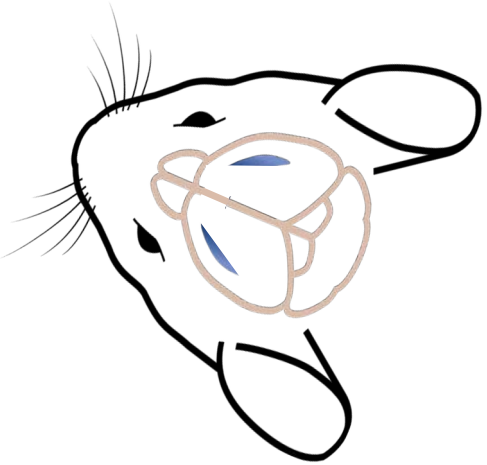
Read more about our work: https://conelab.net

Do you have these prerequisites?

- ❑ Curious about people, their brains, and their experiences
- ❑ Interest in solving difficult problems with persistent effort
- ❑ Eager to learn new skills, make mistakes, and improve through practice

Not required but might be a good fit for your interests:

- ★ Quantitative skills (statistics, linear algebra, programming)
- ★ Knowledge or interest in Chinese, French, or Attié languages



Diet, Behavior, and Cognition Lab

Professor Wambura Fobbs

What do we do?

Work with mice

Vary their diets

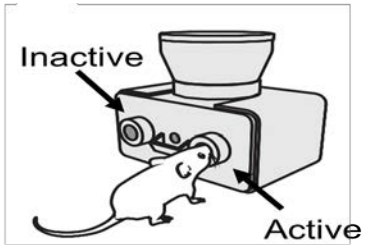
Chow:
Low-fat & Low-sugar

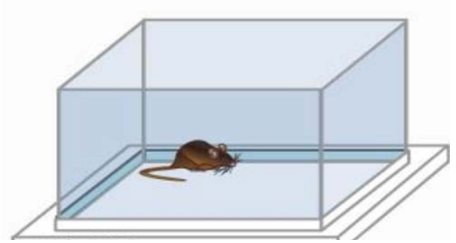
High-fat
Diet

High-sugar
Diet

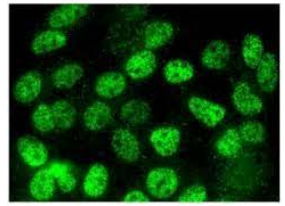
Western
Diet: High-fat & High-sugar

Measure their behavior

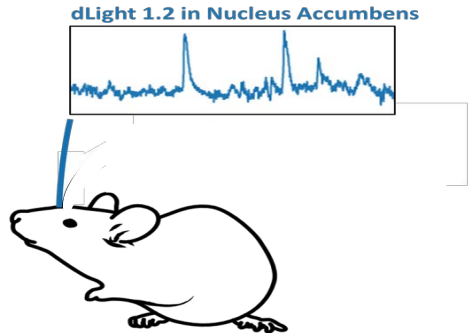




Link behavior to neural activity



Record their neural activity with photometry



Why?

To understand how palatable diets induce binge eating through their actions in the brain.

- Project 1: Which areas of the brain are activated by binge eating and context-induced overconsumption? (Spring 2024)
- Project 2: How are release dynamics of dopamine affected by binge eating? (Summer 2024)

What else?

GCCR
Global Consortium for Chemosensory Research

Many Labs Project 001:

Global Sweet Taste Preference using Monell Preference Tracking

Work with humans

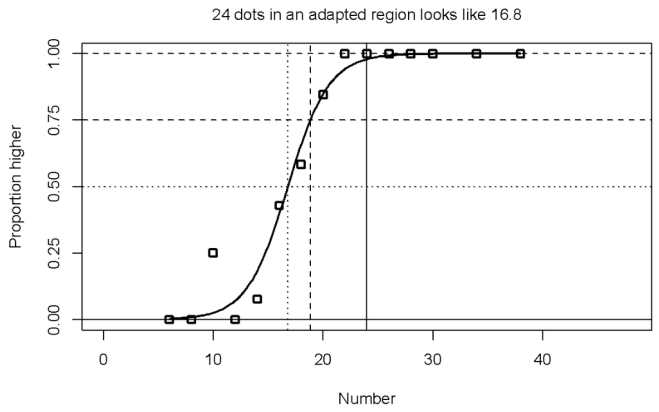
Measure sweet taste preference & correlate it with sugar content of favorite foods and drinks

