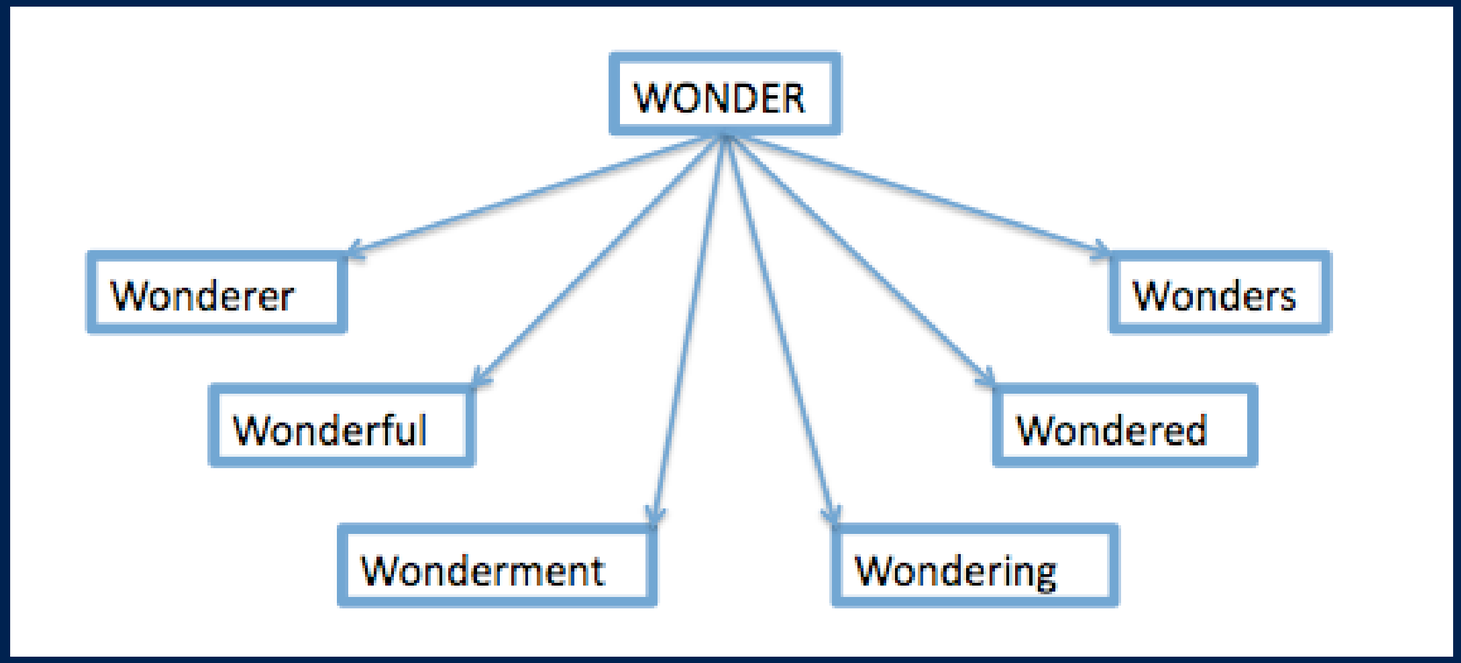
morphological priming with opaque and transparent words

paper by Sally Andrews, Steson Lo (2013)

