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Indexical reference within a discourse context: Anaphora, deixis, "anadeixis" and ellipsis[1]

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1. Introduction

Two principles underlie my recent work on discourse anaphora and deixis:

First, that it is not very revealing to study either deixis or (discourse) anaphora without taking account of the whole range of indexical referring procedures available in natural languages. After all, deixis and anaphora are an integral part of a whole network of indexical procedures. So in my view they should be conceived one in terms of the other, in a reciprocal manner. See Figures 2 and 3, as well as sub-sections 2.1 and 2.2 below.

And second, that indexical expressions (i.e. context-bound means of "pointing") only manifest their true nature in the context of whole texts, whether spoken or written. Indeed they are closely bound up with the structuring of the discourse that may be associated with a particular text within a given context (see sect. 5 further on).

I will be synthesising my recent work in this area under 5 main headings:

- works that attempt to approach anaphora, "anadeixis" and deixis as discourse phenomena — to define them, in short — and then to see how and in what respect the different types of indexical expressions at issue may realise each procedure (sect. 2).
- next, a (brief) consideration of what I have called "topic chains" (also known as "reference" or "anaphoric" chains) and the functions performed within such chains by different types of expressions (i.e. the various "links" in the chains) (sect. 3).
- then two headings characterising certain discourse functions which certain indexical referring procedures may fulfil, as part of the construction of discourse itself:

  - First, within what we might call "**micro-discourse**", the contribution of indexicals to the setting up of local coherence or rhetorical relations in order to integrate two discourse units into a more encompassing unit; and in turn, the contribution of given coherence relations to the complete, in-context interpretation of the indexicals involved (sect. 4);

  - And then within a "**macro-discourse**" context, the functions fulfilled in particular by certain demonstrative expressions realising a discourse-deictic procedure in terms of the structuring of discourse (sect. 5).

- to end, I will deal with ellipsis (VP- but mainly object-ellipsis, which is actually rather rare in English, unlike in colloquial spoken French) (sect. 6).

Finally, as a "Postscript", I will list several recurring difficulties that I have noticed amongst students at Toulouse-Le Mirail at L3 level in analysing anaphoric as well as deictic expressions within written texts (sect. 7). These errors and confusions are quite significant, since they show up "negatively", as it were, some of the essential features of indexical

[1] Thanks are due to Christian Bassac for his comments on an earlier draft of this paper, as well as for the discussion by the audience at the oral presentation.

reference in discourse. They are intended to make you aware of the pitfalls in this area. So,…beware! There are two lists of References at the end of the paper: the first lists relevant works by myself as author, arranged according to topic; and the second is a General Reference list citing the authors mentioned in the text.

2. Anaphora, deixis and "anadeixis": nature and description

I'll start off by taking a "cognitive-functional" view of deixis, anadeixis and discourse anaphora —defining their discourse behaviour and functioning within texts. But first, we need to establish some preliminary concepts and distinctions.

Ever since my doctoral thesis defended in 1982, I have rejected the "co-textual" conception of anaphora, inherited from traditional grammar and Classical Antiquity. This conception is very much alive and kicking in current linguistics, whether in computational linguistics, in formal semantics, in pragmatics or in theoretical models of language, whether formalist or even functionalist in orientation (see my survey article of 2010 in the journal *Functions of Language* 17.2 on this issue). This holds that, in order to assign a complete sense and reference to an anaphoric expression (whether a null pro-form, an overt 3rd person pronoun, a definite, possessive or demonstrative lexical NP, etc.), it must necessarily be brought into relation with a matching textual antecedent expression that co-occurs with it in a given text. It is quite frequent in such approaches to read that "an anaphor **refers** (my emphasis) **to** its antecedent", which is a totally inaccurate statement.

This matching relationship entails among other properties the sharing of feature values for the morpho-syntactic features of number, gender and person for free, bound and reflexive pronouns, as well as the absence of a c-command relation obtaining between anaphor and antecedent expression. Other factors are heuristic rather than structural: for example, the syntactic function parallelism obtaining between antecedent and anaphor (e.g. subject-subject, object-object, etc.).

What characterises this type of approach is a hypostacised, reified conception of the *text* as sole or main domain in which anaphora is said to operate. Now, since my 1999 book published by OUP, I have argued for a three-way distinction amongst the inter-dependent dimensions of *text*, *context* and *discourse*. These three phenomena are inter-defining and interactive in the use of language in context. From my perspective, this distinction is crucial for a proper understanding of the way indexicality operates. Table 1 summarises.

Table 1: The respective roles of *text*, *context* and *discourse* (Cornish 2010, Table, p. 209, revised)

Text	***Context***	***Discourse***
The connected sequence of verbal signs and nonverbal signals in terms of which *discourse* is co-constructed by the discourse partners in the act of communication.	The *context* (the domain of reference of a given text, the co-text the discourse already constructed upstream, the genre of speech event in progress, the socio-cultural environment assumed by the text, the interactive relationships holding between the interlocutors at every point in the discourse, and the specific utterance situation at hand) is subject to a continuous process of construction and revision as the discourse unfolds. It is by invoking an appropriate context that the addressee or reader may create *discourse* on the basis of the connected sequence of textual cues that is *text*.	The product of the hierarchical, situated sequence of utterance, indexical, propositional and illocutionary acts carried out in pursuit of some communicative goal, and integrated in a given context.

What I am calling *text* embraces the entire perceptible trace of an act of utterance. As such it includes paralinguistic features of the utterance act, as well as non-verbal semiotically relevant signals such as gaze direction, pointing and other gestures, etc. (and in the written form of language, paragraph divisions, punctuation, underlining etc.) —i.e. not just the purely verbal elements. *Text* in this conception is essentially linear, unlike *discourse*, which is the product of the hierachically-structured, situated sequence of utterance, indexical, propositional and illocutionary acts carried out in pursuit of some communicative goal. 'Discourse' 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).

Context I conceive 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 addressee or reader creates discourse on the basis of text comprises 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 referring expression, the discourse already constructed upstream of its occurrence, the genre of speech event in progress, the socio-cultural environment assumed by the text, the interactive relationships holding between the interlocutors at every point in the discourse, and the specific utterance situation at hand. It is subject to a continuous process of construction and revision as the discourse unfolds.

Now, to what use(s) is context put in the act of utterance —in other words, what is or are its *raison(s) d'être*? Well, the most important of these is to **ground** (Fr. ancrer) the discourse being co-constructed —first and foremost in the context of utterance, but also in terms of a genre (type of speech event) and a topic domain. Relevant context is what enables discourse to be created on the basis of text: it is through the invocation of a relevant context that addressees may draw inferences (*Conversational implicatures* in Gricean terms: cf. the work of the American philosopher H. Paul Grice in the 1970s and 1980s[2]) on the basis of the speaker's uttering what he or she utters. This very important feature of the use of language allows speakers (if they so wish) to be as economical as possible in their use of the coded language system in creating text, as a function of their current communicative goals (cf. Clark 1996: 250-251). They can rely on their addressees to a great extent to 'fill in' the many gaps that may be left in the textual realization of their intended message.

Example (1) provides an opportunity to see the relevance of each of these dimensions:

(1) "When I think of all the grey memorials erected in London to equestrian generals, the heroes of old colonial wars, and to frock-coated politicians who are even more deeply forgotten, I can find no reason to mock the modest stone that commemorates Jones on the far side of the international road which he failed to cross in a country far from home, though I am not to this day absolutely sure of where, geographically speaking, *Jones's home* lay." (Graham Greene, 1999, *The Comedians*, Vintage Books, p. 9)

Example (1) is an extract taken from the very beginning of a 20th Century novel. Straight away, we can see that the possessive NP *Jones's home* in l. 6 refers in part to the discourse representation evoked via the reference to the character 'Jones' (who can be assumed to be dead, since there has been a question of a 'modest stone' commemorating him

[2] See Chapman (2005), chapter 5 "Logic and Conversation" (pp. 85-113) for the relevant details.

mentioned in the co-text upstream of this reference). And his death is presumably linked to the fact that he "failed to cross" an international road in a country far from his home (again, an inference), a point mentioned in line 4. But the construction of the discourse object that is 'Jones's home' will not have been done on the basis of a unitary expression within the co-text (a "textual antecedent", then), since these two references occur in distinct (subordinate) clauses within the preceding co-text. And yet the interpretation of the anaphoric possessive NP is easily achieved, with no difficulty at all.

(2) "… Another guest, a tall princess, married to an erudite naturalist landowner called Béla Lipthay, 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) (Example (17) in Cornish, 2010, p. 231)

In this written autobiographical narrative extract, the "antecedent triggers"[3] 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* (second line of the footnote). But there is no "canonical" textual antecedent at all here. The indexical NP is licensed via the preceding discourse, where it has been a question of searching various works for confirmation of something the author remembered from his prior reading.

Many other such examples, involving a variety of different types of anaphor, can be found in my 1999 book as well as in the other publications listed in the various sections of the References at the end of the paper.

Now let's examine a recipe, from a 'directive' genre of language use, to illustrate another point about "textual antecedents". The clauses are numbered for convenience.

(3) Lobster with warm potato, shallot and tarragon salad.(1) Slice 200g new potatoes into thinnish discs.(2) Simmer ø until al dente.(3) Split a cooked lobster lengthways,(4) and make a dressing with 1 tbs red wine vinegar, 2.5 tbs extra-virgin olive oil, 2 diced shallots, tarragon, salt and pepper.(5) Drain *the potatoes*,(6) and dress ø.(7) Serve ø with *the lobster* and lemon wedge.(8) (Recipe 24, The Observer Food Monthly supplement, August 2007, item 77, p. 34)

Each clause of this text corresponds to a particular procedure, a stage in the preparation of the dish under consideration. What is of course crucial to an understanding of this text is the particular predication in each clause denoting the culinary operations to be applied to the initially raw ingredients. The genre imposes that each predication denote an operation to be applied in sequence to the result of the immediately preceding one; indeed, there is a single type of coherence relation adopted to integrate the discourse associated with each clause: "Sequence".

