Patterns of Prosodic Prominence in English Intransitive Sentences

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Prominence in Intransitive Sentences. English intransitive sentences vary in whether the subject or predicate bears nuclear stress in broad-focus contexts (e.g. Chafe 1974, Schmerling 1976, Gussenhoven 1984, Selkirk 1984, Faber 1987). Several proposals link the preferred prominence pattern directly to the verbal argument structure, in particular to the unaccusative/unergative distinction (e.g. Selkirk 1995, Kahnemuyipour 2004), or to the syntactic differences between individual-level and stage-level predicates (Diesing 1992, Kratzer & Selkirk 2006). In this paper, we report on a series of experiments which challenge the claim that argument structure directly determines stress placement and provide support for an alternative topicality-based account, under which differences in verb classes indirectly interact with the likelihood of construing the subject as topical. Our proposal draws on insights from Jäger (2001), Wagner (2007), and Kratzer & Selkirk (2007).

Experiment 1. Experimental evidence that unaccusativity plays a role in determining prosodic prominence has been presented in Hoskins (1996) and Irwin (2010), but their stimuli were arguably not properly controlled for other relevant factors. For example, most unergative predicates in Hoskins' study were paired with animate subjects, while most unaccusative predicates had inanimate subjects. We compared intransitive sentences with unaccusative and unergative predicates, holding the contribution of the sentence to the discourse and the relative contributions of the subject and predicate to the meaning of the sentence constant. One example from our 12 items is given in (1):

> (1)   Why did the coach look so concerned?
>   a. A player <u>tripped</u>. (unaccusative)
>   b. A player <u>limped</u>. (unergative)

Production data were collected in a Latin square design dialogue experiment, with the contextual question played from a recorded file. 24 participants' utterances were acoustically analyzed and perceptually coded for prominence by several annotators and the results were compared to data collected in a separate dialogue experiment eliciting the same sentences under narrow focus on the subject or predicate. A mixed model analysis with item and subject as random effects showed no significant effect of argument structure on prominence, while a model comparison with a model without an item effect showed that there were significant differences between items, with a high rate of predicate stress overall—including for unaccusative verbs. In other words, prominence varied systematically between items, but the choice between an unaccusative or unergative verb had no effect. Our experiment thus fails to replicate earlier results in Hoskins (1996) and Irwin (2010), and also fails to confirm the claim in Zubizaretta & Vergnaud (2009) that unaccusatives prefer subject stress, while unergative predications can have either prominence. Our experiment suggests that once information structure is controlled for, argument structure is, in fact, irrelevant.

Experiment 2. In Experiment 2, the class of predicates was varied, holding unaccusativity constant. Patterns of prosodic prominence were compared between predications with verbs of appearance/coming into existence and verbs of disappearance/ceasing to exist (classifications based on Levin 1993). The subject can more easily be construed as discourse-related and, therefore, topical with a verb of disappearance, since for something to disappear it must have been present before the described event. Stimuli consisted of 6 items, as in (2):

(2)   What happened after you took the medication?
        a. A rash <u>formed</u>. (verb of appearance)
        b. A rash <u>faded</u>. (verb of disappearance)
Results show a higher proportion of predicate stress with verbs of disappearance than with verbs of appearance.

Experiment 3. Experiment 3 varied the subjects and held the predicates constant. Patterns of prosodic prominence were compared between intransitive sentences with human and non-human animate subjects. Givón (1976) (among others) argues for a hierarchy of topicality in which human subjects are more likely to be construed as topical. Stimuli consisted of 12 items varying by two conditions, as exemplified in (3):
(3)   Why was the farmer concerned?
        a. <u>A worker</u> limped. (human)
        b. <u>A cow</u> limped. (non-human)
Results show a higher proportion of predicate stress with human subjects than with non-human subjects.

A topicality-based approach. Any approach to prominence in intransitives necessarily acknowledges information structure effects, e.g. in order to account for the effects of focus and givenness on prominence. Our proposal differs from earlier ones, however, in claiming that once we properly understand these information structure effects, the interaction with other factors, like the apparent differences between unaccusatives and unergatives, will follow. Unergatives, e.g., may be more likely to be construed with animate and human subjects (which are more likely to be construed as topical, leading to predicate prominence) compared to unaccusatives simply for pragmatic reasons, due to the thematic roles they assign to their subject (e.g. agent vs. theme). As per the findings in Experiments 2 and 3, we propose that prominence falls on the predicate when the subject is construed as 'topical': We assume that every sentence quantifies over situations, and our claim is that predicate prominence ensues if the material in subject position is construed as part of the restrictor of that quantification, as part of the 'topic situation' (Kratzer 2006, Klein 2008). Our approach can account for the pattern of subject prominence with verbs of coming into existence (*a rash formed*), since if a referring expression is construed as being part of the topic situation, its existence is presupposed, which (depending on the predicate) may seem odd in a statement of its appearance. It may also offer an explanation of predicate stress in the case of individual-level predicates. We argue that in individual-level predications, the subject can be construed as part of the restrictor. Not construing the subject as part of the restrictor although one could have triggers the implicature that there could have been a situation involving that subject in which the predicate would not have held. In other words, we argue that *Bill was intelligent* with nuclear stress on Bill is odd for the same reason that Magri (2009) gives for why *Bill was intelligent on Monday* is odd—it suggests that he might not have been intelligent on Tuesday, contrary to what we know about individual-level predicates like *intelligent*.

Selected References: **Jäger, Gerhard.** 2001. Topic-comment structure and the contrast between stage level and individual level predicates. *Journal of Semantics.* **Kahnemuyipour, Arsalan.** 2004. *The syntax of sentential stress*. Ph.D. University of Toronto. **Klein, Wolfgang.** 2008. The topic situation. MS. MPI. **Kratzer, Angelika and Elisabeth Selkirk.** 2007. A phase theory of prosodic spell-out. *Linguistic Review.* **Magri, Giorgio.** 2009. A theory of individual-level predicates based on blind mandatory scalar implicatures. *Natural Language Semantics.* **Givón, Talmy.** 1976. Topic, pronoun, and grammatical agreement. In C. Li (ed.), *Subject and topic*. **Wagner, Michael.** 2007. A note on stress in intransitives in English. *Snippets.*