How to get involved with the Diet, Behavior, and Cognition Lab

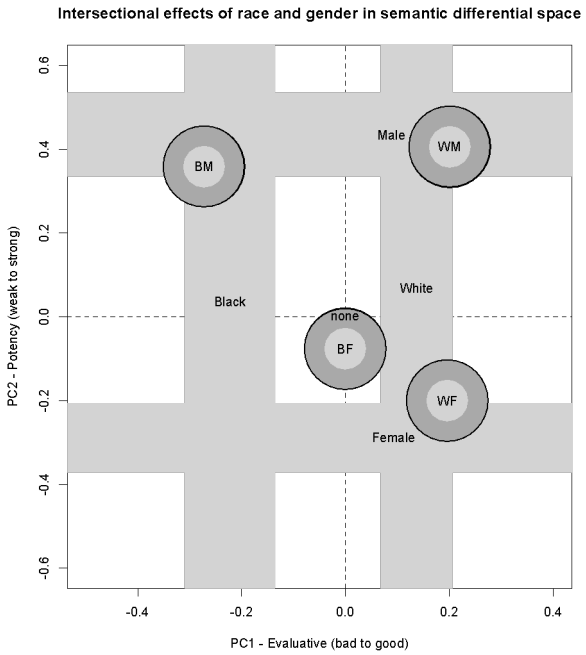
- Contact: wfobbs1@swarthmore.edu
- Spring 2024
  - ManyLabs Project!
  - Research Practicum in Behavioral Neuroscience
- Summer 2024
  - Summer research fellowships