The key point about texts of this kind is that the mental representation of the original, raw ingredients at the start changes as a result of each culinary operation that is applied. So when the reduced definite NP *the potatoes* is encountered in line 4 (clause 6), it will be

[3] In my terminology: see below on this aspect.

interpreted as referring to 'the firm, simmered (Fr. mijotés), thinly-sliced pieces of the original 200g. of potatoes'.[4] But if we linked this NP directly to its ostensible textual antecedent —the indefinite NP *200g new potatoes* in clause 2 (line 1) at the very beginning of the text—, then what would be being 'drained' and 'dressed' on the basis of the processing of clauses 6 and 7 (line 4) would be the raw, unsliced, unsimmered (i.e. not yet boiled in water), unscrubbed and unwashed set of potatoes that we started out with. For this is the referent evoked by this textual antecedent. Yet it is precisely this that the co-textual account of discourse anaphora entails. The dinner guests are not likely to be very impressed with the dish that results from this interpretation, now are they?!

The problem posed for the "textualist" description of anaphora by instances of "evolving reference" as illustrated in (3) stems precisely from the fact that the 'discourse' dimension is left out of account.

All the textual antecedent ("antecedent-trigger" in my terminology) does in such instances is determine the **ontological category** of entity which the anaphor's referent presupposes. In (3), these are, respectively, 'potato' and 'lobster', in (2), 'stretch of text in a book', and in (1), 'home': these are cases of the ontological category "Instance" in Fraurud's (1996) typology of referents. But the referent itself may differ in a number of ways.

See Brown & Yule (1983) for very similar criticisms of the co-textual account of anaphora, notably in relation to Halliday & Hasan's (1976) conception of anaphora ("reference") in terms of their concept of cohesion.

Here is a selection of the conclusions which I arrived at at the end of my survey article in *Functions of Language* 17.2 (2010) regarding the discourse functioning of anaphora and its characterisation:

- The antecedent's referent does not remain static once it is established: its representation in the discourse accrues and/or sheds properties as a function of what is predicated of it downstream of its initial occurrence (see the phenomenon known as "evolving reference"). Hence, the sense and reference of the anaphor ostensibly in relation with it may well be rather different (see example (3) in particular).

- Depending on the 'textual antecedent' as well as anaphor involved, the anaphor may well contribute to the understanding of the antecedent properties which the latter did not initially have for the recipient (see example (14) in section 4 below).

- Furthermore, there may well be no canonical textual antecedent at all (see examples (2) and (5) as well as (16) in Cornish, 2010); and yet the anaphor (in all three cases a definite NP or a 3rd person pronoun) may be interpreted without difficulty via the drawing of relevant inferences.

- The specific indexical properties of the different types of anaphors (3rd person pronouns, definite NPs, both expanded and reduced, demonstrative-based expressions, and so on), taken in conjunction with the anaphoric predication as a whole, play an important role in determining the anaphor's in-context interpretation (see (2), (5) and (16) in Cornish, 2010 in particular). It is not the anaphor *qua* separate expression that picks up the relevant salient discourse representation at the point of utterance, but **the entire anaphoric predication** — which triggers the integration of the discourse unit to which it corresponds with its immediate discourse context in terms of an appropriate coherence relation (see the analysis of (14) further on). This is the 'discourse' contribution to the functioning of anaphors in texts.

[4] Note that I distinguish linguistic forms, meanings and referents via the following notation system: *italics* (or underlining) for **antecedent triggers** and **anaphors**, **deictics** and **anadeictics** (all functioning at the level of *text*), "double inverted commas" for meaning representations (the "**antecedents**" or full semantic-pragmatic interpretations of indexicals, operating at the level of *discourse*), and 'single inverted commas' for the **referents** of indexical expressions. The two last-mentioned items are represented within the discourse that may be associated with a given stretch of text, in conjunction with an appropriate context. It is essential that you distinguish amongst these three constructs in your own analyses, by using the relevant means of expression or notation.

- Finally, in psycholinguistic terms, it is quite implausible that hearers would need to keep in short-term auditory memory a particular expression (the "textual antecedent") in order to interpret a later anaphor — which is what the co-textual account of anaphora would entail, of course;[5] in the written form, this possibility is in principle available to readers, since the co-text remains permanently visible on the page. But even here, according to psycholinguists (Ehrlich & Rayner 1983; Charolles & Sprenger-Charolles 1989), eye regressions by readers to a relevant textual antecedent are relatively rare. Why? Because they are tracking the referents represented in their respective discourse models as the discourse is constructed on-line (in fact, the introduction and updating of particular discourse referents is an integral part of the very creation of discourse itself). The referents of given anaphors are not to be found 'in' the text, but rather are available in (or via) the discourse representation.

The advantages of the notion **antecedent trigger** in relation to the canonical **textual antecedent** are that it is more general than the classical "textual antecedent", as it covers a whole range of non-canonical types of anaphora (see the very similar notion of *attracteur* proposed by Berrendonner, 1990).

As a **percept**, an **utterance token** or a **non-verbal signal**, it is operative in the cases of "evolving reference", "associative" anaphora, exophora, inferential or "indirect" anaphora, in discourse deixis as well as in instances of standard, canonical anaphora. See my 2010 *Functions of Language* paper for examples of all of these subtypes.

The antecedent trigger contributes the ontological category or type of the anaphor's referent, as we have just noted; but the actual 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 anaphoric or "host" predication.

So whether the referent retrieved via a given anaphor has been directly and explicitly evoked in the prior or following co-text (in the case of cataphora) is neither a sufficient nor a necessary condition for the existence of (discourse) anaphora.

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*):

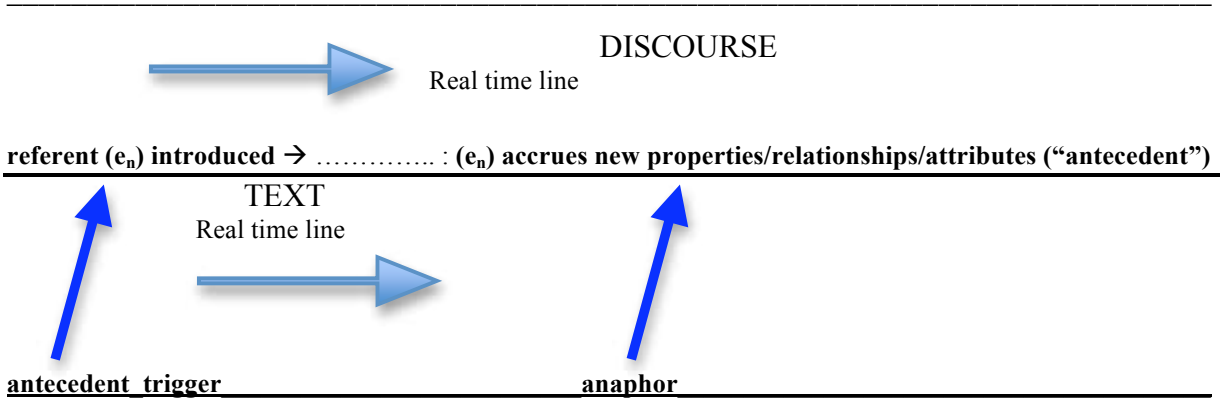


Figure 1: *Discourse*, *text* and the relationships between "antecedent-trigger", "referent", "antecedent" and "anaphor"

As is evident from this diagram, 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* (see the first dark (blue) arrow pointing obliquely upwards towards the discourse representation above). This representation then accrues certain properties, relations

[4] In any case, the addressee or reader will not know in advance of the occurrence of the anaphor **which** "textual antecedent" to retain in short-term memory. So the problem is compounded here.

etc. as these are predicated of it in the ensuing text. A subsequently occurring anaphor (a linguistic expression) in the following co-text then enables the addressee or reader to access this representation **as it has evolved up to the point of retrieval**. This is an illustration of Heraclitus's famous point that "you never step into the same river twice".

2.1 *Deixis* and *anaphora*: a discourse-functional perspective

2.1.1 Definitions

Deixis and *anaphora* are discourse-referential procedures which users exploit in order to build up, modify and access the content of mental models of the discourse under construction by each of the discourse participants (see also the term "mémoire discursive" proposed by Alain Berrendonner). Both of these procedures operate as a function of the principle of "recipient design", serving to coordinate the attention of speaker and addressee (or writer and reader).

Deixis serves prototypically to orientate the addressee/reader's attention focus towards a new object of discourse (or towards a new aspect of an already existing object at the point of use) that is constructed by default on the basis of the utterance context —whose centre point or "origo" in Bühler's (1990)/[1934] terminology is the *here and now* of the speaker/writer's goal-directed verbal and non-verbal activity (see also Diessel, 2006: 470).

Deixis in this conception implies the exploitation of the context of utterance (the deictic *ground* in Hanks' 1992 terminology) in order to profile a discourse-new referent or a new conception of a referent existing within the discourse model. We have to do with deixis every time we have recourse (by default) to the utterance context in order to identify the referent intended by the speaker. The use of the deictic referring procedure always entails a break in the continuity of the discourse prior to the point of use.

As for **anaphora**, the occurrence of an anaphor in conjunction with the clause in which it occurs (i.e. the "host" clause) serves as a signal or an instruction to **maintain** the attention focus already established at the time of speech. In this way, the referents of weakly accented or unaccented anaphors, with low pitch (i.e. which are not phonologically prominent), are assumed to enjoy a relatively high degree of attention focus at the point of use. That is, they are relatively topical referents. Anaphora consists in the retrieval in the context of a given *deictic ground* of a *figure* (a central discourse object) together with that ground. The anaphoric predication as a whole serves to continue that ground (see also Kleiber 1994: Ch. 3).

In both cases, it's the **conceptualisation**, i.e. the **psychological, mental representation of the** referents, that is at issue, whether these referents have been made accessible initially via the external situation or by the preceding (or following) co-text. There exist different "fields" or domains of reference[6] within which the deictic **as well as** anaphoric procedures may operate:

The utterance situation

Pure deixis

(4) Hey, look at *that*! [The speaker gestures towards a strange bird perched on a nearby tree]

Anaphora (more accurately, "exophora")

[6] See in this respect Bühler's notion of *Zeigfelder* ("pointing" or "indexical fields") (Bühler 1934/1990).

(5) [A and B are walking on a pavement, and on turning sharp left, notice a big dog slowly approaching] A to B: Do you think *it*'s friendly? (Cornish, 1999: ex. 4.1, p. 112)

The co-text

Text deixis

(6) A to B: Our rhododendrons are in blossom right now. B: Oh really? How do you spell *that*?

Anaphora

(7)…I know *it*'s got three "d"'s.

The discourse already constructed or anticipated

Discourse deixis

(8) Listen to *this*: a man went into a butcher's shop one day wanting to buy a whole sheep, and…

Anaphora

(9) …Would you believe *it*?

