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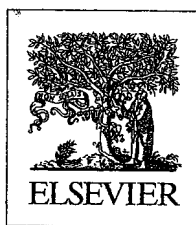
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Accessibility Theory

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Natural discourse does not start from scratch. Speakers routinely integrate new information with contextual assumptions, roughly, information that they can take for granted, and so they need not assert it (Sperber and Wilson, 1986/1995). Referring to discourse entities, an inherent feature of human interactions, is no different. Although some discourse entities are (treated as) new (*a kiss* in [1]), most are (treated as) identifiable (e.g., *the review*, *Helen*, *her* in [1], and *her heart*, a first-mention, in [2]). Thus, part of the nonasserted material is information about discourse entities that the speaker would like the addressee to retrieve (for citations of SBC [Santa Barbara corpus], see Du Bois *et al.*, 2000, 2003. [...] = a short fragment deleted):

- (1) LORI: when you were reading the review,
you talked about the affair between
Helen and Paul, [...]
all that happened was,
LINDA: was a kiss. [...]
LORI: He kissed her, (SBC: 023).
- (2) DORIS: they had an autopsy done on her.
And her heart,
was just hard, (SBC: 001).

Accessibility Theory (Ariel, 1985a, 1985b, 1988a, 1990, 2001), in effect a development of Sanford and Garrod (1981) and Givón (1983) (and see also Chafe, 1994), assumes a logically prior distinction between identifiable/Given entities (coded as definite) and nonidentifiable/Given entities (coded as indefinite). Identifiable entities are ones for which the addressee is assumed to be able to access mental representations (see Du Bois, 1980; Heim, 1982). Accessibility theory seeks to account for the selection and interpretation of all definite referring expressions. The theory does not assume (as fundamental) the first versus subsequent mention distinction, and provides one and the same account for expressions considered referential (e.g., proper names), often used for discourse first-mentions, as well as for expressions considered anaphoric (e.g., pronouns), often used for subsequent mentions (Ariel, 1990, 1994, 1996). It also does not view references to the speech situation (e.g., by deictics) as special (Ariel, 1998a). All definite referring expressions in all languages are analyzed as accessibility markers, as instructions to the addressee on how to access specific mental representations. In fact, the theory handles other types of Given materials as well, most notably whole propositions (see Ariel, 1985a, 1985b, 1988b).

Using a definite NP, the speaker signals to her addressee to access some mental representation based either on his encyclopedic knowledge, his awareness of the speech situation, or his discourse model of the interaction so far (Clark and Marshall, 1981). The definite referring expression also provides information about the intended entity, which the addressee is to rely on when zeroing in on the intended referent (e.g., *her* is a singular female). This is as far as the definiteness aspect takes us, but speakers can be even more helpful. Mental representations are not equally accessible to us at any given stage of the discourse. Some are highly activated, others are mildly activated, and yet others, although potentially identifiable, are not currently activated at all. Speakers refer to discourse entities at all activation levels. This is where accessibility theory plays a crucial role. It helps the addressee pick the correct mental representation by indicating to him the degree of accessibility with which the mental representation is currently entertained. The claim is that each referring expression specializes for a specific degree of mental accessibility, hence the term *accessibility markers* for referring expressions. On this view, addressees search mental representations not only based on the content of the referring expression, but also based on the degree of accessibility indicated by the speaker.

Since mental accessibility comes in a rich array of degrees, accessibility markers can be graded on a scale of accessibility marking, some indicating very low degrees of mental accessibility, others indicating various intermediate and high degrees of accessibility. The following partially grammaticized (see Ariel, 2001) accessibility marking scale, starting with very low accessibility markers and ending with extremely high accessibility markers, has been proposed in Ariel (1990), but the list is not intended to be exhaustive:

- (3) Full name + modifier > full name > long definite description > short definite description > last name > first name > distal demonstrative + modifier > proximate demonstrative + modifier > distal demonstrative + NP > proximate demonstrative + NP > distal demonstrative (-NP) > proximate demonstrative (-NP) > stressed pronouns + gesture > stressed pronoun > unstressed pronoun > cliticized pronoun > verbal person agreement markers > zero.

For example, *the affair between Helen and Paul* in (1) is a long definite description. The prediction is that it indicates a mental representation that is not as accessible as the shorter *the review* or *he*. Indeed, *the review* is what the interlocutors have been

discussing. But the affair, as such, was not explicitly mentioned in the conversation, and in fact, according to Lori, it's not even clear that there was one. *He* (a pronoun) refers to the highly accessible Paul, who was just mentioned.

Now, the correlations between specific referring expressions and specific degrees of mental accessibility are not arbitrary. This is why (3) is virtually a universal. By and large, the accessibility marking scale is governed by three coding principles: informativity, rigidity, and attenuation. Informativity predicts that more informative expressions be used when the degree of accessibility is relatively low. It is only reasonable for the speaker to provide the addressee with more information if the mental representation is not (highly) activated, so he can better identify the intended entity from among the many he entertains at a low degree of accessibility. Rigidity predicts that a (more) uniquely referring expression (such as a proper name), rather than a relatively nonrigid expression (such as a pronoun), should be used when degree of accessibility is low (cf. *Helen, Paul* with *her, he* in [1]). Finally, attenuation predicts that greater phonological size (including the presence of stress) correlates with lower degrees of accessibility, whereas smaller phonological size correlates with higher degrees of accessibility (cf. definite descriptions vs. pronouns, and even more so with zero).

