



Introduction: Reference and Discourse Structure*

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This special issue focuses on the connection between discourse structure and the form, use and interpretation of referring expressions. There are four main themes that characterize the contributions in this collection. First, one central issue is the relation between the production and interpretation of referring expressions and the kinds of information available to speakers and listeners. A second focus that emerges is the question of what information is encoded in particular linguistic forms and what information emerges from pragmatic inferences. Third, the papers as a whole contribute to our understanding of how different types of linguistic forms (e.g. different anaphoric forms and case marking) connect to discourse-structural issues. Finally, these papers explore issues of reference in different domains – sentence-level semantics, information structure and discourse structure – and highlight the close interaction between sentence-level phenomena and discourse-level phenomena. All contributions relate to these themes, but with different emphases and using data from different languages. This results in a broad but nevertheless well-directed

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approach to the question of the interaction of reference and discourse structure.

The six papers in this collection can be loosely clustered into three main groups. The first two papers, by Jeanette Gundel and Henk Zeevat, provide foundational discussions that relate to all four key issues listed above. Gundel and Zeevat primarily discuss the relation between the interpretation and production of referring expressions and their influence on structuring a discourse. While Gundel focuses on the relationship between different referring expressions and the accessibility structure of the discourse, Zeevat explores the possibility of reconciling the demands of production and interpretation by building on the concept of “self-monitoring”, i.e. the idea that speakers monitor the adequacy of their output with respect to an interpretation process. The second group of papers, by Ljudmila Geist and Tania Ionin, investigates different types of indefinite NPs in Russian and English and how they relate to sentence-level semantics and information structure in terms of topic-comment structure. Ionin’s conclusions are based on psycholinguistic experiments, which also form the empirical base for the next two papers, by Elsi Kaiser, and Sofiana Chiriacescu and Klaus von Heusinger. These papers look beyond the sentence level and relate to information structure and discourse structure. They bear on questions related to discourse topicality, referential persistence and reference-tracking through a certain discourse span.

In what follows, we provide a brief discussion of the six papers in this issue, in order to highlight the three main themes that run through this collection. The introductory papers, by Jeanette Gundel and Henk Zeevat, help to set the scene for the other papers by providing an overview of the relation between linguistic forms and the discourse properties of the associated referents. At the same time they enrich this correspondence between form and discourse function by proposing additional restrictions: Gundel argues for the role of pragmatic inferences and Zeevat emphasizes the importance of discourse relations (in the sense of Rhetorical Structure Theory) and the role of self-monitoring, which combines aspects of production and interpretation.

Gundel’s paper *Reference and Accessibility from a Givenness Hierarchy Perspective* takes as its starting point the notion of accessibility (see von Heusinger, 2007; Arnold, 2010) and compares the Givenness Hierarchy (Gundel, Hedberg and Zacharski, 1993) with other referential hierarchies (e.g. Prince, 1981; Givón, 1983; Ariel, 1990). She emphasizes that according to the Givenness Hierarchy, different referring expressions encode information about the cognitive status of the intended referent (e.g. whether it is “in focus”, “activated”, “familiar” and so on). According to this approach, the conventional meaning of different linguistic forms contains information about

the referent's manner of accessibility, i.e. the way the hearer can access the referent. Crucially, the cognitive statuses that form the Givenness Hierarchy constitute an implicational scale. Thus, using a referring expression associated with a particular cognitive status does not exclude the possibility that the intended referent could have a higher-ranked cognitive status. Gundel discusses how this approach differs from other approaches such as Ariel's Accessibility Hierarchy (Ariel, 1990), where different linguistic forms encode the degree of accessibility of the intended referent in a gradient way. In the Givenness Hierarchy, Gundel models this seemingly gradable aspect of accessibility by enriching her mechanism with pragmatic inference rules that build on the implicational nature of the Givenness Hierarchy.

Zeevat proposes in his contribution *The Production and Interpretation of Anaphora and Ellipsis* a novel account of the relation between referring expressions, anaphora and discourse. He combines aspects of interpretation with aspects of production by making reference to the notion of self-monitoring, previously proposed in psychological models of language production. Zeevat proposes that speakers continuously monitor themselves during the producing of referring expressions, and thus keep track of how the intended hearer will interpret the produced expression. This idea is embedded in a broader approach, according to which linguistic phenomena can be described in terms of the cooperation of syntax, self-monitoring and cue-based perception, in the domains of production and interpretation. Zeevat's approach offers a fresh perspective on old questions and raises interesting new questions. Thus, both introductory papers discuss issues that are highly relevant for understanding the interaction of reference and discourse structure. Many of these issues are worked out in more detail in the following contributions.

The papers by Ljudmila Geist and Tania Ionin focus on indefiniteness from a semantic perspective. Both start from the observation that certain forms of indefinites express semantic *and* discourse properties, as shown for indefinite *this* in English (Ionin, 2006). Geist investigates the interpretation of bare NPs in an articleless language, Russian. Bare NPs are ambiguous between a definite and indefinite interpretation, and Geist investigates what guides the availability of indefinite interpretations. Ionin, on the other hand, investigates the referential properties of indefinite NPs with different modifiers (e.g. *a book, a certain book, at least one book*). Both papers highlight the importance of considering discourse-level phenomena when investigating the semantics of indefiniteness: Geist shows that the referential properties of bare NPs are sensitive to discourse-level information, namely topic-comment structure. Ionin's work on the scopal properties of different indefinite types contributes to our understanding of the connection between scope and the discourse-related notion of

specificity, by showing that the availability of long-distance scope does not require specificity.