Shared long-term memory

"Recognitional" anadeixis

(10) A: Do you remember *that time we got rained out camping in Spain last August*?

Anaphora

(11) B: I do indeed! *It* was really awful, wasn't it?

There is also the "displaced" or transposed field corresponding to the creation of a fictitious, virtual world (Bühler's "Deixis am Phantasma").

Now, what is the essential difference between the **anaphoric** ("exophoric") functioning of the pronoun *it* in (5) and the **deictic** value of the use of *that* in (4)? Well, the existence of the intended referent as well as its high degree of psychological saliency is **presupposed** in the former case, but **asserted** (more accurately, **demonstrated**) in the latter (see Cornish 1999: Ch. 4 for a discussion of exophora).

As for **text deixis**, the "field" is evidently the co-text (see example (6) above …*How do you spell **that**?*); whereas with **discourse deixis**, it's the surrounding discourse which has just been constructed (or which is just about to be, in the case of example (8) *Listen to **this**:*…), which is the target of the addressee's processing in order to appropriate the intended referent.

By hypothesis, the 4th type of field indicated above (see ex. (10)) involves both anaphora (in the sense that an existing (but currently inactive) discourse representation is thereby retrieved from shared long-term memory) **and** deixis (via the recourse to the utterance situation in order to point towards a representation buried in shared long-term memory). This type of use would fall within "**anadeixis**" (see Ehlich, 1982 and subsection 2.2 below).

In all four types of domain retained, the deictic uses illustrated by examples (4), (6), (8) and (10) orientate the addressee's attention focus towards a new object of reference, thereby creating a joint or shared attention span. The anaphoric uses exemplified by (5), (7),

(9) and (11), on the other hand, presuppose an already-established joint attention focus on some entity.

Deixis and anaphora can operate, then, on the utterance context, on the co-text, on the surrounding discourse already constructed or anticipated, on shared memory representations or on transposed, virtual worlds. In fact, this is only true in terms of the **immediate** sources of the indexical reference in question: for in every case, deixis as well as anaphora function in terms of discourse-model representations of the fields at issue. But the nature of each type of referring procedure is distinct.

2.2. "*Anadeixis*"

Yet the relationship between deixis and anaphora is **a**symmetrical: these are by no means "absolute" or autonomous indexical referring procedures. As Lyons (1975) convincingly argued (cf. also Bühler 1990/1934; Gerner 2009 and others), anaphora is derivative upon deixis, on which it depends. Deixis is the more fundamental referring procedure. The majority of indexical expression types capable of realising anaphora may also have a deictic function (or are morphologically derived from those that are specialised in this use). The real relationship between these two indexical procedures may be characterised in terms of a cline, with a medium term: this intermediate, hybrid level has been termed "**anadeixis**" by Ehlich (1982).

'**Anadeixis**'[7] is the type of indexical reference which combines the anaphoric and deictic procedures to different degrees: the indexical expressions which realise it (mainly demonstrative-based ones) are **anaphoric** to the extent that their referent is already (potentially) present in the discourse representation assumed by the speaker to be shared by speaker and addressee at the point of occurrence, and is retrieved or created via this reference; however, that referent may be less than highly salient at the point of use, unlike the situation which prevails with canonical anaphora. This is why the **deictic** procedure is a contributory factor in such references. An anadeictic reference is not canonically deictic, in that there is no totally new referent being introduced into the discourse thereby, and not all the utterance-level parameters are being altered via this reference. For examples of anadeixis, see (6), (8) and (10) above as illustrations of text deixis, discourse deixis, and "recognitional" anadeixis, respectively. I'll deal with 'strict' anadeixis and discourse deixis shortly. See Cornish (2011: 757-60) for further discussion.

The prototypical subtype of anadeixis (what I call "'strict' anadeixis") lies in the anaphoric use of demonstratives (whether pronouns or NPs), where they reorientate the interlocutor's attention towards a referent that has already been evoked in the surrounding discourse, but which is no longer topical at the point where the retrieval is to be made; alternatively, where a macro-topical discourse referent has just been introduced and needs to be fully installed in the addressee/reader's short-term memory span. In neither of these cases would an unstressed 3rd person pronoun be capable of maintaining (re-topicalising) the intended referent —its indexical vocation being canonically anaphoric (see its relatively 'low' position in the Scale in Fig. 2 below).

Here is an attested example to illustrate:

(12) **"'Strict' anadeixis"**: "…"We use Viking as a shorthand term and there's the traditional raping and pillaging image of the Vikings. **That** was replaced in the 1970s by what I think of as the fluffy bunny school of Viking studies…"".

[7] The term is due to Ehlich (1982), though Ehlich himself did not define it in theoretical terms; nor did he distinguish the three sub-types developed in this paper.

(Extract from an article by Mark Brown "'Stunning' Viking find of silver coins and jewellery bought for the nation", *The Guardian* 28/08/09, p. 12).

In (12), the referent targeted by the ('strict') anadeictic pronoun *that* is introduced in the initial sentence via a predicating NP (*"there's [the traditional raping and pillaging image of the Vikings]*") — which is, moreover, in Focus position within an existential construction. The demonstrative could not be replaced naturally by an ordinary pronoun (here, *it*: ?*It was replaced in the 1970s by…*). This is because this referent is not yet installed as a topic within the reader's developing mental discourse model (the host sentence corresponds to a "thetic — "all-new" information—judgement", and so requires a more substantial indexical reference in order to achieve this result: the 'distal' demonstrative pronoun *that* fits the bill perfectly here). Note also the **distancing** effect of the use of *that* in (12), in reference to the earlier, older image in question, which has been replaced by the more recent one.

Here now (as already anticipated) is the Scale representing the relative degrees of indexicality intrinsic to a range of indexical expression types in English —pronouns and lexical NPs (see footnote 8 for the key to the abbreviations used in this Figure):

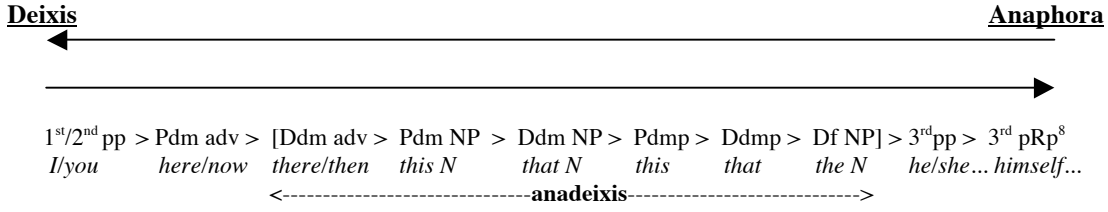


Figure 2: Scale of anaphoricity and deicticity coded by certain categories of indexical expressions

The rationale for the hierarchy lies in the degree of inherent 'indexicality' of each individual indexical category retained. The two poles are occupied, respectively, by 1st and 2nd person personal pronouns, which are primary deictics functioning token-reflexively[9] and may not normally be used anaphorically, and by 3rd person reflexive pronouns, which (at least when unstressed in English) prototypically function only anaphorically as bound variables within a highly constrained clause-bound context (see §2.3 below on this). In both these "polar" instances, the use of a token of each type of indexical in the appropriate context is actually sufficient to ensure the establishment of its referent (though for very different reasons).

I have ordered the demonstrative-based expression types ranged in between the two polar categories on the Scale in terms of the proximal (marked) vs. distal (unmarked) distinction which they carry morphologically in English —the marked counterpart bearing a higher degree of indexicality than the unmarked one (cf. Lyons 1975 and Levinson 2004: 121, n. 4). The use of the proximal variants (*here, now, this N, this*) is associated with the speaker's personal involvement in the act of reference at hand, while that of the distal ones (*there, then, that N, that*) connotes either an interactive alignment with the addressee or a distancing emphasis on the speaker's part with respect to the situation denoted: see the referential value in context of the pronoun *that* in (12) above).

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[8] Key to the abbreviations used in Figure 2: '1st/2nd/3rd pp': "first/second/third person pronoun"; 'P': "proximal"; 'D': "distal"; 'dm': "demonstrative"; 'adv': "adverb"; 'NP': "noun phrase"; 'p': "pronoun"; 'Df': "definite"; 'R': "reflexive".

[9] 'Token-reflexivity' corresponds to the situation where it is sufficient for a primary deictic expression token to be uttered in a given context for the referent to be established: for example, the person who utters the 1st person pronoun *I* (or its accusative form *me*) in some context sets him- or herself up by so doing as current speaker.

The lexical NPs on the Scale are placed to the left of the corresponding pronouns. All demonstrative-based categories occur above the definite NP category: definite NPs are located at the lower limit of the 'anadeictic' span in Fig. 2, since although not always indexical in function,[10] they may still function deictically as well as anadeictically and anaphorically.

Unlike in demonstrative NPs, the head noun in singular definite NPs normally conveys presupposed information at the time of utterance. The expression as a whole presupposes the uniqueness of the intended referent within the activated shared set of referents, and refers **inclusively** to all the members of the set, under Hawkins' (1978) account. This means that definite NPs are more suited than are demonstrative NPs to realising anaphora rather than deixis. Demonstrative-based expressions, on the other hand, carry no presupposition of the uniqueness of their referent (just the reverse, in fact), and refer **exclusively** to one member (or one subset of members) within a given shared set of entities. See also C. Lyons (1999) on this issue.

Note also that placing definite NPs closer to the 'anaphoric' pole of the Scale than demonstrative expression types is contrary to both Ariel's (1990) and Gundel, Hedberg & Zacharski's (1993) hierarchies, which are exclusively based on the cognitive accessibility or cognitive status of the potential referents claimed to be coded by expressions corresponding to each position on the Scales.[11] Phylogenetically (i.e. in terms of the creation by each language of new expression types in the course of its historical evolution), this reflects the diachronic development of the definite article, in those languages which possess it, from an earlier demonstrative form, rather than *vice versa*. This is also the case as far as 3rd person pronouns are concerned.

2.3 *Anaphora* vs. *Coreference*

A word now on the basic distinction between *anaphora* and *coreference*.

Anaphora involves a relation of referential and/or semantic **dependency** between an indexical expression in some co-text and a referent or sense which is independently available (and accessible) within the discourse context of the occurrence of that expression.