Perception and Cognition:
The calibration of the mind to the world

Prof. Frank H. Durgin



Perception of Number

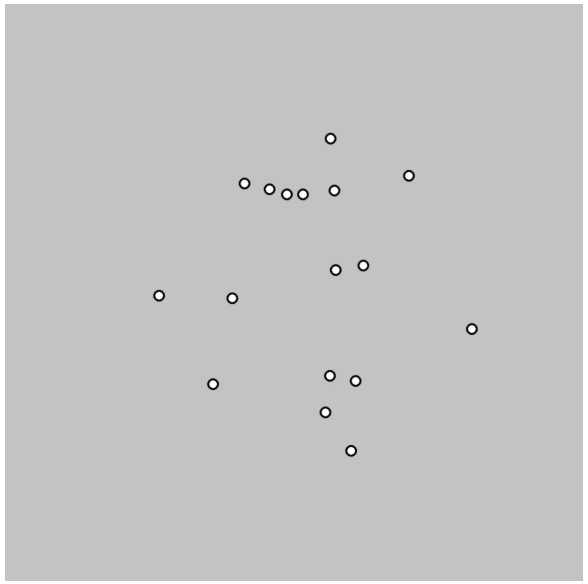


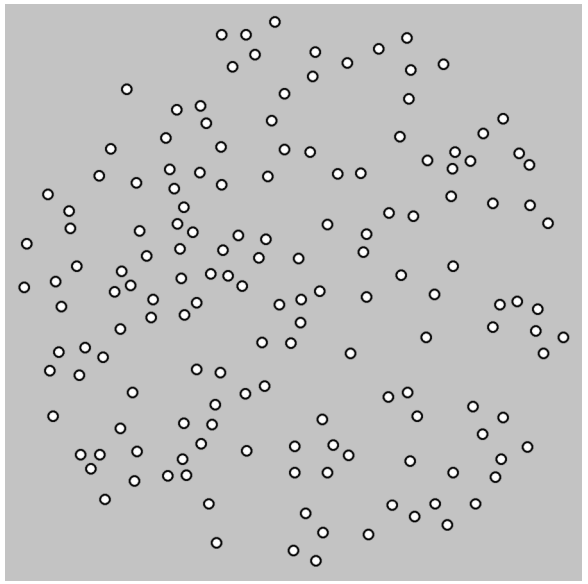
Space Perception and Action

Metaphor and Connotative Meaning

fdurgin1@swarthmore.edu

Number perception (estimation): Example 1





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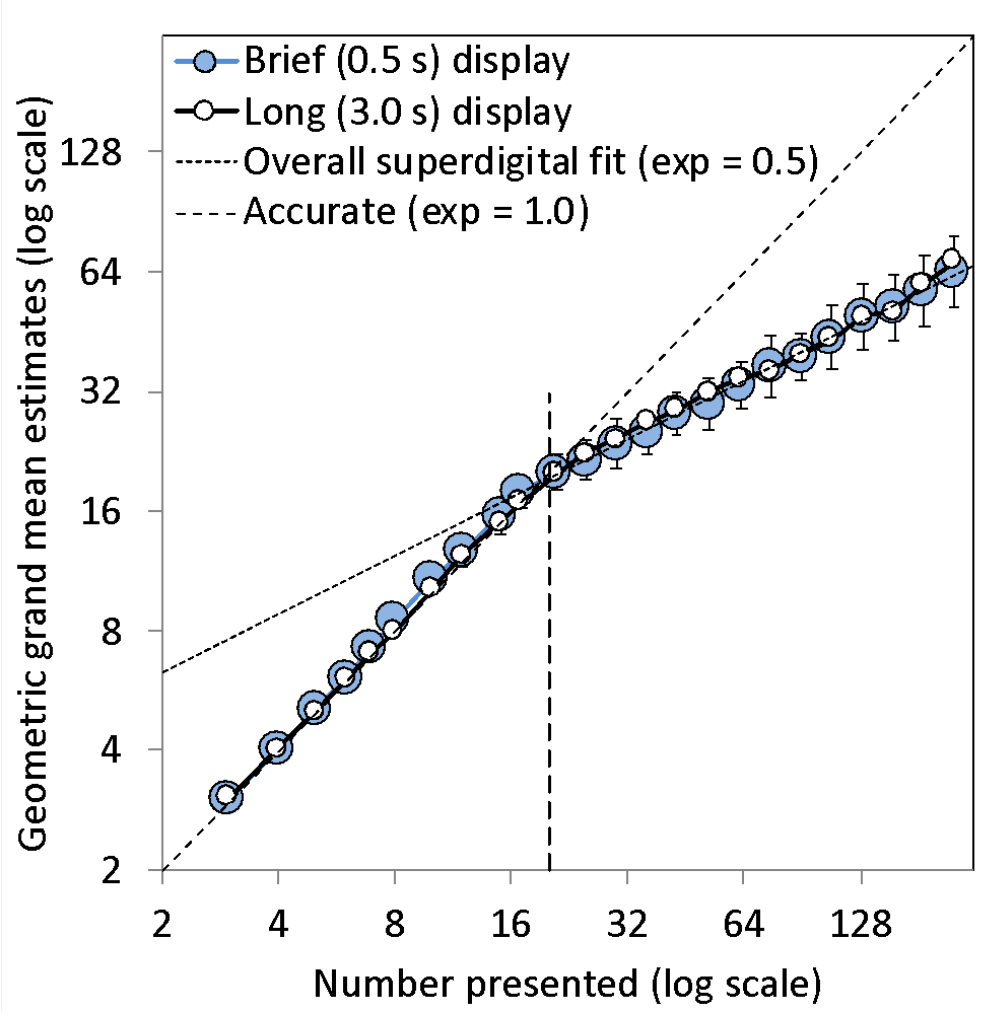
Number perception (estimation): Example 2



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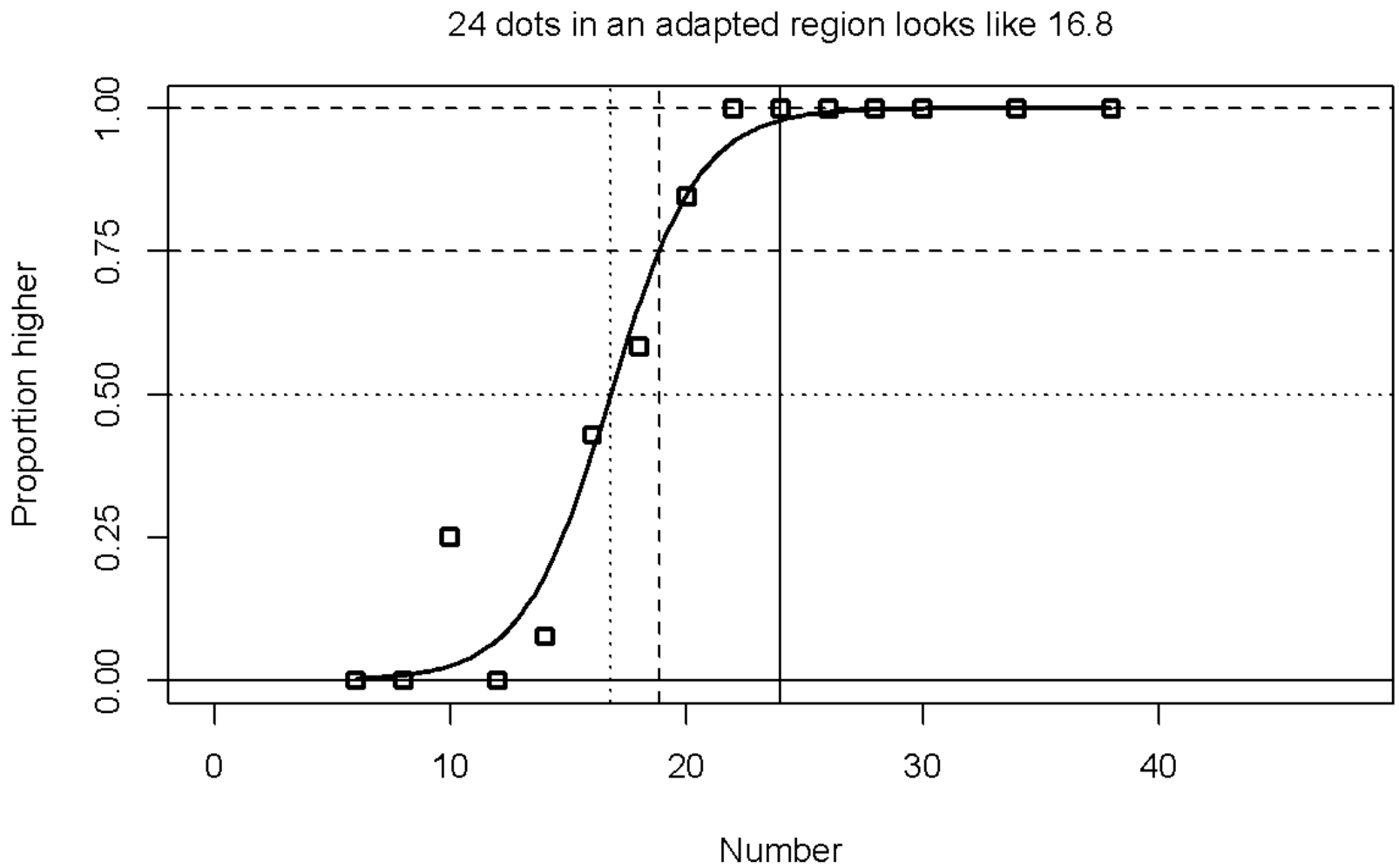
Number perception (adaptation)