Alex, Katarina, Riya, Tori



1

transparent pairs

worker WORK

2

opaque pairs

corner CORN

3

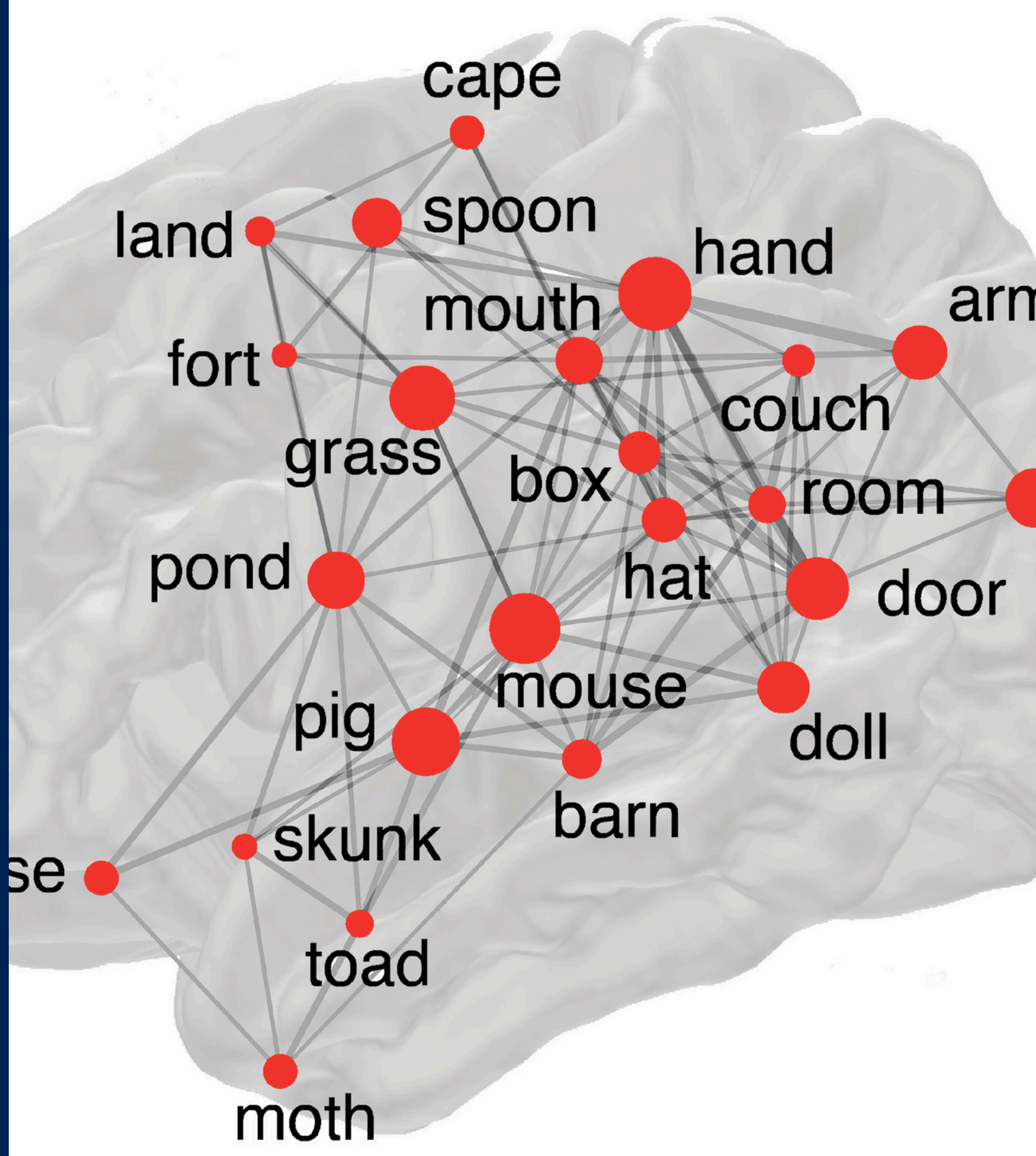
form pairs

turnip TURN

what is priming ?

how seeing one stimulus makes you respond differently to the next one

in this experiment: word associations



how is our mental lexicon organized ?

how does **morphology** influence meaning ?

are connections between words based more on:

- morphology + meaning ? (*worker, WORK)*
- ‘apparent’ morphology ? (*corner, CORN)*
- similar spellings ? (*turnip, TURN)*

method

100 native English-speaking university students (final N = 92 after exclusions).

vocabulary test (semantic),
spelling test,
a dictation test
a spelling recognition test

Masked lexical decision task
prime types: transparent
opaque or form.
Paired with either related or unrelated controls

90 word pairs (30 per condition)

90 nonword pairs
(to balance the design)

Possibilities

1. Transparent→ teacher–TEACH
2. Opaque→ corner–CORN
3. Form→ pulpit–PULP
4. Unrelated control→ garden-TEACH
5. Nonwords (related) → ploner-PLONE
6. Nonword (unrelated)→ flajed-RIDEL

example!

########

plane

PLANET

(then they decide wether it was a word or a non-word)

Results

- **Stronger priming for transparent pairs than for opaque pairs or form pairs**

  As seen in past research

- **Individual patterns emerge**

  Strong vocabulary (semantic) skills→ more priming for tranparent words

  Strong spelling skills→ similar or stronger pairing for opaque words too.

  Morphological priming depends on reading profile→ more reliance on orthographic vs semantic processing.

Implementation plan

Stimuli, global settings

- present forward mask (#######) 500 ms
- present prime stimulus 50 ms
- present target word 500 ms
- wait for key press

Trial structure, counterbalancing

- 180 trials: 90 word targets, 90 non-word targets
- Each target appears equally often in each condition
- Trial order is randomized

What we record

- participant ID
- prime, target
- condition type
- reaction time
- response key
- accuracy

Potential issues

- High error or anticipatory responses
- Order of stimuli affects the decision of the subject

Thank you!