

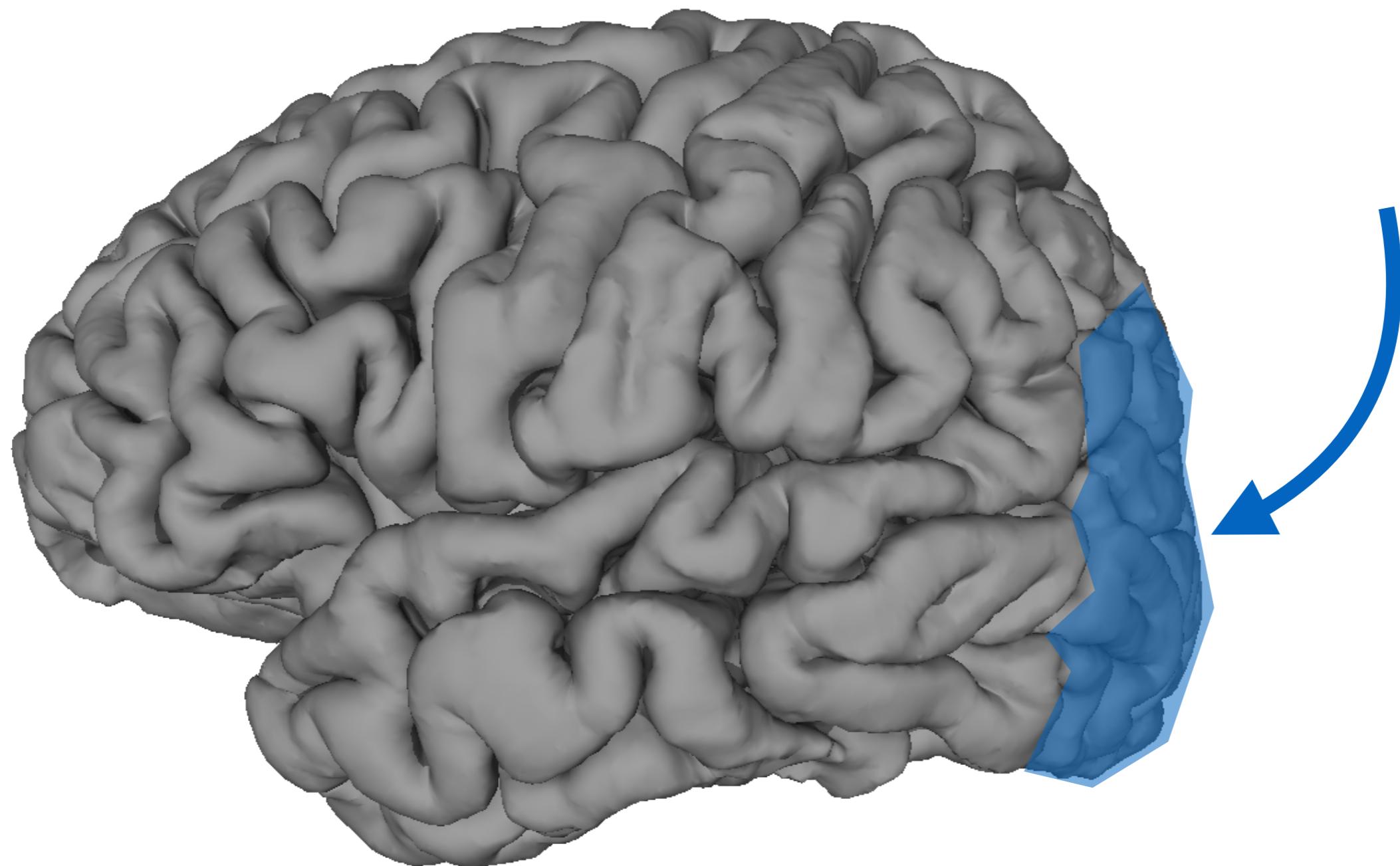
# MAPPING HUMAN CORTEX

Prof. Alexander Huth  
9.10.2020

# INFOGRAPHIC

- \* Your first **infographic** homework is due in 2 weeks (9/24)
- \* I'll be posting a short video demo shortly
- \* You can find all the info you need here:  
<https://github.com/alexhuth/cortex-fa2020/tree/master/infographic>

