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Indexicals and context: Context-bound pre-requisite(s), ongoing processing and aftermaths of the discourse referring act

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1. Introduction

In this chapter, I would like to review the fundamentals (as rugby commentators often say), which often seem to be “taken as read” or even ignored in much work on indexical reference: the question of the nature of the various basic types of indexical referring procedures (here, pure deixis, “anadeixis” and discourse anaphora), and their realization via tokens of the different types of indexical expressions (demonstratives, definite NPs, 3rd person pronouns, and so on) – and in particular, their sensitivity and contribution to the context prevailing at the point of use. More specifically, the context which each type of referring procedure assumes and how each of them modifies that context subsequent to the point of use.

There are two main aspects to this question: first, the particular bundle of discourse-referential properties which characterizes each type of indexical expression: as a function of its distinctive array of semantic-pragmatic properties, the use of a token of each of these expression types, in conjunction with its host predication, presupposes a distinct kind of discourse context, and in turn, creates a particular kind of context for the ensuing discourse; and second, a characterisation of the more general notion of discourse context, over and above the use of any given type of indexical. We will see that it is not in fact simply the use of a token of a

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1 Demonstrative pronouns and NPs, definite or possessive NPs, ordinary 3rd person pronouns, zero pronouns, and so on.
given indexical expression type *per se* that presupposes one or other type of prior context and that serves to shift that context in specific ways, but rather its use in realizing canonical dексis, “anadexis” (here ‘strict’ anadeixis, recognitional anadeixis and discourse deixis), or canonical anaphora. So an exploitation of the language-system/language-use distinction, often conflated in studies of these phenomena, is in fact indispensable (cf. Bach, 2004). The corpus of attested examples used (both written and (originally) spoken) is chiefly drawn from the weekly UK magazine, *Radio Times*.

2. *Text, discourse and (mainly) context, and their harnessing in indexical reference*

In characterizing utterance-level, context-bound phenomena such as the use of pronouns and other indexical expressions, it’s useful to start by drawing a three-way distinction amongst the dimensions of *text, context* and *discourse*. The notions ‘text’ and ‘discourse’ are frequently treated in the literature as virtually identical; or alternatively, ‘text’ is often viewed as relating to a stretch of *written* language, and ‘discourse’ to a *spoken* one. What I am calling *text* embraces the entire perceptible trace of an act of utterance, whether written or spoken. 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. —i.e. not just the purely verbal elements. *Text* in this conception is essentially linear, unlike *discourse*, which is the product of the hierarchically-structured, situated sequence of utterance, indexical, propositional and illocutionary acts carried out in pursuit of some communicative goal. ‘Discourse’, then, is the ever-evolving, revisable interpretation of a particular communicative event, which is

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2 This is illustrated most characteristically by the discourse functioning of definite NPs, which may be used deixically, anadeictically (though not discourse-deictically) as well as anaphorically – and even non-indexically (see footnote 7 below).
Indexicals and context

jointly constructed mentally by the discourse participants as the text and a relevant context are perceived and evoked (respectively). Table 1 below summarises this distinction.

<table>
<thead>
<tr>
<th>Text</th>
<th>Context</th>
<th>Discourse</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td>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.</td>
<td>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.</td>
</tr>
</tbody>
</table>

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

The context is also conceived here in cognitive terms in relation to the mental representations which speaker and addressee are jointly developing as the communication proceeds, and as such it is continuously evolving. The context in terms of which the addressee or reader creates discourse on the basis of text comprises at least the following aspects: the domain of reference of a given text (including of course the local or general world knowledge that goes with it), the surrounding co-text of a 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. The most central of these aspects is the context of utterance of each discourse act: this functions as a default grounding "anchor" for the discourse being constructed as each utterance is produced. So context is the mediating, "anchoring" or grounding dimension of any act of communication. In simple terms: “Text” + “Context” ⇒ “Discourse”. See Widdowson (2004) for a similar three-way distinction, and also Auer (2009).

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, as already pointed out, is to ground 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) on the basis of the speaker’s uttering what he or she utters. This very important feature of the use of language allows speakers 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.

