Conditions on nuclear accent placement in English: Intuitions and production
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This study examines the production of nuclear accent (NA) in English and investigates intuitions about NA placement in an utterance. Native speaker results are reported here with the ultimate goal of investigating how they compare to L2 speakers to better understand the trajectory of acquisition for this phenomenon.

NA placement is subject to a number of grammatical constraints and pragmatic conditions (e.g. Ladd, 2008). For instance, sentences like those in (1), with a compound in final position contrast in NA placement with the segmentally identical sentences in (2), with an adjective+noun sequence, because compounds generally have initial prominence:

(1) They live in the White House / It is a toy factory
(2) They live in the white house / It is a toy factory

However, under contrastive stress, NA may also be retracted to the adjective in (2). Such distinctions have been shown to be difficult for L2 speakers to learn (Zubizarreta & Nava, 2011; van Maastricht et al, 2016).

We consider five accent-retraction rules: (a) final vs. non-final stressed compounds, (b) narrow focus on a non-phrase-final word, (c) left-stress compounds vs. adjective+noun sequences (d) unaccented indefinites in phrase-final position (e.g. I saw someone) and (e) sentences with intransitive verbs, in which NA placement has been claimed to be affected by both verb type (unaccusative vs unergative) and expectedness (Zubizarreta & Nava, 2011).

**Methods.** 20 L1 English speakers participated in this study and were asked to read a series of sentences out loud, which were presented with a contextual question and designed to elicit one of the five conditions. Afterwards, participants were shown the target sentences again and were asked to intuit which of the last two words had greatest prominence.

**Results.** Leaving intransitive verbs aside, in the test on intuitions, 74% of responses were as predicted. By condition (Fig. 1), focus had the highest accuracy rate (as determined by agreement with predicted NA placement), whereas phrase vs. compound had the lowest. Participants also performed more accurately on non-final accents (Fig. 2). Regarding the production experiment, regression analyses (lmer) on differences in intensity, pitch and duration between the lexically stressed vowels in the last two words returned a significant effect of predicted accent placement and no consistent significant differences among the five conditions. Of all measurements intensity differences (Fig. 3) provided the clearest separation between sentences with final and penultimate NA.

For both types of sentences with intransitives verbs, the preferred pattern in the intuitions test was accent on the verb under broad focus, but significantly more sentences with unaccusative verbs vs unergatives triggered accent on the subject (24% vs 8%, p < 0.0001) (see fig. 4). Production data also showed a trend for unaccusative verbs to attract NA to the subject and unergatives to the verb. The effect of expectedness in the discourse context that was provided was not significant.

Overall, these experimental results are in agreement with standard descriptions regarding NA placement in English. The weakest agreement (both in the intuitions and in the production test) was found for the effects on NA placement of the unaccusative vs unergative contrast, which suggests that there are additional factors that influence NA placement in these sentences (see Roettger & Cole, 2018).
Fig. 1 – Accuracy rates per condition.

Fig. 2 – Accuracy rates according to position of NA (final vs. penultimate)

Fig. 3. Intensity difference between the lexically-stressed vowel of the last two words in the sentence

Fig. 4 – Intuited stress placement on verb according to verb type and expectedness

References