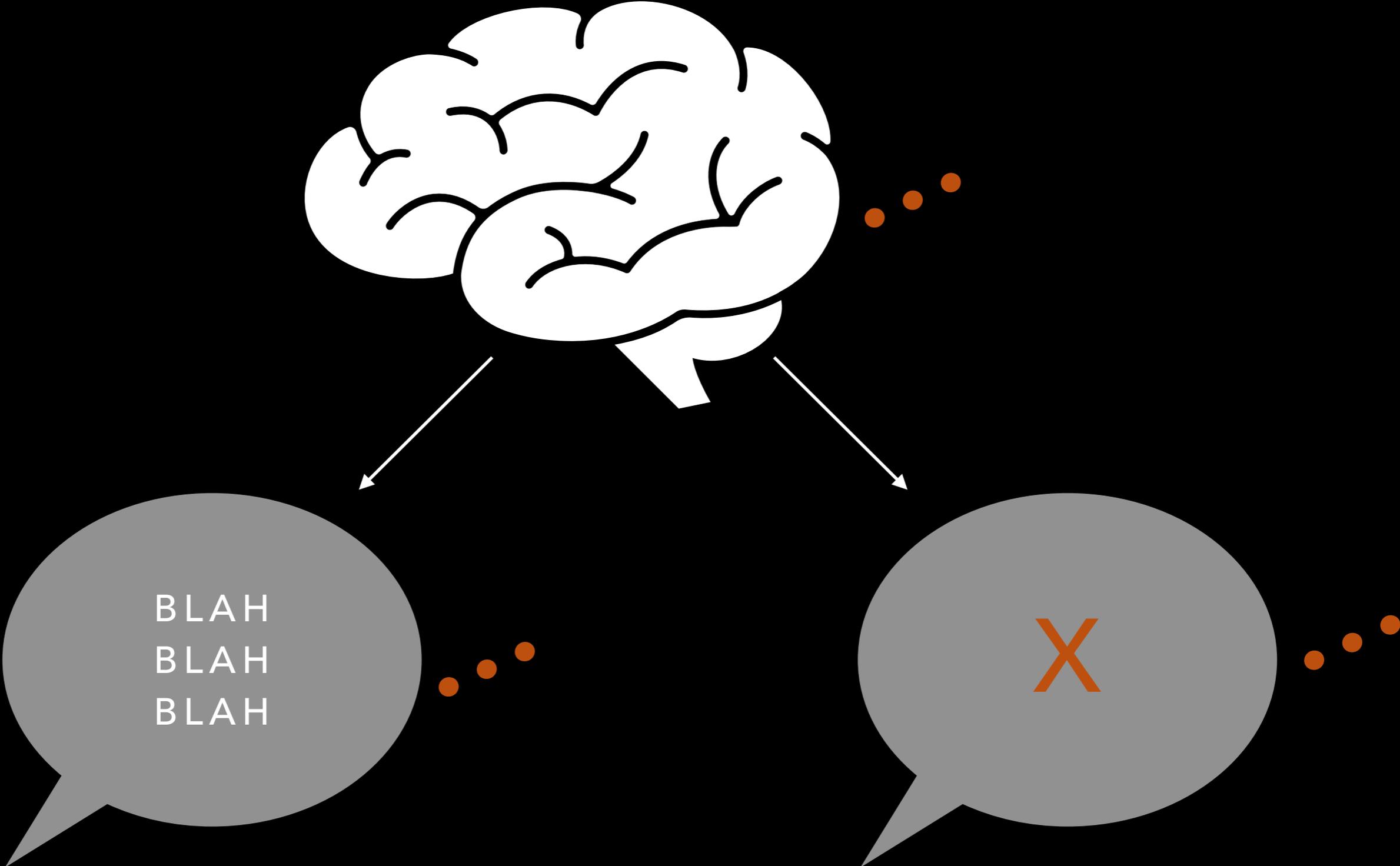


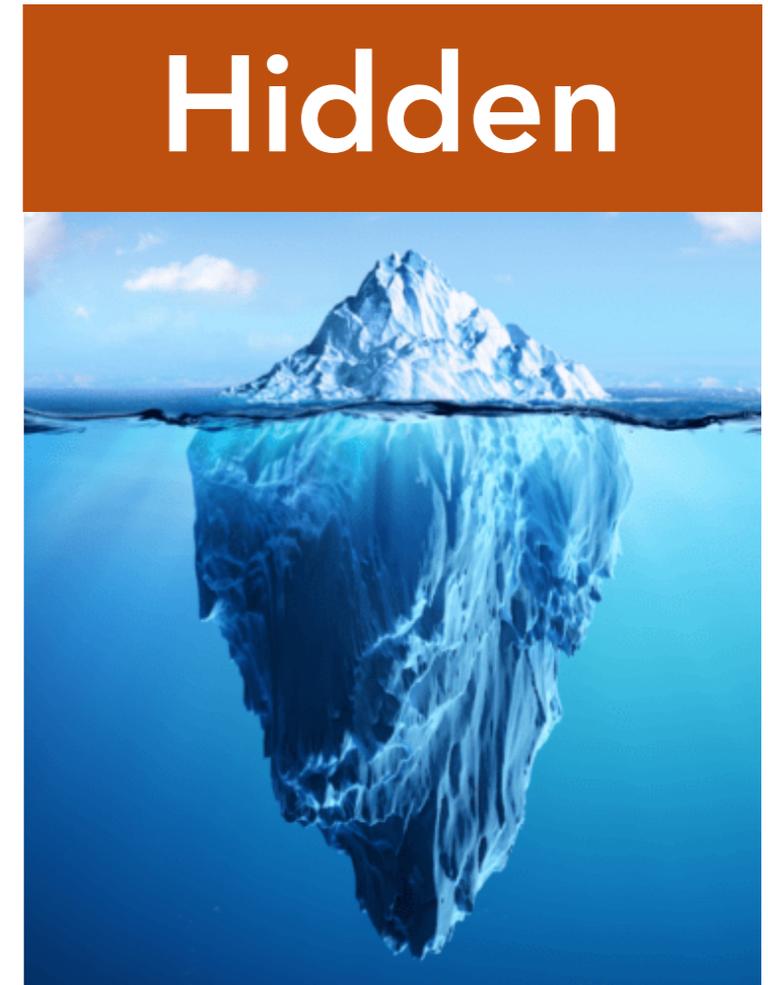
**SALONI KRISHNAN**

# BRAIN ORGANISATION IN LANGUAGE DEVELOPMENT

# MY RESEARCH FOCUS



# DLD - DIFFICULTIES TALKING AND LISTENING



Negative  
Consequences

# GUESS HOW OLD THE CHILD IS..



One day the boy in his orange shirt was feeding his fish called Larry  
And his mum walked in  
She took some money out of her purse and said to him  
'You can go buy another fish if you want to keep Larry company'  
So the boy  
Who we're going to call Bob  
Walked out of the house with the money and towards the pet shop

**Fish in a tank and he's feeding him**

His mom is giving him some money  
out of her purse  
He's going to the shop maybe  
He's walking down the street



