PSY 254: Precept 4

Perceptual development

AI/Preceptor: Kennedy (she/her)

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Today's Agenda

Baby photo presentations

Group MCQs

Perceptual narrowing

Journal article assignment

Preparation for next time

Baby photo presentations

This week

12:30 (Cate, Liz, Anushri)

1:30 (Maren, Maddie, Sean)

2:30 (Anna, Parker)

Next week

12:30 (Camille, Lora)

1:30 (Abigail, Adrian)

2:30 (Vatsal, Diya)

Sign up sheet

Group MCQs

Using any information from lecture, precept, or the textbook, generate one multiple choice question you could envision on a future exam. Write the question, the 3-5 possible choices, and indicate the correct answer. Submit on Canvas ***before precept*** *each week.*

Take turns with each person in the group being the leader once:

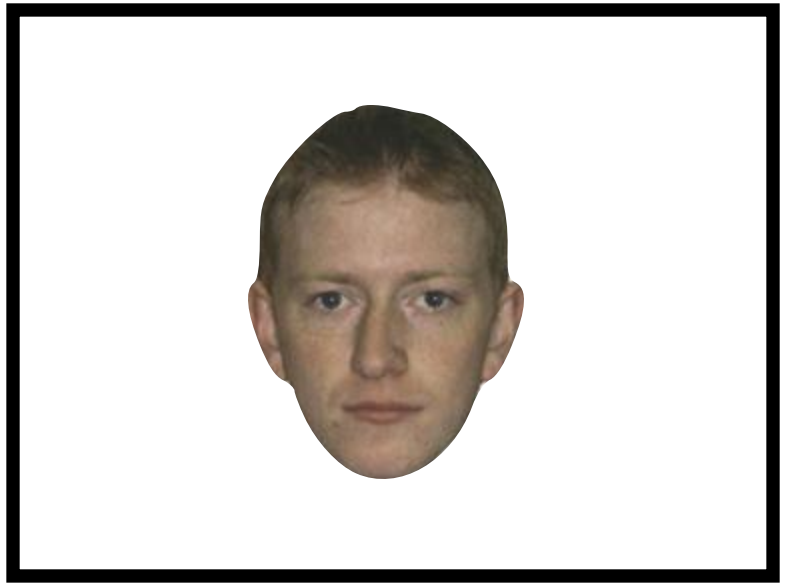
1. The leader shares their MCQ from this week
2. The rest of the group works together to answer and reach a consensus
3. The leader facilitates discussion:
    - If the group is unsure or incorrect, explain & answer any questions
    - If correct, discuss why you chose that question
    - Ask for feedback—was it clear, challenging, and/or interesting? What could be improved for next time?

Perceptual narrowing

VPC

Visual Paired Comparison (VPC)