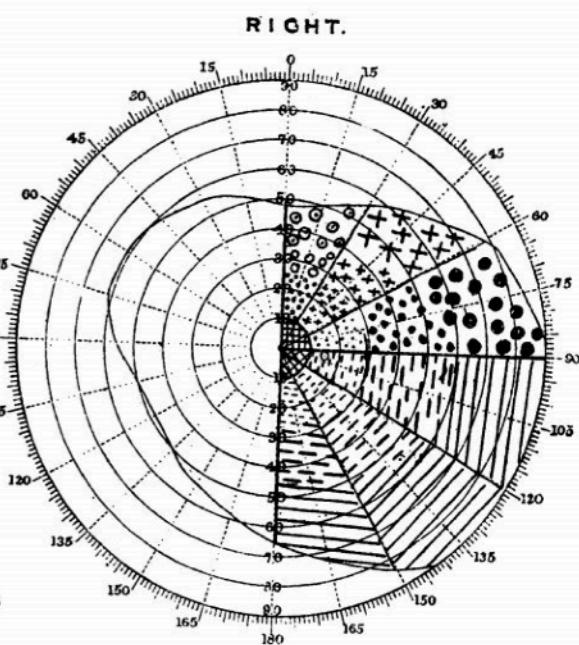
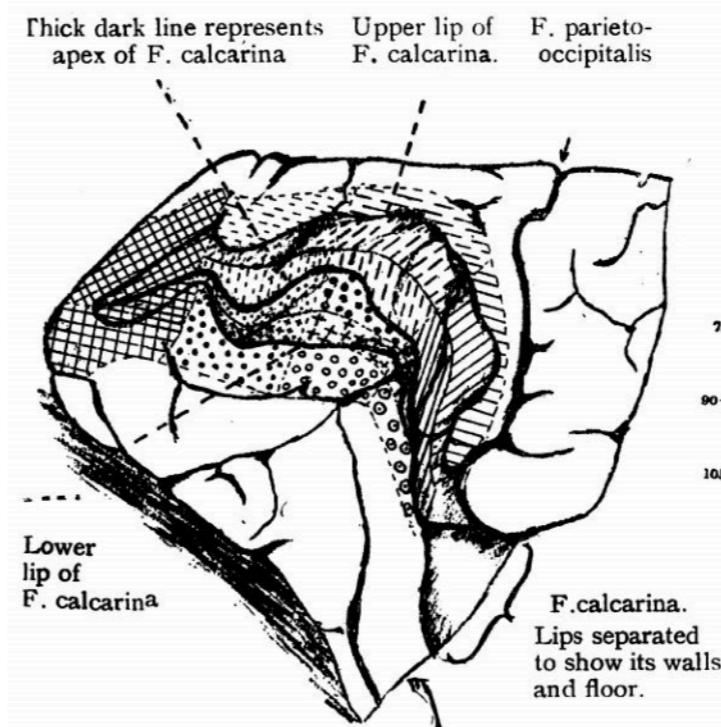
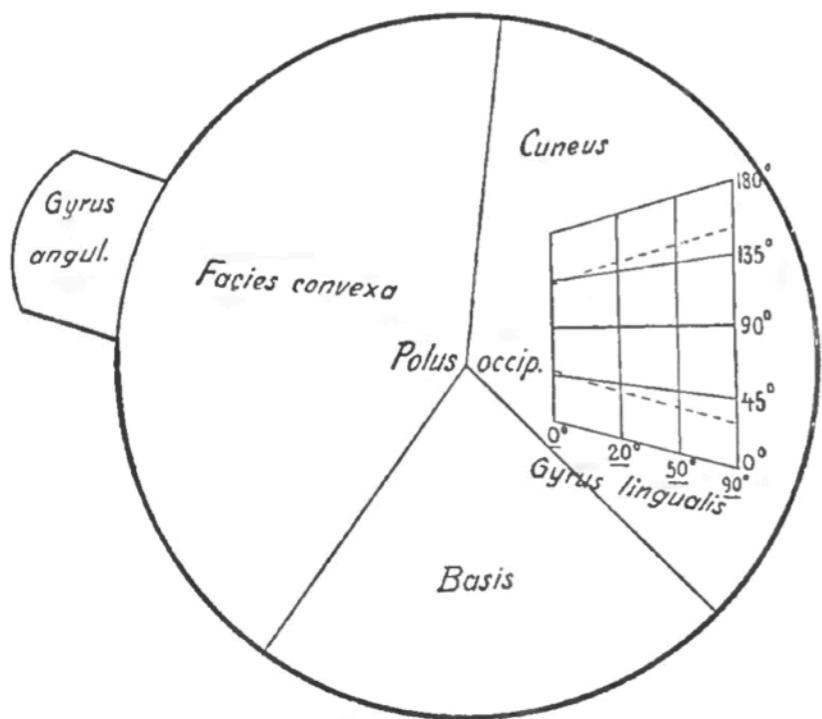
# VISUAL CORTEX



# RETINOTOPIC MAPS

Fig. 39.

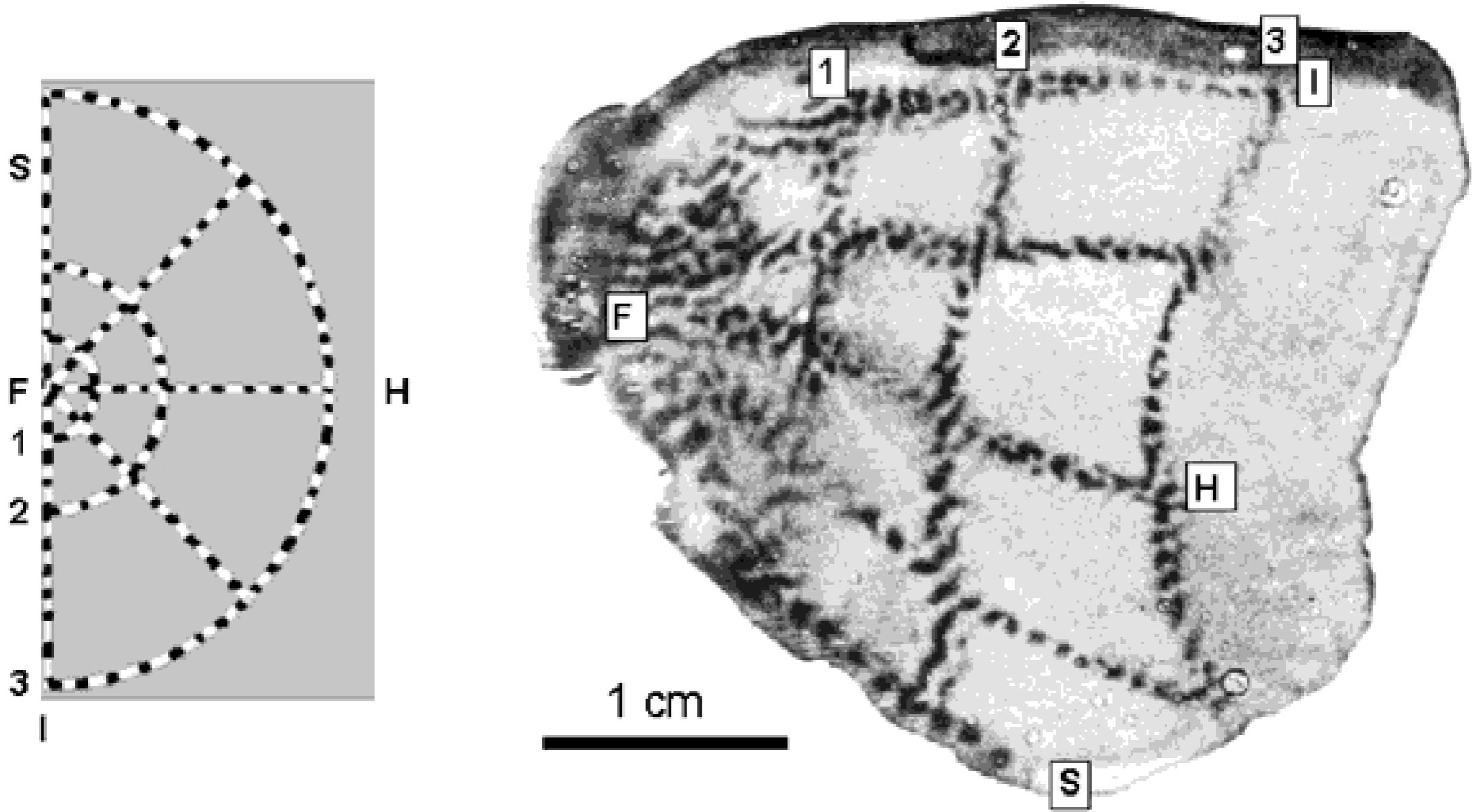
Flächenentreue Darstellung der linken Haupt- und Nebensehsphäre.



