

Thorstein Fretheim and Jeanette K. Gundel (eds.)

Reference and Referent Accessibility

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Reviewed by

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This volume consists of 16 papers most of which were presented at a workshop on reference and accessibility at the 4th International Pragmatics Conference in Kobe, Japan, 1993. The papers all discuss different aspects, applications and modifications of Ariel's (1990) Accessibility Marking Scale and Gundel, Zacharsky & Hedberg's (1993) Givenness Hierarchy. Thus, the volume presents an unusually coherent view on accessibility and reference.

The very short introduction (7-12) by the editors presents summaries of the individual papers, which are organized alphabetically, not thematically. Unfortunately, the editors have failed to take the opportunity to compare the particular treatments of accessibility and reference of these two approaches with other theories or frameworks. Although they mention that reference "has been approached from a number of different perspectives within linguistics, psychology and philosophy ..." (7), they do not name those perspectives or discuss the connection of the research presented in this volume with related work. They do not even compare the two accessibility hierarchies, which are the bases for the articles in the book. Since a short summary and comparison of these two hierarchies will facilitate the reader's orientation to the volume, I will make up for this here.

Ariel (1990, 73) proposes the Accessibility Marking Scale (1) according to which the speaker selects an expression to refer to an accessible entity. If the entity is highly accessible, a pro-form or a pronoun is used, whereas definite NPs are employed for less accessible items. Accessibility is influenced by at least the factors listed in (2) (cf. Ariel 1990, 28-29):

(1) **Accessibility Marking Scale**

Low Accessibility (a) Full name + modifier (b) Full ("namy") name (c) Long definite description (d) Short definite description (e) Last name (f) First name (g) Distal demonstrative + modifier (h) Proximal demonstrative + modifier (i) Distal demonstrative (+ NP) (j) Proximal demonstrative (+ NP) (k) Stressed pronoun + gesture (l) Stressed pronoun (m) Unstressed pronoun (n) Cliticized pronoun (o) Extremely High Accessibility Markers (gaps, including pro, PRO and wh traces, reflexives, and Agreement) *High Accessibility*

(2) **Factors that influence the accessibility**

- a *Distance* Distance between antecedent and anaphor: As distance increases, entity accessibility decreases.
- b *Competition* Number of competitors for the role of antecedent: The more competitors, the less accessible the referenced entity will be.
- c *Saliency* Whether it is a topic or non-topic: Topical entities will be more salient than non-topics.
- d *Unity* The antecedent being within the same frame/world/point of view/segment or paragraph as the anaphor. Entities within the current frame/segment are more salient than entities in previous frames/segments.

Gundel, Hedland & Zacharski (1993) present the Givenness Hierarchy (3), which ranks linguistic expressions according to statuses. They define these statuses in (4):

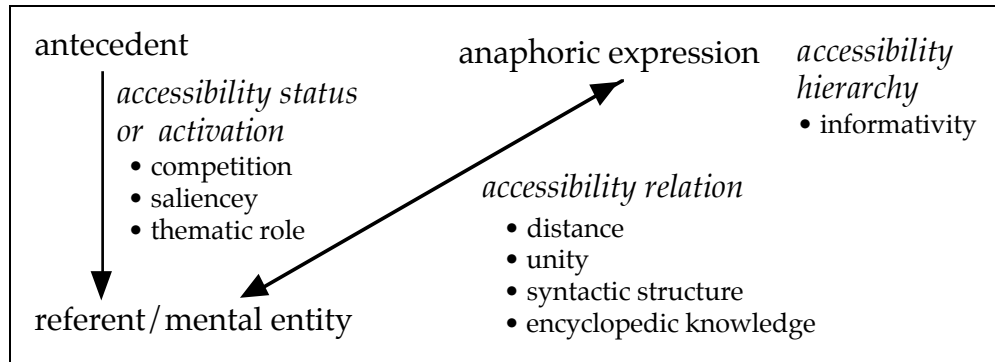
(3) **Givenness Hierarchy**

in focus	>	activated	>	familiar	>	uniquely identifiable	>	referential	>	type identifiable
<i>it</i>		<i>that, this</i>		<i>that N</i>		<i>the N</i>		<i>indefinite</i>		<i>a N</i>
		<i>this N</i>						<i>this N</i>		

