How universal are prominence hierarchies? Evidence from native English speakers

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The term prominence hierarchy has been used to refer to a ranking of nouns by how likely they are to fulfil the agent or patient semantic role in a sentence. Prominence hierarchies have been used to explain a variety of linguistic phenomena such as split ergativity and inverseness (see Lockwood & Macaulay, 2012, for an overview). In general, explanations for prominence hierarchies tend to involve functional constraints or cognitive biases (Lockwood & Macaulay, 2012), and as these accounts generally aim to explain crosslinguistic similarities in the hierarchies, the factors that these explanations rely on tend to be non-language-specific, such as the cognitive accessibility of referents (Bickel & Nichols, 2007) or how natural it is to imagine the event from the viewpoint of one of the referents (DeLancey, 1981). This raises an intriguing possibility: that prominence hierarchies are represented in the minds of speakers of all languages, even if their language does not explicitly encode prominence in its grammar.

The aim of the present study was to investigate this possibility. We test native English speakers, and target the difference between first and third person. Previous crosslinguistic research suggests the first and second person consistently rank above the third person in prominence hierarchies (Lockwood & Macaulay, 2012); a relation which is not explicitly encoded in the grammar of English. In the experiment, participants (N=53) were presented with a past-tense sentence of the form verb-pronoun-pronoun, with one pronoun in the first person and the other in the third person (matched for case, e.g., 'HIT SHE I', 'LEFT HIM ME'). They were asked to determine which of the pronouns was the 'doer' of the action.

The results, shown in Fig. 1, show that 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). Likelihood ratio testing confirmed that this result was

Fig. 1 Grammatical person of pronoun picked as 'doer'

statistically significant – the location of the first person pronoun in the sentence had a significant effect on which pronoun was picked as the 'doer' ($\chi^2(1) = 75.79$, $p < 0.0001$). This preference for first person as 'doer' was also influenced by case.
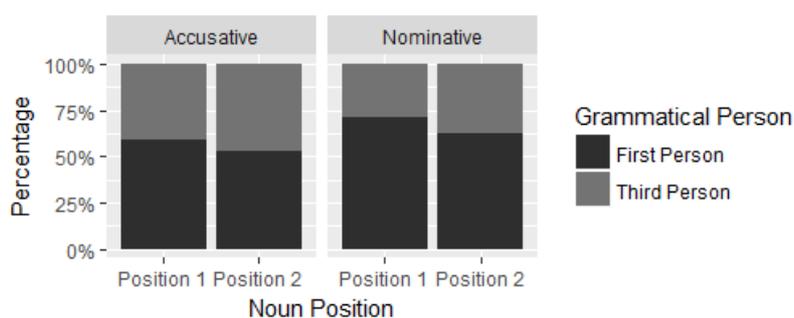
These findings suggest that native speakers of English are indeed sensitive to prominence distinctions between first and third person, even though English does not explicitly encode this relation in its grammar. In other words, English speakers implicitly assume that a first person event participant is more likely to be an agent than a third person participant. This is consistent with the claim that prominence hierarchies are represented in the minds of speakers of all languages. The exact nature of these mental representations, how they are acquired, and what other effects they may have on language processing and production, are matters for further research.

Bickel, B., & Nichols, J. (2007). Inflectional morphology. *Language Typology and Syntactic Description*, *3*(2), 169–240.
DeLancey, S. (1981). An Interpretation of Split Ergativity and Related Patterns. *Language*, *57*(3), 626–657.
Lockwood, H. T., & Macaulay, M. (2012). Prominence Hierarchies. *Language and Linguistics Compass*, *6*(7), 431–446.