MAPPING HUMAN CORTEX

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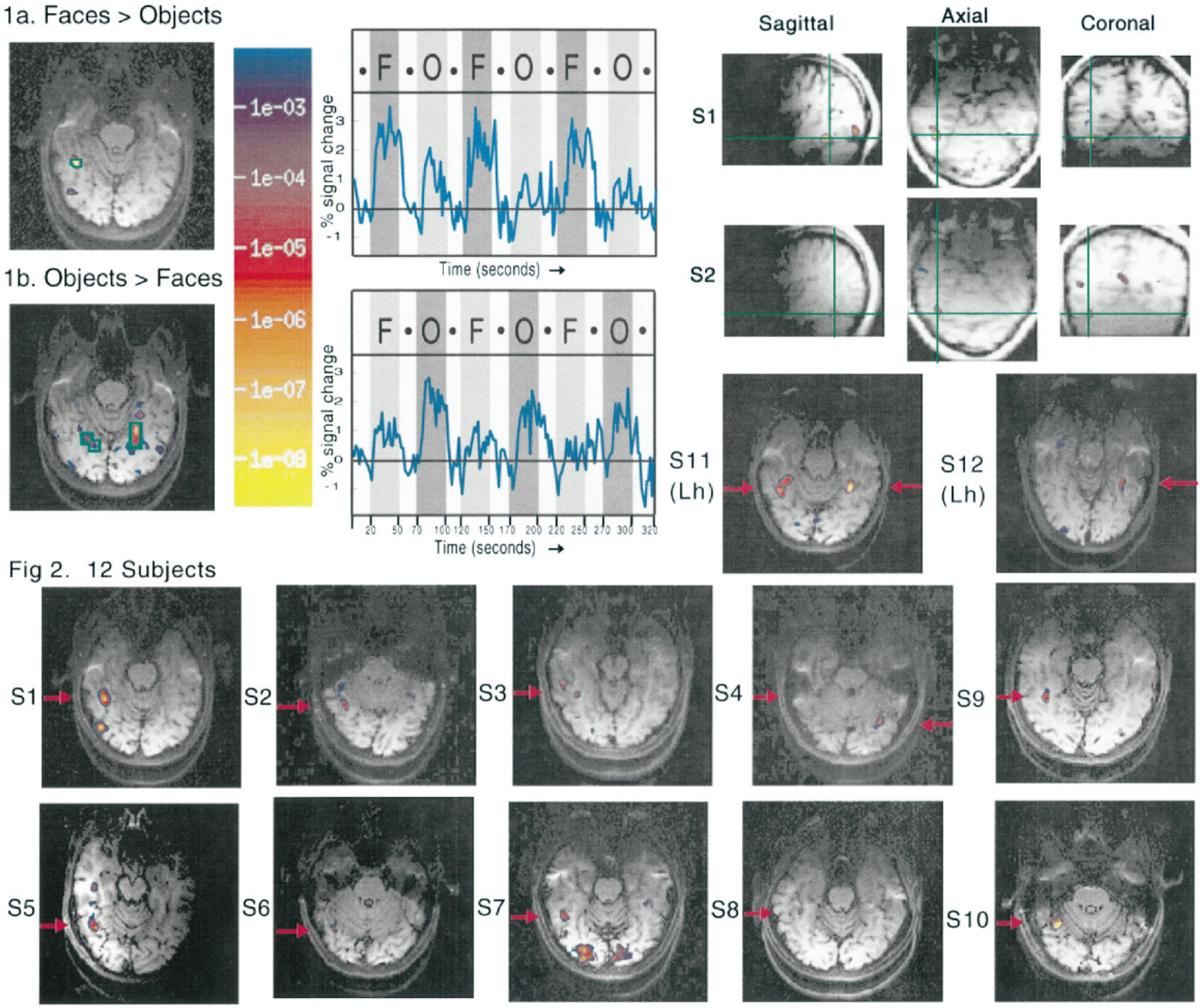
INFOGRAPHIC

* Your first **infographic** homework was due TODAY!

