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Text, discourse, context: a meta-trilogy for discourse analysis

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Abstract

The majority of functional models of language, which purport to account for text, do not recognize the distinct dimension corresponding to “discourse”, as conceived here. Instead, the various semantic-pragmatic aspects of the use of indexical expressions, in particular, tend to be conceived uniquely in terms of the textual environment of the markers involved. Correlatively, the invocation of “context” in such approaches tends to be limited essentially to the co-text. But according to the present study, such expressions operate in terms of the mental discourse representations which the participants are jointly as well as severally constructing as the discourse proceeds.

The article’s aim is to show that the discourse dimension of language use is crucial to the ways in which indexical markers function, and hence should be taken into account in their modelling. This can only be done, it is argued, by integrating their treatment within a model of the broader utterance context in which such expressions are used, thus permitting a dialectic between the system-derived properties of such expressions and those emanating from the particular uses of such resources in actual communication.

Keywords: context, discourse, indexical reference, mental discourse representations, text

1. Introduction

In the functionally-oriented literature on discourse anaphora in particular, and indexical reference more generally, there is significant confusion in relation to the three meta-discursive terms and notions *text*, *discourse* and *context*. In essence, the problem is that the first two of these terms – as well as the notions that underlie them – tend to be confounded, while the import of the third one tends to be downplayed or even ignored. The article aims to sort out the respective domains and functions of each of these dimensions, by analyzing a number of attested multi-propositional examples in terms of their internal and external interactions and interdependencies. It also attempts to pinpoint in general terms, on the basis of the examples analyzed, those aspects of both co-text and other strands of context which are responsible for creating various features of the discourse invoked.

The overall aim is to argue against what appears to be a general tendency in the relevant literature on anaphora to treat it in exclusively co-textual terms, and instead to support an approach involving certain interactions amongst *text*, *discourse* and *context* in its functioning. Two structural- and cognitive-functional models of language (Functional Discourse Grammar and T. Givón’s version of cognitive-functional grammar) will be examined as examples in terms of their conceptions and implementations of these three notions. Both models will be found wanting in one or more of these respects.

In what follows, I first present a characterization of the three meta-discursive dimensions at issue (section 2), and then outline the evidence on which the hypothesized distinction between *text* and *discourse* in particular is founded (section 3). Section 4 proposes a generalization from the analyses of section 3, in order to distinguish several aspects of discourse which may be

signaled by contextual or co-textual means. Section 5 points out the disadvantages in not recognizing the existence of the discourse dimension of various linguistic phenomena, by examining two functional models in this respect. Section 6 summarizes and concludes the discussion.

2. Text, discourse and context

The notions of ‘text’ and ‘discourse’ are often not clearly distinguished in works on language use in context. Indeed, they are often even treated in the relevant literature as virtually identical: see e.g. the definitions of each dimension provided by Francis (1986: 5):

‘Discourse’ refers with systematic ambiguity to a) any stretch of written language considered to be complete in itself and b) the theoretical level at which this stretch of language is analysed. (...) I use ‘text’ only when referring closely to the arguments of those who use this term rather than ‘discourse’ (...).

‘Discourse’ is conceived as either restricted to **written** language, as defined by Francis in (a) above, or, contrariwise, to the **spoken** medium, as defined by Parisi & Castelfranchi (1977: 31) – a perfect contradiction in terms. But see Dickinson & Givón’s (2000: 188, n. 2) conception of “text” as being relevant to both spoken and written productions.

See Butler (2003, Part II: 303-306) for a discussion of the ‘text’/‘discourse’ distinction in relation to various functionalist theories of language. As Butler points out (p. 303), “Halliday (1994: 366) himself appears to equate ‘text linguistics’ with ‘the study of discourse’, and Chafe (1992: 356) ... states that “[b]oth terms [‘text’ and ‘discourse’ – FC] may refer to a unit of language larger than the sentence: one may speak of a ‘discourse’ or a ‘text’.” In all these definitions, it is clear that the notion “discourse” is essentially being aligned with that of “text”.

Our conception of the triple distinction, by contrast, is as follows. First, regarding the notion *text*, Verhagen (2005: 22) (cf. also Langacker, 2001: 151; Levinson, 2003: 35) makes a significant point in claiming that

linguistic expressions are primarily cues for making inferences, and understanding does not primarily consist in decoding the precise content of the expressions, but in making inferences that lead to adequate next (cognitive, conversational, behavioural) moves.

Briefly, *text* constitutes the material trace of at least one act of utterance (whether realized via verbal or non-verbal means – gestural, sensori-perceptual or prosodic). In the spoken medium, non-verbal signals may correspond to gaze direction, winks or pointing gestures of various types. In the written medium, they may be represented by underlining, italics, boldface, punctuation, paragraphing or more generally the page layout of a particular text. The existence of a shared utterance situation in the spoken medium enables the participants to avail themselves widely of non-verbal signals, concomitantly with, or even sometimes in place of, the verbal text of an given utterance: cf. Mey 2020: 86, Connolly 2009; see example (6) in §4 *infra* for an illustration of the latter situation. So it is not only the specifically linguistic components of a given (sequence of) utterance(s) which make up text, in this conception.

Text, then, is the connected sequence of verbal signs and nonverbal signals on the basis of which, in conjunction with the harnessing of a relevant context, *discourse* (see below) is co-constructed by the participants in an act of communication. *Text* in this conception is essentially linear, unlike *discourse* (see below) which is structured hierarchically (cf. Parisi & Castelfranchi, 1977; Fox, 1987).

In claiming the linear character of *text*, I have in mind ‘text’ (as a mass noun), viewed from the perspective of the language processor, not ‘texts’ as planned individual products of particular communicative intentions on the part of a speaker or writer. ‘Text’ as the final output of a speaker’s or writer’s communicative intention involves the consecutive production of

minimal linguistic and/or non-linguistic semiotic units (for the former, phonemes, syllables, phonological words in the spoken medium, and graphemes and words in that of the written). The oral channel requires the products of speech to follow one another in time, and the written one entails that those of the written form of language are arranged consecutively in spatial terms.

Evidently, when the addressee or reader begin their processing of this raw material, they will divide it into units and hypothesize particular relations among them, on the basis of the prosody with which the spoken utterance is pronounced, and of the syntax,¹ the punctuation and the page layout in the written form. This will represent the initial stage in setting up the discourse associated with the text, together with the invocation of a relevant context. Prosody and gestures in the spoken form occur simultaneously and in parallel with the verbal text. With the advent of the world wide web, on-line written texts often contain links to other, related texts (a phenomenon known as “hypertext”). These are tangential to the text initially read, but of course each such text will be initially presented linearly internally, as indicated above.

The quotation above from Verhagen (2005) may be construed as implying that a given text (whether oral or written) is by definition incomplete in relation to the discourse that may be derived from its processing within a relevant context, which is clearly the case (even in the written medium). The dimension *text*, then, underdetermines, on occasion radically, the discourse created thereby (cf. Carston 2002: 15-93; Butler 2013: 19): see (1) below as a prime example.

As for *discourse*, this is conceived here as the product of the contextually-situated sequence of indexical, propositional and illocutionary acts produced with a view to realizing a particular communicative goal. It is here that we find what Verhagen (2005: 22) calls the “next (cognitive, conversational, behavioural) moves”. *Discourse*, then, is the ever-evolving, revisable interpretation of a particular communicative event, which is jointly constructed mentally by the discourse participants as the text and a relevant context are perceived and evoked, respectively.² This interpretation is later converted into an overall mental representation, capable of being stored in long-term memory (cf. also Langacker’s 2001: 180 comparable notion of “consolidation”, as well as Dickinson & Givón 2000: 159).

Discourse units (DUs) are subclassified into background ones, which serve to anchor, both modally and referentially, the central discourse representations created, and foreground units capable of advancing the communication. It is the realization of these different functions that structures the discourse into hierarchically organized levels. DUs are in principle independent in relation to syntactic structures, e.g. clauses, though they may well correspond to the latter (as in (1) below). See Allen (1995: Ch. 16, 503-537) for a systematic, clearly-defined model of hierarchical discourse construction, to which anaphoric relations centrally contribute.

¹ The speaker or writer will leave various signals within the text to indicate the intended relations holding between potentially non-adjacent forms (for example, case marking on nouns and their modifiers in case languages, and agreement marking in languages possessing grammatical gender), in order to signal the syntactic structures to be derived on the basis of the sequence of sounds or graphic forms at issue. Another marked example is the syntax of main and subordinate clauses in Germanic languages (apart from English): here, the tensed part of a verbal complex occupies the second position in such clauses, but the non-finite components are postposed to the end of the clause. The understander must therefore interrelate the separate parts of this complex, parts of which are non-adjacent linearly, in terms of their syntactic competence in the language concerned. Two basic means of syntactic construction are hypotaxis and parataxis. The former is characteristic of written text (“microgrammar”), and the latter of spoken interactive text (“macrogrammar”): see Haselow (2017) for some of the ways in which the distinction operates in creating discourse from spontaneous dialogic speech in English.