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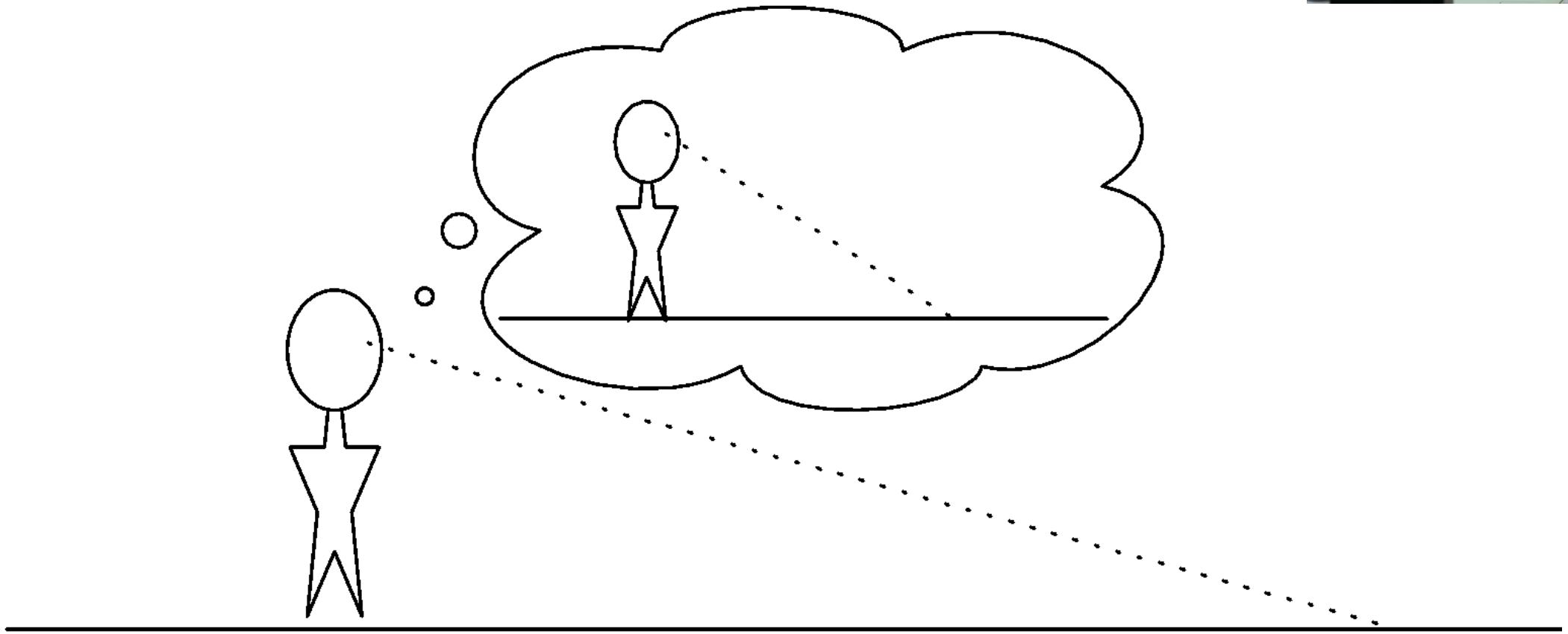
Space perception (useful bias)