Coreference on the other hand is a relation holding between two co-occurring expressions used in some text to refer to the same entity. There is not necessarily any relation of semantic and/or referential dependency holding between each such use, as there is in the case of anaphora.

For example, if in a text we find the following occurrences: "…*David Cameron*… *the British Prime Minister in 2011*…", then it would be the case that each nominal is **independently** referential. That is, either nominal would, on its own, be sufficient to enable the addressee or reader to identify the same particular individual that the speaker/writer has in mind. There is no referential dependency of one upon the other (both nominals could be inverted without any consequences. This is not normally the case with expressions related in terms of **anaphora,** however, where so-called "backwards anaphora", in which the anaphor precedes the antecedent-trigger, is more highly constrained than "forwards anaphora"). So these are examples of "coreference without anaphora".

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[10] They may refer independently in terms of their lexical content when this is sufficient to uniquely identify their referent. Such definite NPs are "referentially autonomous" expressions, in Ariel's (1996) terminology, and not context-bound, as are the indexical expressions analysed here. In a given textual context, such expanded definite NPs may be introductory rather than subsequent (anaphoric or anadeictic) references.

[11] Regarding Ariel's (1990) characterisation, see the criticism in De Mulder (1997: 147-8).

Given that anaphora involves semantic and/or referential dependency, then it is possible to have anaphora **without** coreference, i.e. where no "reference" is involved. This is the case with "co-semy" (same sense), as in *Mary bought an ice-cream this morning, and I had one too*. The indefinite pronoun *one* in the second conjunct of this example is interpreted as denoting 'the same **type** of entity' as its antecedent-trigger, here "ice-cream". We are not buying "the same" ice-cream (i.e. it's not the same referent that is at issue here), but each of us will have a different one. Yet it is a referent of the same type.

Another example of anaphora without coreference is so-called "bound" anaphora involving pronouns. Example: *At some time in life, everyone thinks he is a failure*. The 3rd person pronoun *he* in the subordinate clause here doesn't refer to anyone in particular. In fact, it doesn't "refer" at all. It is equivalent to a variable, bound by the ("universal") quantifier associated with *everyone* (see the paper by Christian Bassac on this topic). To make this clear, you could add *whoever they might be* after *everyone*. The meaning then of the main clause is: "everyone thinks/considers himself to be a failure". So the interpretation of *he* is completely taken charge of by this expression. Again, no "coreference" is involved.

Finally, anaphora **with** coreference is illustrated as follows: *John knows the answer to that question. He's just memorized a whole encyclopedia.* Here, the pronoun *he* is referential, and its reference depends on the prior existence (as well as saliency, topicality) in the discourse context of the referent named 'John', just mentioned in the preceding sentence. So it is **anaphoric** with respect to that prior referent. But it also **co-refers** with the antecedent trigger at issue.

Anaphora, then, involves semantic and/or referential, but not "textual", dependency.

On 'coreference' in naturally occurring texts, see the recent article by Recasens, Hovy and Martí (2011) in *Lingua* 121 (see the General Reference list for the full details).

3. "Topic chains" in texts

A topic chain (sometimes also called "anaphoric chain" or "referential chain" in the literature) is a structured sequence of references developing a single discourse referent within a text. There are major, "macro-topical" chains, and more minor, subsidiary ones, termed "micro-topical" chains. By definition, macro-topical chains are developed both in major discourse units as well as in minor, supporting ones throughout a text, whereas micro-topical ones tend only to occur within background units.

(13) Once upon a time there was *a king who was wise and venerable* (1_i). Now *this king/?#he* (2_i) had *three young and handsome sons* (1_j). *These sons/#Them/?These* (2_j), *he* (3_i) was keen to marry ?*them/ø* (2_j) off, as *he* (3_i) was no longer very rich and *ø* (3_i) needed the dowries…

In this (invented) beginning of a fairy story, the numbers indicated in parentheses show the link position within the respective topic chains occupied by the indexical expression at issue (see Table 2 below). The subscripted letters (here 'i' and 'j') indicate the identity or non-identity of the chains in question (whose 'heads' are, respectively, 'the wise and venerable king' (i) and 'the set of his three sons' (j)).

The first of these two chains (*a king who was wise and venerable…this king…he…he…ø*) will have introduced in initial position a referent termed 'New Topic' by S.C. Dik (1997). This referent is introduced in Focus position in the initial sentence of the text, in the information-structural sense of the term: this reflects the fact that the conventional presentational construction *Once upon a time…*('Il était une fois…') is a strong signal that the

referent thereby introduced will be the global (or "macro-") topic of the anticipated ensuing discourse as a whole, and that it is expected to persist centrally throughout the discourse.

So it's this considerable effort of cognitive construction of a leading protagonist in the story about to be told that requires it to be retrieved almost immediately via an indexically 'strong' expression (here a demonstrative NP that repeats just the head noun of the textual introducer of this character), rather than via a simple unstressed pronoun (*he*). This is equivalent to a kind of "re-introduction" of the referent at issue at this point in the text. Once the identity of this highly topical referent is established as such in the reader's discourse representation, it may be retrieved (maintained) quite naturally via a sequence of 3rd person or zero pronouns within the 3rd link in the chain.

The second topic chain evoked in this text fragment is grounded upon an introductory reference which is less highly focused than the first — the case of the referent 'the set of three sons of the king in question': indeed, this referent is presented as subsidiary to or dependent on the king. It is thus a secondary topic, the three sons being introduced into the discourse as offspring of the central protagonist, the king himself. This topic chain is realised in textual terms thus: *ø three young and handsome sons…these sons…them*.

Extrapolating, we see that each topic chain involves up to three links:

An initial, introductory link (L1) which serves to present the referent within the discourse; **a second link** (L2), whose purpose is to confirm the installation of this referent as a macro-topic within the addressee/reader's mental discourse model; and **a third link** (L3), which may be filled by multiple occurrences of indexical expressions. These serve simply to maintain the high saliency of the topical referent at issue. The indexicals fulfilling this L3 function are anaphoric expressions, used as such.

Table 2 shows the types of nominal expressions capable of realising each of the three functional positions within a given topic chain.

L1 (introductory function)	**L2 ("anadeixis")**	**L3 (anaphora)**
Full proper names	Demonstrative NPs	3rd person pronouns
Extended definite NPs	Demonstrative pronouns	Zero pronouns
Indefinite or quantified NPs	Definite (extended) NPs	Reduced def./poss. NPs
		Reduced proper names

Table 2: Types of nominal expressions capable of realising each link in a topic chain

The types of expressions realising the L1 position are "referentially autonomous" expressions (i.e. ones that do not require the addressee/reader to have recourse to the context at hand in order to access the intended referent —as examples, see the two NPs given in illustration of **coreference without anaphora** in §2.3 above); those realising L2 are "referentially semi-autonomous", and those in L3 position are "referentially non-autonomous" (since they are by definition entirely bound to the context for their resolution). Positions L1 and L3 are obligatory, that is, they must normally be filled, hence "realised". In the news article I presented for analysis in my (2006) *Encyclopedia of Language and Linguistics* entry on "Discourse anaphora", namely "Monet waterlilies set £20m record", it transpired that in discourse terms, chains which are **subsidiary** or **background** may not recognise the 2nd position (L2). This link is only filled when the topic referent is a major discourse referent —that is, when it plays a central role in the situation evoked via the text. In such a case, it is important that the addressee/reader strongly establishes the intended referent

in his/her cognitive representation of the discourse as a macro-topic entity, which will be playing a prominent role in the expected remainder of the discourse.

To end this section, here is an analogy which may help to clarify the relevance of topic chains to discourse reference as well as text structuring. Chains structured in terms of the three key positions ("Head", L2 and L3) may be conceived by analogy with the structure of a rocket launching a probe to explore a heavenly body in our solar system. The lower part of the rocket would provide the basic thrust needed to launch the heavy rocket into the atmosphere at a speed necessary for its subsequent voyage in space. This lower section would then be analogous to the 'introductory' function of the 1st link position in topic chains, which serves to introduce a discourse-new referent (which is not yet "topical" in status).

Next, the "intermediate" part of the rocket would provide the boost needed to cross the terrestrial atmosphere and counteract the gravity which tends to pull flying objects back to the Earth's surface. This intermediate section would be comparable to the function of the 2nd link in topic chains, which precisely enhances the topicality inherent in the referent which has just been introduced, and firmly installs it in the addressee/reader's discourse.

Subsequently, once the frontier between the upper layer of the Earth's atmosphere and interstellar space will have been crossed, the two lower sections of the initial rocket will detach themselves and fall back to Earth, leaving the probe to freely pursue its journey towards the target. Given the absence of any atmosphere or gravity in interstellar space, the probe will quietly pursue its way at a constant speed. This would be analogous to what happens in a topic chain when we reach link 3: here, the purely anaphoric expressions require no particular cognitive effort (unlike links 1 and 2), since the referent at issue is already (highly) topical within the discourse at hand. It is, so to speak, virtually "self-propelling".

4. "Micro-discourse": indexicals and their role in the creation of discourse coherence

Between 2003 and 2006, we conducted an ILF research project entitled *Relations de cohérence et fonctionnement des anaphores* in partnership between the UTM research unit ERSS (axe S'caladis) and the unit EA 1339 from l'université de Strasbourg II. The culmination of this project was the publication of a selection of 6 articles in a special issue of the *Journal of French Language Studies* (issue 19.2, July 2009). The core of the project was an investigation into the interactions within short written non-literary French texts (news-in-brief articles from newspapers, advertisements and film synopses), between the choice of a coherence or rhetorical relation and the functioning of certain anaphoric (indexical) expressions in non-initial sentences, in integrating the interpretation of a sequence of sentences that were not explicitly connected (see (14) below for an English illustration of the kind of texts we studied).

In particular, we studied the heuristic role of:

- …the various types of **indexical expressions** in the setting up of a coherence relation
- …certain **connectives** (*d'abord, puis, notamment, en particulier…*)
- …the **tense** and **grammatical aspect**, as well as the **Aktionsart** (lexical aspect), of the predicators involved; and more generally, the **event structure** of the units to be integrated
- …the **lexical relations** characterising each predicator (e.g. synonymy, hyponymy (sense inclusion), antonomy, meronymy (part-whole relations))

- …the **information structure** of the two units at issue (topic-focus, contrastive topic/focus, "all-focus")

- …the **title** of the text in question, and

- …the **syntactic correlations** existing between the two sentences or clauses involved (e.g. gerundives, participials…)

We also re-examined and on occasion reformulated a small number of coherence relations, as these had been developed in the relevant literature: in particular, *Elaboration*, but also *Background, Explanation* and *Result*, as a function of our corpora.