² Cf. also Widdowson (1998:19), who observes: “What interpretation involves is the relating of the language in the **text** to the schematic constructs of knowledge, belief and so on outside the text. In this way, **discourse** is achieved” (emphasis added).

Context, for its part, is also conceived here in cognitive terms, in relation to the mental representations which speaker and addressee are jointly developing as the communication proceeds, and as such it is continuously evolving. The context in terms of which the interlocutor or reader creates discourse on the basis of text comprises at least the following aspects: the domain of reference of a given text (including of course the local or general world knowledge that goes with it), the surrounding co-text of a given expression, the discourse already constructed upstream of its occurrence, the occasion of the exchange, the genre of speech event in progress, the socio-cultural environment in which the text occurs, the interactive relationships holding between the interlocutors at every point in the discourse, and the particular situational context of utterance at hand.

The most central of the sub-types of context is the immediate context of utterance of each discourse act: this functions as a default grounding “anchor” for the discourse being constructed as each utterance is produced (cf. Langacker, 2001: 144). So context is the mediating, “anchoring” or grounding dimension of any act of communication. In simple terms: “Text” + “Context” ⇒ “Discourse” (i.e. the contextualization of a given text will eventually result in the creation of discourse).³

Example (1) illustrates the distinctiveness of and interaction amongst these three dimensions:

- (1) [Printed sticker on rear window of cars in UK]
Mind that child! He may be deaf

First, the most basic situational, interpersonal (interlocutive) context of this short text is assigned thus: the intended addressee is the driver of the vehicle immediately behind the one displaying the notice. The front-seat passenger, if there is one, will also be able to see it; however, s/he will obviously not be able to act on it, since they do not have control of the vehicle in question. The addressor is presumably the UK Ministry of Transport, responsible for roads, or a road-user’s association such as the AA or RAC.

The context of utterance favoring the relevant sense of the transitive verb *mind* in the first sentence will clearly select “watch out for” or “pay attention to”, rather than “look after” (as in the locution *child-minding*) or “be disturbed by”, as in “*Would you mind opening the window?*”. In this sense, the addressee will access the stereotypical road-using situation (feared by all motorists) of a deaf child who cannot thereby hear an approaching car, and who inadvertently leaves the pavement and crosses the road in its path, risking death or serious injury as a result. Moreover, the modal auxiliary *may* in the second sentence will be given an epistemic rather than a deontic value in context.

Another important discourse-related decision concerns the particular illocutionary point at issue: the imperative mood of the initial utterance clearly corresponds in context to a warning, rather than an order, suggestion or injunction. This value is confirmed by the interpretation of the second utterance, which provides a reason for the illocution associated with the first.

The distal demonstrative determiner *that* in *that* child in the first sentence will correspond to the recognitional use of this member of the demonstrative pair, no actual child necessarily being present in the utterance situation (i.e. at the point when the driver reads the message at issue). The reference is to the “type” of pedestrian at issue, a type further specified by the second sentence *qua* dependent discourse unit: the two discourse units involved are clearly intended to get the intended recipients to act by mentally invoking the stereotypical situation at issue. A further factor relating to discourse is the choice of the coherence relation *Explanation* in integrating the second discourse unit with the first, thereby resolving the pronoun *he* (cf. Hobbs,

³ See Haberland (1999), Renkema (2009: 9-10) and Auer (2009) for similar three-way distinctions.

1979).⁴ So it is a discourse representation of the situation evoked generically here which is intended to be accessed by the addressee-driver.

These features (the establishment of an utterance context, the consequent selection of the appropriate sense of the initial predicator and subsequent modal auxiliary, the choice of illocution as well as mode of reference of the demonstrative and the selection of a relevant coherence relation) all constitute the indispensable grounding that enables the creation of the discourse associated with this short text. They may be said to correspond to “explicatures” in Relevance Theory (see Carston & Hall 2012).

3. Evidence from indexical reference for the three-way distinction

Langacker (2001), as well as Romera (2004) and Van Dijk (2008),⁵ come closest to the present conception of discourse, as outlined in §2. Haselow (2017: 102) also implies the existence of a level of discourse structuring in spontaneous English speech in claiming that what he calls “macrogrammatical” expressions “create structure on the communicative level, (...) expressing meanings that are relevant on the interpersonal (...) and the textual level.” See his sub-section 6.6.3 on “discourse organization”, pp. 272-277. In much current and recent work too, there is frequent use of the term *discourse* with a broadly similar value: witness, the current use of the term “discourse relation” in the sense of “coherence” or “rhetorical” relations, as well as the term “discourse deixis”, in opposition to “text deixis”, and the established domain heading “discourse analysis”. In the present References section, some 17 entries contain the term “discourse” in their titles (apart from instances of names of particular models of language). However, there is not yet full consensus as to the exact understanding of this notion, and especially to its exploitation in utterance-level analyses. There is a pressing need, therefore, to clarify these terms and notions, and to make precise their respective domains and modes of operation. The present study’s aim is to achieve precisely this goal.

Now, exploiting this three-way distinction, my hypothesis is that there is a complex interaction between the dimensions of *text* and *discourse*, mediated by *context*, in the operation of indexical reference. What I call the *antecedent trigger* (an utterance token, a percept or a semiotically-relevant gesture – all falling under the definition of *text* in this conception) contributes the ontological category or type of the anaphor’s referent; but the complete referent itself and its characterization are determined by a whole range of factors: what will have been predicated of it up to the point of retrieval, the nature of the coherence/rhetorical relation invoked in order to integrate the two discourse units at issue, and the particular character of the indexical or “host” predication. All these factors come under the heading of *discourse*, under the present definition.

So contrary to the classical conception of discourse anaphora adopted by the majority of extant accounts, whether the referent retrieved via a given anaphor has been directly and explicitly evoked in the prior co-text (or the following co-text in the case of cataphora) in fact provides neither a sufficient nor a necessary condition for its existence. For the natural language user, there is no simple matching process between two separate expressions (textual antecedent

⁴ See also Cornish (2009) on the interdependence of the operation of integrative coherence relations and anaphora in the creation of discourse, whereby the reference of an anaphor is established jointly as a coherence relation is set up.

⁵ Romera (2004: 4) defines discourse thus: “discourse is seen as a structurally organized compound of units which are related to each other through a series of coherence relations.” As for Van Dijk, his conception of discourse is “any form of language use manifested as (written) text or (spoken) talk-in-interaction, in a broad semiotic sense” (2008: 116). He goes on to write “This includes visual structures, such as layout, letter type or pictures for writers of printed text, and gestures, facework and other semiotic signs for spoken interaction”.

and anaphor), independently of their respective semantic-pragmatic environments.⁶ As an example, see Huang's (2000: 1) definition: "The term anaphora [in contemporary linguistics] is commonly used to refer to a relation between two or more linguistic elements, wherein the interpretation of one (called an anaphor) is in some way determined by the interpretation of the other (called an antecedent)".

Figure 1 is a schematic representation of the distinction between *antecedent trigger* and *antecedent* as I conceive it, as well as of the different domains in which each operates (respectively, those of *text* and *discourse*).