As noted by **Geist** in her paper *Bare Singular NPs in Argument Positions: Restrictions on Indefiniteness*, Russian bare NPs can receive a definite interpretation (refer back to a familiar referent) or an indefinite interpretation (introduce a new referent). However, while the definite interpretation is freely available in the appropriate discourse context, the availability of the indefinite interpretation is restricted. In particular, Geist shows that it is governed by the topic-comment structure of an utterance: bare NPs in topic position cannot be interpreted as indefinite, only definite, whereas bare NPs in the comment can receive an indefinite interpretation. She explains this restriction by the requirement that indefinite aboutness topics must be specific. Bare indefinite NPs in Russian however can only receive a non-specific existential interpretation, and hence do not qualify as topics.

Ionin's contribution *An Experimental Study on the Scope of (Un)modified Indefinites* focuses on the semantic properties of NPs in English that are lexically marked as being indefinite. She reports a series of experiments investigating the scope of English indefinites in relative clauses, an environment which is standardly considered to be a scope island. Ionin's results challenge the widespread view that some kinds of indefinites – in particular *a* indefinites and *a certain* indefinites – are exceptional in being able to escape scope islands and receive wide scope. She finds that while the narrow scope reading is (unsurprisingly) available for all kinds of indefinites, the wide scope reading is more available with *a certain* indefinites than *a* indefinites, suggesting that these two types of indefinites are semantically distinct. In addition, the asymmetry between *a* and *a certain* seems to suggest that wide scope readings are only possible with specific indefinites. However, further experiments show that modified numeral indefinites (e.g. *at least one*) – which are assumed to be quantificational, not specific indefinites – can also receive wide scope readings, contrary to what is normally assumed in the literature. As a whole, Ionin's results suggest that the long-distance / wide scope interpretation of indefinites is not intrinsically connected to specificity, and she also touches on the possibility of a connection between long-distance scope and topicality (see Endriss, 2009).

The papers by Elsi Kaiser and Sofiana Chiriacescu and Klaus von Heusinger share a common interest in the relation between sentence-level phenomena, information structure and discourse-level phenomena – more specifically, the effects of information-structural notions such as “topic” and “focus” on the referential choices in upcoming discourse. Kaiser investigates effects of contrastive focus on the production of subsequent discourse, looking at how likely

a speaker is to mention the focused (or non-focused) entity again later on, and what referring expressions are used. In addition, she considers the effects of focus from the perspective of the comprehender, who is tasked with resolving the referring expressions produced by a speaker. Chriacescu and von Heusinger's work addresses topicality-related issues in Romanian; in particular, they explore the discourse-level effects of the optional object marker *pe*, and show that *pe*-marked objects are pre-topics and likely to become topics in subsequent discourse. Both papers relate to the notion of "referential persistence", i.e. how likely a particular referent is to be mentioned in subsequent discourse.

Kaiser's paper, *Investigating the Consequences of Focus on the Production and Comprehension of Referring Expressions*, investigates how the referential persistence of different entities is influenced by contrastive focus, and how this interacts with other factors known to correlate with referent salience, such as subjecthood. She presents two sentence-continuation experiments. Experiment 1 (interpretation) investigated how participants interpret pronouns following mini-dialogues with contrastively focused subjects or objects. Experiment 2 (production) used the same mini-dialogues but now participants were able to freely choose what referring expression to use in their continuations. Experiment 1 showed that pronouns tend to be interpreted as referring to the *immediately preceding subject*, regardless of whether it is pronominalized or focused. This is also found on those trials in Experiment 2 where participants chose to produce a pronoun. In contrast, NP-initial continuations in Experiment 2 reveal the importance of the alternative to the contrastively-focused constituent: participants showed a preference for starting their continuations with the alternative to the contrastively focused *subject* – although this referent is hardly ever pronominalized. These results emphasize the need to distinguish likelihood of subsequent mention from likelihood of pronominalization (see also Kehler et al., 2008). Furthermore, both pronominalization and subsequent-mention patterns suggest that subjects are "special", more likely to be mentioned again in subsequent discourse.

The paper *Discourse Prominence and Pe-marking in Romanian* by **Chriacescu and von Heusinger** also addresses issues having to do with likelihood of subsequent mention and choice of referring expression. They investigate the distribution and discourse properties of the differential object marker *pe* in Romanian. In particular, they look at indefinite NPs in direct object position, which can optionally be marked with *pe*. The authors show that factors such as animacy, referentiality and specificity are unable to satisfactorily explain the presence/absence of *pe* on indefinite objects. On the basis of a sentence-continuation experiment that compared direct objects with and without *pe*,

Chiriacescu and von Heusinger show that *pe*-marked indefinite objects are more likely than bare indefinite objects to be realized in subject position in subsequent discourse, thus they show a “topic shift potential” assuming that subjects express topics. It is worth noting that this shifting function can also be expressed with the choice of referring expression (i.e. whether the subject of the second sentence is a personal pronoun or a demonstrative determiner, see Bosch and Umbach, 2007; see also Kaiser and Trueswell, 2008). *Pe*-marked indefinite direct objects are also referred to more frequently in subsequent discourse than bare indefinite objects. However, the kinds of anaphoric forms that participants used to refer back to *pe*-marked and bare indefinite objects did not differ strikingly; the most common form was a definite NP. Chiriacescu and von Heusinger suggest that a distinction needs to be made between topicality, which they connect to likelihood of subsequent mention, and choice of referring expression. This echoes the distinction that Kaiser observed regarding likelihood of pronominalization and likelihood of subsequent mention.

In sum, the papers in this special issue look at different linguistic forms (including nominal forms and case markers) and different domains (sentence semantics, information structure and discourse structure). They ask questions about the differences between speakers and listeners and the interplay of semantics and pragmatics. By looking at the relationship between reference and discourse structure from such a broad range of levels, these six contributions highlight the close yet complex nature of this relationship.

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