Familiarization Period



~20s

5s

Paired Comparison

5s

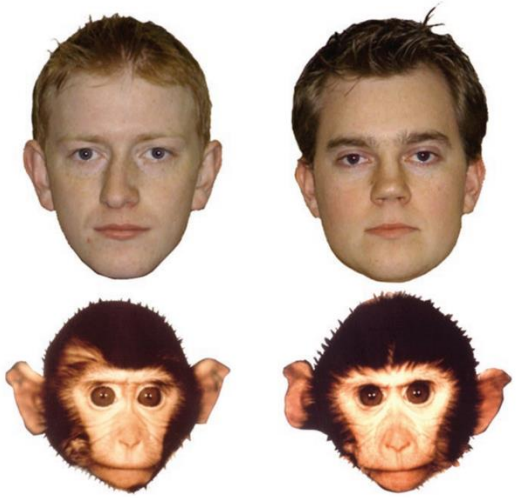
Create a figure on the board

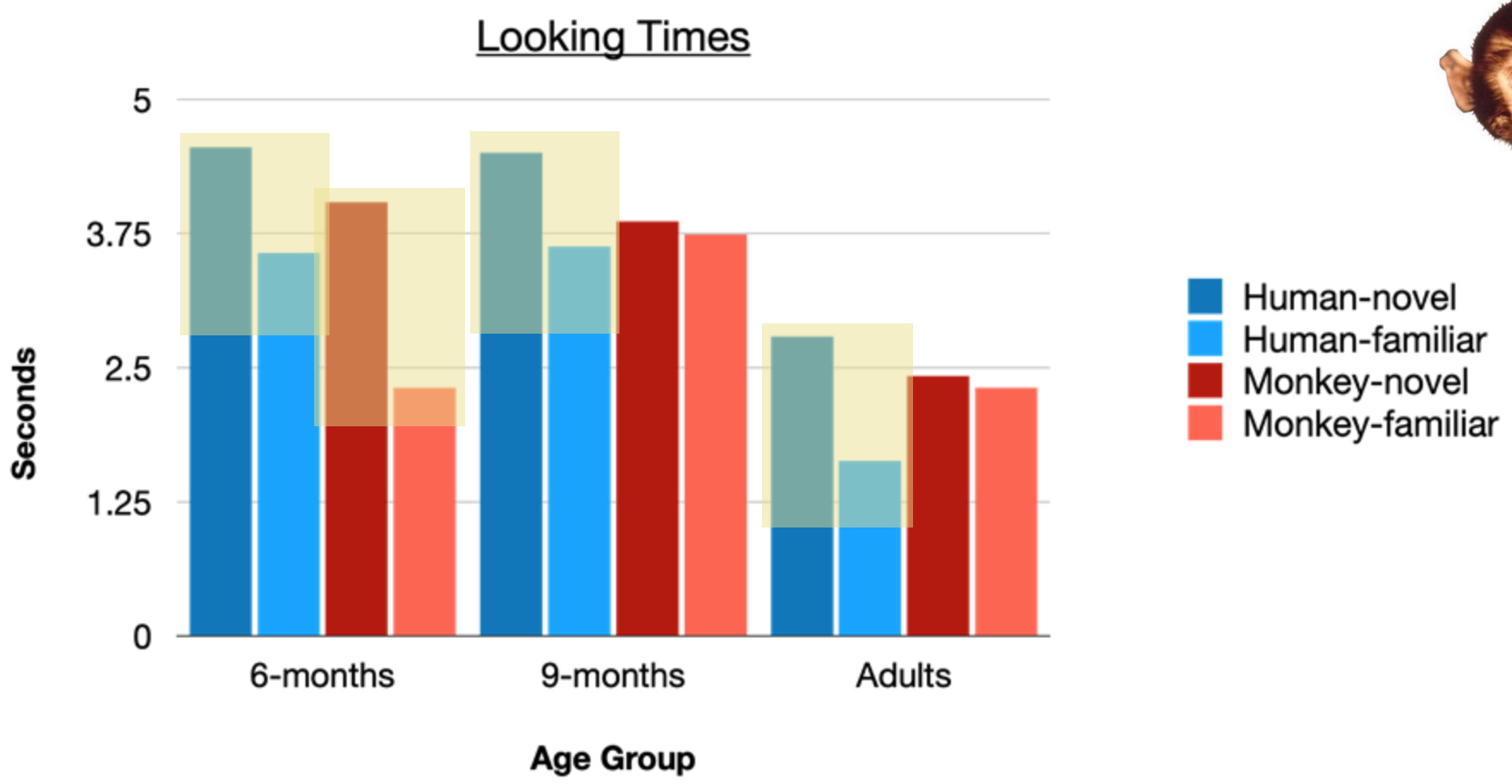
"Younger infants, who possess less experience with faces than older infants and adults, should be better than older infants or adults at discriminating between individual faces of other species."

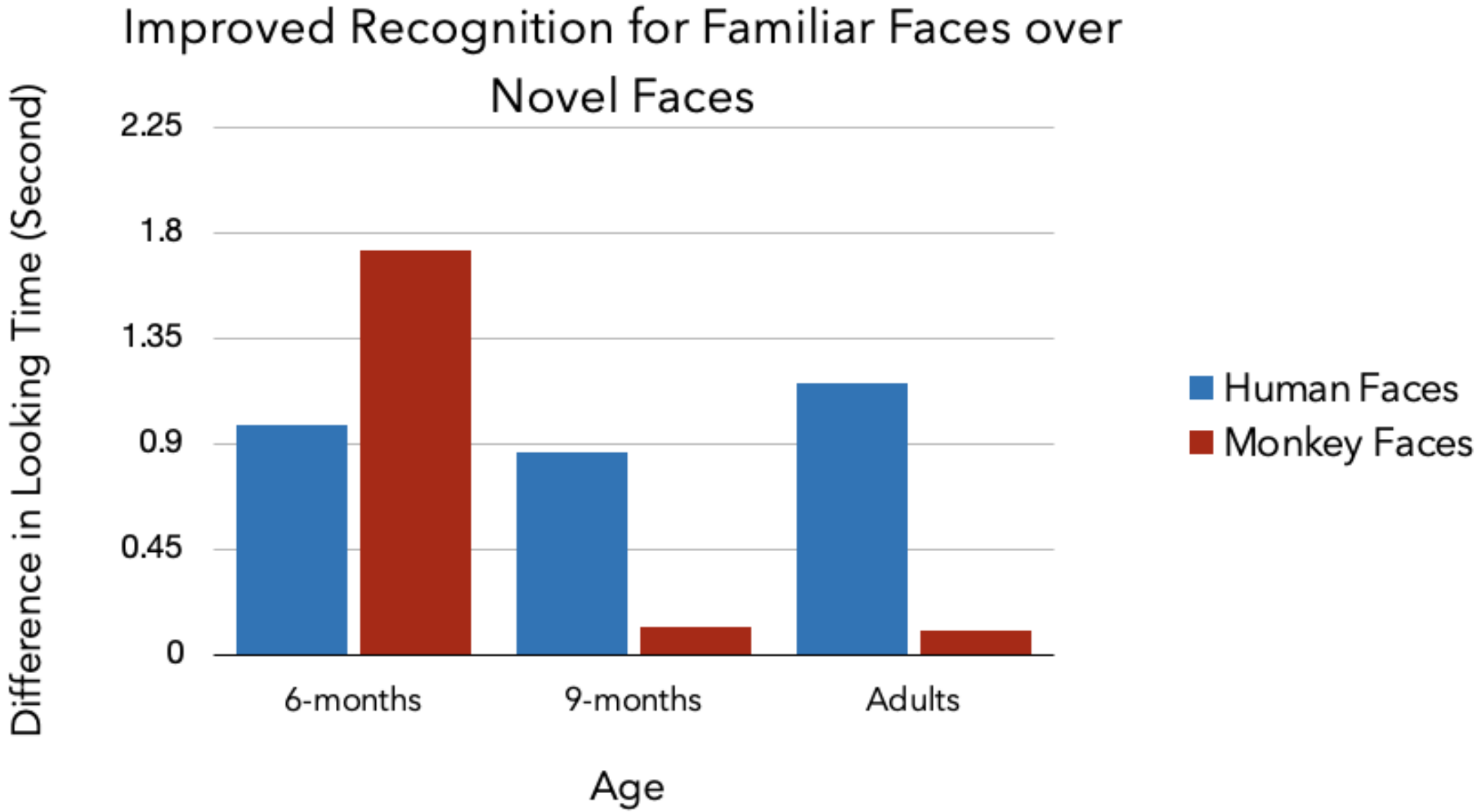
Independent Variable (IV)
Familiar vs. Unfamiliar
Human vs. Monkey