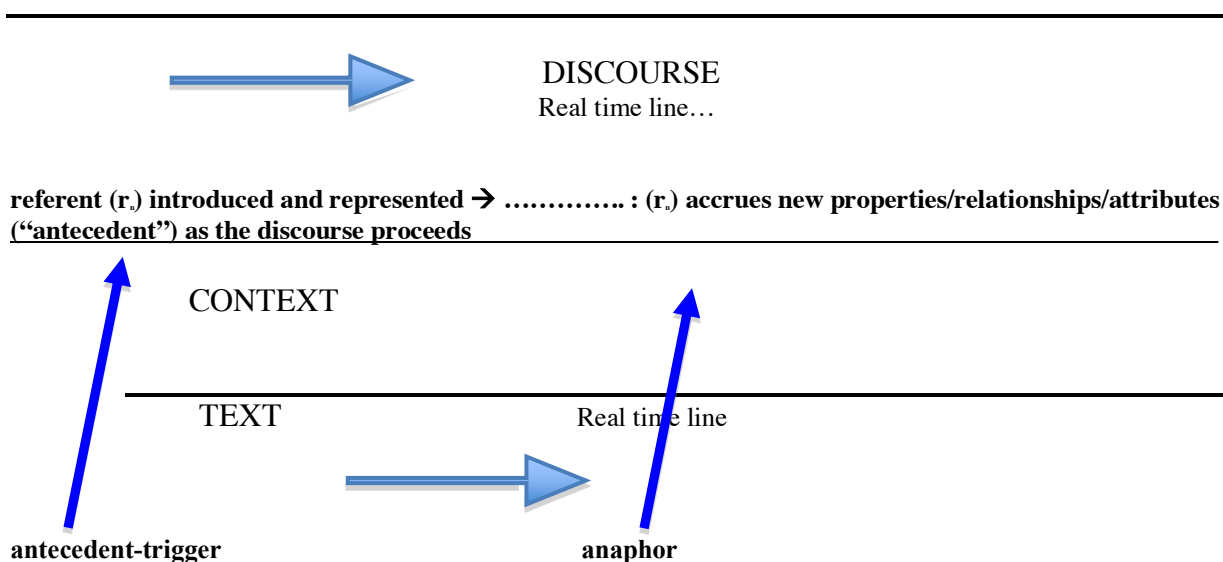


Figure 1: *Discourse, context, text* and the relationships between "antecedent trigger", "referent", "antecedent" and "anaphor": recipient's perspective

As is evident from this diagram, Discourse and Text are schematized as running in parallel with each other – both subject to a time line. Text and Context feed into Discourse. The *antecedent trigger* is part of some particular *text* (broadly construed, as we have seen) and may evoke a referent, which is mentally represented within the *discourse*:⁷ see the first dark (blue) arrow pointing obliquely upwards through the mediating 'Context' layer towards the discourse representation level above. This representation then accrues certain properties, relations etc. as these are predicated or inferred of it in the ensuing text. A subsequently occurring anaphor (a linguistic expression, possibly a null pronoun) together with its host predication as a whole in the following co-text then enable the addressee or reader to access this representation **as it has evolved up to the point of retrieval**. This is an illustration in communicative terms of Heraclitus's famous point that "you never step into the same river twice". The Figure represents the recipient's perspective. For the speaker or writer, the lowest layer would correspond, not to *discourse*, but rather *context*: *discourse* would then represent the middle layer, with "text" as the final, highest one.

Let us look now at some attested instances of indexical reference which require certain (virtually automatic) inferences on the reader's or hearer's part, the co-text (in examples (2)

⁶ See in this regard Kehler's (2008) incisive criticism of what he calls the "SMASH" procedure, as in the traditional account of pronoun resolution in mainstream psycholinguistics: i.e. "Search, Match, and Select using Heuristics" (Kehler, 2008: 95) – a revealing acronym if ever there was one!

⁷ This representation corresponds to the *antecedent* under this conception – i.e. the in-context interpretation assigned to the anaphor at the point where it occurs in a text. The antecedent representation reflects the essentially relational, context-determined feature of the anaphor's reference: e.g. in (1), for *he*, it will be "the possibly deaf child who may step into the road in the trajectory of an approaching vehicle".

and (3)) not having explicitly introduced the referent picked up by the anaphor in advance of its occurrence.

- (2) ... Another guest, a tall princess, married to an erudite naturalist landowner called Béla Liphthay, from Lovrin in the Banat, was a descendant (not direct, I hope) of Pope Innocent IX of the famous house of Odescalchi, lords of Bracciano.*

* According to Sir Walter Scott (or Macaulay quoting him; I've searched both in vain and will probably come upon *the passage* the day after this book is out), Bracciano, by its reedy lake, was the best example of a mediaeval fortress he had ever seen... (Patrick Leigh Fermor, *Between the Woods and the Water*, London: John Murray 2004, p. 104)

In this written autobiographical extract, the *antecedent triggers* for the discourse entity 'the particular passage in a book by Sir Walter Scott or by Macaulay quoting him which claims that Bracciano was the best example of a medieval fortress the former had ever seen', are both the framing adverbial PP *According to Sir Walter Scott (or Macaulay quoting him...)* and the conjunct *I've searched both in vain* in the first line of the footnote containing the definite NP anaphor *the passage*. Reference is made in terms of metonymy to the (historical) works written by Sir Walter Scott or Macaulay, according to a well-established referential convention whereby the name of an author may be used to refer to his or her works. A further confirmation of this interpretation comes from the use of the verb *searched* in line 1 of the footnote.

Now, once these referents have been evoked via inference, the definite NP *the passage* may be resolved anaphorically in terms of an associative part-whole relation as a function of the knowledge that books contain "passages". But there is no canonical textual antecedent at all here. Notice that only a definite NP such as *the passage* is capable of targeting the intended referent here, a 3rd person pronoun (e.g. *it*) being insufficiently informative: after all, the host predication is part of a putatively background discourse unit (a footnote on a term used in the text proper), which is therefore outside the main line of the developing discourse.

Another attested example, from a rather different written genre, is given in (3) below. This extract formed part of a notice displayed in a stationery store (W.H. Smith UK), where, unlike in (2), pronominal forms were used to retrieve a salient inferred referent:

- (3) CUSTOMER SERVICE REFUND POLICY
We hope you are delighted with everything you buy from us. However, if for any reason you are not, simply return *it* to us in *its* original condition with your receipt, within 30 days of purchase and we will gladly refund your money. This is in addition to your statutory rights.

Here it is also in terms of the construction of the discourse up to and including the occurrence of the anaphoric clause, and not in terms of a co-textually introduced entity, that the pronoun *it* and possessive pronominal determiner *its* in line 2 of this text refer. For the interpretation of *everything you buy from us* (line 1) would not be congruent with the form of the pronoun and possessive determiner: namely, singular inanimate. The in-context interpretation of the pronoun and possessive determiner is provided more specifically by the ellipsis in the preceding clause *if for any reason you are not* (i.e. "satisfied with any particular item you buy from us"). These pronominal elements refer, then, to a potential member of the set of items characterized by the antecedent-trigger *everything you buy from us*. The referent of the two occurrences of *it* and of *its*, then, is 'the article bought by any customer of W.H. Smith with which he or she is dissatisfied, if that is the case' – the modifying conditional clause in this *antecedent* structure

(see note 7) being a reflection of the fact that the referent at issue was evoked, precisely, within a conditional clause: the elliptical clause ...*if for any reason you are not* in the example.

Example (4) below shows how features of the co-text help to determine relative degrees of topicality, and thus of psychological saliency, amongst the nominal referents evoked. As such, they **indirectly** specify the preferred anaphoric reference of indexicals. In (4), unlike in examples (2) and (3), there is a textually-introduced referent for the indexical NP *This mysterious man with an aerosol can* in line 3 to retrieve:

(4) **Deception**

9.00pm *Alibi*

DRAMA We've grown used to Cameron being the smartest person on screen, but there's a real danger here of *him* being outwitted by a Banksy-style street artist with whom *he* has past beef. *This mysterious man with an aerosol can* once dissed *the magician* in a very public way. And *he's* now running rings around *him* as *he* distracts the public with *his* artwork while an accompanying team stage daring robberies on the sly.

Cameron, though, also knows a thing or two about getting people's attention, (...) (David Brown, *Radio Times* 14-20.08.21, p. 101)

This very "tongue in cheek" style of writing, complicitous with the reader, is typical of *Radio Times* film and TV programme synopses, such as this one: see for example the highly idiomatic expressions "has past beef with" and "dissed" (meaning in effect "insulted" here) in line 3. The main character in this series, Cameron, is considered to be already familiar to the reader/viewer, so not in need of any introduction: a simple surname or forename is deemed sufficient. As such, the protagonist is presented as topical, indeed macro-topical in this short text, being picked up via a pronoun (*him*) in the second conjunct of the initial sentence, and also a later one (*he*) in the same sentence. His rival, however, is introduced by an expanded indefinite descriptive NP extended via a relative clause (*a Banksy-style street artist with whom he has past beef*).

The second sentence gives rise discursively to an "Entity-Elaboration" (cf. Prévot *et al.* 2009) coherence relation on this adversary, introduced by an also-expanded proximal demonstrative NP (*this mysterious man with an aerosol can*). This functions as a so-called "strict" anadeictic⁸ indexical reference which serves to re-orient the attention focus to the last-mentioned entity in the preceding co-text; but the central character, 'Cameron', is referred to via a definite presuppositional NP (*the magician*). The following sentence continues the now re-set focus with subject pronouns used to maintain the reference, and an object one (*him*) to refer back to the erstwhile topical entity. As such, these two sentences may be said to form a sub-unit within the initial topic-establishing one, in discourse terms.