Context is also what enables the crucial integration of basic discourse units (representing discourse acts or moves) into a higher-level discourse unit. As far as context-bound (indexical) reference is concerned, the immediately preceding co-text, as well as the discourse constructed following its processing, are needed in order to provide the cues required for the addressee to base his/her inference of a potential referent on; and the context and discourse context enable the speaker to choose an appropriate

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3 So there are more strands of ‘context’ than just the three discussed by Ariel (1998:190), namely “Encyclopedic knowledge”, “Speech situation salient facts” and “Previous discourse”. See Cornish (2009, 2013: 93-6) for some discussion.

4 See the title of Kent Bach’s (2004) chapter.
context-bound expression to allow the addressee to retrieve a given referent accessible via the prior discourse. The prosodic structure associated with these prior utterances also plays a crucial role in the realization of given anaphoric expressions, as well as in their interpretation potential. See Roberts (2004) on these aspects.

Now, exploiting this three-way distinction, my hypothesis is that there is a complex interaction between the dimensions of text and discourse, mediated by context, in the operation of indexical reference. What I call the antecedent trigger (an utterance token, a percept or a semiotically-relevant gesture – all falling under my definition of text) contributes the ontological category or type of the anaphor’s referent; 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 indexical or “host” predication. All these factors come under the heading of discourse, under my definition (Table 1). So contrary to the classical conception of discourse anaphora, 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) provides neither a sufficient nor a necessary condition for its existence. For the natural language user, there is no simple matching process between two separate expressions (textual antecedent and anaphor), independently of their respective semantic-pragmatic environments, as under the traditional account.

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):
As is evident from this representation, Discourse and Text are schematized as running in parallel with each other – both subject to a time line. Text and Context feed into Discourse. The antecedent trigger is part of some particular text (broadly construed, as we have seen) and may evoke a referent, which is mentally represented within the discourse (see the first dark arrow pointing obliquely upwards through the mediating ‘Context’ layer towards the discourse representation above). This representation then accrues certain properties, relations etc. as these are predicated of it in the ensuing text. A subsequently occurring anaphor (a linguistic expression) together with its host predication as a whole 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”. In this
schema, there is no direct intra-textual relation posited between antecedent trigger and anaphor, as under the classical conception of anaphora (see Cornish, 2010 for further discussion).

3. Deixis, anaphora and “anadeixis”, and the distinctive indexical properties of various context-bound expression types

3.1. Deixis, anaphora and anadeixis

As far as deixis and anaphora are concerned, I view these as complementary discourse procedures which the users exploit in building, modifying and accessing the contents of mental models of a discourse under construction within the minds of speaker and addressee (or writer and reader in the written form of language). They are essentially attention-coordinating, discourse-management devices.

**Deixis** serves prototypically to direct the addressee’s attention focus to a new object of discourse (or to a new aspect of an existing one) that is derived by default via the situational context of utterance – whose centre point is the ‘here and now’ of the speaker’s verbal and non-verbal activity in cooperation with the addressee (cf. Bühler’s, 1990/1934 “origo”, the centre-point of the deictic space: see Fricke, 2003 for some very relevant discussion, and also the view put forward by Kibrik, 2011: 503). Deixis is context-creating (see also Hausendorf, 2003) in that its use invokes the utterance-level parameters which need to be set anew for particular values, as a function of the roles that are assigned of current speaker and current addressee, time and place of utterance, as well as source of point of view.

**Anaphora**, on the other hand, is a discourse-referring procedure designed to maintain the existing attention focus established hitherto (or assumed by the speaker to be so established): so the referents of (weakly stressed, phonologically non-prominent) anaphors will be presupposed to
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enjoy a relatively high degree of psychological salience or attention focus level for the addressee at the point in the text where they are used. Anaphora, according to this view, plays an essentially integrative role in the creation of discourse.

Both anaphora and deixis, then, function at the level of memory organization, enabling the speaker to manage it by guiding the addressee's processing of the incoming segments of a text. Deixis involves by default the use of the speech situation (the (deictic) ground, in Hanks' 1992 terminology) to profile a figure (a new referent or a new conception of an existing referent within the discourse registry); see also Sidnell (2009) in this respect; while anaphora consists in the retrieval from within a given ground of an already existing 'figure', together with its 'ground', the anaphoric predication acting to extend that ground (see Kleiber, 1994: Ch. 3).

Yet the relationship between deixis and anaphora is asymmetrical: 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 (both ontogenetically and phylogenetically), on which it depends – though for Kibrik (2011: 512), it is from exophora that anaphora is more directly derived. Deixis is therefore 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) (see Fig. 2 below).