Tatsuji Inouye, 1909

Gordon Holmes, 1918

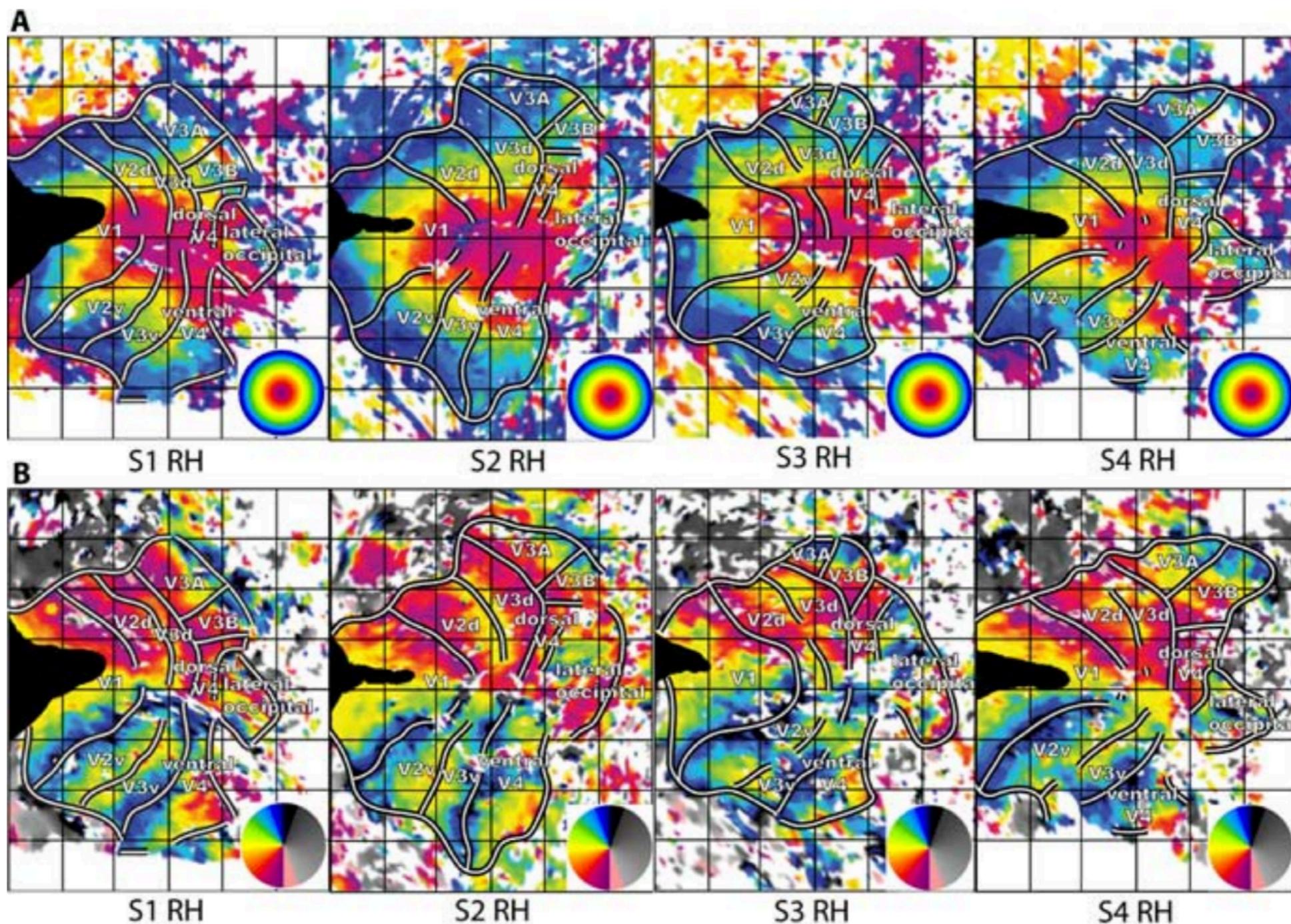
# RETINOTOPIC MAPS



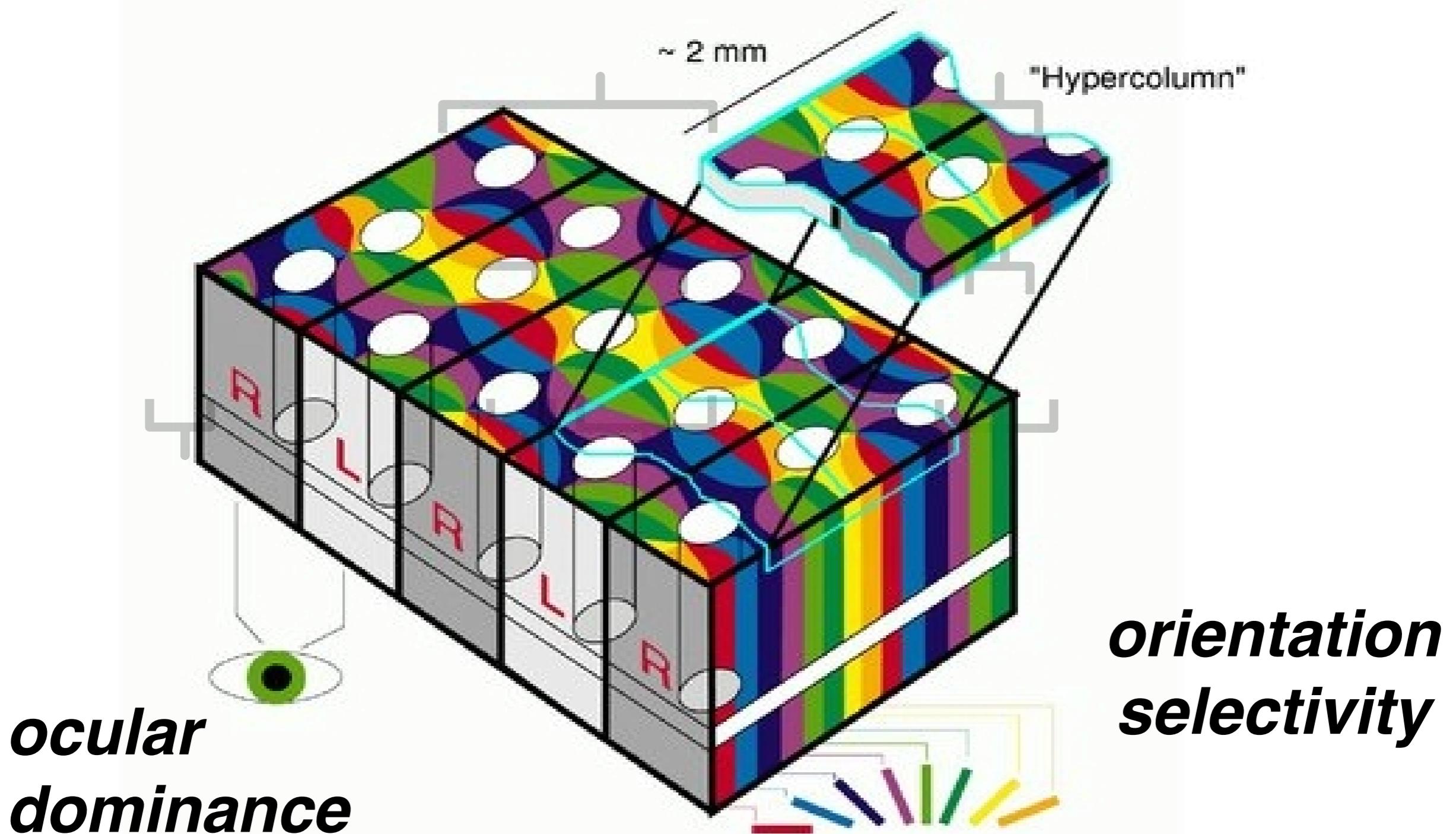
# RETINOTOPIC MAPS