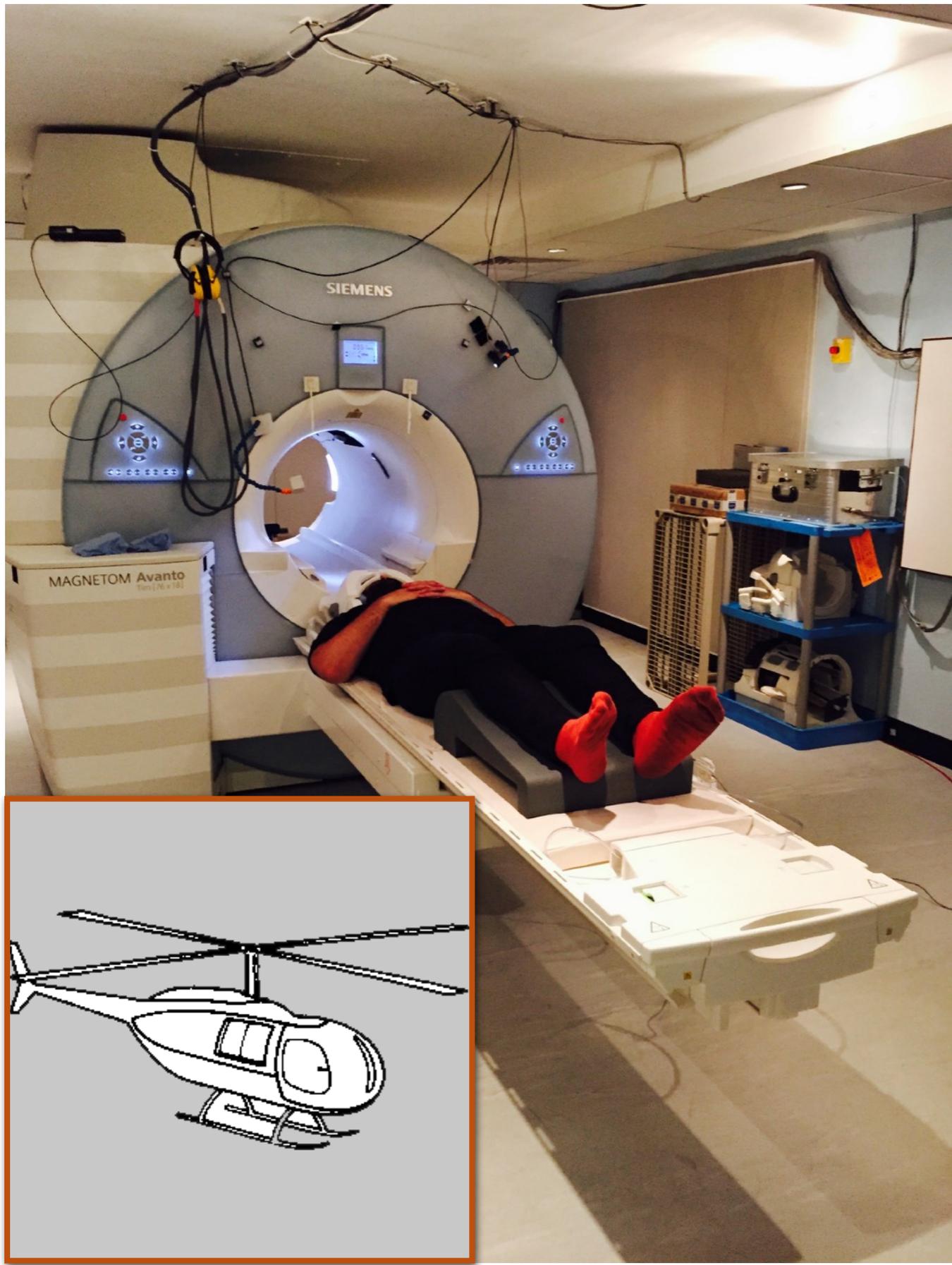
**MSc**  
2008-09



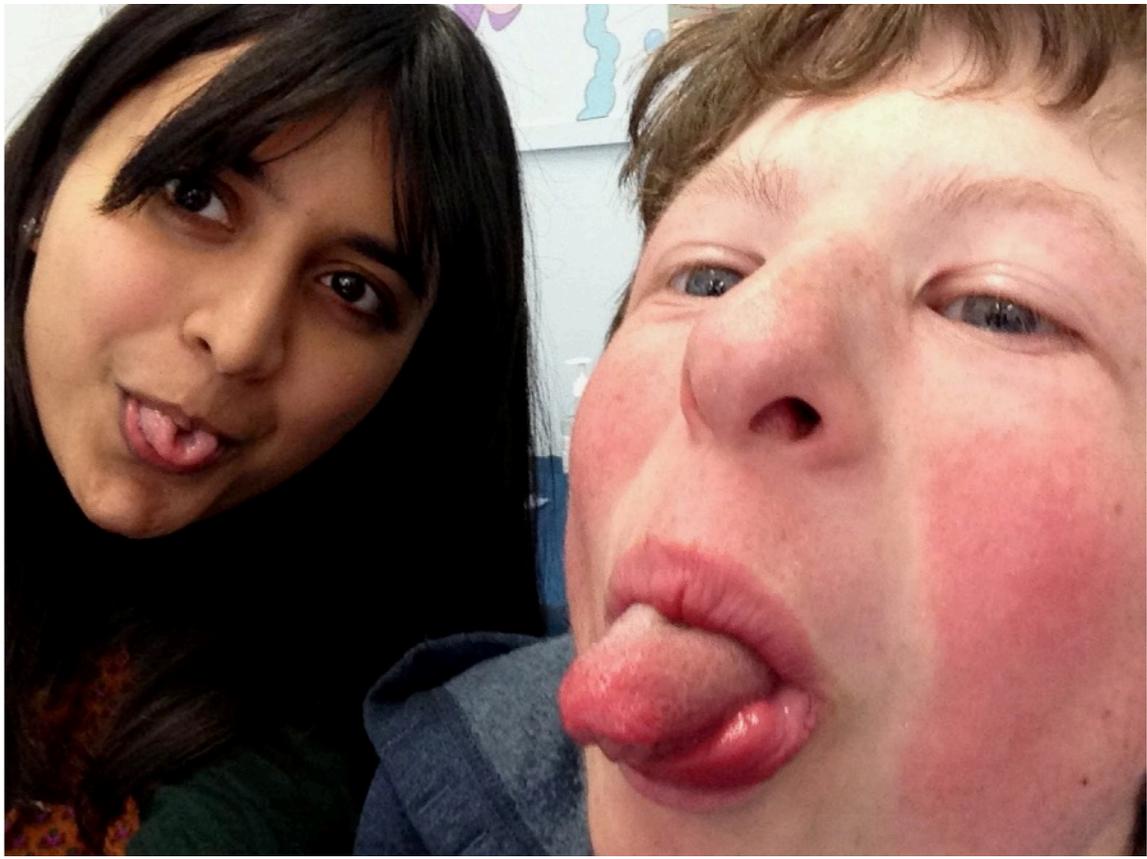