"Anadeixis" is the type of indexical reference which combines the anaphoric and deictic procedures to different degrees (it has "one foot in each camp", as it were): 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

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5 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.
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 re-set via this reference. For examples of anadeixis, see (3), (4) and (6) in section 4 below as illustrations of discourse deixis, “recognitional” anadeixis and ‘strict’ anadeixis, respectively. See Cornish (2011: pp. 757-60) for further discussion.

3.2. The distinctive indexical properties of a range of (English) phoric expression types

Let us look now at the array of indexical expressions capable of realizing these indexical referring procedures. Figure 2 is an attempt to range 10 broad categories of English indexical expressions in terms of their relative degrees of inherent deicticity and anaphoricity.

<table>
<thead>
<tr>
<th>Deixis</th>
<th>Anaphora</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st/2nd pp &gt; Pdm adv &gt; [Ddm adv &gt; Pdm NP &gt; Ddm NP &gt; Pdm p &gt; Ddm p &gt; Df NP] &gt; 3rd pR &gt; 3rd pPP</td>
<td></td>
</tr>
<tr>
<td>I/you here/now there/then this N that N this that the N be/she...himself...</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2: Scale of indexicality coded by certain categories of indexical expressions (Cornish 2011: Fig. 1, p. 755)

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6 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”.

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9
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 and may not be used anaphorically (in the strict sense of the term), 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. 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 (albeit for very different reasons). These two expression types mark the upper and lower limits on the Scale, respectively.

As for the central ‘anadeictic’ span on the Scale, the demonstrative adverbs (e.g. now/then, here/there) are placed at a higher position on the Scale (i.e. further to the left) than the NPs, since they are potentially ‘token-reflexive’ items, like the 1st and 2nd person pronouns; however, unlike these, the distal members of each pair (e.g. then, there), at least, can be and are frequently used anaphorically – or rather “anadeictically”. See Himmelmann (1996: 245-6, n. 12) for cross-linguistic evidence that demonstrative determiners and pronouns are often historically derived from demonstrative adverbs, which are more basic expression types. See Kleiber (2008:143) on the inability of the French equivalent of the pro-ximal spatial demonstrative adverb here, ici, to function anaphorically, and De Mulder & Vetters (2008: 15) on the same property claimed to be associated with the use of the French proximal temporal deictic adverb maintenant (‘now’). Both these works argue that the proximal members of these indexical adverb pairs are nonetheless “token-reflexive”, like the English primary deictic pronouns I/me, you; but unlike the latter, they are “opaque” (Kleiber, 2008) or “impure” (De Mulder & Vetters, 2008) indexical expression types. That is, their referent is not automatically yielded by virtue of their very occurrence in an utterance token, but, as in the case of the demonstrative NPs and pronouns, needs to be inferred by the addressee/reader on the basis of context. So these expression types are placed on the Scale just to the right of the polar 1st and 2nd person pronouns.
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 the point made by Levinson, 2004: 121, n. 4, in relation to the privative opposition between this and that). 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 referent targeted.

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 Figure 2, since although not always indexical in function, they may still function deictically as well as anadeictically and anaphorically.

Unlike with 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 demonstrative NPs to realizing anaphora than deixis (though this latter value is still possible with the use of definite NPs: see examples (2) and (3) in Cornish, 2011: 756; however, these instances may no doubt be reanalysed as involving both anaphoric and deictic reference, thus as “anadeictic” in value). Demonstrative-based

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7 They may refer independently in terms of their lexical content when this is sufficient to uniquely identify their referent. See for example the NPs the proprietor of La Voile Rouge beach restaurant and the billowing smoke of a car wreck, drawn from two recent UK news journalism items. Such definite NPs are “referentially autonomous” expressions, in Ariel’s (1996) terminology, and not context-bound, as are the indexical expressions analysed here. Note that in their original contexts, the two definite NPs presented above realized introductory, not subsequent (anaphoric or anadeictic) references. So the definite article should not, in my view, be characterized as ‘inherently’ deictic, as is the case in Martin (1992: 116): cf. his term ‘deictic the’.
expressions, on the other hand, carry no presupposition of the uniqueness of their referent (the reverse, in fact), and refer **exclusively** to one member (or one subset of members) within a given shared set of entities. In particular, where they are determiners, the head noun in conjunction with any expansion has a classifying or implicitly predating function in relation to the referent singled out by the NP as a whole. An attested (written) example is (1) below, taken from the weekly UK magazine *Radio Times*:

(1) **“Choices. Telling Tales”** (Mon-Fri 11.30 a.m./12 midnight BBC 7, Radio Times 29.07-4.08.06, p. 126)

Originally written and read by their author Alan Bennett […] for TV, these autobiographical stories work so much better on the radio. He re-recorded them for Radio 4 in just one day back in 2000 with the then producer and now head of programmes at BBC 7, Mary Kalemkerian. *These snapshots of his childhood growing up in Leeds* are delivered in that quietly spoken voice, where his pauses are just as powerful as the words that led up to or followed them…

Here, the referent of the expanded demonstrative NP (italicized) in lines 4-5 is salient and topical at the point of occurrence, having already been retrieved via a 3rd person pronoun *(them)* in line 3. But the introduction of new, non-inferable information8 requires a demonstrative and not a definite-article determiner: **#The snapshots of his childhood growing up in Leeds** would not have been felicitous as a substitute, since if this definite NP were to have been construed as anaphoric, the head noun + PP complement would need to be presupposed information, which is manifestly not the case here. The anaphoric use of definite NPs normally entails that the addressee is (potentially) familiar with the intended referent.

Clearly, then, the inherent degree of indexicality associated with definite NPs is lower than that of the demonstrative-based categories retained (unlike these, for example, they cannot be used to realize ‘discourse deixis’, as we will be seeing in section 4 later on), but higher than that of (unstressed) 3rd person pronouns, normally limited to the anaphoric function. Though their default use is to express anaphora, they may also have quasi-deictic, ‘anadeictic’ as well as non-indexical uses, as we have seen. Note

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8 The fact that the stories in question are “snapshots of AB’s childhood when he was growing up in Leeds”.
also that placing definite NPs closer to the ‘anapho-ric’ pole of the Scale than demonstrative expression types is contrary to both Ariel’s (1990) and Gundel, Hedberg & Zacharski’s (1993) hierarchies (see Figure 3 below for the latter), which are exclusively based on the cognitive accessibility or cognitive status of the potential referents that are claimed to be coded by expressions corresponding to each position on the Scales9. Phylogenetically, placing definite NPs closer to the “anaphora” pole than demonstratives reflects the diachronic development of the definite article, in those languages which possess it, from an earlier demonstrative form, rather than vice versa.

In this respect, if we look at Gundel et al.’s (1993) “Givenness Hierarchy”, which purports to range a number of English referring expressions (both indexical and non-indexical) on a 6-point scale of positions corresponding to the “cognitive statuses” they are claimed to code, it would seem that a kind of “category confusion” has been committed: that is, as between the internal, system-defined properties of the example expressions placed beneath each position representing the Scale of cognitive statuses according to the breadth or narrowness of their cognitive scope10 and their possible uses by a speaker in some context.

\[ \text{in focus} \succ \text{activated} \succ \text{familiar} \succ \text{uniquely identifiable} \succ \text{referential} \succ \text{type identifiable} \]

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th>the N</th>
<th></th>
<th>the N</th>
</tr>
</thead>
<tbody>
<tr>
<td>it</td>
<td>that/this</td>
<td>that N</td>
<td>the N</td>
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<td>indef. this N</td>
</tr>
<tr>
<td>this N</td>
<td></td>
<td></td>
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</tbody>
</table>

Figure 3: Gundel et al.’s (1993: 275) “Givenness Hierarchy”

Note also that, though the lexical NPs (the second occurrence of this N, that N and the N) occur further towards the “discourse-new” pole of each Scale than the corresponding pronouns (3rd person and demonstrative ones), the two occurrences of the proximal demonstrative NP this N in Gundel et al.’s “Givenness Hierarchy” (which in fact represent distinct

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9 Regarding Ariel’s (1990) characterisation, see the criticism in De Mulder (1997, pp. 147-8).