* *YOU'RE AMAZING*

Functional localizer for the fusiform face area



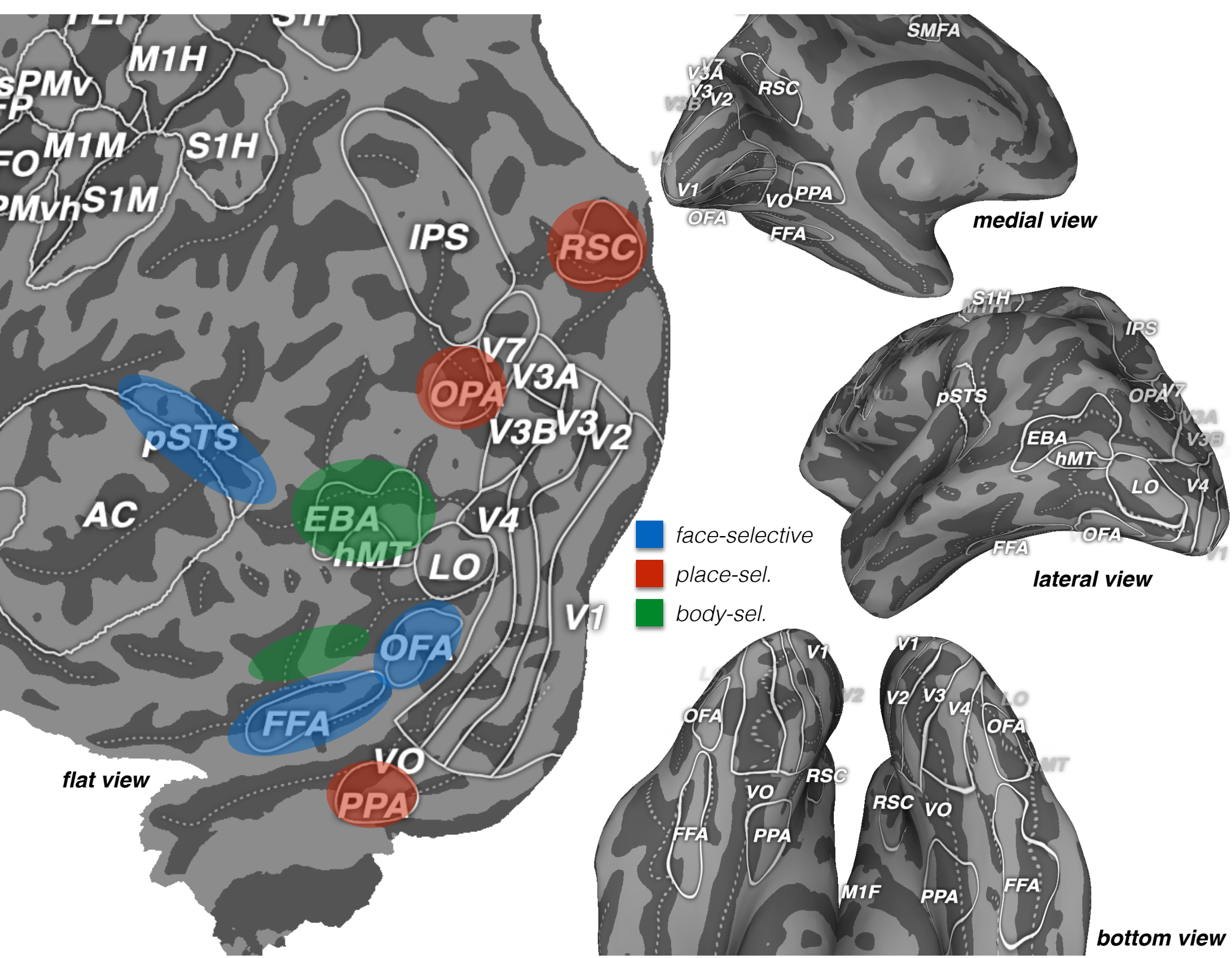
Kanwisher et al. 1997

LOCALIZATIONISM

* Do we believe that this area is actually specific to processing faces?
    * What is **special** about faces?
    * **Why faces** & not other categories of stimuli?

CATEGORY SELECTIVITY

* It's now accepted that 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)


M1H
sPMv
M1M
S1H
S1M
IPS
RSC
V7
V3A
OPA
V3B
V3
V2
pSTS
AC
EBA
hMT
V4
LO
V1
OFA
FFA
VO
PPA
face-selective
place-sel.
body-sel.
flat view
SMFA
V3A
V3
V2
RSC
V1
VO
PPA
OFA
FFA
medial view
S1H
IPS
pSTS
OPA
V7
V3A
V3B
EBA
hMT
LO
V4
FFA
OFA
lateral view
V1
V2
V3
V4
OFA
RSC
VO
PPA
FFA
M1F
bottom view

LIMITS OF DEDUCTION

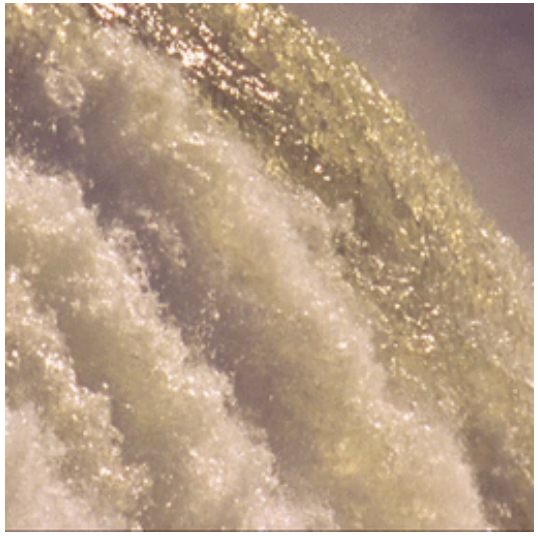
* Each experiment is designed to a small number of **hypotheses**
* What if truth doesn't clean map onto these hypotheses?
* What if the result doesn't generalize?

