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Special Collection in Linguistics Vanguard: "The acquisition of information structure"

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The linguistic expression of information structure, i.e., the formal reflexes of an utterance's discourse integration, has begun to receive increasing attention in the study of first as well as second language acquisition. The primary dimensions of information structure often addressed in the acquisition literature include "givenness" (maintained vs. new information) and "aboutness" (topic vs. comment), as well as emphasis and highlighting (e.g., contrastive topic, focus and their interaction with focus sensitive operators of different types) (Dimroth and Narasimhan 2012).

A substantial body of research demonstrates that children acquire – with little apparent effort – the basic aspects of the ambient language by the age of five years. But in addition to acquiring the phonology, lexicon, and morphosyntax of their language, children must also learn how to tailor their use of these linguistic devices according to the informational needs of their interlocutors across communicative contexts. However we do not yet understand how children learn to mark information structure in their language. Prelinguistic children possess the rudimentary socio-cognitive capacities underpinning information structure, such as the ability to distinguish referents based on their novelty or familiarity (Friedman 1972; Slater et al. 1982) as well as sensitivity to others as beings with informational states (O'Neill 1996). In addition, children also produce, at an early age, the language-specific devices that adults use to mark information structure, such as prosody, varying referential forms (lexical vs. pronominal forms), and different word orders and construction types, among others (Hoff 2009). Nevertheless, children's ability to use these devices to mark information structure in an adult-like manner develops over a protracted trajectory (Höhle et al. 2016) which "may be caused by the fact that producing and understanding linguistic means of encoding. . . IS [information structure] in a communicatively adequate way not only requires grammatical and pragmatic knowledge but is also based on an advanced system of social-cognitive abilities" (2016: 2).

Second language learners, in particular at an adult age, come equipped with mature variants of the social-cognitive abilities underlying information structure distinctions in language. As a consequence, potentially universal principles such as "learn forms for given information", or "topical information first" seem to have an important impact on utterance structure in beginning second language learners (Perdue 1993), even though the expression of information structure is rarely taught. However, language-specific associations of form and function signaling the different information structure dimensions pose a serious challenge for second language learners. The target-like interpretation of ambiguous forms (e.g. pronouns) that is guided by discourse-dependent preferences as well as the exact match of native speakers' choices for signaling information structure in production might turn out to be "the final hurdle" (Verheijen et al. 2013) for native-like attainment in second language acquisition. Different reasons for that difficulty were proposed in the literature. These include the subtle and non-transparent interaction of grammatical and information structure principles in connected discourse (Carroll et al. 2000), the high degree of variation and multiplicity of factors influencing information structure marking in the native input, and the cognitive load resulting from the need to pay attention to both grammar and context embedding (Sorace and Filiaci 2006) during online processing (Hopp 2016).

Some of the core questions that are addressed in this area include the following: Do first and second language learners adapt their utterances to their hearer's informational needs from early on? When do language

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learners home in on language-specific preferences for information selection and distribution in stretches of discourse? Can adult L2 learners ever become native-like in this respect? Do language learners express the same kinds of information structure relations as adult native speakers using the same devices?

The 6 studies that constitute this special collection include studies of first and second language learners of an array of languages including French, German, Dutch, Russian, and Korean. Word order, prosody, referring expressions, and focus sensitive particles are investigated based on data collected using a variety of methods including questionnaires, judgment tasks, comprehension tasks, answer-reconstruction as well as longitudinal observations of spontaneous language production. Collectively, these provide a rich array of perspectives on the acquisition of information structure.

Information structure and first language acquisition

Sauermann and Gagarina investigate the role of information structure context (given-before-new order) as well as type of referring expression (NP versus pronoun) in modulating comprehension of canonical and non-canonical word orders in children and adults speaking Russian. Speakers across age groups were highly accurate in comprehending both SVO and OVS sentences irrespective of type of referring expression or context. The authors attribute the absence of contextual and information structure effects to the early acquisition of case, as well as exposure to a relatively robust given-before-new pattern in the input to children acquiring Russian.

Bartz and Bittner investigate the role of information structure in the delayed acquisition of finite clause structure in *aber*-clauses in a longitudinal study of 1–2-year-old children acquiring German. The authors investigate the information-structural patterns of contrastive information in *aber*-clauses and the explicitness of the contrast realizations. They observe changes in the preferred types of contrasts, as well as a changes from explicit to implicit contrast realization. The study also reveals a delayed realization of finite clause structure in *aber*-clauses that the authors attribute to the complex information-structural alignment of at least two different constituents as well as the anticipation of an implicit proposition.

Chen and Höhle examine the use of word order and prosody in distinguishing different focus types in Dutch 4- and 5-year-olds. Using an interactive answer-reconstruction task, they find that although children do not use word order (SVO versus OVS) to distinguish focus types, they do employ pitch and duration in the subject nouns to distinguish focus types in SVO sentences. These findings reveal that 4–5-year-olds acquiring Dutch differ from their German- and Finnish-speaking peers, who use both word order and prosody to mark specific focus types.

Narasimhan and Dimroth investigate the influence of discourse context on children's ordering of "new" and "old" information in noun phrase conjuncts in children acquiring German. Prior research found a robust new-before-old ordering preference in a question-answer sequence in 3–5-year-old children. However in connected discourse children no longer exhibit an overall preference for the new-before-old order. Rather, children produce the new-before-old order in fluent utterances and the old-before-new order in non-fluent utterances, while adults overwhelmingly prefer the old-before-new order. These findings suggest that children's ordering patterns are not categorical, but are flexibly influenced by factors such as discourse context.

Information structure and second language acquisition

Colonna et al. investigate how native speakers and second language learners of French understand pronouns in contexts where more than one potential antecedent NP is available in a preceding clause. Their questionnaire study reveals that both groups differ in their preferred interpretation of such ambiguous pronouns.

Whereas the native speakers' preferences for one of the possible antecedents results from the availability of an alternative construction that unambiguously establishes co-reference with the other antecedent, the learners do not seem to interpret one construction in light of the other. Instead, their responses reflect the preferences of their first language (German), where no such alternative structure exists. Interestingly, however, the learners do react in a target-like manner to a manipulation that signals a functional difference. In passive constructions, both native speakers and learners showed an increased preference for the sentence initial patient NP as an antecedent for the ambiguous pronoun. As the patient is topicalized in passive sentences, this result can be ascribed to an information structure difference that is apparently easier to learn than a preference based on alternative forms.

The study by **Park** shows, that information structure constraints do not always win out against other factors, such as frequency. Her study uses a judgment task in order to investigate the influence of the given-before-new principle on the preferred word order in Korean ditransitive clauses. Native speakers were found to prefer a scrambled word order (direct object before indirect object) in contexts in which the canonical word order (indirect object before direct object) would have violated the given-before-new principle. Intermediate-to-advanced learners of Korean as a second language were less ready to deviate from the canonical (and much more frequent) pattern for the benefit of information structure.

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