**PhD**  
2010-14

**AT THE CBCD**

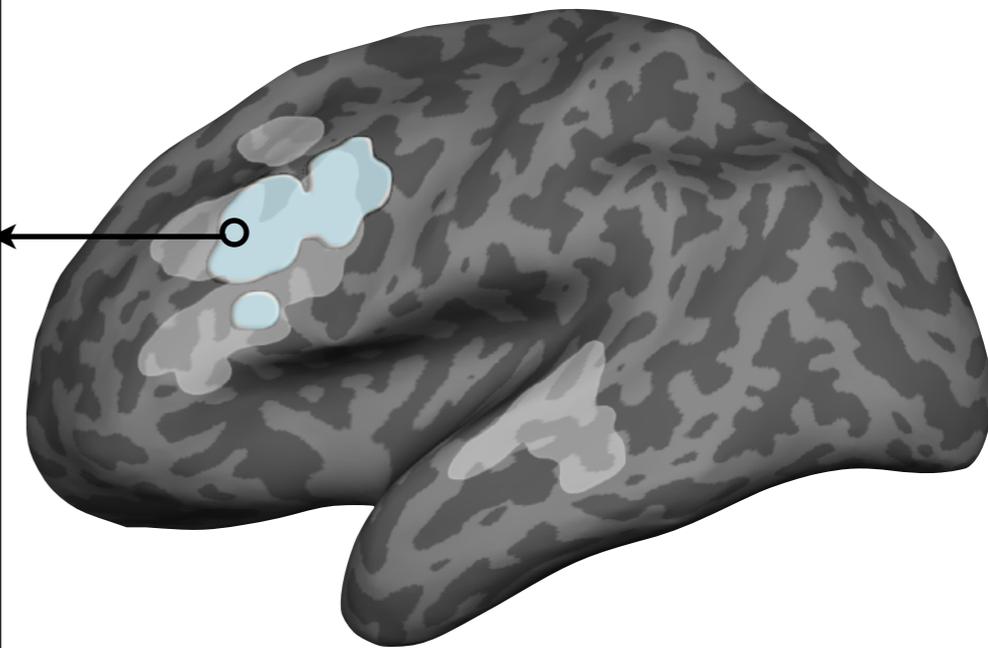