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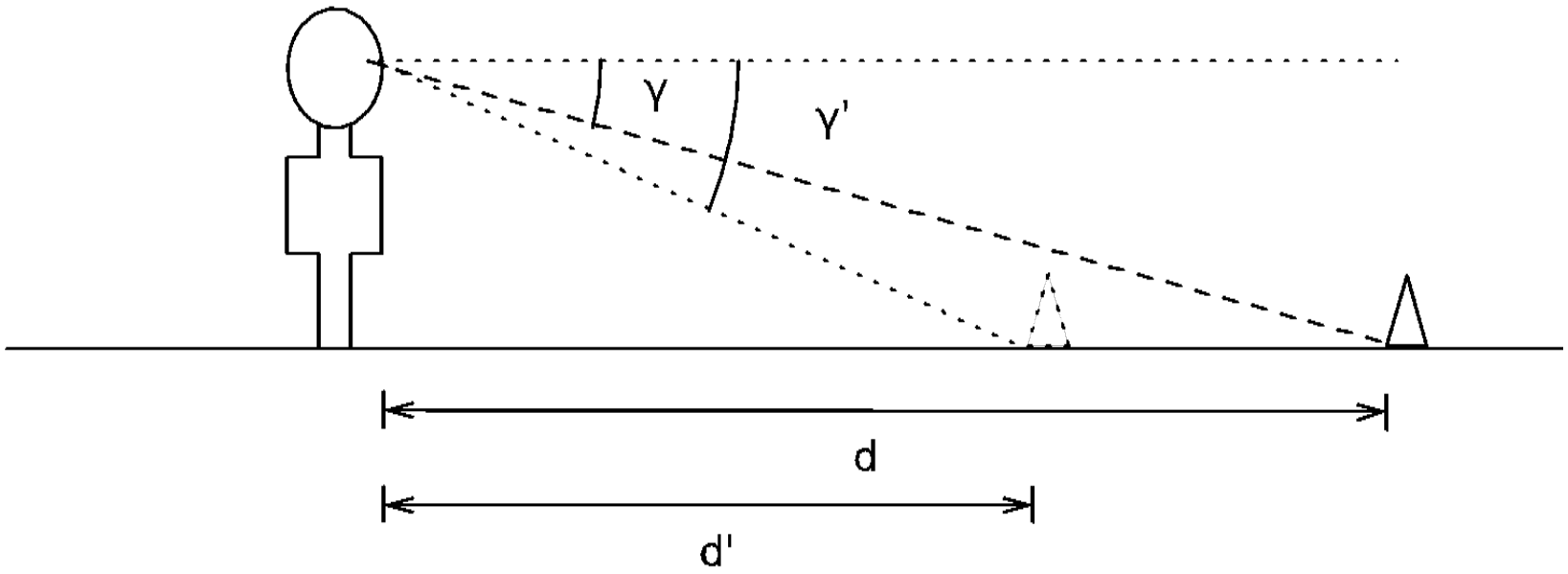
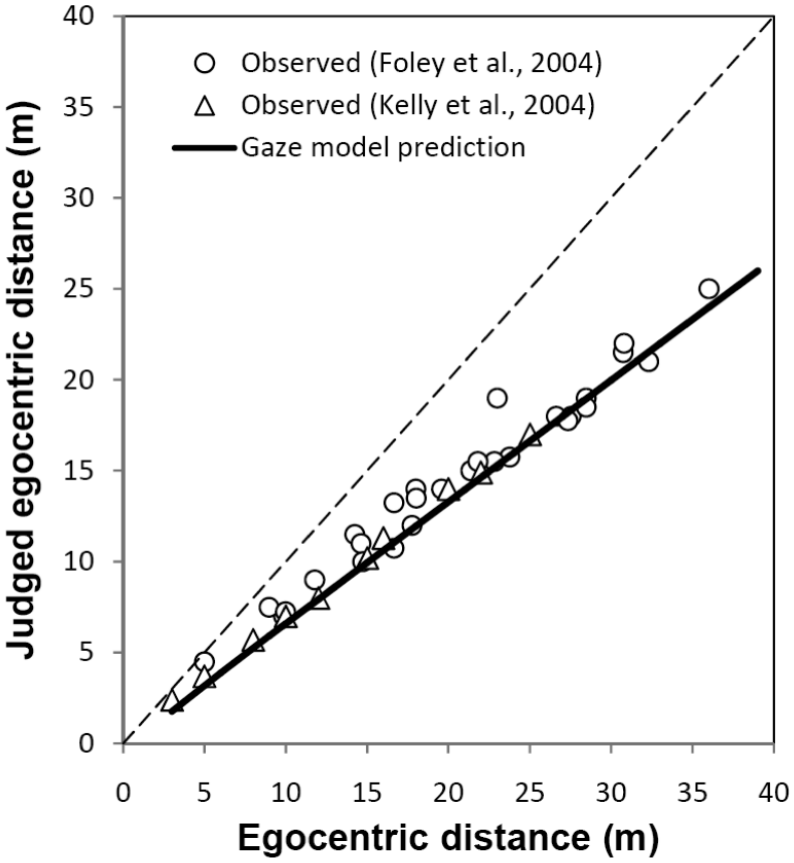
Space perception (bias in perceived distance)