The role played by indexicals in the cohesion and coherence of multi-clausal texts is fundamental. Invoking one or more semantic-pragmatic relations holding between the discourse units that correspond to the indexical predication and the 'target" unit, as a function of the particular coherence relation assumed in order to integrate them into a higher order unit, is one condition on the isotopy needed for the indexical in question to maintain, by retrieving it, a salient (or less than salient) referent. If no relevant type of rhetorical or coherence relation is available in context to integrate the two units, then the indexical(s) in the second one will be uninterpretable. Moreover, in textual examples like (14),

(14) "**Paulson offered treasury role**

President Bush nominated Henry Paulson, the chief executive of Goldman Sachs, as US treasury secretary in place of John Snow. *The 60-year-old investment banker* is a China expert and keen environmentalist." (*The Guardian Weekly* 9-15/06/06, p. 2)

it is clear that the relation *Entity Elaboration* which may be invoked in order to integrate the macro-units corresponding to both sentences of the text, can only "elaborate" the topical individual introduced in the discourse unit correlating with the initial sentence (as also in the title). For the text is evidently "about" Henry Paulson, and not John Snow: it's HP who is to be the new US treasury secretary, JS bowing out (yielding his position to HP). JS is no longer in post, and the reader does not expect that the rest of the text (should there be any) will be about him at all. A predication can only predicate something new about a referent which has been singled out as being susceptible to receiving new information. So it's the first-mentioned referent which is the target of the extended definite NP subject of the second sentence (*the 60-year-old investment banker*) —even though this NP could (in principle, at least) target the referent 'John Snow'. Note that we learn something new about the entity at issue (Henry Paulson) from the content of the anaphor, in relation to what the antecedent had evoked (this is a regular feature of the news journalism genre).

The key point here is that the anaphoric relation holding between the indexical *the 60-year-old investment banker* and 'Henry Paulson', the macro-topical referent in this short text, provides the anchoring 'pivot' needed in order for the coherence relation *Entity-Elaboration* to integrate the two discourse units into a higher level unit. This is a prerequisite then for understanding the text as a whole (i.e. for deriving the 'discourse' that may be associated with that 'text'): indeed, to "elaborate" a particular entity, that entity has to figure both in the elaborated situation and in the elaborating one. In the textual examples containing indexicals in my 2010 article in *Functions of Language* (as also in the 2009 one in *Language Sciences*), the relations *Claim-Evidence*, *Concession, (Entity-) Elaboration, Explanation*, *Result* and *Sequence* turned out to be relevant. See Kehler *et al*. (2007) for further discussion of the interactions between coherence and coreference relations in texts.

5. Discourse anaphora, anadeixis and the structuring of (macro-)discourse

5.1 'Strict' anadeixis and discourse deixis

In several publications (see section 5 of the first list of References at the end of the handout), I studied the textual behaviour of **demonstratives**, in particular in realising two types of anadeixis: **'strict' anadeixis**, and **discourse deixis**. 'Strict' anadeixis is realised by what Diessel (1999) calls "anaphoric demonstratives" (see example (12)). In the first and fourth of the publications in section 5 of the References, I sketched out an analysis of the structuring function, in terms of discourse, of demonstratives realising in particular a discourse deictic function.

With **discourse deixis**, the addressee/reader operates on the surrounding discourse which has just been constructed in order to appropriate (or to create, rather) the intended referent. See Lyons (1977), Guillot (2007), Himmelmann (1996) and Diessel (1999) on this topic. Unlike in the case of "strict" anadeixis, with discourse deixis, there is no pre-existing discourse referent to target at the point at which the discourse-deictic reference occurs.

(15) **Discourse deixis**: ""…Every day, people hide heartache and pain in public. I think audiences recognise **that fragility** and are drawn to it"…". (Extract from an article entitled "Pulling Power", *Radio Times* 1-7.08.09, p. 18).

In (15), we have a demonstrative NP introduced by a demonstrative determiner and a head noun denoting a psychological quality ("fragility") in context, which serves to reclassify the other two 3rd order (abstract) referents already introduced, setting up a more general property which is reified, on the basis of the more specific psycho-physical qualities ("heartache" and "pain") just evoked via the preceding sentence, and which it subsumes. Note that 'fragility' is not, strictly speaking, a hyperonym of 'heartache' and 'pain' as such—rather, this is a subjective characterisation on the writer's part.[12] This is a discourse-deictic use, then.

As such, the demonstrative NP which realises it within its host clause could not be replaced by a 3rd person pronoun at all (*#...I think audiences recognise it and…*): for an unstressed 3rd person pronoun serves simply to maintain within the host clause the already high saliency of a given discourse referent at the point of retrieval (see Figure 2). But this is not the case here. The referent needs to be constructed and installed in the evolving discourse model, and it's via a demonstrative-based expression that this is achieved.

Moreover, whereas in (12) (an instance of 'strict' anadeixis) the demonstrative pronoun *that* could well be replaced by a definite NP whose head is the same noun as the one used in the antecedent-trigger NP: *The image was replaced in the 1970s by…*, such a replacement would be totally unacceptable in the case of (15), repeating the indexical NP's head noun: *#I think audiences recognise the fragility and…*[13] This shows clearly that, unlike (12), (15) does not involve anaphora *stricto sensu*, as such. This contradicts what is claimed by Piwek et al. (2008: 697), namely that "discourse deixis" is nothing more than a form of discourse anaphora. All this is consistent with the predictions that may be derived from the Scale of indexicality in Fig. 2.

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[12] See Schnedecker (2006) for the various types of predicate used in demonstrative NPs in French.

[13] The essential reason for this is that the property "fragility" cannot easily be presupposed of the intended referent at the point of use, which it would normally be when the exponent noun is head of a definite NP — so it is not an anaphoric (or 'strict' anadeictic) reference.

Figure 3 presents the different indexical referring procedures we have seen so far, also in the form of a Scale:

Canonical deixis > Discourse deixis > Recognitional deixis > 'Strict' anadeixis > Canonical anaphora

Figure 3: Scale of indexical referring procedures

The 'anadeixis' span in this Scale ranges from 'discourse deixis' to the left, to 'strict' anadeixis to the right. 'Recognitional' anadeixis is placed in between 'discourse deixis' and 'strict' anadeixis, because it is a more deictically-oriented referring procedure than the latter (since its potential referent is not readily accessible to the addressee/reader, but needs to be retrieved from shared long-term memory: recall example (10) from subsection 2.1 earlier on). However, unlike 'discourse deixis', a potential referent does in fact exist prior to the reference effected: it is simply less immediately accessible than in the case of 'strict' anadeixis. This scalar conception clearly shows that with strict anadeixis, the anaphoric aspect will be dominant ('strict' anadeixis being located on the Scale closer to the 'anaphora' pole), whereas with discourse-deixis, it's the deictic one that predominates: while in the case of 'strict' anadeixis, the referent is simply being retrieved from prior discourse, with discourse deixis, a new referent is being created and installed in the interlocutors' working memory, as it is via the use of the canonical deictic procedure.

5.2 The roles of 'strict' anadeixis and discourse deixis in the structuring of discourse

To illustrate, here is a single short text, taken from my (2011) paper in *Language Sciences* 33(5). Like the others presented in that article, this one is drawn from the UK weekly magazine *Radio Times*. This magazine offers a rich tapestry of data, since it contains not only film previews and programme notes for TV and Radio, but also feature articles, interviews, advertisements, recipes and letters to the editor. Its style is relaxed and informal, often close to spontaneous speech. As here, there is therefore a lot of interactivity between writer and reader, and the writer is often subjectively involved in his or her discourse. Text (16) is a short article previewing a dramatised TV biography.

(16) ***Television*** **by Alison Graham**
WHAT WE'VE BEEN WATCHING
Of mice and men…

i. *Breaking the Mould: the Story of Penicillin* (29 July BBC4) was a delightfully old-fashioned dramatised biography of the type that wouldn't have looked out of place in the 1970s, with perhaps Robert Hardy in the lead role of Nobel Prize-winning chemist Professor Howard Florey.

ii. In **the 2009 version** *he* was played by Dominic West, a hot property since *The Wire*, who assumed an unobtrusive Australian accent and a very unflattering parting. *West* also revealed a useful skill during the science bits in the lab as a man who knows how to insert mice into test tubes. *He* was very gentle and *the stunt-mice* appeared none the worse for *their* adventures. *They* probably even had a nice little cup of tea afterwards.

iii. If you could get past the punning title (breaking the mould/penicillin — can you see what they did there?), **this** was a straightforward, thoroughly workmanlike

telling of a complex and not, on the face of it, eye-poppingly dramatic story. There were no car chases and no-one scaled any high buildings as *Professor Florey* and
15. *his team* developed penicillin in huge qualities, saving countless lives. (On moral grounds, *he* refused to patent *the process* and exploit *it* commercially).
iv. But **this very earnestness** was part of *Breaking the Mould*'s retro charm. There was even a British actor (Oliver Dimsdale) with a delightful "Cherman" accent as Dr Ernst Chain, *Florey's* colleague. *It* made me go all misty-eyed for the days of
20. Anthony Valentine as Major Mohn in *Colditz*. (Article in *Radio Times*, 8-14.08.09, p. 47).

I have written the indexical referring expressions bearing a purely anaphoric discourse value in this text in *italics*, and those with a deictic or anadeictic function in **boldface**.

Note first of all that 3rd person pronouns (apart from the occurrence of the pronoun *he* in line 5) and possessive NPs, but also reduced Proper nouns (e.g. *West*, l. 7, *Florey's*, l. 20), occur exclusively **within** elementary discourse units (whether central or subsidiary) and signal intra-unit continuity. The one exception to this generalisation is the occurrence of the 3rd person pronoun *he* in line 5. This pronoun refers back to 'the lead role of Howard Florey', a referent introduced in the previous paragraph (which corresponds in discourse terms to a distinct discourse unit). However, this reference is felt to be awkward here: this is due to the fact that there is a conflict between the effect of referential and thematic **continuity** associated with the use of a 3rd person pronoun, and the **break** in continuity conveyed via the start of a new textual paragraph, headed by a "framing adverbial" (the PP *in the 2009 version*) which sets up a new discourse unit.