The next and final paragraph, however, begins with an explicit re-reference switching the focus back to the main character, using the same proper noun that was used initially for this same purpose. This focus re-set is confirmed via the use of two subject pronouns in the following co-text (not reproduced in full) and a pronominal determiner (*his*). There are no further references to the other character, however.

The various types of referring expressions used here are co-textual cues to the discourse status of the two referents at issue here (cf. Kibrik's, 2011: Chs. 8 and 9 analogous notion of "referential aids"). This shows the usefulness of having available a record of the recent co-text, as a means of orienting the addressee's or reader's interpretation of potentially ambiguous

⁸ By *anadeixis* is meant the hybrid indexical functioning of certain context-bound expressions to target discourse entities which are either not yet topical, or whose erstwhile topical status has faded. Another example of this type of use, already seen, is *that child* in (1), exemplifying recognitional anadeixis.

anaphors in context – though in actual usage the textual expression fades rapidly, since working memory is extremely limited in capacity (cf. Jarvella 1979).

An example where a switch to an alternative, non-topical entity at the point where the latter is re-referenced, but where a topic-continuing expression type used to express it (a 3rd person pronoun, *he*) results in minor incoherence, is given in (5):

(5) **Militants want cleric freed**

A militant Palestinian splinter group, the Islamic Army, has demanded that Britain release a Muslim cleric in return for the freedom of BBC reporter Alan Johnston. *He* was kidnapped on March 12. (*The Guardian Weekly*, 18/05/07, p. 2)

In (5), the 3rd person masculine singular human-denoting pronoun *he*, signaling canonical anaphora, is used to retrieve a referent introduced in a peripheral phrase within the initial sentence, the adjunct PP *in return for the freedom of BBC reporter Alan Johnston*. Note that there could be a comma (or a pause in the spoken version) between the words *cleric* and *in* here, showing that this adjunct may be a sentence modifier. Like the text in (4), here the predication in the second sentence of (5) is clearly elaborating the less topical of the two male entities evoked, namely Alan Johnston – a referent which is in fact not topical at all at the point where the NP evoking it occurs.⁹ So as a discourse unit, this sentence represents a background comment on this not yet topical entity,¹⁰ and does not continue the main line of the discourse – which has to do with the Muslim cleric then in custody in Britain.

But targeting this secondary referent via a topic-maintaining device (the pronoun *he*) results in minor infelicity, precisely because of the fact that the discourse unit in which it occurs is background and not foreground in character.¹¹ Consonant with this status, a more natural retrieval of this referent would have been via a reduced definite role-denoting NP, such as *the journalist*; see the analogous NP *the magician* in (4), which also refers to a male individual not in focus at the point of use. In addition, the use of *he* results in anaphoric ambiguity here (at least at the point where the pronoun *he* is encountered), since, as already pointed out, the macro-topic entity in this text is the Muslim cleric whose release is demanded by the Palestinian splinter group, the Islamic Army.

Indeed, the cleric is mentioned in the very title, which highlights the essential point of the text as a whole. Moreover, this referent is introduced in the body of the text via an indefinite NP in direct object position within a complement clause, a grammatical function higher in the hierarchy of grammatical relations than the adjunct PP introducing the second male referent. However, once the predicative component of the anaphoric sentence is taken into account, only the BBC reporter may be said to have been “kidnapped”; for the Muslim cleric is presupposed to be held in custody by Britain at the time of publication. So there is a conflict here between the import of ‘top-down’ (the macro-topic as indicated in the title) and of ‘bottom-up’ (the contribution of the host predication) contextual information. Interestingly, according to Kaiser’s (2010: 487) analysis, it is the Estonian demonstrative pronoun *see* (‘this one’) that would be used in this type of situation, rather than the default pronoun *ta*: see her written examples (5a,b) and (6), p. 487. The Finnish demonstrative pronoun *tämä* (‘this (one)’) would also be used here in translation (Elsi Kaiser, p.c.), and in French, again a demonstrative

⁹ Haselow (2017: 110) expresses this type of situation thus: “(...) co-indexicality per se presupposes that a referent has been established and mentally activated before it is indexed by e.g. pronominal reference at a later point in time. Lack of prior activation prevents ... the successful processing of an indexical device (...)” See his 4.5.3 (pp. 219-229) for further discussion along these lines.

¹⁰ See also the note within extract (2) in this respect, where a reduced definite NP rather than a 3rd person pronoun was used.

¹¹ See Cornish (2012) for further discussion of this distinction and its relevance for indexical reference in discourse.

expression (e.g. *celui-ci* ‘this one’ or *ce dernier* ‘the latter’). In German, it would also be a demonstrative pronoun (*dieser* ‘this one’: Monika Schwarz-Friesel, p.c.).

Clearly, then, discourse is internally structured in terms of hierarchical relations between discourse units, and is not essentially linear, unlike text: see §2 above. And the expression of anaphora, anadeixis and deixis (i.e. of indexical reference) is sensitive to this factor: see amongst other works, e.g. Fox (1987); Pu (2011).

4. Types of context involved in indexical reference

The aspects of context we have seen in the examples presented so far may be ranged in terms of the following headings:

- 1) types of context resulting in discourse-relevant properties; and
- 2) types of context directly or indirectly influencing the form of an expression or utterance.

Regarding the first sub-type, we note the following aspects of context:

- **The co-text induces inferences based on knowledge of world:**

See examples (1), where the stereotype of an incautious deaf child crossing a road in the path of an oncoming vehicle is triggered in context initially by the first sentence *Mind that child!*, and (2), where the trigger is *According to Sir Walter Scott (or Macaulay quoting him)...* Reference here is to (historical) **works** written by these authors, not to the individuals *per se*. This corresponds to conventional, genre-based knowledge assumed on the reader’s part. The inference derives from readers’ assumed knowledge that the famous individuals mentioned wrote works of history.

Example (3) has as textual antecedent-trigger *everything you buy from us*, where *you* refers to the customer, and *us* to the store W.H. Smith. The host predication (*simply return it to us in its original condition with your receipt*) trades upon the assumption that a shop is devoted to selling goods to customers, and that it is necessarily concerned that the customer should be satisfied with the goods s/he buys from it. Again, this stereotypical information is available via the reader’s world knowledge.

And in (5), the reader’s knowledge of “being kidnapped” will be able to help him/her choose between the Muslim cleric and Alan Johnston as referent of *he*, since being held in custody in Britain is not a type of “kidnapping”.

- **Co-text induces discourse-relevant properties:**

In examples (4) and (5), a macro-topical entity is evoked via reference within the initial, topic sentence (and also in the text’s title in the case of (5)); in addition, the linear precedence of the textual introduction of the former in relation to that of a secondary, more background referent is also relevant.¹² The initial references to the former are made via a grammatical relation higher on the scale of GRs than those made to the latter (in (4), subject vs. oblique prepositional object of a passive participle, and in (5), the direct-object as opposed to the oblique object or sentence-modifier function).

¹² Cf. Gernsbacher’s (1990: 10-48) hypothesis of “The Advantage of First Mention” in thereby laying a foundation for the construction of a particular discourse representation. The claim is based on a large number of on-line reading experiments

- **The semantic-pragmatic relation holding between two discourse units**

can influence the choice of referent (where there is more than one potential candidate) for a given indexical expression. See in this respect examples (4) and (5) once again. Unlike in (5), the predicative content of the indexical (host) clause in (4) does not (in principle) discriminate between the two candidate referents here; though the illustration of the second-mentioned one “dissing” (i.e. insulting) the former in public together with the case of “outwitting”, as expressed in the preceding sentence, may well be instances of the street artist gaining the upper hand over his rival. In (5) it is the predicative content of the second sentence which signals the background status of the discourse unit to which it corresponds. This in turn induces the choice of the secondary referent evoked within the initial, topic sentence; although as we saw earlier, the choice of a topic-maintaining indexical (the pronoun *he*) is not in fact consonant with this indication.

As for the

- **direct or indirect influence of context on the form of the indexical expression selected** (or on the “host” indexical predication of which it is an integral part),

this may be said to hold in the case of (2), since only a (reduced) definite lexical NP type such as *the passage* may occur as anaphor in this context. Neither a 3rd person pronoun, nor a null anaphor, nor even a demonstrative-based expression (*this/that/this/that passage*) would be fully acceptable in its place. In this category, we must of course include syntactically-governed null subjects of non-finite clauses, where no other alternative referential expression is possible in such a position. For their referent is controlled both syntactically and referentially by the subject NP of the main clause.