[http://gallantlab.org/pycortex/retinotopy\\_demo/](http://gallantlab.org/pycortex/retinotopy_demo/)

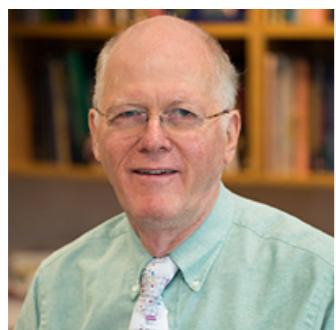
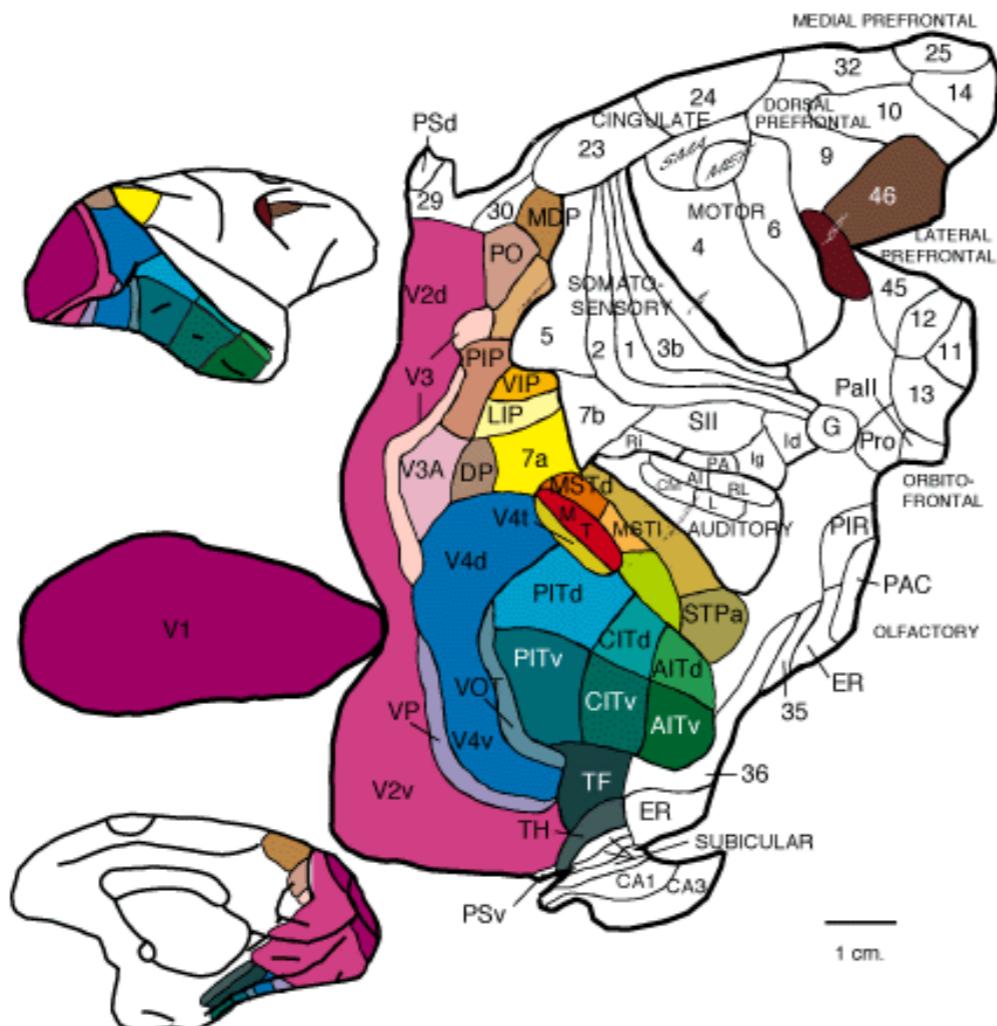
# RETINOTOPIC MAPS