Dependent Variables (DV)
Looking time (seconds)

Pascalis et al. (2002)






Improved Recognition for Familiar Faces over Novel Faces
Difference in Looking Time (Second)
2.25
1.8
1.35
0.9
0.45
0
6-months
9-months
Adults
Age
Human Faces
Monkey Faces

Pascalis et al. (2002) takeaway

6-month-olds are still generalist.

They are as good at discriminating between monkey faces, as they are discriminating between human faces.

9-month-olds have become specialists.

Experience narrowed their perception to the salient stimuli in their environments (i.e., human faces)

They become worse at discriminating between monkey faces, and better at discriminating between human faces.


IS YOUR BABY
RACIST?
EXPLORING THE ROOTS
OF DISCRIMINATION
FROM 'NURTURESHOCK'
BY PO BRONSON & ASHLEY MERRYMAN

What was the motivation / question / hypothesis in Vogel et al. (2012)?

Given what you know about the role of experience in shaping perception think carefully about why you might expect changes in how infants perceive own vs. other-race faces.

How is this example of perceptual narrowing **different** than the one we saw in the previous paper?

Other race effect

Other-race effect (ORE) : Adults find it easier to distinguishes faces of their own racial group than others.

Do you expect newborns to show this effect?

How about 9-month-olds?

Other race effect

Newborns do not demonstrate ORE; tested with Caucasian, African, and Chinese faces (Kelly et al., 2007)

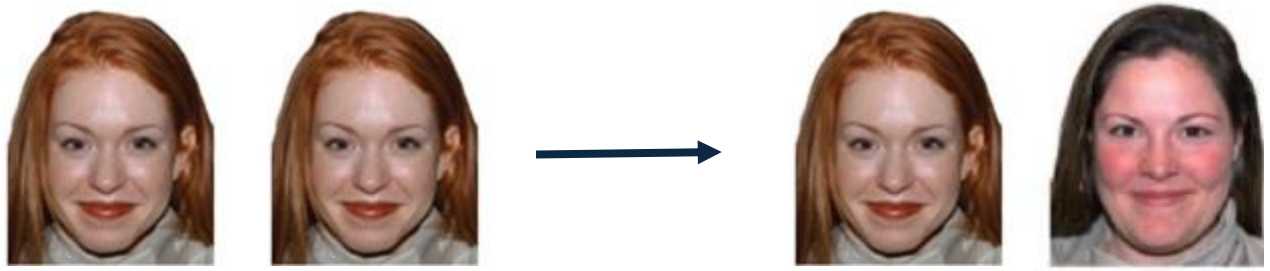
By 9-months, ORE emerges (Kelly, Quinn et al., 2007)

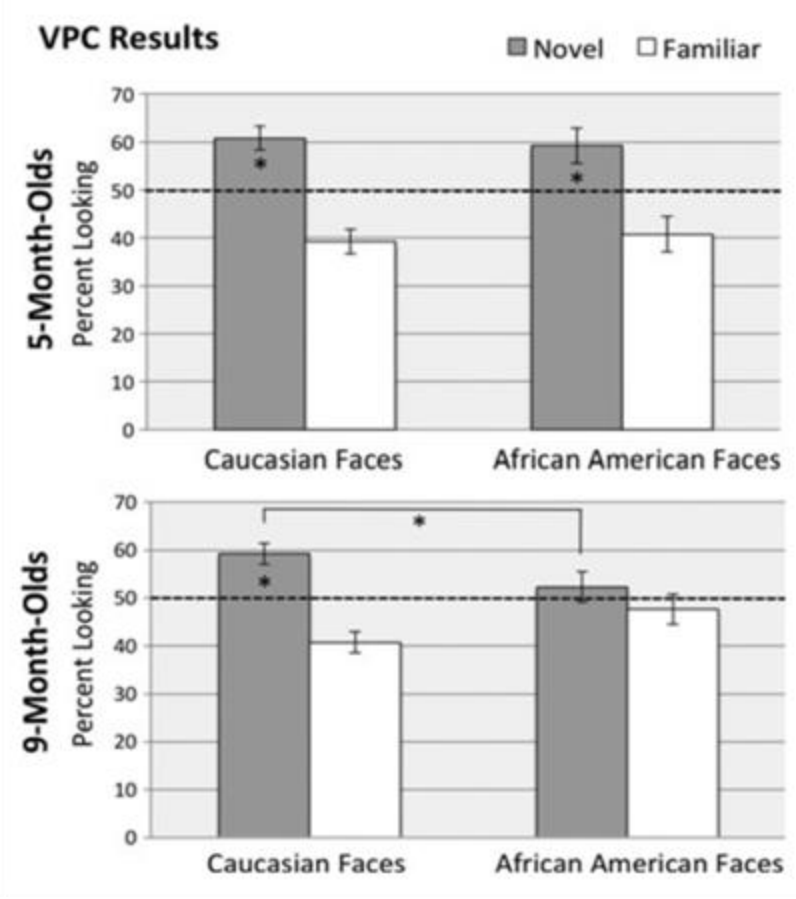
What about multiracial families?