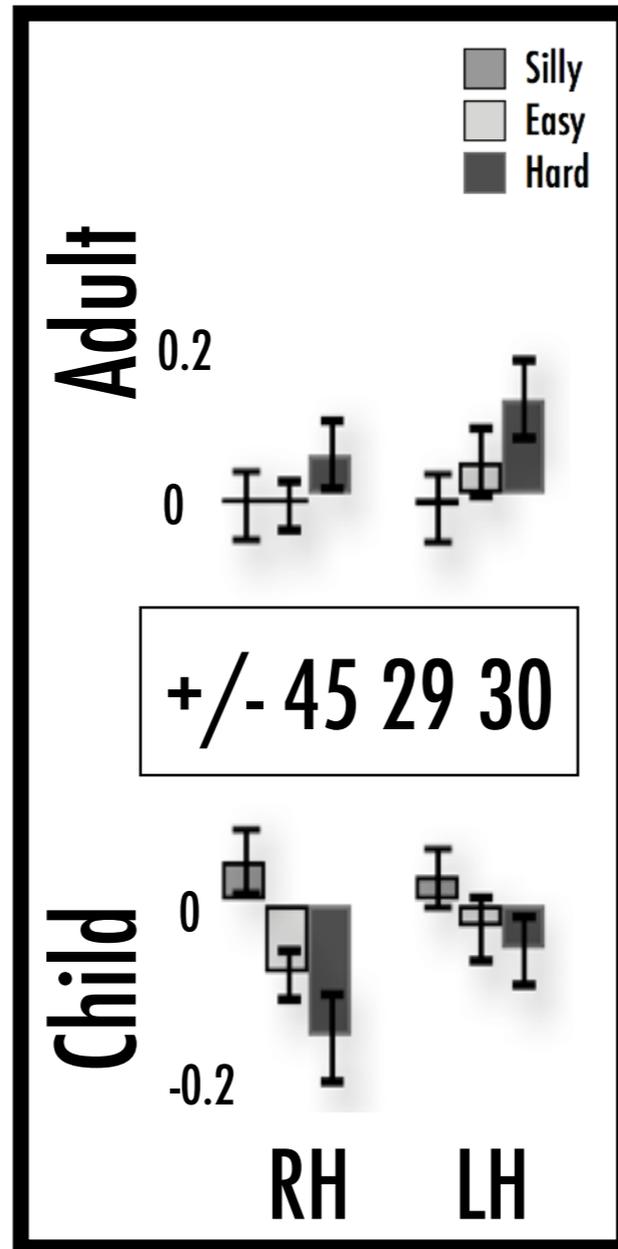
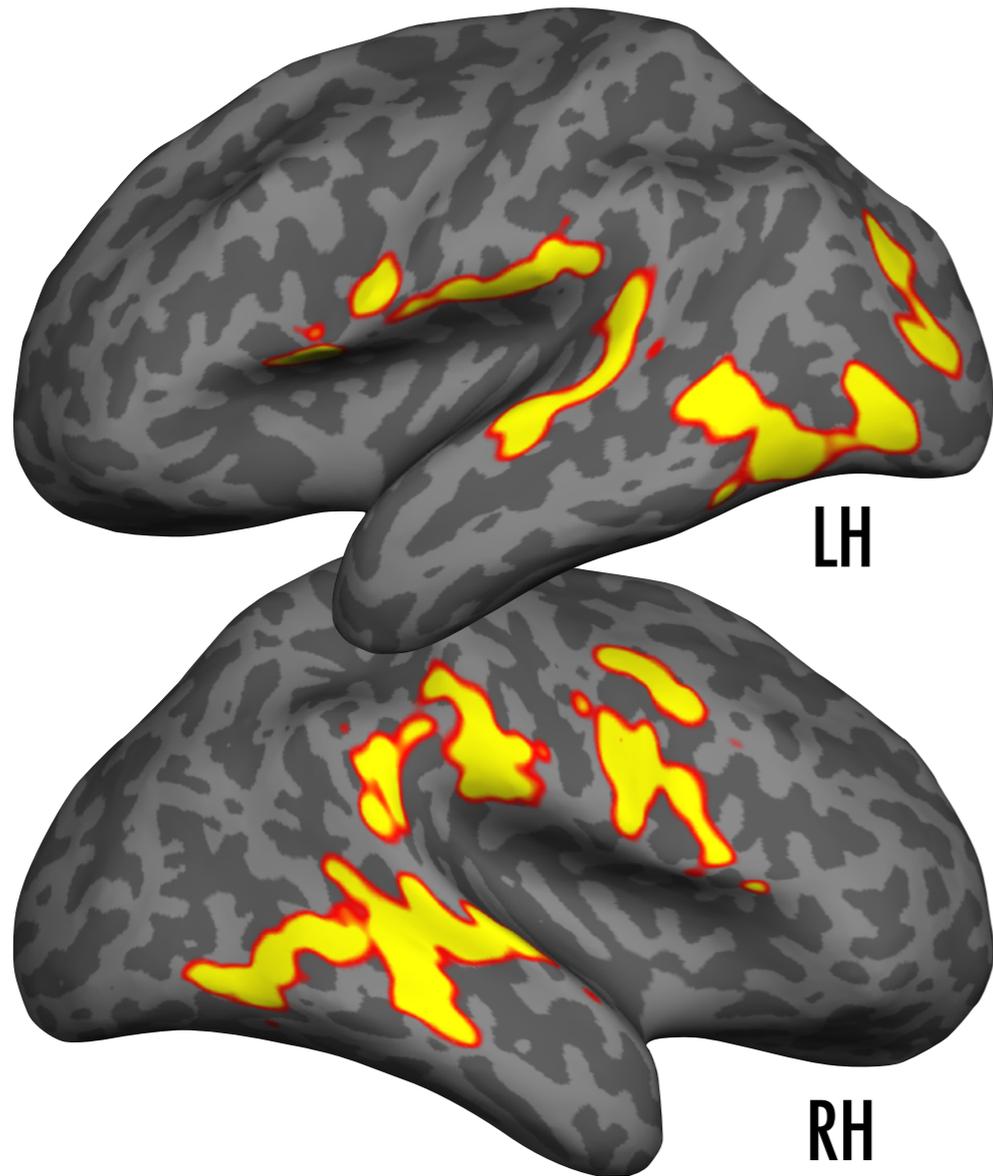