In more "macro-" discourse terms, the theme of 3 of the 4 textual paragraphs (each realising a discourse unit) is announced by means of anadeictically-functioning indexicals: first, via a definite NP (*the 2009 version*, a referentially non-autonomous indexical) in line 5, para. 2; and later via demonstrative-based expressions: the proximal pronoun *this* in line 12 (para. 3), and the demonstrative NP *this very earnestness*, line 17 (para. 4).

Now, this demonstrative NP is clearly a discourse-deictic occurrence, since it implicitly predicates the property of "earnestness" (Fr. sérieux) of the "worthy", undramatic character of the film's plot highlighted in the previous paragraph. This in order to make it into the topic of the final paragraph (the "Coda" of the article as a whole). This NP serves to signal a transition between two major discourse units of the text, thereby signposting the imminence of the concluding unit, which "wraps up" the text as a whole.

The discourse-deictic character of the reference of *this very earnestness* in this text shows how demonstrative-based expressions occurring unit-initially in a text may enable the user to change from one gear to another, discursively speaking — hence to effect a transition from a unit serving to introduce a given referent to a new unit, by re-classifying it, establishing it as a discourse entity by reifying some aspect of what has been predicated within an earlier unit in the discourse. In other words, the processing of such indexicals involves looking backwards to the preceding discourse at the same time as looking ahead, towards the new unit about to be constructed. It is precisely this which makes them so useful for realising this particular discourse function. Note also that, like the characterising noun *fragility* in *that fragility* in example (15), the use of the head noun *earnestness* in *this very earnestness* in (16) reflects the writer's subjective evaluation of what has just been evoked in the 3rd major discourse unit, rather than being a relation lexically determined by some head lexeme within an antecedent (there isn't one here, in fact).

Now, these discourse-deictic occurrences of demonstratives that initiate a paragraph in written texts have several of the distinctive properties that have been attributed to "framing" adverbials:

First, they mark the end of a preceding discourse unit and the start of a new one (they signal boundaries between units: the *textual segmentation* function, then); and second, in terms of their descriptive content, they project a wide scope over the sentences/utterances which follow them (the *integrative* function). The demonstrative NP *this very earnestness* in (16) is a very good example of this. As is generally the case with demonstrative NPs, this descriptive content is not presupposed of its referent, but serves to (re-)classify the discourse material on which the expression operates, or it implicitly predicates some discourse-new property of it.

At the same time, discourse-deictic demonstratives manifest certain of the properties of *connectives*, linking up with the unit that precedes.[14]

This last property reflects their residual anaphoric dimension (see Fig. 3). It is their essentially deictic dimension which is responsible for the anticipatory character of such references — since all uses of demonstratives (whether pure deictic or anadeictic) result in the conveying of new information in context. The user's obligatory transit via the immediate utterance context of the demonstrative in search of an "index" (or "demonstratum") in order to yield a referent, means that its use will cause a break in the continuity of the discourse at this point. This break corresponds to the boundary demarcation which the use of demonstratives may effect, and the new information to which they give rise in context stems from their "anticipatory" dimension.

6. VP and object ellipsis, null and overt pronouns

English being a highly syntacticised language with a fairly rigid word order and little or no inflectional morphology, the distribution of null object pronouns (as opposed to subject ones) is highly restricted. However, they may occur, in certain circumstances: these are characteristically semantic and discourse-pragmatic in character rather than syntactic, however. One major issue in this respect is this: in instances of object non-realisation in English, are we dealing with **ellipsis** as such, or with the actual "presence", underlyingly, of a null pronoun with specific discourse-referential properties?

McShane (2005: 3) distinguishes between "syntactic ellipsis" (i.e. ellipsis proper) and semantic ellipsis. She claims that "Syntactic ellipsis is the nonexpression of a word or phrase that is, nevertheless, expected to occupy a place in the syntactic structure of a sentence." In my conception, this is *textual* in character. The example she gives is of "gapping", involving the verbs of parallel, conjoined clauses:

(17) "*Mary **got** an A on the math test and Louise **ø** a B*".

Here, the repeated past-tense verb *got* from the first conjunct is ellipsed in the second.

Semantic ellipsis, for McShane (2005: 3), is "the nonexpression of elements that, while crucial for a full semantic interpretation, are not signaled by a syntactic gap." With semantic ellipsis, there is no *syntactic* incompleteness involved, only (by definition) semantic.

[14] In fact, Diessel (1999), (2006) argues that it is this use that has given rise diachronically to grammatical connectives.

Examples of this would be (18a,b):

(18) a. *I forgot* ["to take/bring"] *my keys*. (McShane, 2005: 3)

b. *He is reading* ["a book written by"] *Tolstoy*. (*Ibid*: p. 3)

The elements in square brackets (my notation) are semantic constructs, part of the meaning normally conveyed by such sentences (see my distinction between "text" and "discourse" in Table 1), and are not syntactically active constituents.

6.1 "VP Ellipsis"

But "syntactic" ellipsis is not, in actual usage at least, restricted to situations where the constituent ellipsed is an exact copy of its "antecedent" or controller expression, which is simply "substituted" by zero (in fact, this is true generally, whatever the type of anaphoric expression at issue). As examples, let me repeat three attested (originally spoken) utterances illustrating VP ellipsis, initially presented in Cornish (1997: 9):

(19) "…They don't appear to be actually doing anything, yet in fact they obviously are ***ø***" (Artist on *Arena*, BBC2, 05.04.78. Example (6) in Cornish, 1997: 9)

In (19), the antecedent trigger introduces a predicate occurring within the scope of the negation of the introducing verb *appear*. But the elliptical segment "ignores" the effect of the logical scope-bearing operator involved (the negative polarity), and accesses the propositional function from inside that scope. So the ellipsis is interpreted as "doing something". Note also the relevance of the adversative connective *yet* and the obligatory contrastive pitch accent on *ARE* here, which help to motivate the ellipsis involved —compensating, as it were, for the absence of syntactic parallelism involved here. The coherence relation integrating the two conjuncts here is clearly that of *Contrast* (Kehler, 2002), a "Resemblance" relation. Instating *in situ* an exact copy of the antecedent would lead to severe ungrammaticality as well as to semantic incoherence: **…yet in fact they obviously ARE doing anything*. But this would seem to contradict Kehler's (2002) theory, which is that when *Resemblance* coherence relations are operative (as in (19)), then syntactic reconstruction driven by the parallel semantic and syntactic structures underlying each clause involved is required.

(20) "[Anthony Hayes] is head of the London agency Hayes & Jarvis, whose well-healed customers are particularly demanding and knowledgeable, so I think the assertion is worth following up, and later on, I will ***ø***." (*The Observer*, 02.05.76. Example (7) in Cornish, 1997: 9)

In (20), the ellipsis accesses the content of the propositional function "*x* follow up the assertion" introduced by the antecedent trigger *the assertion is worth following up*. The coherence relation at work here integrating the first two major discourse units would be *Cause-Consequence* (*Result*), according to Kehler's (2002) system; but the one connecting the elliptical clause with the immediately preceding one is surely *Temporal Sequence,* a *Contiguity* coherence relation (according to Kehler's system). Again, the formal structure underlying the syntactically active elliptical predication ((*I will) follow it up*) is not parallel to that of its antecedent trigger (which is in the passive voice, whereas the elliptical fragment is in the active): substituting this to the right of the modal auxiliary *will* via some kind of copying mechanism would lead to severe ungrammaticality: **I will the assertion is worth following up*. Such examples are readily found in corpora of spontaneous speech.

(21) "The trouble in Britain is that there are no initiators [of policy in Ministries] — people try to **ø**, but…". (Interviewee, BBC *Radio 3*, 12.05.84. Example (8) in Cornish, 1997: 9).

Finally, in (21), the VP ellipsis is able to access a predication contained in a relational **noun** (a nominalised verb with its arguments): its interpretation here is "initiate policy in Ministries". This is no doubt facilitated by the evident regular derivational relation holding between the agentive noun *initiator* and the verb *initiate* (a morphologically "transparent" relation). The integrative coherence relation operative here would seem to be *Concession* ("…although people try to initiate policy in Ministries, they nevertheless [don't succeed in doing so]"). Following Kehler's (2002: Ch. 3) account, it is the type of Coherence relation invoked to connect the two discourse units at issue that is relevant as far as the interpretation of VP-ellipsed clauses is concerned: Contiguity and Cause-Effect relations do not require syntactic parallelism between the two clauses involved, but Resemblance ones do (but the Contrast relation involved in (19) is nevertheless a counterexample to this claim).

All three examples show that "VP ellipsis" is not **simply** a superficial syntactic device used for avoiding textual repetition (*contra* Hankamer & Sag, 1976, as well as Sag & Hankamer, 1984), but that it is primarily sensitive to semantic-pragmatic factors (see also McShane, 2005 in relation to Russian, Czech and Polish data). On occasion, these factors may override the condition which requires syntactic parallelism. This then is a "deep" (semantic) rather than "surface" (syntactic) property, according to Sag & Hankamer (1984). See also Kehler (2002: 76-9) for a very similar point. Kehler's chapter 3 surveys a number of semantic accounts of VP Ellipsis in the literature, as well as purely syntactic ones, giving evidence in favour of each type.

6.2 Object ellipsis, null and overt 3rd person pronouns

6.2.1 The *semantic* vs. *syntactic* valency of predicates

Let's start by briefly distinguishing between the *semantic* valency of a given predicate and the *syntactic* valency of the verb, adjective or preposition to which it corresponds on the lexical level. The semantic valency of a predicate (a semantic notion) corresponds to the number and semantic type of its arguments (obligatory participants in the state of affairs which the predicate denotes). On the other hand, its lexico-syntactic counterpart (verb, adjective or preposition) has what we might call a "syntactic" valency (the number and syntactic category of its essential complements). The internal (semantic) arguments of a predicate and the (syntactic) complements of a counterpart verb, adjective or preposition may coincide, but they may also diverge. Let's look at the three transitive or ditransitive verbs in (22a-c).

(22) a *John saw the "No Entry" sign.*
b *The postman placed the packet in the tray.*
c *The car hit the railing.*

The examples in (23) (below) show that the second, or the second and third arguments of the predicates *see*, *place* and *hit* as illustrated in (22) are required both semantically and syntactically (even though the 3rd (locative) argument of the verb *to place* (see (23b)) may be ellipsed when it is recoverable via the context):

(23) a * *John saw*.
b *?The postman placed the packet/*The postman placed in the tray/*The postman placed*.
c **The car hit*.