- (4)a *Type Identifiable* The addressee is able to access a representation of the type of object described by the expression.
- b *Referential* The speaker intends to refer to some particular object or objects.
- c *Uniquely Identifiable* The addressee can identify the speaker's intended referent on the basis of the nominal alone.
- d *Familiar* The addressee can uniquely identify the intended referent on the basis of an existing representation in memory.
- e *Activated* The referent is represented in current short-term memory
- f *In Focus* The referent is at the current center of attention.

Both views are very similarly designed and differ only in some minor points. Both theories conceive accessibility as a gradable property of a mental or "cognitive" entity, which can be more or less accessible. The informativity of the linguistic expression referring to this entity must match the degree of accessibility associated with the intended entity. The two approaches differ in whether the categories on the hierarchy are mutually disjoint (Ariel) or whether less accessible statuses include more accessible ones (Gundel et al.). However, neither approach distinguishes two different aspects of accessibility, namely the accessibility status and the accessibility relation, which are illustrated in (5):

(5)



A referring expression, or the antecedent, introduces, activates or evokes a mental object. This entity is assigned a certain accessibility status or activation depending on competition, saliency, the grammatical role and lexical properties of the associated expression. For instance, an entity associated with a subject receives a higher accessibility (or activation) than one associated with an object. A definite NP or a proper name activates its associated referent in a different way than an indefinite NP does. The accessibility relation, on the other hand, holds between an already activated or established element in the discourse and another referring expression that is associated with it. This anaphoric expression "accesses" the discourse entity. The access is determined among other factors by the distance and the syntactic structure between the anaphoric expression and the antecedent that has activated the entity. Furthermore, contextual and encyclopedic as well as inferential knowledge may constrain this relation. The accessibility relation is also reflected in the choice of the anaphoric expression. If the intended entity is easily accessible the anaphoric expression need not be very informative (e.g. a pro-form or an unstressed pronoun), while less accessible entities need more information in the anaphoric expression (full NPs, full names). This reflex of the anaphoric expression with respect to the status of the intended referent is described in the Accessibility Marking Scale (1) and in the Givenness Hierarchy (3).

Only three contributions to the volume compare the accessibility views taken here with related approaches such as Relevance Theory (Sperber & Wilson 1986) or Centering Theory (Grosz et al. 1983). Mira Ariel argues in her paper *Referring Expressions and the +/-*

Coreference Distinction (pp 13-35) against Levinson's attempt to explain coreferentiality by three pragmatic principles. Ariel claims that the coreferential vs. disjoint distinction is derived from the gradable notion of accessibility, which is determined by two main factors: "The degree of accessibility of the mental entity serving as linguistic antecedent varies according to two main factors. First, some antecedents represent mental entities inherently more salient (...) The second factor that determines the degree of accessibility of a specific antecedent (or rather its mental representation) at the time when the potentially anaphoric expression is being processed, is the nature of the relation between the two" (22). However, she does not acknowledge the deeper problem of the interrelation between accessibility and coreferentiality. The discourse pragmatic notion of accessibility is gradable and by definition presupposes that there is always a mental referent, while the notion of coreference is categorial and causes grammatical contrasts between coreferential vs. disjoint expressions.

In *Relevance Theory Meets the Givenness Hierarchy: An Account of Inferrables* (141-153), Jeanette Gundel illustrates through the example of "inferrables" ("bridging inferences" or "associated anaphors") the interaction of her Givenness Hierarchy with Relevance Theory (Sperber & Wilson 1986). The referent of an inferrable is not mentioned directly in the discourse and, therefore, it is not directly accessible. Rather it must be inferred from the given material as in ... *a book. The author ...* The accessibility (or activation) of the entity associated with the referential term *the author* not only depends on the accessibility (or activation) of the related entity associated with *a book*, but also with the relation established between the two. Since the Givenness Hierarchy can only account for the former condition, Relevance Theory comes into play to establish the necessary relation. This contribution shows how inferrables can be accommodated in the given framework and also demonstrates how the Givenness Hierarchy fits into a more general framework.