The three principles overlap to a large extent. Quite often, informative expressions are also relatively rigid and unattenuated. However, this is not invariably so. *The newspaper* and *United States of America* are as informative and rigid as *the paper* and *US(A)*, respectively, but they are not as attenuated. Accordingly, the lower accessibility markers are found in contexts where a lower degree of accessibility is the case (see Ariel, 2001, *inter alia*). Similarly, in languages with verbal person agreement, there is no difference in the informativity and rigidity between independent pronouns (e.g., Hebrew *ani*, 'I') and the corresponding agreement marker (+*ti* for past tense). But distributional patterns show that the independent pronoun (less attenuated) is used when the speaker is less accessible. Finally, for Western names, it's usually the case that first and last names are equally informative and attenuated, but they are not equally rigid. Last names tend to pick a referent more uniquely than first names (simply because there is a greater variety of last names). Accordingly, Ariel (1990: 45) correlates the two types of names with different textual positions, showing that anaphoric first names mostly find their antecedents within the same paragraph, but last names have three times as many cross-paragraph anaphoric relations. This points to the lower degree of accessibility indicated by last names.

Distance between a previous and a current mention of the entity (recency) is indeed one important factor determining degree of accessibility. Naturally, the longer the time elapsed between the previous and the current reference, the less activated the representation, so that relatively lower accessibility markers are called for. Note that the relationship between the antecedent and the anaphor, their Unity, is not simply measured in number of words (only), but rather, syntactic boundaries (e.g., the clause), textual boundaries (the paragraph, the episode), and pragmatic boundaries (units more vs. less cohesively linked to each other) define the closeness between a potential antecedent and its anaphor, dictating higher or lower accessibility markers depending on how 'distant' the two are from each other. When a discourse entity is inferred based on another, we similarly see differences according to how automatic/stereotypic the inference connecting the two is (cf. *her heart* in [2], which is easily inferred from *her*, given that humans have hearts, with *his sense of character values* based on *his* referring to *Mister Forster* – SBC: 023, where we don't automatically assume that people have a "sense of character values"). Empirical evidence for these Unity claims can be found in Clancy (1980), Sanford and Garrod (1981), Givón (1983), and Ariel (1985a and onward).

Unity features mostly pertain to anaphoric references. Referent salience is important for all types of reference, first-mention referential expressions included. Some discourse entities are inherently more salient: the speaker and addressee (vs. third persons), humans (especially vs. inanimates), and famous personalities (vs. anonymous people). Other discourse entities have a prominent *ad hoc* status, mostly because they constitute discourse topics. The predictions are then that higher accessibility markers will serve these more salient discourse entities. Competition over the role of intended referent between potential mental representations may, however, lower the degree of accessibility of each, mainly of nontopics. It then calls for lower accessibility markers:

- (4) MARY: What I have to do,
is take off the distributor wire,
and splice it in with the fuel pump
wire.
Because my . . . fuel pump; is now
electric, (SBC: 007).

- (5) In the reference, each author is referred to by name and initials. There is a single exception – to avoid the possibility of confusion, first names are always included for David Payne, Doris Payne, John Payne, Judith Payne and Thomas Payne (Dixon, 1994: xvi–xvii).

In (4), the more topical entity is coreferred to by *it*, the nontopic by an informative lexical NP (*my fuel pump*). In (5), presumably equally accessible entities are all referred to by lower accessibility markers (full names), because they compete with each other (initial + *Payne* is not rigid enough in this context).

It is important to remember, however, that accessibility theory makes claims about correlations between referring expressions and degree of accessibility, measured as a total concept, rather than by any one of its components (e.g., topic, distance, or competition). In other words, the prediction is that accessibility marker selection is determined by weighing together a whole complex of accessibility factors, which together determine what the degree of accessibility of a given discourse entity is at the current stage of the discourse (see Toole, 1996; Ariel, 1999). This is why, for example, even speakers are not invariably referred to by the highest accessibility markers (zero in Hebrew). Although the speaker is a highly salient discourse entity, if she's not topical or if it's competing with another antecedent, it may be referred to by an independent pronoun.

Finally, accessibility theory is universal (see Ariel, 1990: 4.2), although not all languages have exactly the same set of referring expressions, and even when these seem to be identical, they may rate differently for the three coding principles (informativity, rigidity, and attenuation, e.g., cf. English and Japanese pronouns). Provided they are comparable, all referring expressions are predicted to indicate the same relative, though not absolute, degrees of accessibility. Thus, in all languages zeroes indicate a higher degree of accessibility than pronouns, but not all languages allow cross-sentential zero anaphora. Accessibility theory applies to all genres/registers (see Ariel, in press). In fact, because accessibility related discourse patterns are so common in diverse registers and languages, we can account for various cross-linguistic grammaticization paths. For example, the recurrent creation of verbal person agreement markers for first/second persons, but not for third persons (via the cliticization of the high accessibility markers used for the very salient speaker and addressee; see Ariel, 1998b, 2000), as well as universal constraints on the use of resumptive pronouns (see Ariel, 1999). At the same time, accessibility constraints may be violated to create special pragmatic effects (e.g., *Jamie the old lady* (SBC: 002) is too low an accessibility marker, when used by Jamie's husband in her presence).

See also: Articles, Definite and Indefinite; Deixis and Anaphora: Pragmatic Approaches; Demonstratives; Pronouns.

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