What about multiracial families?

Infants with Black *and* White caregivers show equal interest and in faces from both races, providing further evidence of the role of experience in perceptual narrowing (Bar-Haim et al., 2006)

Vogel et al. (2012) – Part I

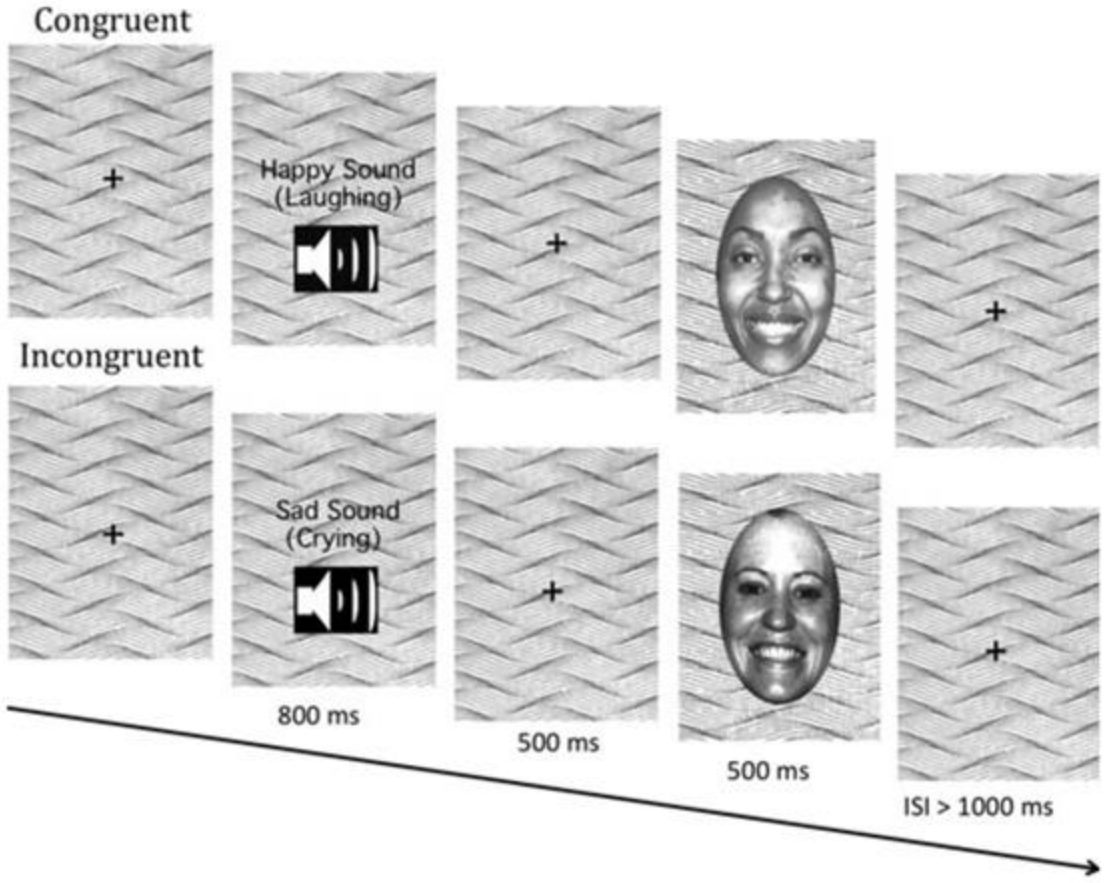