In the case of example (4), it is clear that a relatively substantial and explicit indexical expression is required to target the male human referent bearing the lower level of topicality in this context, given the competition between two same-gender referents. A demonstrative-based expression is in fact preferred for this purpose here, in response to two factors: first, the need to switch the focus to a just-introduced subsidiary referent; and second, the fact that a proximal demonstrative NP is the preferred vector for introducing discourse-new information on an already existing entity, as here. But see the attested use of the pronoun *he* in (5) in a similar textual and discourse context; yet this is not a natural in-context continuation (likewise in the case of the replacement of the demonstrative NP in (4) by the pronoun *he*). An additional factor here is the genre-specific preference of written news journalism for lexical NPs rather than pronouns evident in (4).¹³ But again, this is not a systematic, rule-governed factor, merely a tendency.

Notice that it is perfectly possible for a user to perform discourse acts in a relevant context using non-verbal means alone. For example, at a cinema, when a member of the audience arrives just before the film is due to begin, and an expectant hush descends upon the auditorium. The following entirely silent, non-verbal exchange may then take place between the newly-arrived person (A) and a member of the audience (B) sitting next to an empty seat:

- (6) A to B: Gesture towards the empty seat, simultaneously raising eyebrows in B’s direction. B to A: Hand gesture with palm upturned describing a broad sweep over the seat at issue towards A, signaling that it is free, and that s/he may take it

¹³ In the case of the indefinite and demonstrative NPs in (4), the journalist has packed a large amount of reader-new information into these expressions – a typical feature of printed news journalism.

Here, A uses two signals to communicate with B: first, a pointing gesture via gaze direction or index finger at the object targeted, and second, the raising of eyebrows directed at B (cf. also Tomasello 2021: 5, ex. (4) for a very similar example) signaling his/her questioning. The first gesture is purely deictic, the second involves an anaphoric element. B's response also contains an anaphoric dimension: a presupposition that it is the empty seat next to him/her that is at issue. Recall that the gestures used in (6) form part of what I am calling 'text' (see §2), but would not be so construed by the majority of functional models of language, e.g. standard Functional Discourse Grammar,¹⁴ for which 'text' is restricted to linguistically-realized forms only. And yet, the exchange represented in (6) consists just as much of two cooperative discourse acts, forming an adjacency pair, as the equivalent linguistically-realized version.¹⁵ However, see Alturo *et al.* (2016) and Kok (2016) for attempts to integrate gestures within the FDG framework, even though both works concentrate on co-verbal gestures *per se*, unlike the ones illustrated in (6), termed "emblems" in the relevant literature (i.e. conventionalized gestures that are potentially detachable from speech).

Discourse-structural factors also influence the form which an indexical expression may assume, as well as its referential possibilities. See in this respect Fox's (1987) constraint to the effect that the occurrence of an anaphoric 3rd person pronoun in a text is a signal that the containing focus space (discourse unit) is continuing, while that of a more substantial marker (a repeated proper name, for example) may indicate that the current space is completed, and a new one begun thereby. See example (4) for a clear illustration of the latter use. An interesting case of a pronoun occurring after an interruption or digression, a situation which Fox terms a "return pop", is illustrated in (7):

- (7) (...) Enver [father of artist Tracey Emin] went bankrupt and left when she was seven, and she squatted with her mother Pam and twin Paul in a staff cottage. 'Mum crept into the hotel to steal lead piping to sell so we could eat.' *She* disliked school and was not happy – a useful incubator for creativity... (Extract from "If people say the bed's a joke, I'd say they're not interested in art". Interview with Tracey Emin by Andrew Duncan, *Radio Times* 18-24/08/01, p. 32)

Here, the parenthesis¹⁶ or digression in lines 2 and 3, a direct quote from the interview, serves simply to illustrate, and hence to justify, the assertion by the journalist prior to the parenthesis of the extreme poverty in which Tracy Emin's family lived when she was seven (*viz.* the reference to her mother's having felt the need to steal lead piping to buy food for the family). The parenthesis is a direct-speech quotation whose locutionary source is the subject of the interview, Tracey Emin, and not the journalist who later wrote the article. The feminine singular pronoun *she* subject of the sentence following the parenthesis unambiguously targets Tracey Emin, the text's macro-topic. It would not have been able to pick up the other female entity (TE's mother), evoked within the parenthesis itself.

Now, this configuration can be explained precisely because the textual segment across which this retrieval took place is a direct-speech quotation, attributed to the subject of the interview: the single inverted commas surrounding the segment, in addition to the switch from 3rd to 1st

¹⁴ Hengeveld & Mackenzie (2008): see §5.1 below for more on this model.

¹⁵ A possible linguistically-realized version might be something like this:

- (i) A to B: "Excuse me, is that seat available?"
B to A: "Yes, by all means. Feel free".

¹⁶ See Dehé (2014) on parentheticals in spoken English. The term is used in the relevant literature to cover both written and spoken instances involving a temporary disengagement from the main line of text.

person (namely *we*) regarding the pronouns used, indicate this unequivocally. By these means, it is clearly differentiated from the main line of the discourse. Thus the text which follows continues the main issue, developing the prior description of TE's childhood. It is for this reason that a 3rd person pronoun is used quite naturally in this respect, rather than a more elaborate marker. The referent is thereby marked as still "active", psychologically, in terms of the current discourse focus, and the parenthesis has no perceptible effect on the discourse structure here: that is, it is not an independent discourse unit in its own right, merely a segment of text. This interpretation is further confirmed by the predicative part of the post-parenthetical segment, namely the attributes "disliked school and was not happy", properties which could hardly characterize TE's mother at this point in the text.

Clearly then, it is both co-textual and discourse factors which may impinge both on the form a subsequent indexical utterance may assume, and on the discourse status as well as potential interpretation of the evolving communicative event.

It seems clear from the analyses of the examples presented in §3 and in the present section, that the current indexical-containing utterance being processed must be converted into a discourse unit, and the rhetorical or coherence relation connecting it with the discourse already constructed upstream assigned. This will be achieved on the basis of a number of features, the most important of which are the nature of what is predicated within the incoming utterance, the information structure it expresses, any discourse connective indicating a particular type of link to the preceding discourse context, the tense and aspectual character of the utterance, and so on. Working memory would also need to contain a representation, varying with each new utterance, of the addressee's current state of pragmatic, contextual knowledge, as assumed by the speaker (see Bezuidenhout 2013; Dickinson & Givón 2000: 163), as well as an indication of the locutionary source of each represented utterance. Such representations are indispensable for the smooth functioning of indexical reference (canonical anaphora, anadeixis and canonical deixis) within discourse.

5. Text, discourse and context in two structural- and cognitive-functional models: a case study

I have chosen two functional models of language to establish whether they recognize the dimension "discourse", and if not, with what consequences. Namely, Functional Discourse Grammar (Hengeveld & Mackenzie – henceforth H&M – 2008) (§5.1), and Talmy Givón's version of cognitive-functional grammar, as reflected in his (2017) cross-linguistic study of zero forms (§5.2).

5.1 Functional Discourse Grammar

At the very outset of their 2008 book (p. 9), H&M state explicitly that FDG "is in no sense a discourse-analytical model", despite the presence of the term "Discourse" in the model's name. See Mackenzie (2020) for a more recent defence of this position. But the question then is, should it nonetheless include the discourse dimension, as outlined here, or at least make provisions for the model to be embedded within a broader model of the wider utterance context involved, at least in order to account for the way in which indexical reference operates in actual texts, as we have seen?

Briefly, FDG is a modular functional–typological theory of language structure. Its major objectives are twofold: first, to set up a typologically comprehensive model of grammar (pragmatics, semantics – both to a limited degree –, morphology, syntax, phonology – including prosody); and second, to characterize the set of expressions of a given language in terms of the discourse acts which they may express, in relation to the speaker's perspective (though in

abstraction from any actual language use) in forming and formulating a communicative intention and then in fleshing it out pragmatically, semantically, morpho-syntactically and phonologically.

However, its Contextual Component, which is closely interconnected to the operation of each level of the core grammatical module, is restricted to containing chiefly linguistically-relevant contextual information – though it does also house non-linguistic, but grammatically-relevant information such as the social relationships between the interlocutors deriving from the Context of utterance. The reason for this is that it is the first of the two main objectives of the model, as outlined above, which takes pride of place. Thus, in the absence of a complementary model of discourse interaction, it is arguable that the second of these goals is prevented from being properly developed in its own right, as we shall see shortly.