# BEYOND RETINOTOPY

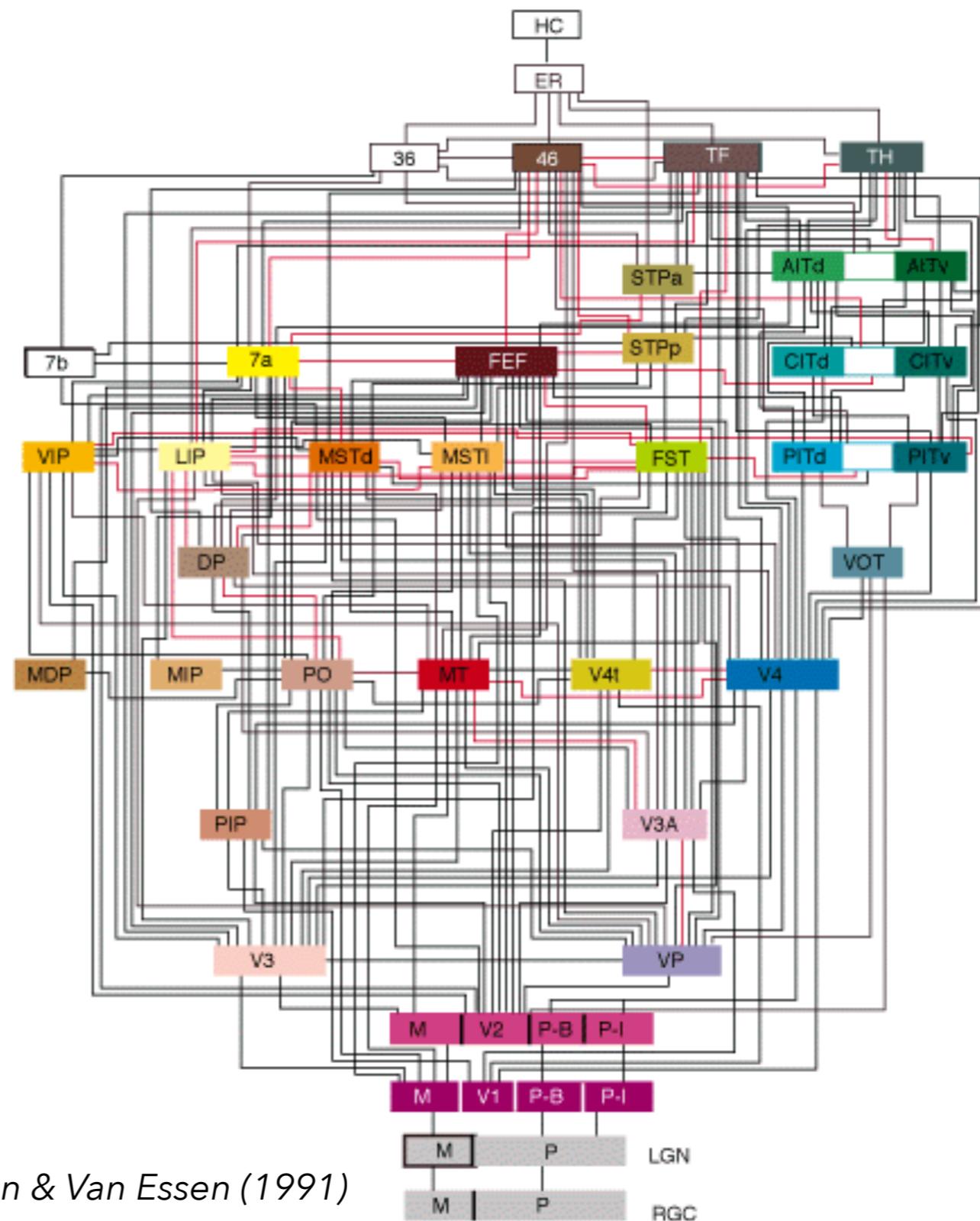


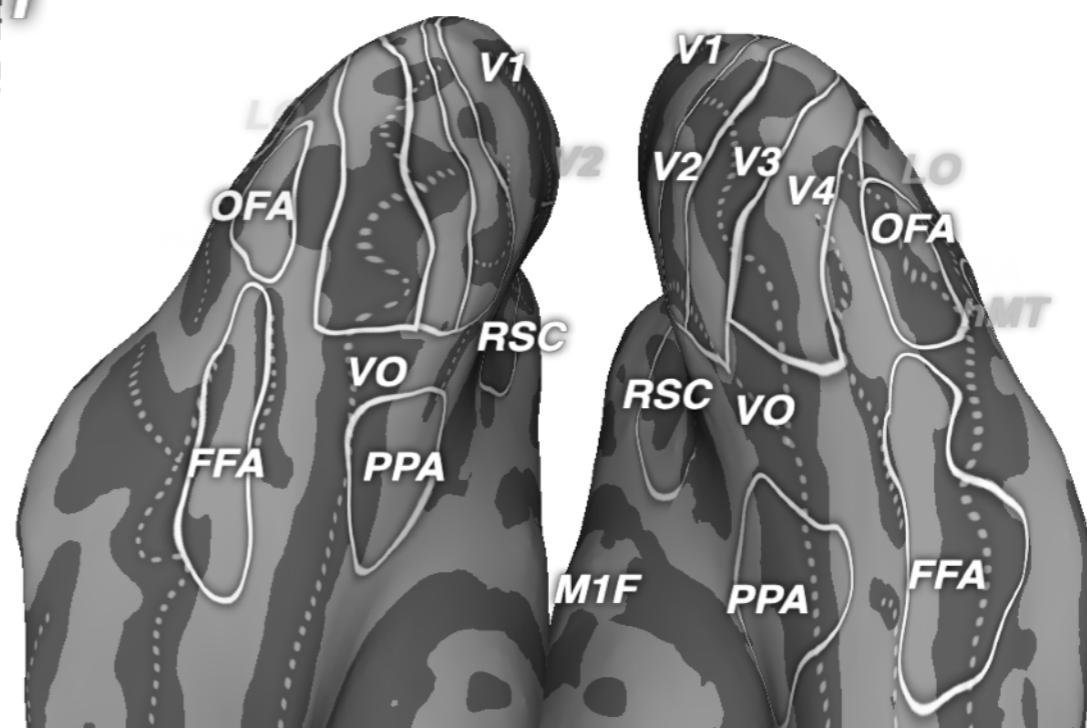
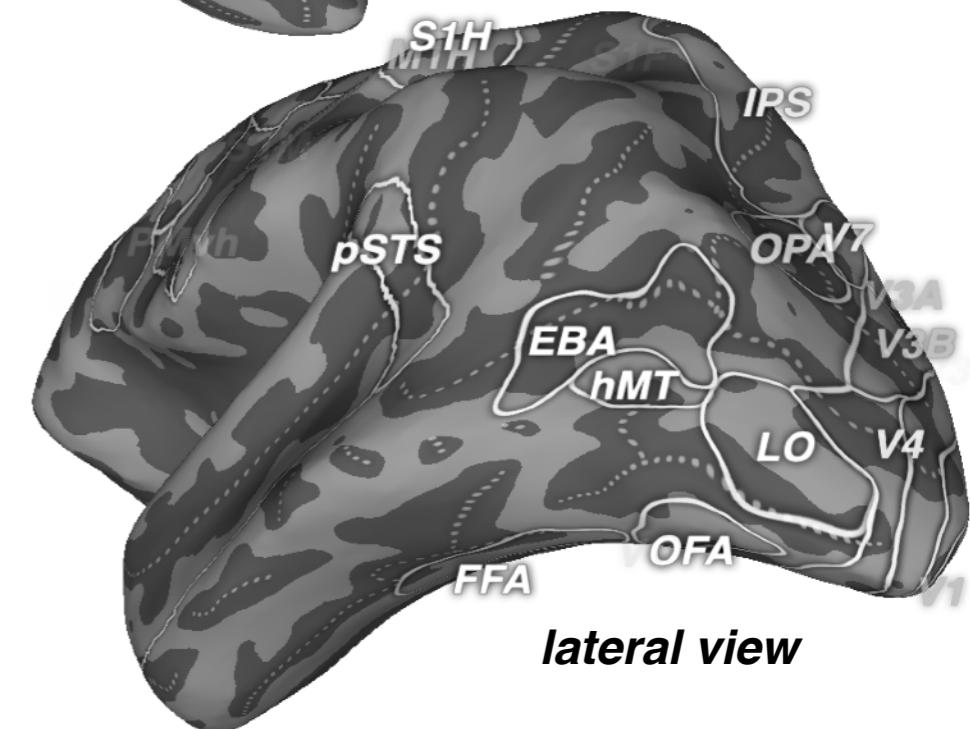