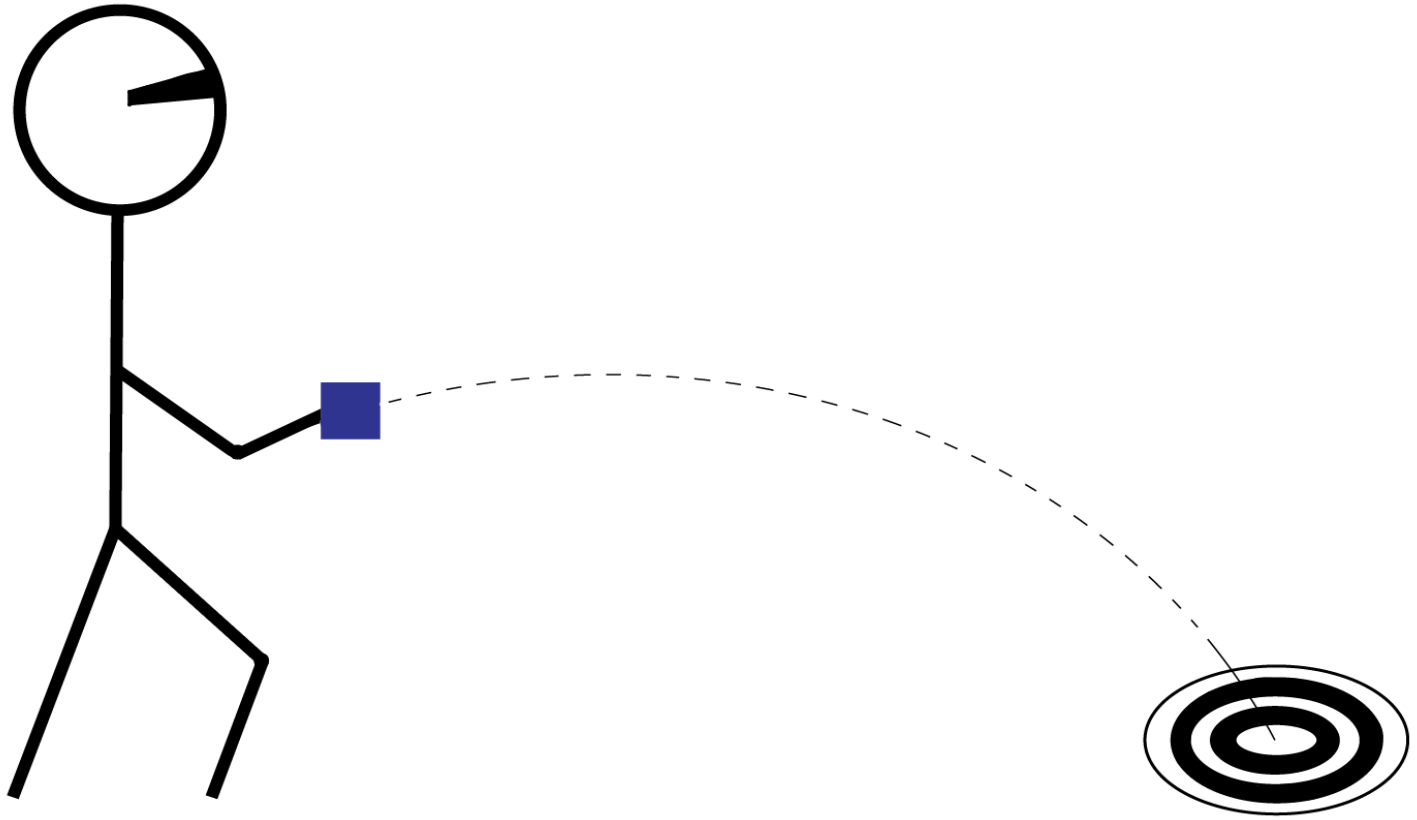


fdurgin1@swarthmore.edu

Space perception (useful for action?)

fdurgin1@swarthmore.edu

Space perception (useful for action?)



fdurgin1@swarthmore.edu

Metaphor and connotative meaning

- Sensory metaphors are ubiquitous and fairly universal
  - He was bitter
  - She felt sour
  - It was a dark day for us
  - Living large
  - Stocks are down
- What do they mean? Why do we use them?
- Are metaphors more emotionally engaging than literal statements?

fdurgin1@swarthmore.edu

How to get involved with Perception and Cognition

Email me for a meeting if interested in summer research or senior thesis

fdurgin1@swarthmore.edu

PSYC 102: Research Practicum in Perception and Cognition

- offered next in **Fall 2024**, and probably also in Fall 2025

PSYC 032/132 - Laboratory Course and Seminar in Perception (**S 2025**)

Prof. Andrew Ward, Social Psychologist

- My research investigates factors that affects individuals' self-control
- I am especially interested in health domains, including dieting and exercise
- Generally, I work with students who have already taken courses with me
- If you'd like to know more, feel free to email me at award1@swarthmore.edu

Research on

- mental health and well-being in adolescence and young adulthood
- women's mental health and well-being during pregnancy and post-partum

Ways to get involved

- Psyc 109: RP in well-being (Spring 2024; 2024-2025 academic year)
- Thesis (2024-2025)
- Research Assistant position
- Volunteer
- Summer (students who have previous experience in the lab)

Kid Cognition & Development Lab

Emily Foster-Hanson
efoster3@swarthmore.edu

Kid Lab Questions

How do kids learn gender norms through interactions with their parents?

How do parents and kids decide how to use technology?