*IMAGES NOT FROM THIS STUDY

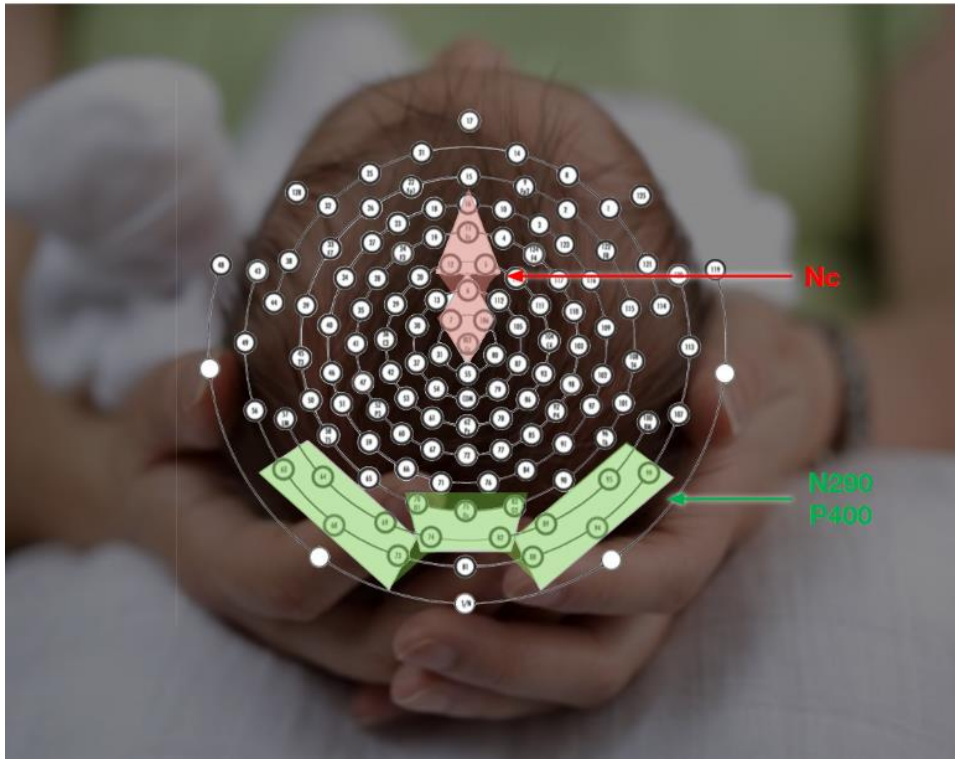
Vogel et al. (2012) – Part II

*ABOVE IMAGE NOT FROM THIS STUDY

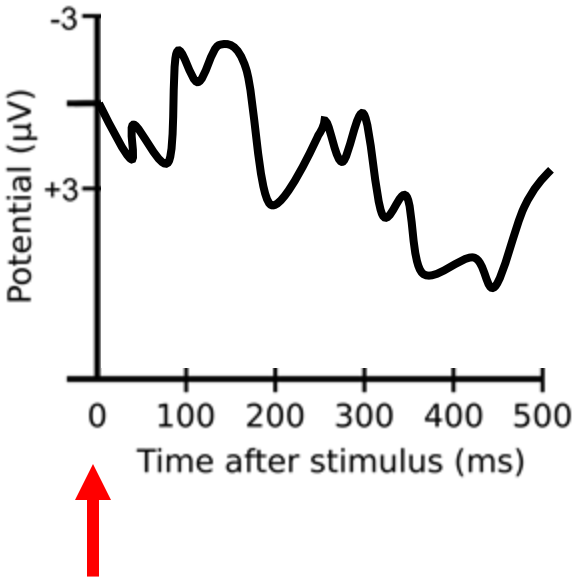


EEG = Electroencephalography

Measures electrical activity in the brain

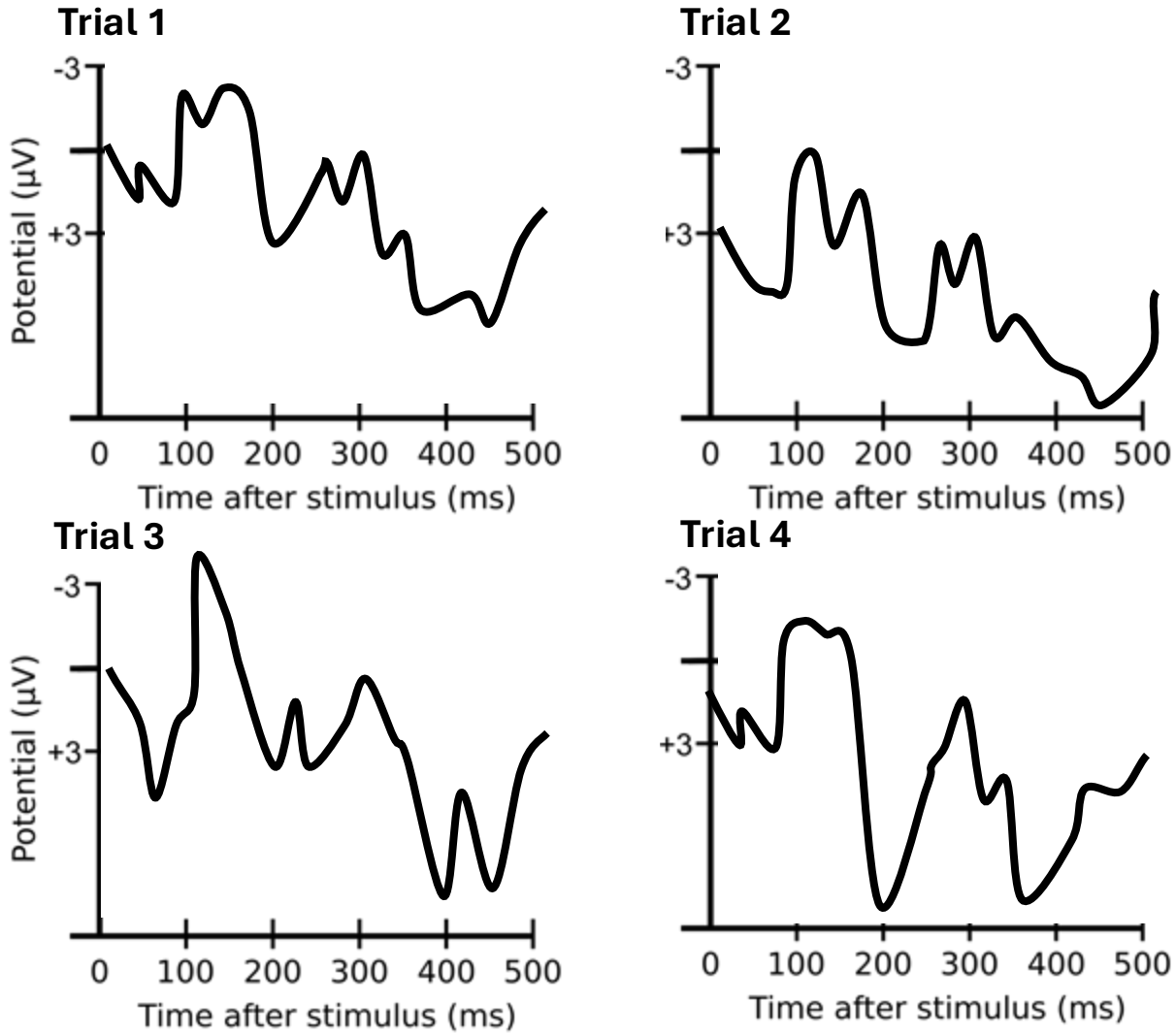


Event-Related Potentials (ERPs)