DRIMLEE



# Adult > Child



KRISHNAN ET AL., 2015,  
CEREBRAL CORTEX





LEAVING FOR A POSTDOC AT UCL  
[2014-15]

- Motor expertise leads to increased recruitment of sensorimotor regions
- Only for the genre that musicians can produce
- Generation of sensorimotor predictions?
- Again, **multiple ways that brains accomplish the same task**



KRISHNAN ET AL., 2018,  
CEREBRAL CORTEX

# POSTDOC AT OXFORD

[2015-19]

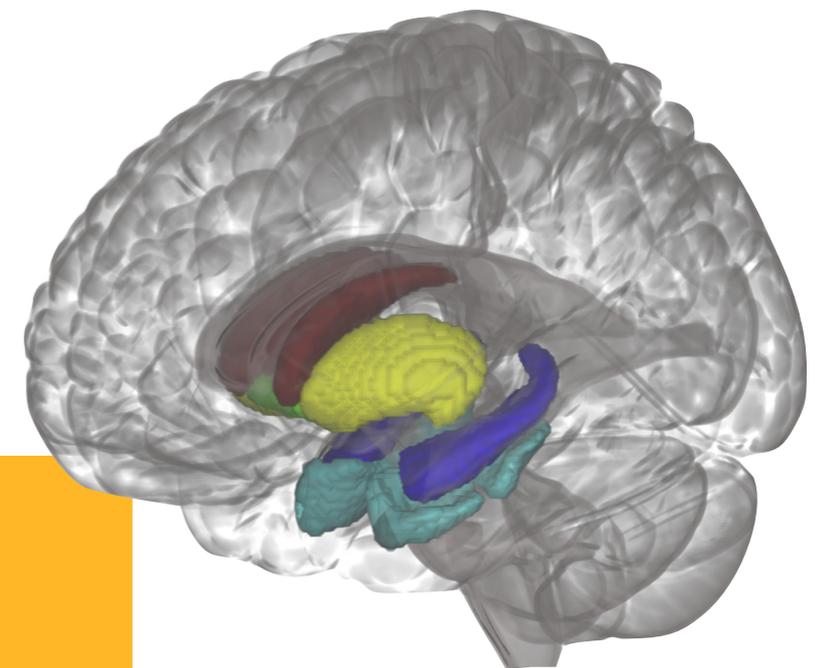
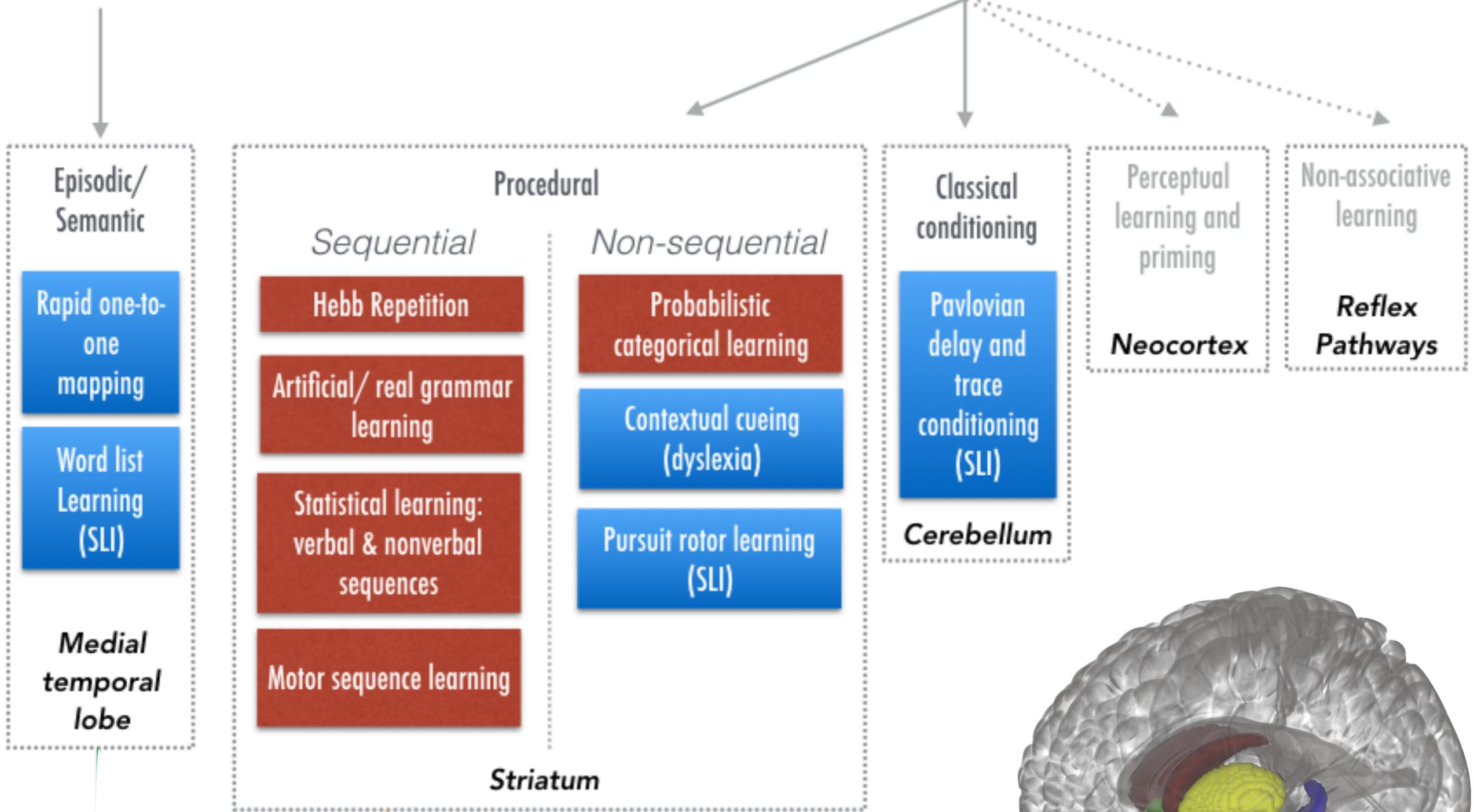