In their contribution *A Bilateral Approach to Givenness: A Hearer-Status Algorithm and a Centering Algorithm* (291-306), Marilyn Walker & Ellen Prince distinguish between two partially orthogonal parameters in order to describe pronominal reference in cases with two equally accessible entities, as illustrated in (6) (291), where the numbers m/n

indicate that m speakers out of n favored the indicated reading of the sentence, and # marks a reading as not acceptable.

- (6) This guy_i's sitting in the park, minding his_i own business. After a while, he_i takes out his_i lunch and starts eating. Suddenly, he_i notices a guy_j on the next bench.
- a He_i/ #he_j looks at #the guy_i/the guy_j and says... (11/11)
- b #The guy_i/the guy_j looks at him_i/ #him_j and says... (11/11)
- c He_i/he_j looks at him_i/him_j and says... (9/11: he_i/him_j 2/11: he_j/him_i)

The first parameter is the information status of a given entity in the hearer's mind according to the belief of the speaker. This information status governs the definite/indefinite distinction (cf. Prince 1981). The second parameter is the activatedness of that entity in the current utterance. It is computed by using an algorithm from Centering Theory, in particular a ranking of potential antecedents according to their grammatical roles in the antecedent sentence. The most accessible item can be anaphorically picked up by a pronoun, while the less accessible item is referred to by a full NP. This explains the contrast between (6a) and (6b). The preferred reading of (6c) could be explained if the parallelism of grammatical roles between the antecedent and the anaphoric sentence is taken into account (cf. the contribution by Rosén). Thus, Walker & Prince split the accessibility hierarchy into two different algorithms, one of which is borrowed from Centering Theory. Although it is very clear how Centering Theory can account for the data in (6), it is not apparent in light of the given example why we need the definite/indefinite distinction.

Two articles discuss the theoretical status of inference in a discourse. Wallace Chafe argues in *Inferring Identifiability and Accessibility* (37-46) that different kinds of inference (or associations) are involved in establishing either identifiability or accessibility in a discourse. An essential inference (or an immediate association) can be drawn from a sentence if the inferred referent is an essential part of the situation according to which we interpret the sentence (e.g. *a restaurant. ... the waiter ...*). The referent for *the waiter* is

made accessible by uttering *a restaurant*. Accessibility (in the sense of activation) is expressed in three different degrees: active, semiactive and inactive. These degrees correspond to the notions given, accessible and new. Essential inference can establish semiactive or accessible items. On the other hand, nonessential inference (or a mediated association) can even be drawn from a sentence if the intended referent is not an essential part of the context (e.g. ... *a car*. ... *the tag* ...). This kind of inference establishes identifiability, which has to do with whether the hearer can identify the intended object. It is grammatically marked by the definite/indefinite contrast (cf. the contribution of Walker & Prince). This analysis successfully distinguishes between two kinds of "inferrables" (cf. Gundel): one accessible and identifiable and one non-accessible and identifiable.

Christina Hellman discusses the ontological status of the concepts "inference" and "inferencing" in her paper *The 'Price Tag' on Knowledge Activation in Discourse Processing* (193-211). After giving a very comprehensive survey on the use of the concept "inference" in related discourse theories, she defines inference as a non-analytic strategy which can be either problem-oriented or automatic. Following Johnson-Laird (1983), she calls these two inferencing concepts "explicit" and "implicit", respectively. Explicit inferences may take some time, while implicit inferences are rapid, effortless and outside conscious awareness. She then compares the "costs" of drawing these inferences and asks how the speaker decides between explicit and implicit reference. The result of her discussion of experimental research is tentative. Nevertheless, this contribution gives a very valuable comparison between a propositional or analytic and a procedural or non-analytic notion of inference.