A video coding and data visualization tool

How to get involved with KidLab

- Email: efoster3@swarthmore.edu
- Courses: PSYC 139 (Spring ‘24)
- Research Assistant position
- Summer Research Fellowship
- Thesis
- Volunteer

The Psycholinguistics Lab

Dan Grodner

dgrodne1@swarthmore.edu

How do people use and understand language?

Specific Areas of Focus

- How do people communicate between the lines?
- How do people take the perspective of their conversational partner?
- How do speakers and addressees learn and adapt to different situations?
- How do speakers and addressees deal with grammatical change (e.g., new types of pronouns)?

Language demands reading between the lines

- *A: I'm leaving you.*
  - *B: Who is he?*
- *Nice place you got here. It'd be a shame if something happened to it.*
- *A: We are looking forward to the military aid you promised.*
  - *B: I want you to do us a favor though.*
- *Sarah got pregnant and married.*
- *Want to Netflix and chill?*

Language demands reading between the lines (continued)

- *Can you reach the salt?*
  - *Pass me the salt*
- *Do you see the the tall cup?*
  - *There is a non-tall cup around*
- *Some of you passed the test.*
  - *Not all of you did*

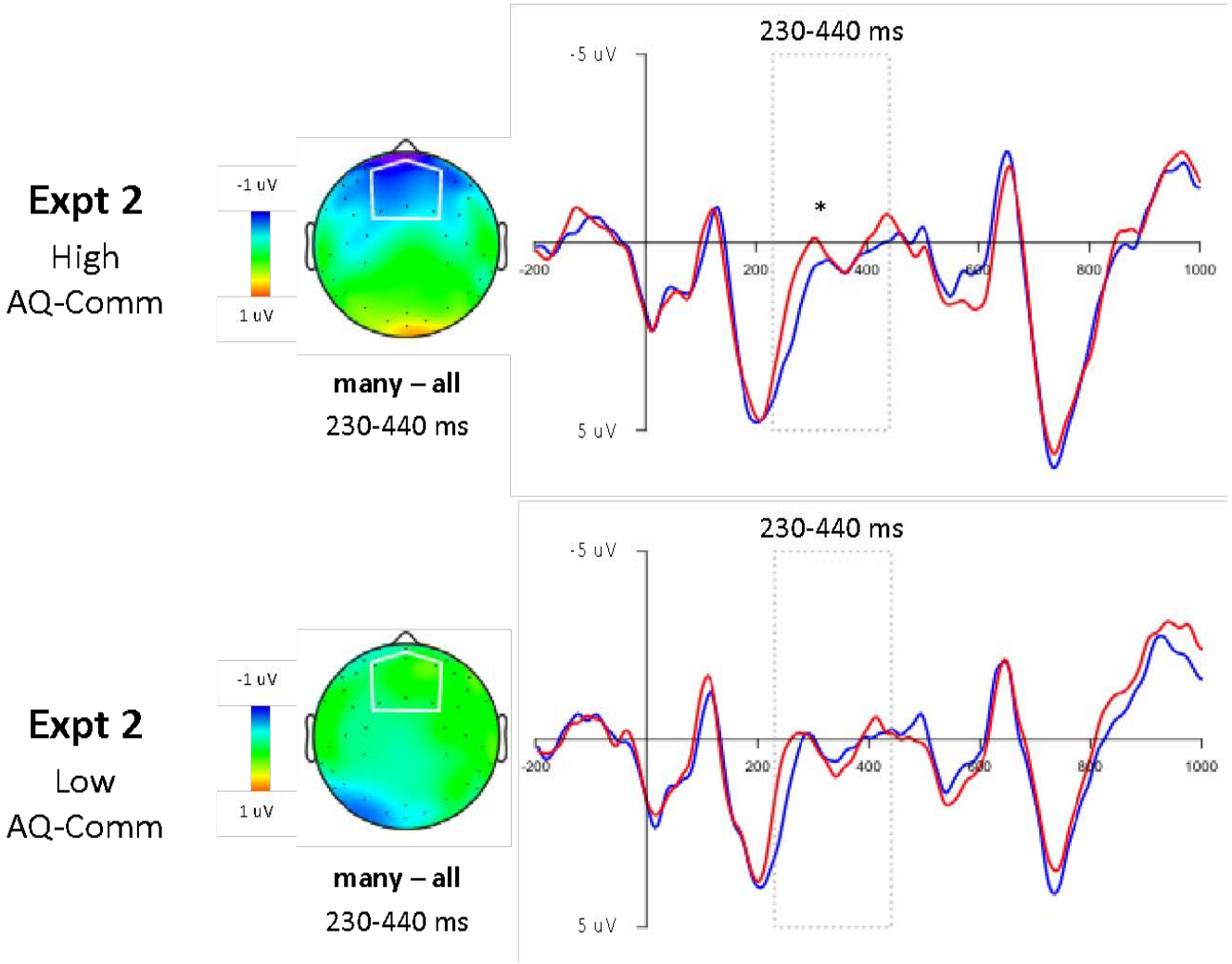
Some of you passed the test

- Speakers adhere to certain maxims of communication:
  - Be as informative as you can be (all else being equal)
- Informativity scale
  - <*all*, *most*, *many*, *some*>
- Counterfactual reasoning about what wasn't said and the social motivations for saying what they did

Does sociocommunicative skill predict the speed of getting the inference?