# BRAIN BASIS OF DEVELOPMENTAL LANGUAGE DISORDERS [DLD]

- Adult model from aphasia doesn't apply - DLD is not caused by gross lesions
- Inconsistent findings [few previous studies with limitations like small Ns]
- We need a theoretical basis for where and what to examine

# Declarative Learning

# Non-declarative Learning



KRISHNAN, WATKINS, & BISHOP, 2016  
TRENDS IN COGNITIVE SCIENCES

# THE BOLD STUDY - N = 160



## *Brain Organisation in Language Development*

MRC GRANT

KATE WATKINS & DOROTHY BISHOP

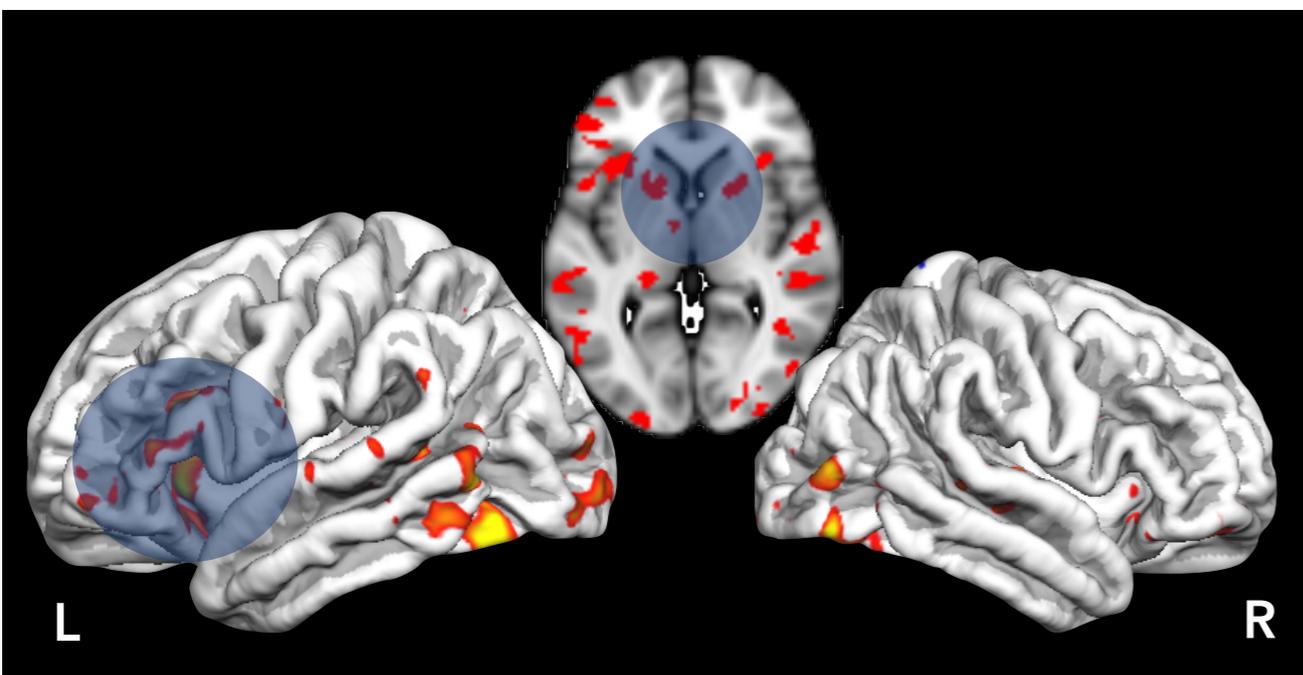
RESTING  
STATE

FMRI -  
WORD  
PRODUCTION

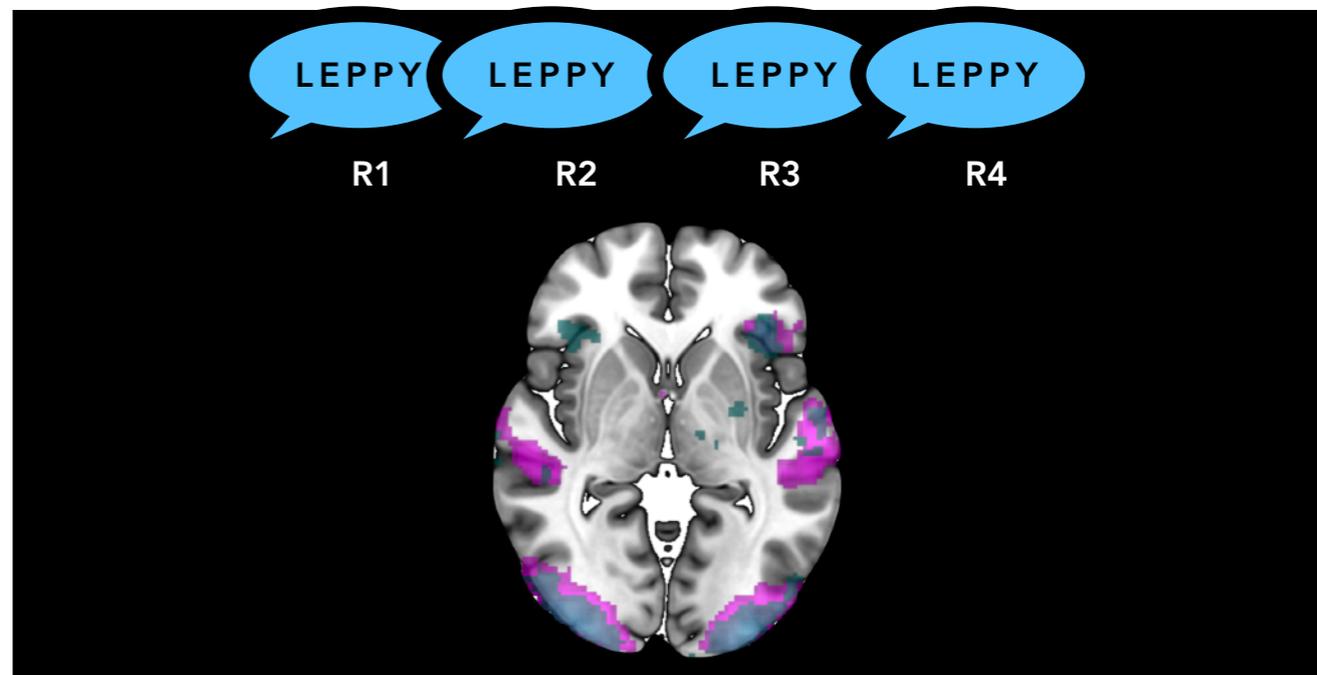
FMRI -  
WORD  
LEARNING

DIFFUSION

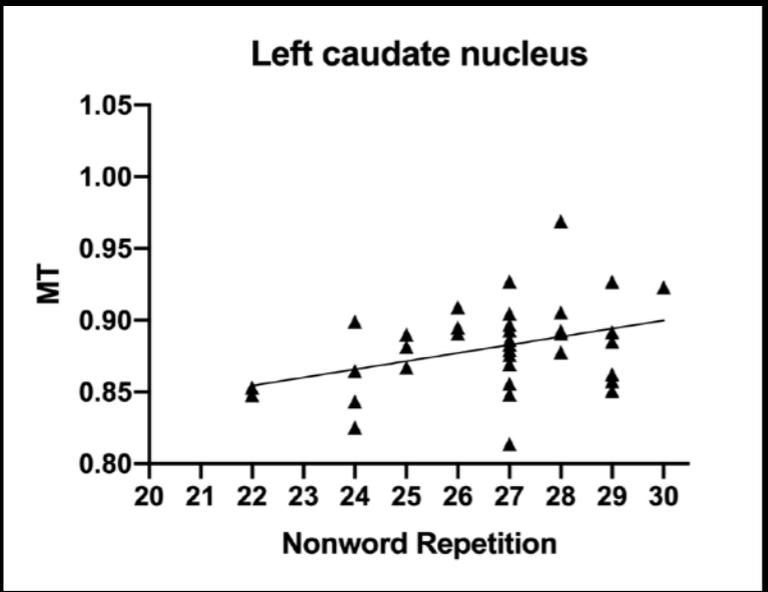
MPMS



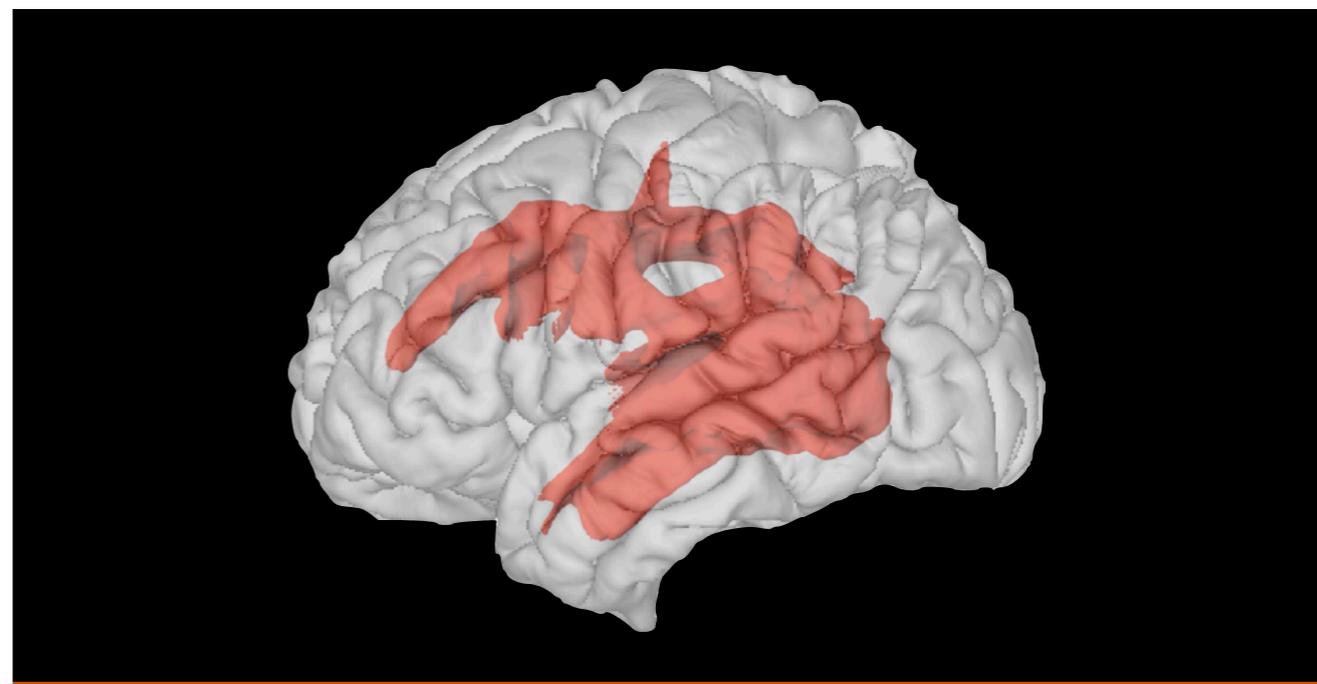
KRISHNAN, SMITH, WILLIS, BISHOP, & WATKINS,  
STAGE 1 REGISTERED REPORT, NEUROIMAGE



NONWORD LEARNING



MPMS



DTI

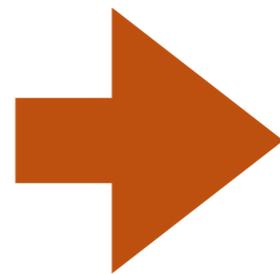