The Contextual component is intended to provide a record of the preceding discourse acts represented in terms of their linguistic expression, as specified at each of the Levels recognized in the grammatical module; and the Conceptual component purports to house representations of the speaker’s communicative intentions in realizing his/her discourse act, as well as relevant conceptual and world-knowledge information – but again, only insofar as this information plays a systematic role in the selection and specification of given language forms to express a particular discourse act.

H&M (2014) characterize the Contextual component as being internally structured to parallel the core Grammatical Component with its four basic Levels: the Interpersonal (IL), the Representational (RL), the Morphosyntactic (ML) and the Phonological (PL). The Contextual component is intended to contain information held to be shared by both speaker and hearer: see also the conception of shared discourse information discussed in García Velasco (2014) and Giomi (2014). As each incoming clause is represented at the four core Grammatical Levels, these representations are copied within the Contextual component in stacked form according to the order of occurrence of their exponent expressions. This stacking device is claimed to model the differing saliency levels of individual referents as they are “supplanted” by more recently-introduced referents, or retrieved anaphorically via an attenuated indexical expression (a null anaphor or a 3rd person pronoun, for example). The latter function serves to maintain their existing saliency level.

But this would seem to be a somewhat blunt instrument, and does not take into account the hierarchical character of discourse which characterizes the relations holding between one discourse unit and the next,¹⁷ to which indexical expressions of all kinds are sensitive. For example, in the first conjunct of H&M’s (2014: 214) example (11a), *John ordered a beer...*, the indexed variable representing the referent ‘John’ would be copied into the RL slot in the Contextual Component. However, when the NP *a beer* occurs, the indexed variable representing it in this slot is said to displace the copy of the previous referent variable, pushing it down on the stack (see H&M, 2014: 218). The referent ‘the beer that John ordered’ is therefore claimed to enjoy a **higher** saliency level than the entity ‘John’ within the Contextual Component at this point, simply by virtue of being mentioned more recently.

Yet this purely co-textual conception in terms of actual temporal or spatial sequence is at odds with the discourse configuration here. For under a Topic-Comment information structure of this initial conjunct, for example, the referent ‘John’ would be the topic entity about whom it is predicated that he “ordered a beer”. The discourse referent ‘the beer that John ordered’ is thus part of the Focus constituent in information-structural terms, and is in no way ‘topical’: no “aboutness” relation may be constructed around it: cf. # “About a beer, John ordered one”. Thus it is difficult to see how it could be “displacing” the already high saliency of the agentive, human topical referent ‘John’ here, in terms of discourse structuring.

¹⁷ See in particular the analyses of the textual examples (4) and (5) (§3) as well as (7) (§4).

This view is confirmed by Gernsbacher's (1990) claim concerning the advantage of first mention (AFM) in texts (see note 12 above). According to this, the first mention of an entity is all the more accessible in relation to subsequently mentioned referents, since it creates the macro-foundation for representing the ensuing discourse (though the author does not use this term). The attested example (5) analyzed in §3 is a counterexample to the FDG procedure, in any case, as indeed is example (7) (§4): in (5), given that the pronoun *he* in the second sentence is picking up the most recently mentioned referent 'Alan Johnston', there should be no sense of 'minor incoherence' felt by the understander at this point, according to the authors' hypothesis – yet there clearly is.

In (4), the second human referent evoked, 'the street artist', is mentioned more recently than the first one ('Cameron') at the point when the demonstrative subject NP is encountered in the second sentence. But this is not the reason why its referent should be supplanting the preceding one in terms of topicality: for it is precisely because a proximal demonstrative NP is used for this reference, switching the earlier focus established, that this is the case. And in (7) (§4), according to the FDG account, the pronoun *she* in the post-parenthetical segment would refer to Tracey Emin's mother rather than to Tracey Emin, an interpretation which as we have seen is impossible (for discourse-level reasons, precisely). So the authors' procedure regarding the functioning of the Contextual Component in fact runs counter to the hierarchical nature of discourse, as outlined in sections 2 and 3. It takes account only of the textual and linear-sequential expression dimension involved.

From the perspective adopted here, there are further problems with these proposals. First, regarding the representation of *text*, not only is it in principle inadequate to exclude non-verbal signals, which play an all-important role in spoken face-to-face communication in particular (see Connolly 2009 and §4 above); but also, at least under Giomi's (2014) proposal for the representation of *text* within the Contextual Component, only the Morphosyntactic and Phonological levels of representation – i.e. the expression planes – would be involved, the IL and RL then taking care of "discourse". This would of course entail the exclusion or at least sidelining of the lexical-semantic dimension, a move which is clearly problematic.

For *discourse*, here the construction of a situated, provisional representation of the communicative event on the basis both of text and context, could not get off the ground if the sub-lexical dimension were absent from the input.¹⁸ See Levelt (1989: 181) for similar points regarding the centrality of lexical concepts in text production and processing, as well as Van Dijk (2008: 171-77). Levelt (1989: 181) stresses that "formulation processes are lexically driven", and notes on p. 93 that, "depending on the intention to be conveyed, certain semantic components or predicates will have a higher level of saliency or activation in the speaker's mind than others." That is, a given lexeme's lemma (see Levelt 1989: Ch.6 on lemmas). Thus in the case of the former quote, we must understand "lexically driven" as being so "under a particular

¹⁸ See the special issue of *Linguistics* 54(5) (2016) for a range of proposals for the handling of the lexicon in FDG, and in particular the contribution by H&M, who state (p. 1135) that "lexemes come [in the FDG model] with neither meaning definitions nor selection restrictions". This radical restriction, would mean, of course, not only that discourse cannot in principle be accommodated by the model, but more particularly that anaphoric reference would not be adequately captured. The crucial role in the latter function of the predication hosting a given anaphor would nonetheless correspond to a version of the notion of "selection restrictions", also excluded by the authors.

However, an anonymous reviewer informs me that "meaning definitions" (i.e. lexical decomposition) are in fact catered for in a subsequent revision to the model, since they are now included in the expanded Conceptual component. I am not able to verify this at present, however, since I do not have access to the relevant work in which this change is adopted. Moreover, a variant of "selection restrictions" is in fact intended to be accounted for in terms of the insertion of given lexemes into particular predication frames in Formulation. However, it is not clear whether, in so applying, the particular sense that is presupposed of the host lexeme's argument (if indeed it is a predicate) is explicitly manifested. Yet this is critical for the operation of indexical reference (see also below).

sense” (see also Butler 2013: 26). As Butler also points out, this basic principle is contradicted by the way the FDG model operates, in that lexemes are only inserted within Formulation into predication frames (PFs), which are already available via the Fund; hence no particular role is imparted to a lexeme’s lemma in the model. Honselaar & Keizer (2009) have indeed proposed the subsequent selection of given PFs as a function of a lexeme’s sense, on the basis of three Dutch verbal locutions; however, this ordering has not been retained subsequently by the model as at present.

From the point of view of the recipient too, as we have seen, it is the sense of the lexical elements, appropriately adjusted in terms of the context, making up an utterance which is crucial in constructing the discourse associated with it. See for example the context-modulated senses of the transitive verb *mind* and the modal auxiliary *may* in (1) (§2), as a function of the recipient’s understanding of the illocution involved as a particular warning in this context. For, crucially, it is the particular sense as well as the wider understanding in context of the predicative dimension of the anaphoric host segment as a whole,¹⁹ that condition both the choice and the discourse-representational character of the anaphor’s referent, thereby facilitating the anaphor’s resolution.

Second, as implied earlier, discourse does not simply consist in representations at two distinct levels of individual clauses (in FDG, the Interpersonal and the Representational, as argued by Giomi, 2014): at some point, there must be a series of integrations, from the local to the global level until the macro-discourse as a whole is represented, thus allowing it to be placed in long-term memory for recall at some later point.

Furthermore, of course, the indexed symbol “R₁” that occurs in Interpersonal representations in the model is not in any way a representation of an actual referent: it is only present in IL schemas as a place-holder, in order to allow a potential predicate expression (verb, adjective etc.) to ascribe a property to it, in accordance with the particular expression yielded at the Output stage in a derivation. Actual referents may be individual, set, generic or variable, as well as assuming a variety of ontological statuses: physical object, eventive or conceptual, for example. Such entities may only be represented in a fully worked-out discourse representation which takes into account the kinds of textual, contextual as well as discourse features outlined in §4.

For a number of proposals capable of remedying the deficiencies in the core FDG model outlined above, see Cornish (submitted: §4). In essence, these are as follows.