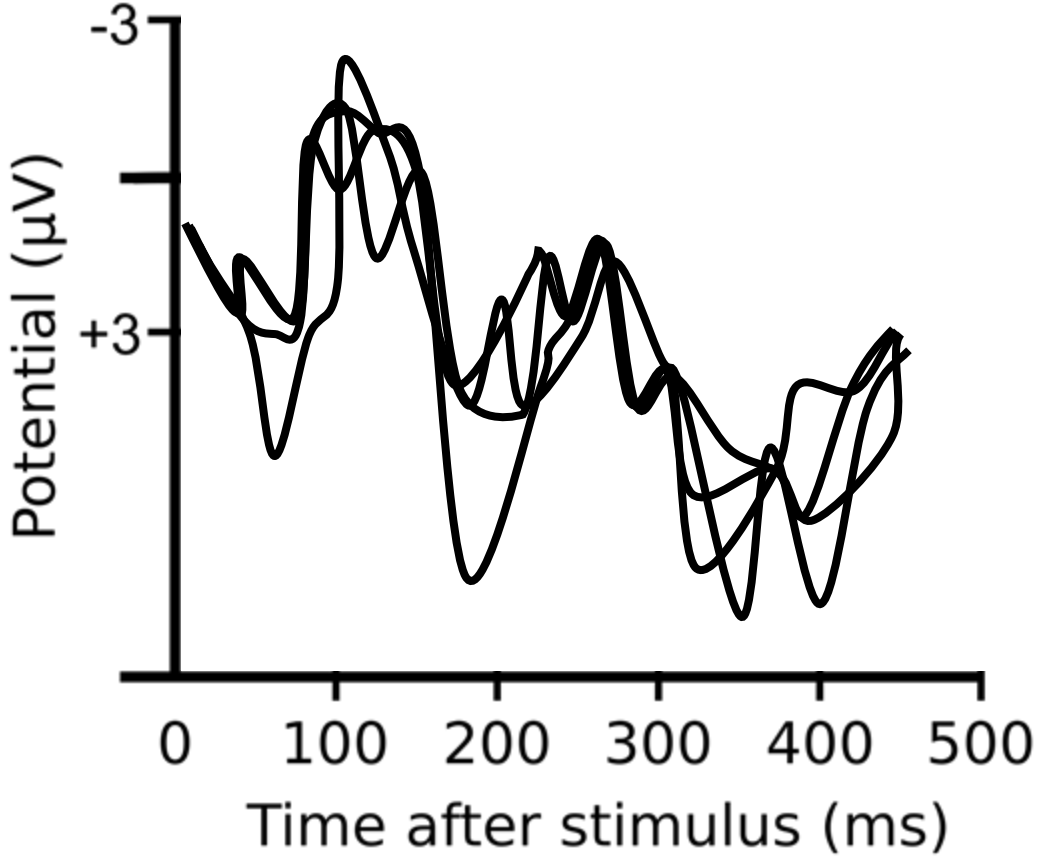


Stimulus starts

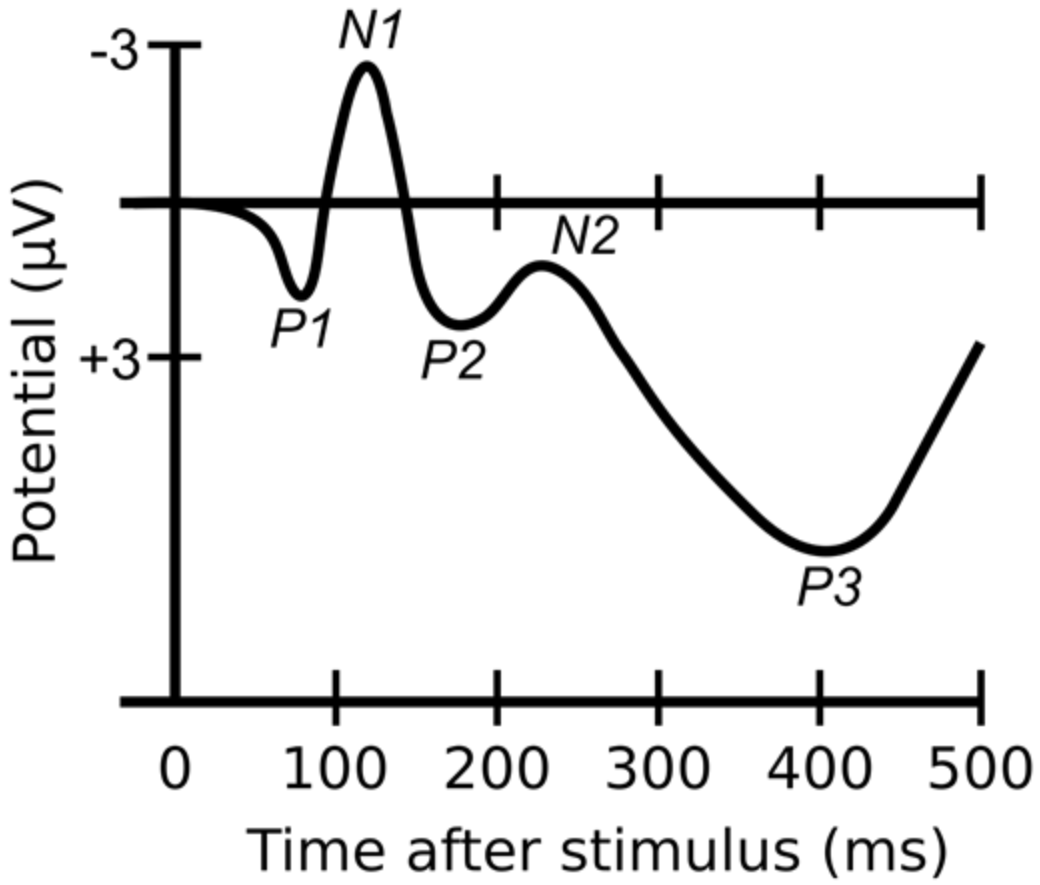
Event-Related Potentials (ERPs)