6.2.2 *Indeterminate* vs. *generic* values of null complements

By contrast, the **syntactic** valency of the lexical counterparts of the predicates in (24) (normally 2-place predicates) may be reduced by one place (complement). This reduction has an important effect on the semantics of these predicates (this is the "absolute" use of transitive verbs). Yet their **semantic** valency remains a two-place one. Here, the **event structure** of the predications in (24a,b) is that of an **activity** (i.e. a "process", which could in principle go on indefinitely), and is no longer that of a **telic accomplishment** (an event that has an internal end-point), as when the second and (when relevant) third arguments are realised syntactically.

(24) a *Ron sawed, and Mildred pruned*.
b *Hilda read, while Jim wrote*.

Further generic or indeterminate referential values of unexpressed arguments are illustrated by the following attested examples:

(25) "*See, try, admire or buy at London's Motor Show.*" (Advertisement, *The Sunday Times*, 9.10.83, p. 9)

The kinds of things the reader of this advert is being invited to "see", "try (out)", "admire" or "buy" (all 2-place predicates and lexically, transitive verbs) are evidently new models of motor vehicles and their accessories, exhibited at the Motor Show to which the utterance refers. There is no discourse referent to which these arguments refer (what is highlighted are the "activities" associated with the meaning of these predicates here, as also in (24a,b)). Rather, these are what Van Valin & La Polla (1997) call "inherent arguments", part of the internal lexical semantics of the host predicates at issue. The non-instantiation of the second arguments here, together with the use of the imperative mood of each predication, has had the effect of converting what would normally be accomplishment predications into activity ones.

(26) [Notice displayed on dustbins in a street in Canterbury, UK:]
"*Recycling is so easy when it's collected from your doorstep*."

We need to distinguish between the values *indeterminate* and *generic* associated with null complements. The type illustrated by (26) could be analysed as **generic**, since the initial clause as a whole is generic: the tense is the (gnomic) present, and the predication attributes a property ("being very easy") to a **type** of event rather than to a token (a single occurrence). Whereas in (25) the four predications are eventive, each conjunct being in the imperative mood, and the actions enjoined are localised within a particular commercial event. So the null complements here all have an **indeterminate** rather than **generic** value in context.

Overt pronouns, for their part, may assume the non-referring generic value illustrated by (26) (see example (30b) further on), as well as the indeterminate reading (see (25´) and (25´a)):

(25´) *See it, try it, admire it or buy it at London's Motor Show*.

Another attested example (also taken from an advertisement) is (25´a):

(25´) a. [Picture of a "Unibond" (colle forte) tube]
"*You name it*
This seals it" (Street advertisement for "Unibond", Broad Oak Road, Sturry, UK)

But characteristically, where the host predicator occurs with a null complement, the "activity" interpretation is highlighted rather than the telic reading, directed towards a goal. In (25´a), the object pronouns could not be replaced by zero forms, since what is in focus here is not the **activities** of "naming" or "sealing" *per se*, but rather the (undifferentiated) types of physical entities that may be the object of the naming and sealing at issue.

6.2.3 *Null* vs. *overt* referential-anaphoric pronouns

Let's end this discussion by comparing the anaphoric potential of null and overt pronouns, as a function of the expression of event structure.

In English, three situations are possible (and attested) as far as the anaphoric occurrence of pronominal or null internal arguments is concerned:

1) the context is compatible **both** with a null complement **and** with an overt pronoun;

2) (very rarely) only the null complement is possible (i.e. null complements are 'marked' expression types in English, in relation to overt pronouns); or

3) only an overt pronoun is acceptable.

In certain languages, there is a different distribution of null and overt pronouns as far as the expression of anaphora is concerned: Gujarati (as indeed Asian languages of the Far East in general) is a particularly "liberal" language, since it allows either expression type in all contexts. Spanish and spoken French are "intermediate" languages in this respect, while English is a particularly restrictive language.

Moreover, the anaphoric interpretation of a null complement seems to conform to two main conditions:

1) there must be **a specific semantic selection restriction** on the internal argument(s) subject to syntactic non-realisation, or alternatively the contextual reference domain provides an appropriate type of denotation (see (25) in this respect, in relation to the indeterminate reading of null complements). And…

2) the referent of the null complement must be **contextually salient** at the point of use. This condition is necessary, but not sufficient, as (27) shows:[15]

(27) *Martin liked the look of* [*the pair of walking shoes displayed in the store window*]$_i$*: he went and bought* ****ø$_i$/them$_i$*** *without trying* ****ø$_i$/them$_i$*** *on*.

It seems that it is the **non-specific** nature of the selection restriction associated with the lexical-semantic structure of the verbs *buy* and *try on* that prevents this type of functioning. Only overt 3rd person pronouns can occur in these positions, as (27) shows. Why? Presumably because the selection restrictions imposed on the relevant 2nd argument positions by the

[15] See also the ill-formed examples of 2- or 3- place verbs of achievement or accomplishment followed by a null complement in (23) above – where the tense is also the definite past, and where the referent targeted by the null complement may also be contextually salient.

predicates 'buy' ("commercially saleable goods") and 'try on' ("clothes sold in shops") are too general to provide a specific intended referent in context. By contrast, null complements with these predicators are perfect when they take on an "activity" sense, whereby they would have an "indeterminate", non-referential value, as in the imperative occurrence of *buy* in (25). In spontaneous spoken French, on the other hand, null complements may well occur in referential contexts such as (27), under pragmatic control (*…il est allé acheter* ϕ_i *sans essayer* ϕ_i).

A null complement can also evoke **a(n) (in)definite identifiable entity**— that is (in the former case), a discourse-new referent. What is crucial in this particular case is that the intended referent of the zero form (which may well be a discourse referent) should be identifiable for the addressee/reader. Whether or not it is salient at the time of utterance is not relevant. The first null complement in (28) illustrates this:

(28) *I wrote ϕ to you a week ago, you know, but you never answered ϕ!*

The null complement of *answered* in the second conjunct of (28) illustrates a fourth possibility, where an implicit internal argument is not only referential and identifiable, but anaphoric. For obvious reasons, a definite 3rd person pronoun could not commute with a null complement bearing a discourse-new referent. But this is of course perfectly possible under the referential-anaphoric reading (though in (28), the zero pronoun is much more natural in context: like the null pronouns in example (32) further on, the second occurrence in (28) may instead be replaced by the (metonymically functioning) 1st person pronoun *me*, showing that the reference is essentially deictic here).

Other verbs, which have more specific selection restrictions, as well as different Aktionsart properties, allow both types of markers. Let's look at a pair of examples presented by Groefsema (1995: 156):

(29) a *John picked up the glass of beer and drank* ***ø***.
b *John picked up the glass of beer and drank* ***it***.

Here, the choice of a null complement for *drank* in (29a) induces a **partitive** interpretation ("John drank only **some** of the beer in the glass"). The null pronoun is anaphoric, but the null instantiation of this predicator's second argument has changed the "accomplishment" event structure in (29b) with the overt pronoun, to an **activity** predication.[16] In (29b) on the other hand, 'John' is understood as having drunk **all** the beer in the glass (the overt pronoun imposing a holistic interpretation of its referent, so giving the predication as a whole a telic accomplishment value, where the event of drinking beer comes to an end point).

By contrast, in (30a), both predications denote an atemporal property (the predications at issue are generic), the second one existing independently of the first —so there is no "anaphora" here.

(30) a *John drinks only gin, but I [don't-FC] drink* ***ø***.
b *John drinks only gin, but I [don't-FC] drink* ***it***. (Lehrer, 1970: (67), (68), p. 245).

In (30a), it's the conventionally recognised type of denotation 'alcoholic beverages' associated with the null complementation in the case of *drink*[17] which overrides the purely

[16] See Van Valin & Lapolla (1997: 112) for arguments that verbs of consumption such as *eat* and *drink* are basically activity verbs in terms of Aktionsart, but which may also be used transitively as accomplishment predicates.
[17] See the study of the equivalent French verb *boire* by Mejri & François (2006) in this regard.

anaphoric interpretation which would have simply carried over the type of entity at issue, namely 'gin' here. So we are dealing here with the generic, non-referential value of the null pronoun, as described earlier, and not with the partitive anaphoric reading we saw in (29a): note in this respect that the verbs of each conjunct in (30) are in the simple present tense, whereas in (29) they were in the preterit (definite past tense).

In other cases, the referent identified via an anaphoric null or overt pronoun is identical (in (31) the host predicator is a preposition, in syntactic terms):[18]

(31) "… *always lock your car and never leave anything valuable inside* ***ø/it*** …" (*Radio Times*, section on "Crime", p. 114)

The semantics of this preposition is highly specific: "fully contained within a 3-dimensional 'hollow' object"; so this is sufficient to enable the identification of the intended referent (which is also highly salient in this context).

The second of the three broad possibilities indicated earlier (where it is only the null complement that is acceptable in context as an anaphor) may be illustrated by the following attested example, where the host verb is *hit*, a verb that denotes some sort of contact with a surface, and which doesn't normally license a null second argument (see (23c) above):

(32) "…*It wasn't moving very quickly, it took between four and five minutes until I saw it hit* ***ø****… After a few seconds the wave hit* ***ø*** *and smashed against the beach."* (Eye-witness account of the tidal wave that hit the town of Patong in Thailand in December 2004, *BBC News on the web*, 30.12.04).

Note in (32) that *it* would not have been possible at all as a substitute for either of the null pronouns here. Clearly, when the reference is vague, giving rise to an "ambient" type of interpretation (analogous to the expletive subject of weather verbs, as in *It's raining again!*), only the null complement is possible. In particular, the more distinctly **deictic** value associated with the use illustrated in (32) can be seen in the possibility of substituting at least the first of the null complements here by the inclusive 1st person plural pronoun *us*. This is a primary deictic expression type, occurring at the very top (the left-hand pole) of the Scale of indexicality in Fig. 2. Here, the null complement pronoun has the interpretation "the place where we were (at the time)".

To summarize and conclude this section, then, we can say that the **generic** or **indeterminate** (non-indexical) instances of non-instantiation of second and third (where relevant) arguments of a predicator are not actually examples of ellipsis (whether syntactic or semantic) at all. This applies to examples (24)-(26), (29a) and (30a). However, **referential-anaphoric** argument non-realisation may be said to correspond to syntactic, rather than semantic ellipsis, under McShane's (2005) definitions. Examples (31) and (32) and the second conjunct of (28) would fall under this heading, while the null complement in the first conjunct of this example would correspond rather to semantic ellipsis.