First, the two “transversal” components within the core model, the Conceptual and the Contextual, would be re-conceived as integral parts of a process model of the wider utterance context in which the expressions derived via the core pattern one may be situated.²⁰ These two components would be enriched with the kinds of context- and use-relevant properties advocated by Butler (2013), Connolly (2018: 11), Cornish (2013) and other authors. The Conceptual component would include an encyclopedia and an ontology: see Butler (2012) for an FDG-compatible proposal. Both devices are represented in Connolly’s (2018) proposal for the incorporation of Construal within the existing Conceptual component. A dictionary should also be included, listing the lemmas of the lexemes that will eventually form part of a particular output expression (cf. Butler 2013: 38).

The Conceptual component would need to contain the means for constructing a mental discourse representation of the import of the prior and current utterances in a text. This

¹⁹ See the host predications in examples (2) (“...and [I] will probably come upon *the passage*...”), (4) (“*he*’s now running rings around him as he distracts the public with *his* artwork”), (5) (“*he* was kidnapped on March 12”) and (7) (“*she* disliked school and was not happy”). See Wilson & Carston (2007) on lexical “loosening” and “narrowing” or “enriching”, in particular contexts of use.

²⁰ See Haselow (2017), a study based on extracts from a corpus of spontaneous spoken English utterances.

representation, once built, would be transferred to the Contextual component, and could be developed, for example, on the basis of Allen's (1995: Ch. 6) model of discourse construction.

As an integral part of this construction process, there would be a device that assigns and re-assigns, as the discourse unfolds, particular saliency or activation levels to each of the referents evoked in the discourse: see in this respect the "Update", "Embark", "Retrieve" and "Differentiate" functions, as well as the concept "Standpoint", posited by Connolly (2018: 12-13) as developments of the existing Conceptual component. This assignment procedure would replace the unworkable "referent-stacking" proposal outlined in H&M (2014). The contextual cues needed to motivate such (probabilistic, hence defeasible) assignments would need to be recorded in the newly-adapted Contextual component, on the basis of features of the ongoing text, and be specifically marked out as such.²¹ The Contextual component would now consist of two parallel parts: one recording the representations of the preceding and current text as well as certain features of the situational context of utterance, and another housing the developing discourse representation that this will have evoked.

The properties of a given utterance in a particular context need to be accessible in order for this to be the case, not only from the recipient's point of view, but also from the speaker's. The latter can be viewed as leaving an array of cues within the text, on which s/he tacitly induces the recipient to draw in (co-)constructing the discourse associated with it. As Wilson & Carston (2007) and others propose, the core or canonical senses encoded in given lexemes will invariably be adjusted (narrowed or enriched, or broadened or loosened, as the case may be) by the participants in given contexts of utterance. Such adjustments are claimed both to contribute to the truth conditions of the proposition created and to induce the drawing of implicatures (p. 246).

5.2 Talmy Givón's cognitive-functional model (Givón 2017)

Let us look now at how (or whether) Givón's comparable model of language, in certain ways at least, handles discourse, as reflected in his recent work (Givón 2017).

Givón's theoretical framework is essentially functional and cognitive in orientation. As in a great many works on anaphora and indexical reference generally – Givón's (2017) work being wholly devoted to zero forms in a wide range of languages –, the textual dimension of language use is harnessed to accounting for aspects of the latter for which it is not strictly relevant. There are distinct echoes here, then, of the FDG procedure in this respect (see §5.1). The range of indexical-anaphoric markers that Givón recognizes are zero forms, unaccented 3rd person pronouns, accented pronouns and definite NPs. The choice among these is required to be based upon an appropriate textual antecedent co-occurring in its vicinity in a given text, if the indexical marker is to be considered as anaphoric: the term "text-based antecedent" is frequently used in this respect, e.g. on p. 61.

Notwithstanding, Givón, to his credit, does recognize (p. 43) the limitations of purely text-based accounts of indexical reference, which tend not to take account of "the **mind** that produces and interprets the text" (p. 43: Givón's own emphasis). Hence his insistence that it should be "in mentally-stored text" (pp. 27, 37) that the search for referents of given indexical forms should take place, and not in text itself *per se*. But "referents" are not in fact to be found "in texts"; in any case, this search procedure cannot literally be implemented, given that working memory is finite and limited. For as we noted earlier, the textual trace of a communicative event is short-lived, and disappears from short-term memory once the discourse is constructed – or very soon thereafter (see, e.g., Jarvella, 1979, and indeed Givón himself, on p. 66). What is stored in long-term memory in the default scenario is *discourse*, not *text* as such;

²¹ See Allen's (1995) Figure 16.5, p. 509 and Box 16.1, p. 518 for sets of English cue phrases together with their typical functions in signaling discourse structure.

that is, a mental representation of the speaker's and addressee's interpretation of the ongoing communicative event, subject to continuous revision as a function of the ever-changing context of that event as it unfolds.

As already mentioned, it is discourse which is hierarchically structured, while text is essentially linear.²² As we noted in §2, *text* corresponds to the connected sequence of perceptible cues (i.e. the physical product of an act of utterance) provided by the speaker/writer for their addressee/reader to infer the *discourse* (the negotiated meaning) that may be associated with a given stretch of text in conjunction with a relevant *context*. However, Givón does not make this distinction explicit in his analyses and presentations – though it often appears to be implicit to varying extents, notably in chapter 2.

In fact, all the numerous tables of data presented throughout the work are compiled in terms of relative textual frequencies of occurrence of the forms at issue, so the textual dimension clearly looms large at every turn. This is especially apparent in Givón's heuristic of "anaphoric distance"²³ in terms of degree of anaphoricity, and of "referential persistence" in terms of "cataphoricity". Here, an essentially *discourse* phenomenon is being characterized in purely *textual* (i.e. immediately quantifiable) terms. For it is quite possible, for example, that a macro-topical discourse entity may not be mentioned textually for a large stretch of text, yet remain topical and activated, and will be treated as such in terms of the use of highly continuous markers at a later stage: I myself have found several instances of this in my collected corpora of utterances. This phenomenon would seem to invalidate to some degree, at least, the "anaphoric distance" criterion.

6. Conclusions

Taking account of the *discourse* created through interpreting *text* matched with an appropriate *context* is indispensable if we are to seriously envisage a modelling of the speaker's performance of discourse acts. By definition, the goal of modelling the discourse constructed requires invoking a model of the broader utterance context of such performance. Without this, discourse in the sense defined in §2 cannot be represented.

In both the FDG and the Givónian conceptions, in relation to the representation of discourse anaphora (and of indexical reference more generally), only referents which will have been explicitly introduced either co-textually or situationally (in the case of FDG) can be made available for coindexing with given anaphors. So in the case of examples like (2) and (3), which are by no means exceptional, this will be impossible since there are no explicit textual antecedents present – though there are certainly "antecedent-triggers" in these written examples, in the sense of Cornish (2010). The intended referents at issue here are all made available via the discourse constructed upstream of their retrieval by the indexical marker. Yet this level of representation is not explicitly recognized by either model.

Furthermore, even when there is a textually introduced candidate referent for an anaphor's referent to be coindexed with, there may be a potential competition with another one whose inherent properties, as well as those of the expression that introduced it, match those of the anaphor. This is the case in examples (4) and, to an extent, (5). As we saw in section 3, it is only by taking into account certain co-textual features as well as those of the surrounding discourse, that a principled selection may be made among these. Anaphor resolution is therefore

²² Notwithstanding Givón's characterization of text as **both** hierarchical and linear: in the present conception, however, it is the processor who constructs the hierarchical syntactic relations which are signaled in the text by the speaker or writer. See note 1 in §3.

²³ This is defined (p. 39) as "The number of clauses (or elapsed time) from the last occurrence of the referent in the preceding discourse." However, "referents" do not "occur" as such: it is rather the textual expression targeting the referent which occurs in a given text (i.e. here, certainly, the "antecedent" in traditional accounts).

by no means a virtually automatic, unproblematic “cut-and-dried” procedure: it is both part of, and ultimately contributes to, the discourse created via combining the text with a relevant context in interpreting the former.

Discourse anaphors in dependent discourse units perform at least two essential discourse functions: first, in conjunction with the host predication as a whole, they select the context unit with which the dependent, indexical unit is to be integrated (anaphora being essentially a discourse-integrative device, analogous to discourse connectives) – where the context unit is not necessarily linearly adjacent in co-textual terms; and second, they act as pivot or anchor in terms of the application of one or more coherence relations which will eventually knit the two units into a seamless woof, so providing the essential isotopy which is a prerequisite for the implementation of all coherence relations.