10 The most restrictive is that of “in-focus” at the left-hand end, and the least (or most “open-ended”) corresponds to “type-identifiable” at the right.
uses of this single indexical form type) are widely separated: the “activated” value coded by *this* N occurs close to the “anaphoric” (discourse-old) pole, whereas the new-referent-introducing use of this indexical occurs close to the discourse-new pole. I will be arguing, to the contrary (see §4 below), that this indexical type has a single set of intrinsic semantic-pragmatic properties; but that the difference expressed via its placement at different positions in the GH is a direct consequence of the different indexical referring procedures being applied in each case: *strict* anadeixis in the case of the value “activated” – see example (6) below, where the occurrence of the distal determiner *that in that film* (l.5) may well be replaced by its proximal counterpart *this* –, and one sub-type of discourse deixis in that of the value “referential” – see example (5) below (but the status “familiar”, which this expression type is said to code, is not relevant in either case). One other problem with the GH is that the 4th and 6th positions “uniquely identifiable” and “type identifiable”, respectively), unlike the other four positions, relate to properties of the expression types claimed to code them, rather than to independent non-linguistic cognitive statuses as such. In addition, the 5th position, “referential”, relates to a particular utterance-level value (i.e. use) of the indexical type concerned (*this* N), rather than to a distinguishable “cognitive status” *per se*. See Cornish (2013: pp. 86-89) for further discussion of the Givenness Hierarchy.

4. The contexts assumed and created by the operation of deixis, anadeixis and anaphora

I will concentrate here on three distinguishable subtypes of anadeixis: discourse deixis, “recognitional” anadeixis and ‘strict’ anadeixis (to be presented in that order).

An English example of each of these subtypes of indexical reference, together with examples of canonical deixis and canonical anaphora, follow. We start with an example of canonical deixis:
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(2)  Canonical (situational) deixis: [Advertisement for Mercedes Benz, *Radio Times*, 19-25.08.06, p. 140]

Less rain where you see this (/that/#the) sign. (Picture of M-B trademark: a steel tripod set in a circle, under which is the caption “Mercedes Benz”).

Here, the existence of the immediate intended referent (‘the Mercedes Benz trademark’), which is available within the utterance context via the picture accompanying the text, is being drawn to the addressee’s attention as a function of the very act of utterance involved (a “token-reflexive” use, then). There is no presupposition that it already exists and is salient within the latter’s attention focus, as is the case with canonical anaphoric references. Rather, its existence is asserted (or, more accurately, demonstrated). The proximal demonstrative determiner this (and not distal that) is used here, since the advertiser is expressing his/her subjective involvement (subjective “proximity”) with the intended referent, bringing it forcefully to the reader’s attention, and the head noun classifies it as being of the type “sign”. This is not to say that distal demonstrative NPs can never realize canonical deixis. They clearly can. But not here (cf. #that sign…). The deictic procedure adopted results in the intended referent “standing out” from within its context, thereby acquiring a high level of psychological salience for both writer and reader; so it is introduced into the discourse as a new unit of information.

The process of establishing the intended referent here can be analysed as operating indirectly: first, the use of the proximal demonstrative NP points towards an “index” immediately available within the context of (2) (cf. Nunberg, 1993; Recanati, 2005), which in turn (as a conventional symbolic, even quasi-iconic, trademark), evokes the ultimate referent here, the particular make of car at issue (it’s not the trademark which the advertisement is targeting, but the make of car of which it is the trademark).

(3)  Discourse deixis: I’ve written 14 musicals and don’t have a huge desire to write another until I’m absolutely sure I want to invest that (/that/#that) amount of time... (“Staging a revival”, RT Interview with Andrew Lloyd-Webber, *Radio Times* 5-11.08.06, p. 18)

In (3), the time taken to write a musical is not in focus or even accessible (or “familiar”, as (wrongly) predicted by the GH –see Fig. 3) when the predication I’ve written 14 musicals is realized. Its discourse existence is the
result of an inference drawn at the point of interpretation of the indexical. Hence the use of a distal demonstrative NP that amount of time to refer to this aspect of the writing of a musical. The proximal determiner this or the equivalent definite lexical NP (#the amount of time) would not have been equal to the referential task required here; after all, in the former case, the speaker is distancing himself from the time he obviously needs to write a musical. And in the latter, it is clear that a particular period of time of the kind at issue cannot be presupposed at the point where the NP occurs.

With discourse deixis, it’s the surrounding discourse just constructed which the addressee operates upon to appropriate the intended referent. This involves an act of cognitive pointing towards the result of processing a predication (or a part of a predication) in surrounding discourse, and creating a new discourse entity out of it via an inference (cf. also Webber, 1991: 126). The fact that neither 3rd person pronouns nor even definite NPs may realize this type of indexical reference also pleads against the hypothesis that discourse deixis is simply equivalent to discourse anaphora (as e.g. Piwek et al., 2008 claim).