So in the final analysis, what motivates the possibility of not realising one or more internal arguments of given predicators is the recoverability of a coherent interpretation in context. This also seems to be the case with VP Ellipsis, which we saw in §6.1. If this is possible in the context at issue, then the argument(s) can be unrealised syntactically (i.e. textually). But if it is not, then they can't be.

[18] The source text had the null complement in this position, in fact.

More generally, after examining the examples in this section in particular, though not exclusively, we can say that it is the choice and use of a particular indexical expression token, together with its host predication as a whole, which primarily determines its in-context interpretation as well as (where relevant) referent. This was particularly in evidence with the three attested examples of VP Ellipsis seen in (19)-(21) in section 6. The situation characterised by the classical conception of anaphora (whereby the anaphor has first to be brought into relation with an appropriate co-occurring textual antecedent in order to receive its full interpretation) is thus completely reversed —i.e. the indexical within its host predication "projects" a potential target referent existing within the preceding (or following, anticipated) discourse, contracting a relation with a relevant adjacent discourse unit via an appropriate coherence relation, in order to integrate the two units into a higher-level unit of discourse.

7. Postscript: Errors and confusions in the analysis of indexical references in L3 students' scripts at UTM

To end this presentation, I think it would be useful to mention several recurrent errors in analysing instances of deixis and anaphora in texts, committed by L3 students at UTM. During my time in the English department, I taught a one-semester core course in English linguistics, as well as an option course in discourse analysis, discourse anaphora and deixis at this level.

Errors in recognising instances of deixis and anaphora in texts

- Let's take as a first illustration this extract from a novel:

"…Immediately below them there was a peach tree in first flower, the buds a deep rose colour. The plot of ground marked out by Cecilia for her kitchen garden had been turned over for them by a man on a tractor from a nearby village. (…)

Cecilia turned to him ['Harold'] a face delicately glowing. 'Darling, look at *that patch the man turned over for us*. It has dried from the deep brown it was at first. It is a reddish ochre now, the true Umbria colour.' (…)" (Barry Unsworth, *After Hannibal*, 1996).

Now, a majority of students, when asked to analyse the form, meaning and referential function of *that* in the demonstrative NP *that patch the man turned over for us* (lines 4-5), wrote that it is "anaphoric" in reference (since the intended referent, 'the plot of ground marked out by Cecilia for her kitchen garden' introduced in lines 1-2, has already been evoked). (Of course, it's not *that* by itself that has a reference, but the whole expression which it "determines"). But this is to confuse two levels of discourse: the **narration** (in which this referent was first introduced) and the **dialogue** (cf. Benveniste's distinction between "histoire" and "discours").

The first level is where the discourse participants are the narrator as locutionary source and the reader as "addressee" or intended recipient, and the second, a direct speech segment, involves Cecilia as utterer and Harold as addressee. This latter situation is a **deictic** frame. Note the vocative, attention-attracting noun *Darling* that precedes the indexical predication: the use of this noun signals to the person so addressed that he is being cast in the (deictic) role of 'addressee' by the speaker.

There follows an imperative sentence *Look at that patch the man turned over for us*. In communicative terms, this represents an invitation to the addressee to turn his gaze towards the patch of land at issue — a patch visible from the room in which the interlocutors are situated. The use of the verb *look* is also a clue that it's a question of evoking something new, and not of maintaining some item of information already established in the prior discourse. In addition, the indexical NP *that patch the man turned over for us* is an expanded, not reduced expression —unlike anaphoric markers in general. The reduced restrictive relative clause *(which) the man turned over for us* serves here precisely to help the addressee identify the intended referent, using the context of utterance in order to do so. The distal demonstrative determiner *that* is used in order to establish a joint attention focus on a discourse-new (though no doubt hearer-old) object of discourse.

Those students who classified the reference of the dem. NP here as "anaphoric" were no doubt

simply relying on the "objective" situation being evoked via the text as a whole, independently of any meta-communicative frame involving the discourse participants. But it is clearly deictic here.

- Extract from Alison Lurie's (1965) novel, *Nowhere City*: "…The house was dark. "Katherine?" he [Paul Cattleman] called, and walked through to the kitchen, turning on *lights* as he went. *Katherine's kitchen* was as clean and tidy as an office, unadorned except for *an engagement calendar* and a shelf of herbs..."

Now, a number of students analysed the indefinite plural NP *lights* in the second line of this extract as functioning "deictically"—presumably because they considered that it is a direct reference to the situation being evoked here, and that it is this which is the criterial factor. But the mode of reference of *lights* here is certainly not "deictic". Indefinite NPs such as *lights* may enable the addressee or reader to identify their referent without their needing to have recourse to the situation of utterance (which is distinct from the situation being evoked via the text). The referent of such an NP type is not **different** on every occasion of use (as it is with the use of demonstrative adverbs, NPs or pronouns). Nor is its referent "anaphoric", as a number of other students stated it is, since this occurrence is the **first mention** of this entity in the extract (hence its **indefinite** character).

- *Katherine's kitchen* (l. 3): This possessive NP isn't "deictic" either (since the reader doesn't need to have recourse to the utterance context in order to access the intended referent); nor is it "anaphoric" (despite the fact that the character 'Katharine' has already been mentioned). Again, students seem to operate on the assumption that "anaphora" is merely a function of the objective facts of the situation being evoked via a text in conjunction with a relevant context, and is not a particular mode of reference adopted by the speaker or writer.

- "…Paul went into the bedroom. *The blinds* were drawn down, and his wife was lying in bed in the dark…" (extract from the same passage, a few lines further down).

Here, the plural definite NP *the blinds* (l. 1) may well be characterised as "deictic", since we are viewing the scene through the subjective perspective of the character Paul Cattleman. It is these "blinds" (Fr. stores) that the reader "sees" as s/he crosses the rooms of the house in question with him. It is the definite and not indefinite status of this NP which allows this interpretation. Cf. Bühler's notion "Deixis am Phantasma". The reference of the NP *the blinds* here is at the same time an instance of "associative anaphora", since the referent is understood as being part of the bedroom which is being focused upon in this scene (a 'bedroom' normally having 'blinds' (or 'curtains') in it).

Problems in recognising the referring function

- In a (broadsheet) newspaper article on the launch of a new 3D console by Nintendo, the definite NP "*the first mainstream device to boast "glasses-free" stereoscopic effects"* in the sentence "*But Nintendo's new games console —the handheld 3DS — is the first mainstream device to boast "glasses-free" stereoscopic effects"* was often included by students in the sequence of expressions realising the L3 link in the topic chain developing the referent 'the new 3DS console marketed by the firm Nintendo'. Yet this is clearly not a referential occurrence at all — rather it is a **predicating** use (as complement of the copula "*is"*). This NP should therefore not have been included in the list of anaphoric markers of the L3 link in this chain.

Confusion between referents

- Certain expressions, though definite, were indicated as belonging to the topic chain developing the referent 'the new 3D console marketed by Nintendo'. But the expressions in question have **distinct** (though admittedly related) referents. For example "*the two devices"* in the following sentence: *"A new "Street Pass" mode allows the console to detect when other 3DS owners are nearby, prompting* the two devices *to automatically swap game items, characters and scores as they pass"*. The discourse object evoked via the use of this def. plural NP is 'the set of at least two 3D games consoles', and not the basic product as such. The referent isn't identical (i.e. there is no "coreference" involved), so this marker should not have been included in the set of expressions realising the L3 link in this chain.

Confusion between the functioning of INdefinite (non anaphoric) phrases and definite (potentially anaphoric) ones

- First, a number of students failed to indicate in their analyses that the NPs used to maintain the high saliency of a macro-topic referent (hence belonging naturally to the L3 link in the chain at issue) were "definite". But they couldn't have fulfilled this function if they were not;
- Moreover, some of them confused the values "definite" and "indefinite" carried by the NPs involved.
- In this regard, a number of **in**definite NPs (e.g. "*400,000 units"* and "*4m consoles"*—see the text fragment given below) were wrongly analysed as belonging to the L3 link in this chain, hence as maintaining anaphorically the high saliency of the referent. Here is the context of use of these indefinite NPs: "…At last month's Japanese launch, the device was a sell-out, with *400,000 units* shifting in the first 24 hours. Nintendo says it expects to sell *4m consoles* worldwide before the end of March…".

Errors in properly characterising a marker fulfilling some reference or other

- On occasion, students characterised the nominal expressions they retained as realising a particular link in a topic chain simply as "nouns" (or "substantifs"). In doing this, they did not distinguish between the "phrasal" status of an expression (NP, PP etc.) and the lexical (or grammatical) status of the head of that phrase. But a lexical element (noun, verb, adj, prep etc.) is not capable of referring independently in some context. Only the phrase of which it is the head can do this, in principle. Lying behind this (fundamental) distinction is the more general dichotomy between **the language system**, which exists "hors usage", and **the use of that system** by some user to carry out certain communicative functions (whether of the referring, predicating, modifying or appositional or other kind). This is a quite widespread confusion that I have noticed elsewhere in my Linguistics teaching.

Incorrect characterisation of the use of some marker or other as "deictic" in value

Quite regularly, **proper nouns** (or even **indefinite NPs**) are characterised as bearing a "deictic" or "anadeictic" value in context. Yet proper nouns are by definition "referentially autonomous" expressions, which don't depend on the context in which they are used in order for their referent to be identified. The same applies (but for different reasons) to indefinite NPs. For a marker to be used "(ana)deictically", the addressee or reader must have recourse to some aspect or other of the context at hand, in order to identify the referent intended. However, since proper nouns are "names", their use assumes in the addressee/reader prior knowledge of the entity bearing the name in question — whatever their context of use may be. As such, their reference is (in principle) constant, across contexts.

By contrast, if these proper nouns are repeated in a text, following their initial use, and especially if these repetititions are made in reduced form, then the contextual status of these uses may change: they turn from being referentially autonomous expressions to non-autonomous (or "semi-autonomous") ones —the speaker or writer now assuming that their addressee or reader will have some prior knowledge of (or familiarity with) the intended referent. This status will enable these uses to take on an anaphoric, reference-maintaining function in context.

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