References

- Allen, J. (1995). *Natural Language Understanding* (2nd edition). Redwood City Ca.: Benjamin/Cummings Pub. Co.
- Alturo, N., Clemente, I. & Pyrató, L. (2016). Notes for a multilingual and multimodal Functional Discourse Grammar. In M. Fernández-Villanueva & K. Jungbluth (eds.), *Beyond Language Boundaries: Multimodal use in multilingual contexts*. Berlin: de Gruyter, 3-33.
- Auer, P. (2009). Context and contextualisation. In J. Verschueren & J-O. Östman (eds.), *Key Notions for Pragmatics*. Amsterdam/Philadelphia: John Benjamins, 86-101.
- Bezuidenhout, A. (2013). Perspective taking in conversation: a defense of speaker non-egocentricity. *Journal of Pragmatics* 48(1): 4–16.
- Butler, C. (2003). *Structure and Function: A guide to three major structural-functional theories. Part 2: From clause to discourse and beyond*. Amsterdam: John Benjamins.
- Butler, C.S. (2012). An ontological approach to the representational lexicon in Functional Discourse Grammar. *Language Sciences* 34: 619-634.
- Butler, C.S. (2013). A reappraisal of the functional enterprise, with particular reference to Functional Discourse Grammar. *Revista Canaria de Estudios Ingleses* 67: 13-42.
- Carston, R. (2002). *Thoughts and Utterances*. Malden MA/Oxford//Victoria: Blackwell Publishing.
- Carston, R. & Hall, A. (2012). Implicature and explicature. In H-J. Schmid (ed.), *Cognitive Pragmatics*. Berlin: Mouton de Gruyter, 47-84.
- Chafe, W. (1992). Discourse: An overview. In W. Bright (ed.), *International Encyclopedia of Linguistics* Vol. 1. New York: Oxford University Press, 355–358.
- Connolly, J.H. (2009). Accommodating multimodality in Functional Discourse Grammar. In E. Keizer & G. Wanders (eds.), *Web Papers in Functional Discourse Grammar* 83: 1-18.
- Connolly, J.H. (2018). Construal and the Conceptual component of Functional Discourse Grammar. *WP-FDG-91*: 1-33.
- Cornish, F. (2009). Inter-sentential anaphora and coherence relations in discourse: A perfect match. *Language Sciences* 31(5): 572-592.
- Cornish, F. (2010). Anaphora: Text-based or discourse-dependent? Functionalist vs. formalist accounts. *Functions of Language* 17(2): 207-241.
- Cornish, F. (2012). Micro-syntax, macro-syntax, foregrounding and backgrounding in discourse: When indexicals target discursively subsidiary information. *Journal of Belgian Linguistics* 26: 6-34.
- Cornish, F. (2013). On the dual nature of the *Functional Discourse Grammar* model: Context, the language system/language use distinction, and indexical reference in discourse. *Language Sciences* 38: 83-98.
- Cornish, F. (submitted). When is a Functional Discourse Grammar not a "discourse grammar"? On the notion "discourse" in the model's name. Under review by *Language Sciences*.
- Dehé, N. (2014). *Parentheticals in Spoken English. The syntax-prosody relation*. Cambridge: Cambridge University Press.
- Dickinson, C. & Givón, T. (2000). The effect of the interlocutor on episodic recall: An experimental study. In M. Barlow & S. Kemmer (eds.), *Usage-Based Models of Language*. Center for the Study of Language and Information: CSLI Publications, 151-196.
- Fox, B.A. (1987). *Discourse Structure and Anaphora: Written and conversational English*. Cambridge: Cambridge University Press.
- Francis, G. (1986). *Anaphoric Nouns*. Birmingham: English Language Research.

- García Velasco, D. (2014). Activation and the relation between context and grammar. *Pragmatics* 24(2): 297-316.
- Gernsbacher, M.A. (1990). *Language Comprehension as Structure Building*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Giomi, R. (2014). Grammar, context and the hearer: a proposal for an addressee-oriented model of Functional Discourse Grammar. *Pragmatics* 24(2): 275-296.
- Givón, T. (2017). *The Story of Zero*. Amsterdam/Philadelphia: John Benjamins.
- Haberland, H. (1999). Text, discourse, discours: the latest report from the Terminology Vice Squad. *Journal of Pragmatics* 31: 911-918.
- Halliday, M.A.K. (1994). *An Introduction to Functional Grammar* (2nd edn.). London: Arnold (cited in Butler 2003).
- Haselow, A. (2017). *Spontaneous Spoken English. An integrated approach to the emergent grammar of speech*. Cambridge: Cambridge University Press.
- Hengeveld, K. & Mackenzie, J.L. (2008). *Functional Discourse Grammar. A typologically-based theory of language structure*. Oxford: Oxford University Press.
- Hengeveld, K. & Mackenzie, J.L. (2014). Grammar and context in *Functional Discourse Grammar*. *Pragmatics* 24(2): 203-227.
- Hengeveld, K. & Mackenzie, J.L. (2016). Reflections on the lexicon in Functional Discourse Grammar. *Linguistics* 54(5): 1135-1161.
- Hobbs, J. R. (1979). Coherence and coreference. *Cognitive Science* 3: 67-90.
- Honselaar, W. & Keizer, E. (2009). Lexicon and frames in FDG: A treatment of Dutch bekend zijn 'to be familiar, well known', behandelen 'to treat' and trouwen 'to marry'. *Lingua* 119: 1212-1241.
- Huang, Y. (2000). *Anaphora: A cross-linguistic study*. Oxford: Oxford University Press.
- Jarvella, R.J. (1979). Immediate memory and discourse processing. In: G.B. Bower (ed.), *The Psychology of Learning and Motivation* Vol. 13. New York: Academic Press, 379-421.
- Kaiser, E. (2010). Effects of contrast on referential forms: Investigating the distinction between strong and weak pronouns. *Discourse Processes* 47: 480-509.
- Kehler, A. (2008). Rethinking the SMASH approach to pronoun interpretation. In J. K. Gundel & N. Hedberg (eds.), *Reference. Interdisciplinary perspectives*. Oxford: Oxford University Press, 95-122.
- Kibrik, A.A. (2011). *Reference in Discourse*. New York/Oxford: Oxford University Press.
- Kok, K. (2016). The grammatical potential of co-speech gesture. *Functions of Language* 23(2): 149-178.
- Langacker, R.W. (2001). Discourse in Cognitive Grammar. *Cognitive Linguistics* 12(2): 143-188.
- Levelt, W.J.M. (1989). *Speaking. From intention to articulation*. Cambridge Mass./London: MIT Press.
- Levinson, S. C. (2003). Contextualizing 'contextualization cues'. In S. L. Eardmans, C. L. Prevignano & P. J. Thibault (eds.), *Language and Interaction: Discussions with John J. Gumperz*. Amsterdam: John Benjamins, 31-39.
- Mackenzie, J.L. (2020). Why Functional Discourse Grammar is not, and could not be, a discourse grammar. *Revista Canaria de Estudios Ingleses* 80: 73-87.
- Mey, J. L. (2020). Indirectness and co-construction. A discourse-pragmatic view. In Z. Livnat, P. Shukrun-Nagar & G. Hirsch (eds.), *The Discourse of Indirectness*. Amsterdam/Philadelphia: John Benjamins, 85-96.
- Parisi, D. & Castelfranchi, C. (1977). The discourse as a hierarchy of goals. *Signs of Change* 1(2): 31-67.

- Prévot, L., Vieu, L. & Asher, N. (2009). Une formalisation plus précise pour une annotation moins confuse : les *Élaborations d'entité*. *Journal of French Language Studies* 19(2): 207-228.
- Pu, M-M. (2011). *Discourse Anaphora: A cognitive-functional account*. Munich: LINCOM EUROPA.
- Renkema, J. (2009). *The Texture of Discourse*. Amsterdam/Philadelphia: John Benjamins.
- Romera, M. (2004). *Discourse Functional Units. The expression of coherence relations in spoken Spanish*. Munich: LINCOM EUROPA.
- Tomasello, M. (2021). Communicating without conventions: The cooperation model. *Cadernos de Lingüística* 2(1): 1-27.
- Van Dijk, T.A. (2008). *Discourse and Context. A sociocognitive approach*. Cambridge: Cambridge University Press.
- Verhagen, A (2005). *Constructions of Intersubjectivity. Discourse, syntax, and cognition*. Oxford: Oxford University Press.
- Widdowson, H. (1998). The conditions of contextual meaning. In K. Malmkjaer & J. Williams (eds.), *Context in Language Learning and Language Understanding*. Cambridge: Cambridge University Press, 6-23.
- Wilson, D. & Carston, R. (2007). A unitary approach to lexical pragmatics: Relevance, inference and ad hoc concepts. In N. Burton-Roberts (ed.), *Pragmatics*. Basingstoke/New York: Palgrave Macmillan, 230-259.