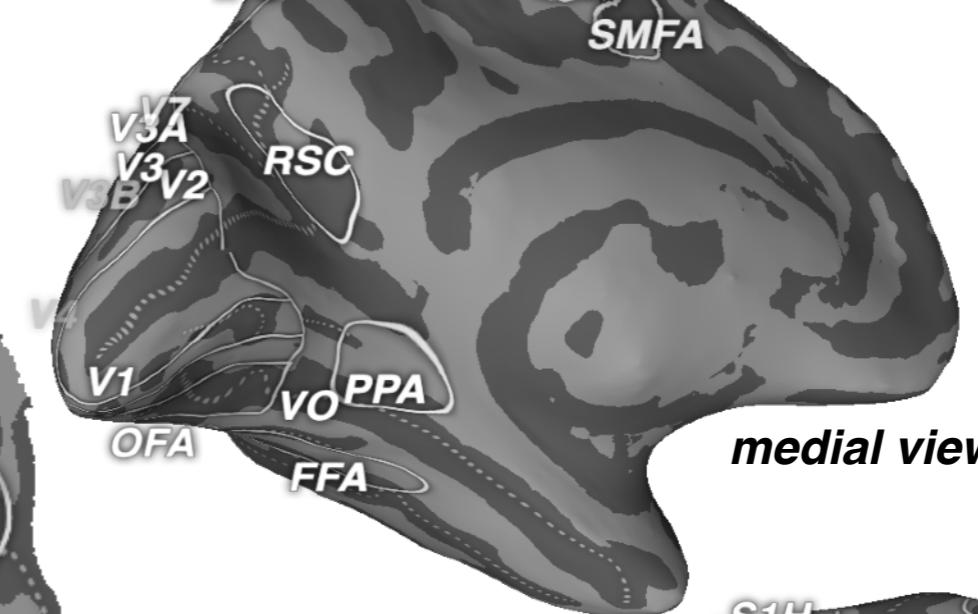
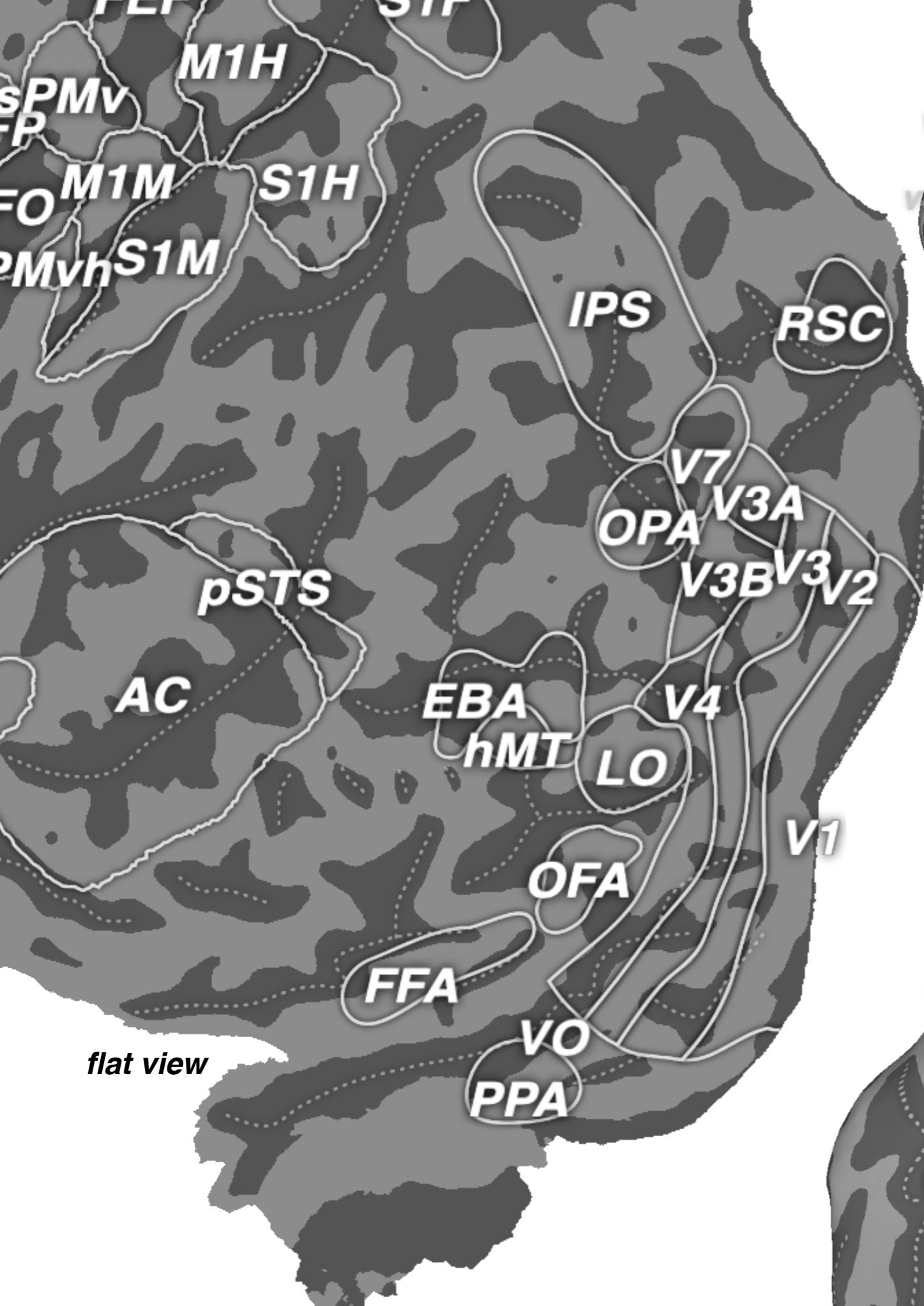
# VISUAL CORTEX AREAS



