How universal are prominence hierarchies? Evidence from native English speakers

Prominence Hierarchies

- What are they? Rankings of nouns in a sentence by how likely they are to fulfill the agent/patient semantic roles [1].
- Explanatory power: Account for linguistic phenomena such as inverse-ness and split ergativity [1][2].
- Common patterns:
  - Pronouns outrank other nouns [1].
  - First and second person outrank third person [1].
  - Animate entities outrank inanimates [1].
- How do they arise? Explanations often appeal to cognitive biases or functional constraints, e.g. cognitive accessibility [3] or naturalness of viewpoint [4].

Prominence Hierarchies and Cognition

Hypothesis:
If prominence hierarchies arise from cognitive biases or functional constraints, it is possible that they may still be represented in the minds of speakers of languages that do not explicitly encode them in their grammar.

Research Question:
Do speakers of such a language still perceive higher-ranking nouns to be more likely agents than lower-ranking nouns?

This study:
- Looks at the first person, second person > third person ranking.
- Looks at native speakers of English, a language not known to explicitly encode this ranking in its grammar.

Methodology

Participants
- 53 native speakers of English

Stimuli and Design
- 24 target sentences constructed in the following way:
  - 24 verbs with clearly agentive subjects.
  - 8 case-matched pairs of first and third person pronouns:
    - Latin-square design matching each verb with one of the 8 pairs of pronouns to produce a pseudo-sentence of the form:
    - BANDAGED I HE
    - ASSASSINATED HER ME
    - SLAPPED SHE I
    - Balanced so that each pronoun pair appears 3 times in these sentences.
    - 36 filler sentences.

Task
- Online experiment.
- Participants presented with the 60 sentences (24 target and 36 filler) and asked to determine which of the two nouns is the ‘doer’ (i.e. agent) in each sentence.

Results

- Participants interpreted the first person pronoun as the ‘doer’ (agent) more often than the third person pronoun in both the nominative and accusative case;
- and both when the pronoun was immediately after the verb (Position 1) or at the end of the sentence (Position 2).

- The location of the first person pronoun in the sentence had a significant effect on which pronoun was picked as the ‘doer’ ($\chi^2(1) = 75.79, p < 0.001$).

Discussion and Conclusions

- This study shows that English speakers implicitly assume that a first person event participant is more likely to be an agent than a third person participant.
- Suggests that native speakers of English are indeed sensitive to prominence distinctions between first and third person.
- This is consistent with the claim that prominence hierarchies are represented in the minds of speakers of all languages.
- Further research is needed to investigate the exact nature of these mental representations, how they are acquired, and what other effects they may have on language processing and production.

References