Two articles analyze how the nature of referents contributes to their accessibility status, i.e. they investigate ontological aspects of the referents. Östen Dahl & Kari Fraurud show in *Animacy in Grammar and Discourse* (47-64) that the animate-inanimate contrast is very pervasive in language. They illustrate this with statistical material on the association of syntactic position and animacy. For instance, Navajo has grammaticalized the restriction that the object must not be higher in animacy than the subject, and statistical evidence from Swedish hints in the same direction. They also speculate on the

interaction of animacy and referentiality: an animate NP tends to be referential, whereas an inanimate NP is often non-referential. They conclude that animacy should be regarded as an ontological category or type similar to the contrast between individual, set and situation.

The intended ontology is further developed by Kari Fraurud in *Cognitive Ontology and NP Form* (65-87). Referents are assigned to the cognitive ontological classes "Individuals", "Functionals" and "Instances", these typically corresponding to proper nouns, definite NPs and indefinite NPs, respectively. A referent can belong to different classes depending on the context and the speaker-hearer relation: "As illustrated above by the possibility of referring to Thorstein Fretheim by means of either the name or the relational description *the husband of Gine* or the 'type description' *a Norwegian linguist*, there are case where one and the same entity can be conceived of and talked about alternatively as an Individual, a Functional, or an Instance by different people, in different discourses, and even at different points in the same discourse" (78). In my opinion, this example rather illustrates that the notion of cognitive ontology becomes vague if it is related in this way to the perspective of the speaker. The basic idea of an ontology is that it expresses inherent properties of entities that are not linguistic in their nature and, therefore, not changeable. Fraurud's cognitive ontology seems to be a rephrasing of the different cognitive or mental states of the Givenness Hierarchy described in (4).

Two articles treat the interaction of accessibility and intonation. Intonation has for a long time been neglected although it is well-known that it provides information about the contribution made by a linguistic expression to the representation of discourse. In *Assessing Contexts with Intonation* (89-112) Thorstein Fretheim extends the list of relevant factors for accessibility given in (2): "Many of the contextual assumptions that a hearer adds to his or her context in spoken discourse are triggered by the speaker's choice of a specific intonation pattern" (89). Intonation plays an important role in at least two ways: first it constitutes the contextualization (cf. Sperber & Wilson 1986) according to which accessibility can be evaluated. And second it indicates by contrastive stress on

pronouns, that the pronoun does not refer to the discourse topic, but to a less accessible element.

Marianne Mithun examines the role of intonation in Central Pomo, a Native American language, in *Prosodic Cues to Accessibility* (223-233). Based on the categorial distinction in given-accessible-new (cf. Chafe) she shows that the relative accessibility of the activation state of referents is signaled by more than a choice of referring expressions. The differences in their activation states are reflected by differences in prosodic structure. A new discourse referent is introduced by an NP in a separate intonation unit. An NP that refers to a given entity receives a monotone intonation, and an NP that refers to an accessible element lacks any intonation status. This investigation clearly shows that the gradable notion of accessibility has to be cut in categorial pieces in order to be encoded into grammatical form such as intonation.

On Accessibility and Coreference (155-178) by Helena Halmari is a revised version of an article published in *Nordic Journal of Linguistics*. It was a good decision to include it in the present volume since Halmari investigates the relation between the accessibility (relation) of an anaphoric term and the grammatical role of its antecedent, i.e., she examines the structural aspect of distance (see (2a)) that influences accessibility. She compares the accessibility hierarchy of Ariel with Keenan & Comrie's (1977) Accessibility Hierarchy: "The NP Accessibility Hierarchy arranges the grammatical relations of NPs in a hierarchical order according to their accessibility for different syntactic operations, subjects being most accessible. Ariel's referential accessibility hierarchy again arranges NPs according to their properties as markers of accessibility (...)" (p 167). This paper reveals an interesting correlation between the two hierarchies.