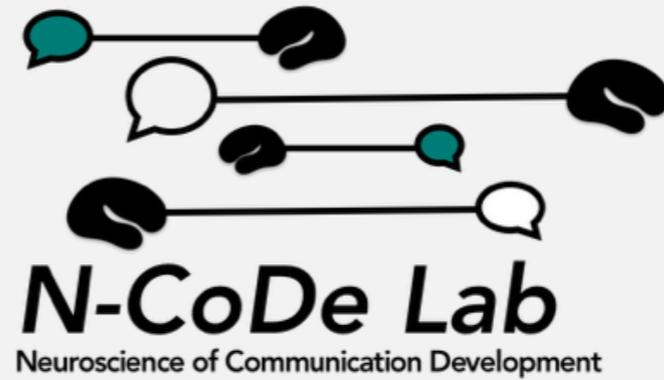


**LECTURER AT ROYAL HOLLOWAY**  
[2019 ONWARDS]

# WHY DO WE LEARN WORDS?

- How do intrinsic motivation and reward play into word learning?
  - Understanding and modeling motivation
  - Reward perception in adolescence
  - The role of curiosity in word memory





**SALONI.KRISHNAN@RHUL.AC.UK**

**TWITTER: @SALONIKRISHAN**

**NCODELAB.COM**

**JOBS**

***ESRC FUNDED PHD STUDENTSHIP***

***PART-TIME RA POSITION***