David Van  
Essen

Felleman & Van Essen (1991)



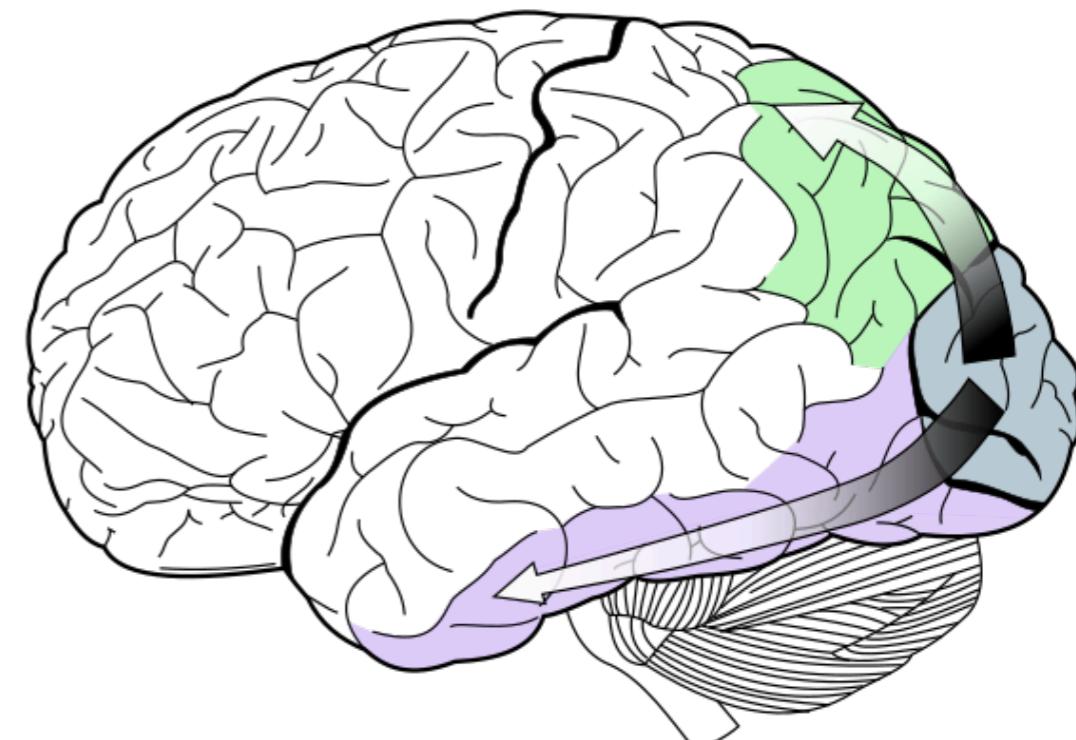


# DUAL STREAM THEORY

- \* Visual cortex comprises two processing “streams”:
  - \* **Dorsal stream** is the “where” pathway, represents position & sensorimotor transformation
  - \* **Ventral stream** is the “what” pathway, recognizes form