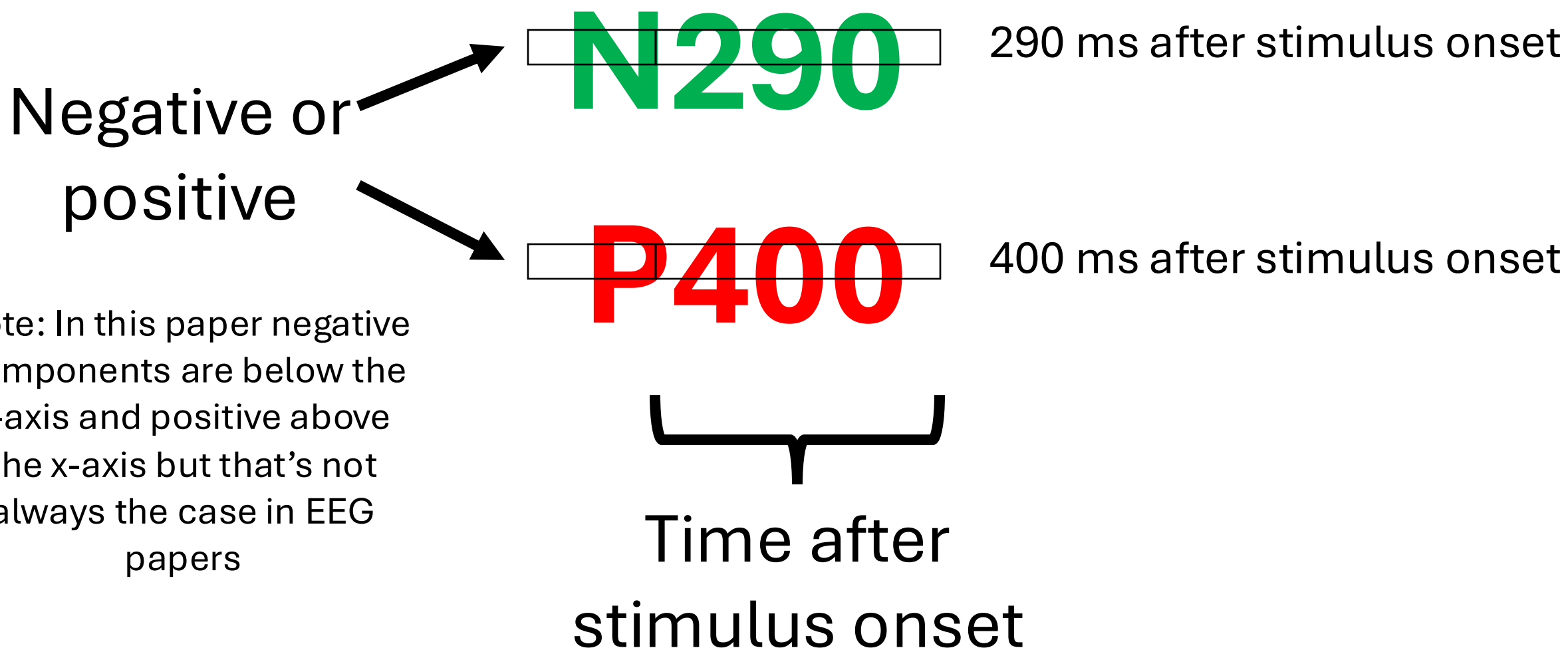
Event-Related Potentials (ERPs)



Event-Related Potentials (ERPs)