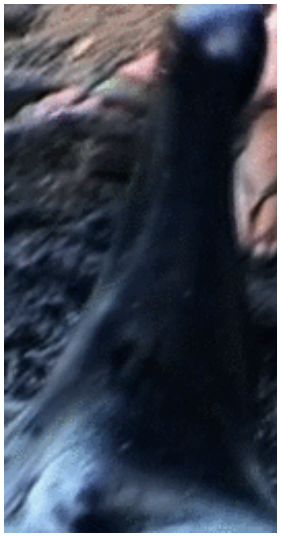
INDUCTIVE APPROACH

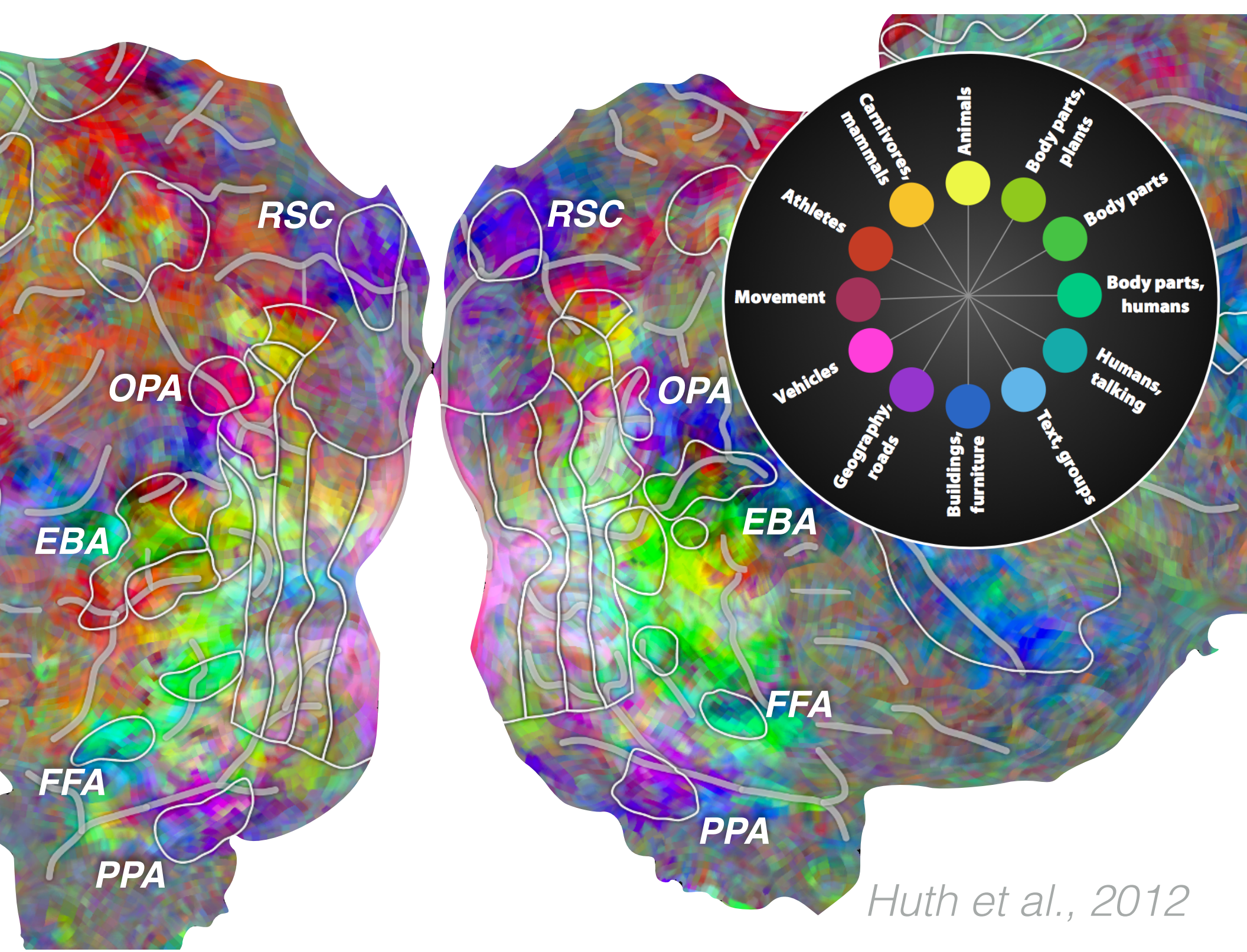
* **Measure** brain responses to a wide variety of stimuli
* **Build** model to predict responses based on stimuli
* **Test** whether model generalizes to different stimuli
* **Use** model to answer questions about brain