Four articles apply accessibility hierarchies to different languages and genres. Rachel Giora & Cher-Leng Lee study the use of zero vs. overt pronouns in written Chinese texts in their contribution *Written Discourse Segmentation: The Function of Unstressed Pronouns in Mandarin Chinese* (113-140). They argue that "unstressed pronouns in Mandarin are functional in text segmentation over and above their pure referential role. They occur in boundary position to mark the beginning and end of a written discourse segment" (114).

The segment-initial position of a pronoun can be explained by its function to mention the referent or topic of this segment. However, the segment-final position cannot be accounted for along these lines. It rather seems that pronouns have an additional discourse function, that of indicating the boundaries of discourse segments. These findings are new and not expected and may initiate more investigation of this kind.

Nancy Hedberg applies Gundel et al.'s framework to Mandarin and Japanese in her contribution *Word Order and Cognitive Status in Mandarin* (179-192). Mandarin and Japanese only partly realize the statuses of the Givenness Hierarchy (3) by linguistic categories. For instance, Japanese and Mandarin do not have the definite article to express referential status. They mark referential status in different ways. Mandarin uses the distal demonstrative to refer to uniquely identifiable but unfamiliar entities, while the distal demonstrative in Japanese cannot be used in this way. Moreover, Hedberg detects an interaction of word order and definiteness in Mandarin: Nouns preceding the verb tend to be definite, while those following the verb tend to be indefinite.

Victoria Rosén develops a refinement of accessibility hierarchies in her article *The Interpretation of Empty Pronouns in Vietnamese* (251-261). She discusses cases of several empty pronouns. These cases cannot be handled by accessibility theories because such theories compare the salience of the intended referents with the information encoded in the referring expression. "Since empty pronouns do not contain any information which can aid us in identifying their referent, the logic of the salience scales might lead us to expect that there would only be one possible candidate referent that an empty pronoun could refer to, the most salient referent" (252). She convincingly shows for empty pronouns in Vietnamese that the accessibility relation between the referring expression and its antecedent not only depends on the factors described in (2), but also on the syntactic position of the referring expression, which must be similar to that of its antecedent. She calls this aspect "relational givenness". This approach seems very valuable, in particular with respect to the problem stated in the article of Walker & Prince (cf. example (6) above).

Janine Tolle discusses an application of Ariel's hierarchy to different genre in *The Effect of Genre on Referential Choice* (263-290). The paper formulates a generalization of Ariel's Accessibility Hierarchy that can be applied to different genres such as science

fiction novels, academic book reviews, informal conversations and current affairs interviews. It is shown that the referential relations in these texts are established according to the same Accessibility Hierarchy. Thus, Tolle rejects Fox' (1987) claim that the accessibility hierarchy depends on the genre.

Ann Mulkern investigates the place of proper names in the Givenness Hierarchy of Gundel et al. (1993) in *The Game of the Name* (235-250). Mulkern argues that proper names play the game of referring expression as described in the Givenness Hierarchy (3). She argues against Ariel's ranking (cf. 1a-f) of full names vs. single/first names. Mulkern shows that the use of different forms of names depends more on extra-linguistic conventions. It seems to me that the use of proper names is independent of either the Givenness Hierarchy or the Accessibility Marking Scale since they do not express lexical or descriptive information. The use of proper names rather codes the social relation between speaker and referent. Proper names play their own game with their own rules. Chungmin Lee discusses generic reference in *Generic Sentences are Topic Constructions* (213-222). Lee argues that generic NPs are always semantically/pragmatically definite, even though they might not be marked overtly by a definite article. Their definiteness is derived from their familiar status in the discourse. Moreover, Lee holds that generic subjects tends to be the topic of a sentence. This interesting study is the only contribution in this volume that does not fit into the framework of accessibility hierarchies of referential expressions.

The volume closes with an index of subjects and an index of names, both of which are very helpful. There are very little typos and the general layout is very well designed, which makes it a pleasure to read the book. Despite the absence of an overarching discussion and some weak contributions, this volume constitutes a major contribution to the discussion on referent accessibility. It represents the most recent research in a very valuable, uniform way. It is highly recommended for everyone working on or interested in discourse analysis and referent accessibility.

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