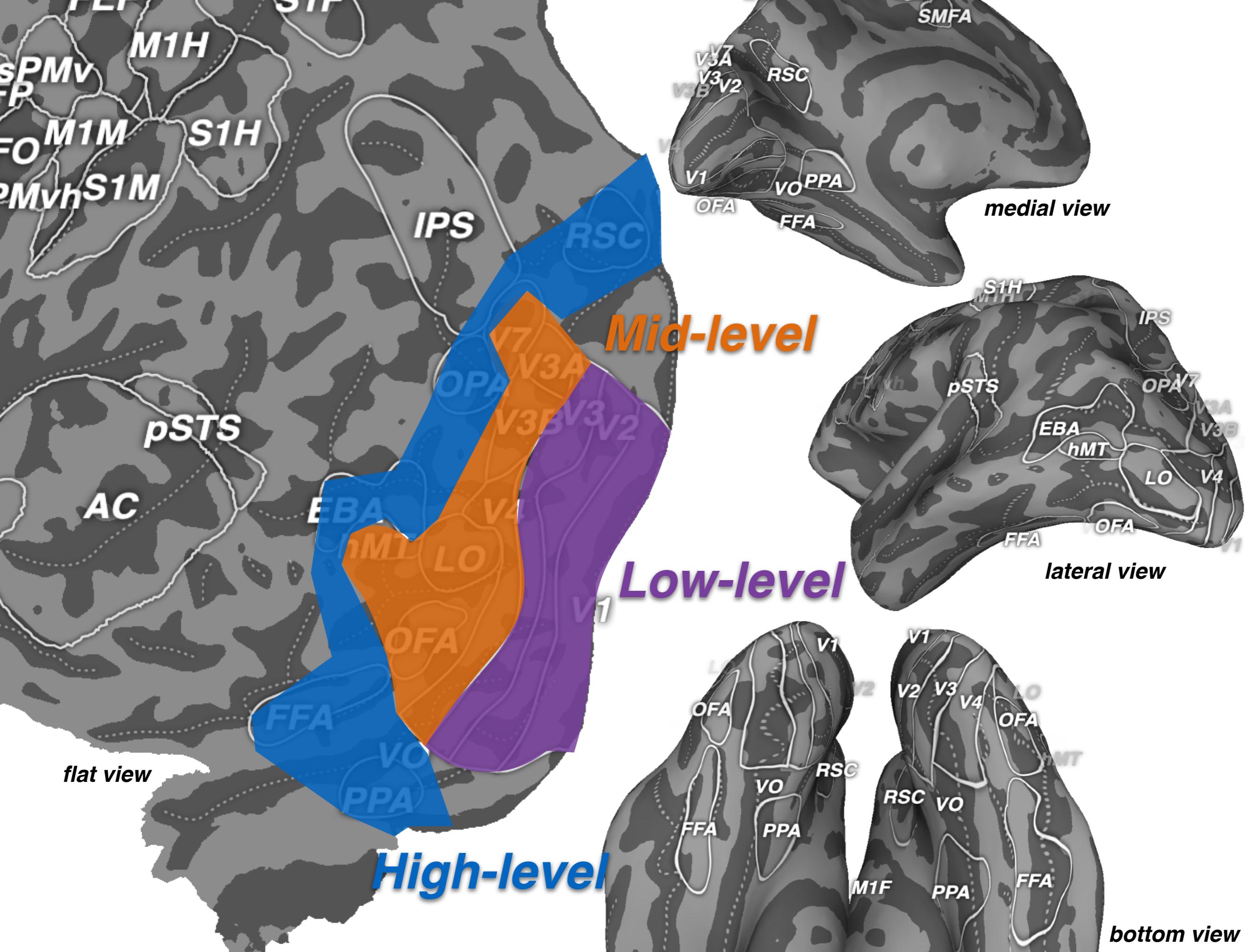


Leslie  
Ungerleider



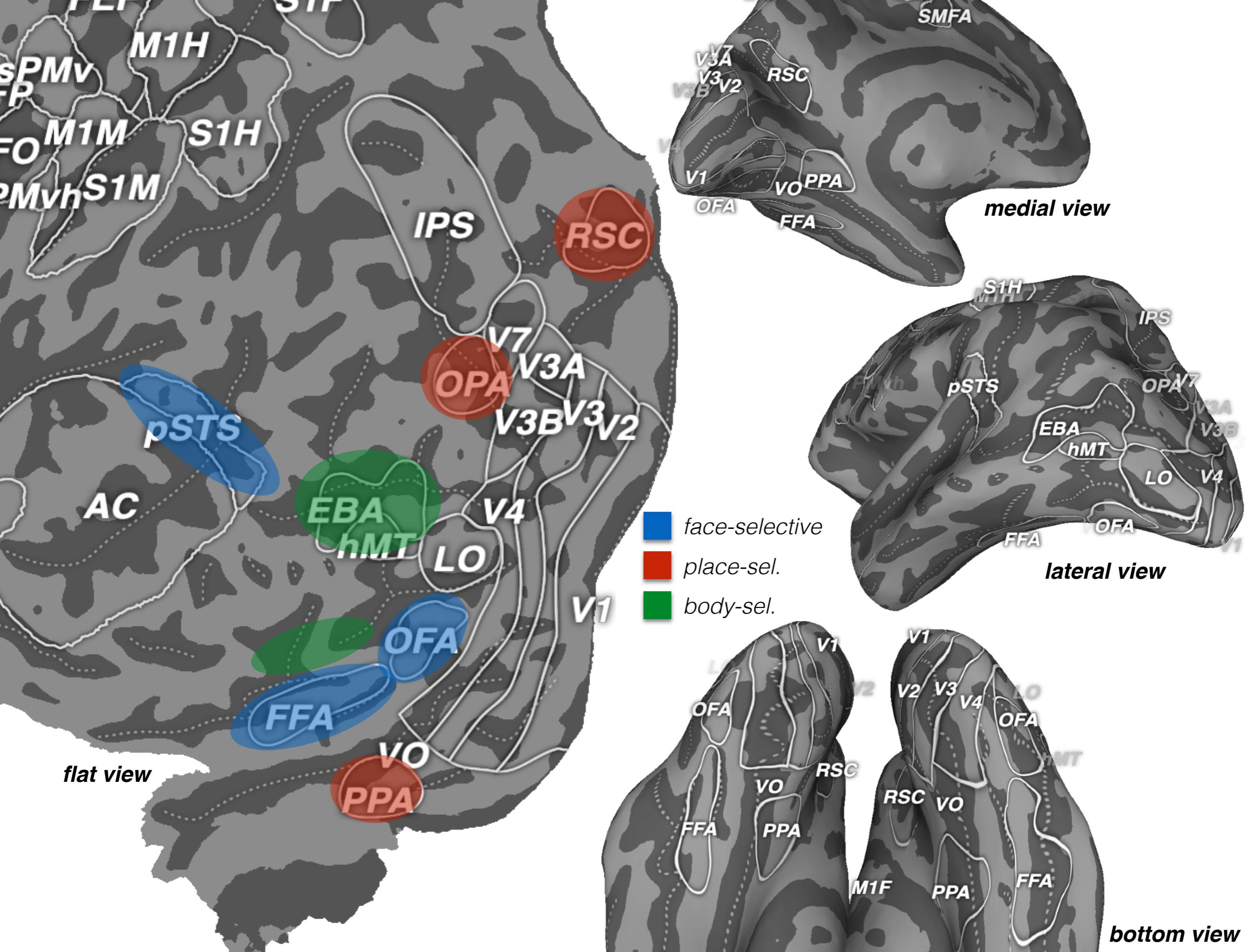
# VISUAL CORTEX AREAS

- \* Other ways to divide visual cortex:
  - \* **Retinotopic** areas ("low-level")
  - \* **Semantic** areas ("high-level")
- \* But there are things that don't fit neatly into this distinction!



# CATEGORY SELECTIVITY

- \* Many parts of anterior ("higher-level") visual cortex are **category-selective**
  - \* We call these areas **semantic** because they care about *meaning* more than *form*
- \* e.g. the **face areas** (FFA, OFA, etc.) and the **place areas** (PPA, OPA, RSC)



**UNTIL**

**NEXT**

**TIME**