NATURAL STIMULI

horseman
horse
walk
road
spectator
mountain

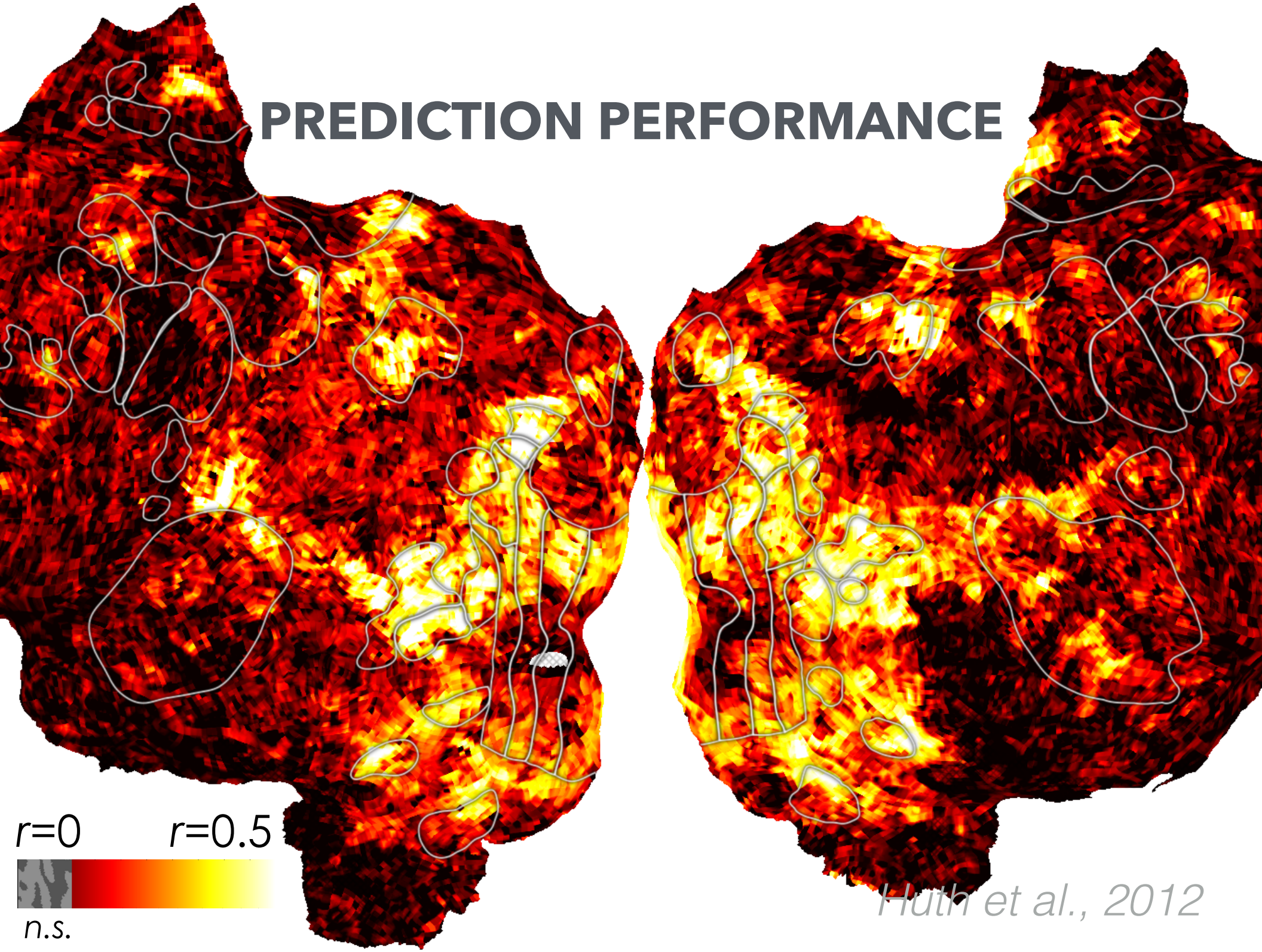






Huth et al., 2012

PREDICTION PERFORMANCE



Huth et al., 2012

UNTIL

NEXT

TIME