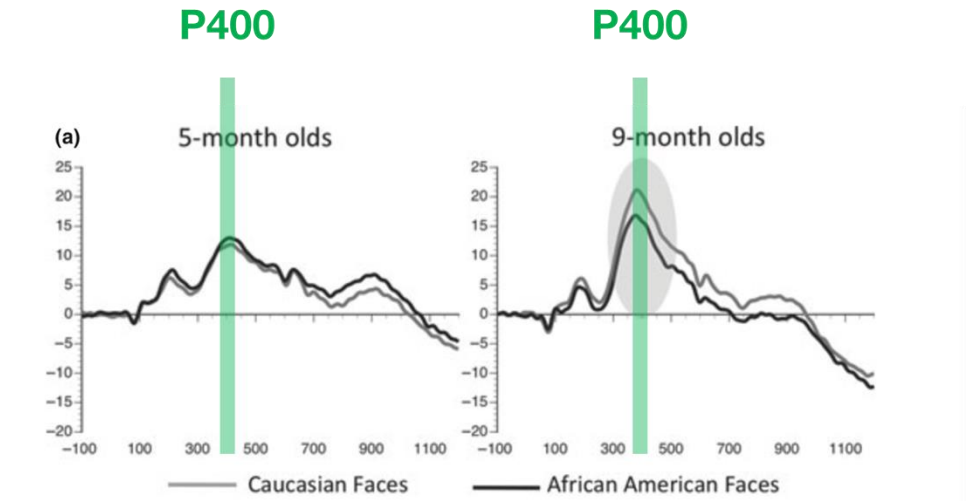


Naming conventions in this paper



Note: In this paper negative components are below the x-axis and positive above the x-axis but that's not always the case in EEG papers

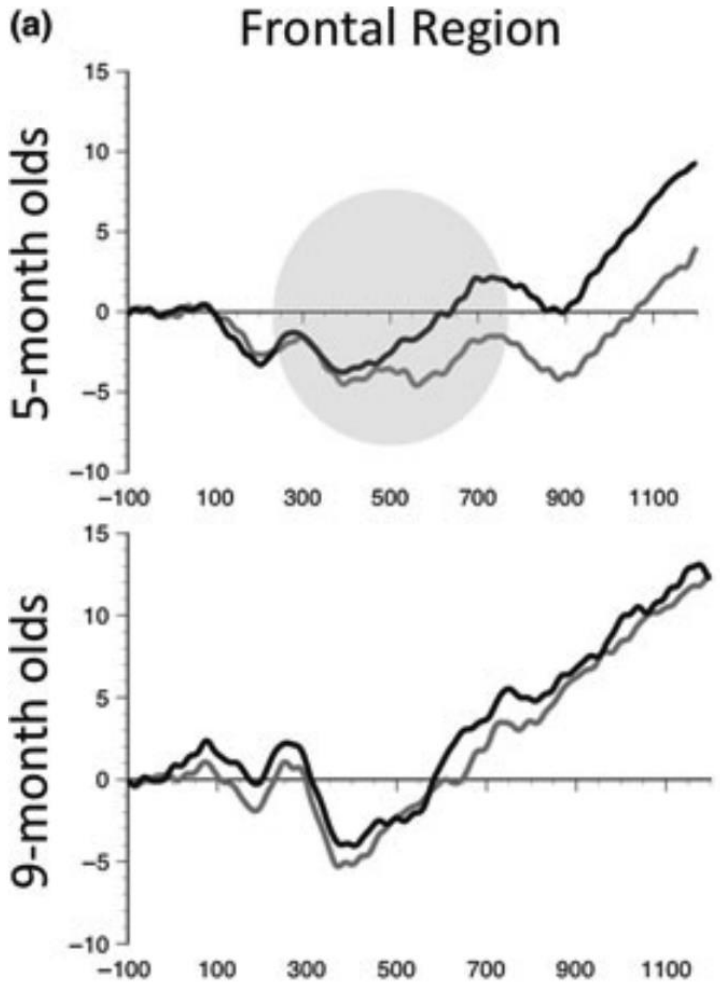
What's happening in these graphs?



P400 component:
Positive voltage deflection
400ms after stimulus onset

"the **neural response** to own- and other-race faces … is **differentiated in 9-, but not 5-month-old infants**"

What's happening in these graphs?



Nc component:
Negative voltage deflection **~450-550ms** after stimulus onset

"**5-month-olds exhibited a more negative Nc response** to congruent relative to incongruent faces. **No significant difference for 9-month-olds**."

Group mini-presentations

Group 1: Pascalis et al. (2002)
Monkey/Human Perceptual Narrowing

Group 2: Vogel et al. (2012)
Own/Other Race Perceptual Narrowing

(1) Study strengths and weaknesses

(2) Identify how and why this occurs in development. What are some specific influences that lead to your paper's perceptual narrowing effect?

(3) Other thoughts/implications?

7 minute prep, 3 min presentation!

Journal article assignment

Detailed description of assignment on Canvas

Design an original developmental psych research study

- Introduction (2 pages)
- Methods (2 pages)
- Predicted results and Discussion (2 pages)
- References and Citations (APA)

Quick help :
https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html

Rough Outline: **October 30 at 5pm**
Final Paper: **December 9 at 5pm**

Preparation for next time

Homework:
Read two articles (*Failing At Four* and **any media article on early education**)
Come to class with questions/comments about this paper!

Submit MCQ on Canvas before precept (indicate the correct answer)

Email me your baby photos by 11am on Tuesday if you're presenting next week

Office hours:
Wednesdays 10:30-11:30am in PSH 217
Email me (kcasey@princeton.edu) with questions or to schedule alternate meeting time