Sikos et al. in prep

Many elephants are **mammals**

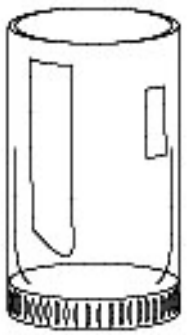


I am ***a*** ***compassionate*** ***conservative***

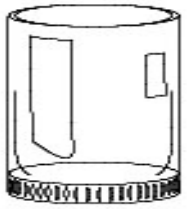
Reference (the lines)

Contrast (between the lines)

*Pick up **the tall glass**.*

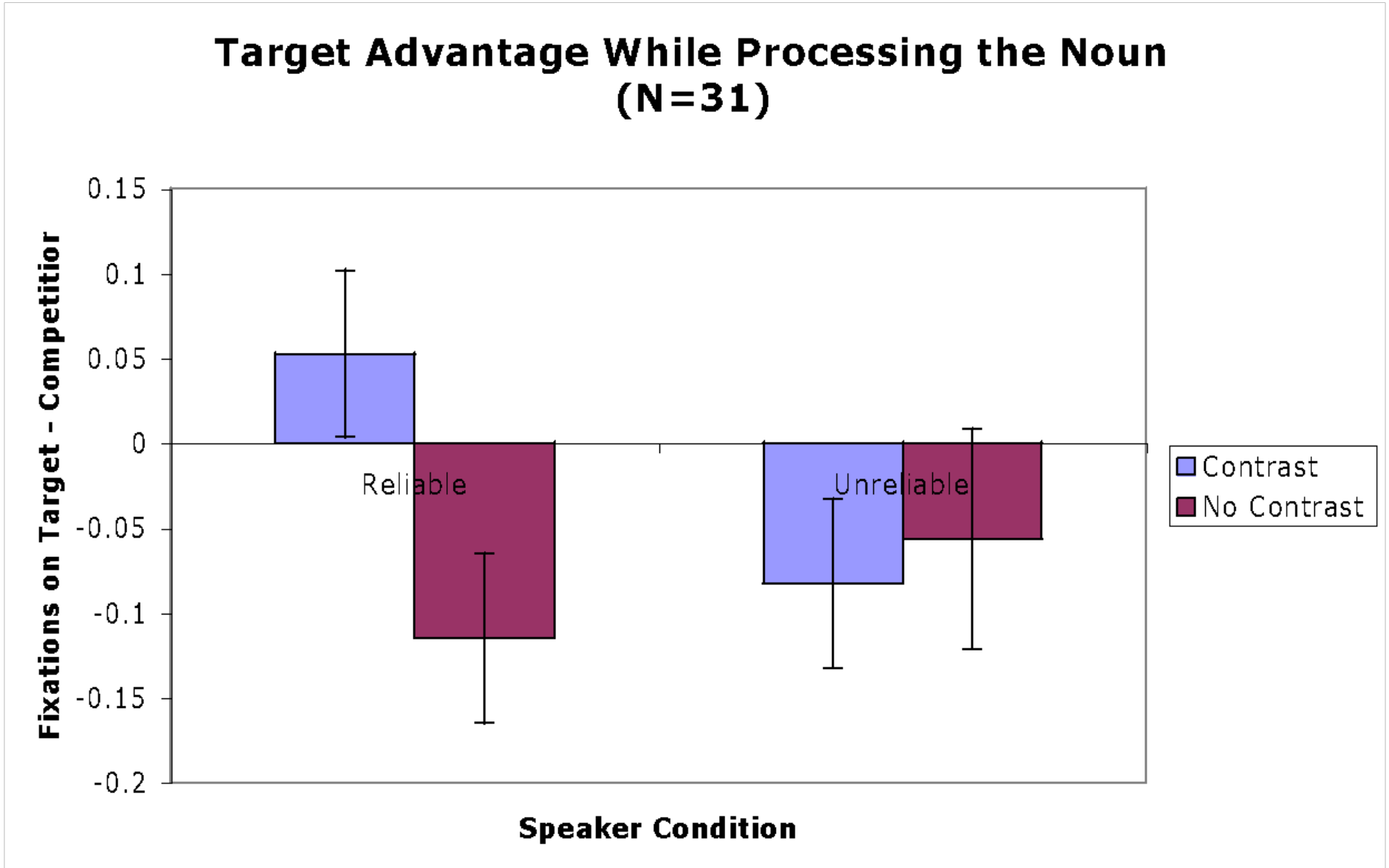


Reference



Contrast

- When and how are these contrastive inferences computed?


Target Advantage While Processing the Noun
(N=31)
Fixations on Target - Competitior
0.15
0.1
0.05
0
-0.05
-0.1
-0.15
-0.2
Reliable
Unreliable
Contrast
No Contrast
Speaker Condition