Aims

- Fine-grained investigation of concreteness in verb-noun subcategorisation
- Comparison of computational evidence and cognitive evidence
- Zoom in on concreteness scores of verbs and nouns subcategorised as:
  - Subjects
  - Direct Objects
  - Prepositional Objects

Concrete vs. Abstract Words

- Previous computational results:
  - Concrete words co-occur mainly with concrete contexts
  - Abstract words co-occur mainly with abstract contexts
  - Not fully in line with Embodied Theories of Cognition (Barsalou, 1999):
    - ✓ Concrete Words
    - ✗ Abstract Words

Subjects (active clauses)

Nouns vs. Verbs

- Nouns: 3.9 ± 1.6
  - belief, vs. belief
- Verbs: 3.4 ± 1.1
  - moralise, vs. sit

Materials

- Human concreteness scores (Brysbaert et al., 2014)
  - 1=abstract - 5=concrete
- Abstract words
- Corpus: parsed version of the ENCOW16AX (9.5B words)
- 11.7M verb-noun token pairs (3.8M abstract verbs, 7.9M concrete verbs)

Prepositional Objects

1. Concrete Verbs and Nouns (e.g., “in”)
   - write in book
   - sleep in bed
   - Exceptions: idiomatic structures
     - carry in accordance
     - carry in manner

2. Abstract Verbs and Nouns (e.g., “for”)
   - need for purpose
   - imagine for moment
   - Exceptions: metonymic reading
     - write for magazine
     - run for office

3. Concrete and Abstract Verbs and Nouns (e.g., “on”)
   - sit on bench
   - base on expectation
   - depend on extent

Take Home Message

- Concrete verbs predominantly subcategorise concrete nouns as subjects and direct objects
- Abstract verbs predominantly subcategorise abstract nouns as subjects and direct objects
- 3 main patterns for prepositions: main concrete, main abstract, mixed
- Exceptions → semantic effects in verb-noun interaction: collocations, metaphors and metonyms