As with canonical deixis, with discourse deixis, a discourse-new referent is being introduced into the discourse via the use of the deictic procedure; but unlike canonical deixis, this is not totally new, and the relevant deictic parameters are not being re-set via this act of reference.

(4) “Recognitional” anadeixis: … These snapshots of his childhood growing up in Leeds are delivered in that (#this/#the) quietly spoken voice, where his pauses are just as powerful as the words that led up to or followed them… ("Choices. Telling Tales" (Mon-Fri 11.30 a.m./12 midnight BBC 7), Radio Times 29.07-4.08.06, p. 126) (Extract from example (1) above)

Unlike discourse deixis, recognitional anadeixis may in principle be realized via definite lexical NPs (NPs introduced by the definite article or possessive determiner). However, in (4), #the quietly spoken voice would not be acceptable as an alternative to the distal demonstrative that quietly spoken voice actually used (without the addition of an extra predicate modifier enabling the complete identification of the intended referent: for example …

that is his trademark). If the proximal determiner this were used instead, then the fact that Alan Bennett has a characteristically “quietly spoken voice” would be being forcefully presented as such, qua new information, the writer subjectively taking charge of the description – but this interpretation is incompatible with the context of the expression here, both stylistically and communicatively. An attested example of this subjective referent-introducing function that may be performed by proximal demonstrative NPs is given in (5) (see position 5 “referential” in Gundel et al’s 1993 GH, Fig. 3 above):

(5) Because I’ve spent the last few months putting together the new show, I’ve been soaking up a lot of news. Most of that has been from newspapers, but I try not to miss The World at One on Radio 4. Nick Clarke has this deliberately non-combative approach that allows the guests to trip themselves up… (“What I’m watching”. Armando Iannucci, Radio Times 29.07-4.08.06, p. 31)

I would classify the proximal demonstrative NP in lines 3-4 in (5) as realizing a discourse-deictic function, like the possible “referent-anticipatory” use of this NP type (as in Listen to this: a man went into a butcher’s shop one day, and asked for a whole sheep…)[12].

To return to (4), there is a deictic aspect to the reference of the distal demonstrative NP here, in that the writer is clearly orienting the reader’s attention toward an (assumed) particular shared representation in (here) episodic memory: this is the raison-d’être of the pre-modifying epithet quietly spoken within the NP itself, which acts as a memory retrieval cue for the reader. But at the same time, there is an anaphoric dimension, since the use of the NP is presupposing the prior existence of the shared representation (‘the playwright Alan Bennett’s characteristic voice quality’) within the reader’s memory – i.e. that s/he will be familiar with it: there is a connotation of “complicity” here between writer and reader, as if to say “You

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12 According to Prince (1981: 235), the use of determiner this as illustrated in (5) is “new topic introducing”, conceptually indefinite, and always evokes a specific referent. It has several properties that distinguish it from the pure-deictic use of the demonstrative (as seen in (2) above). But as we already noted in relation to position 5 (“referential”) in the GH (Fig. 3), these distinct properties relate to the particular sub-type of indexical referring procedure being used (pure deixis vs. discourse deixis), rather than to the indexical used to realize it qua form-type.
know the particular voice I mean”. It is in no sense an attempt to construct such a memory representation, a situation which a canonical deictic or discourse-deictic reference would bring about. Yet this reference is nonetheless more clearly deictic than anaphoric, since the writer cannot assume that the reader’s attention will already be focused upon the intended referent in these examples – even peripherally, as is the case with ‘strict’ anadeictic references (see (6) below). Gerner (2009: 73) gives examples of the use of a dedicated “familiar” (recognitional) demonstrative in Kaili Qanao, and refers to reports of exclusively recognitional demonstratives in certain Oceanic languages.

(6) ‘Strict’ anadeixis (see Cornish, 2011: 758-9): I noted with smug satisfaction that I own copies of 20 of the 25 films in your “How to be a film buff” feature (22 July), and generally agreed with the list. But I was staggered to see Armageddon included. Was it there for a joke, or a dare?

I rate that (this/the) film as one of the most laughably bad I’ve ever seen, with its corn, abuse of the laws of physics, slow-motion shots of US “heroes” trudging purposefully, script straight from the Big Book of Clichés, poor music, cartoon characterisation and sheer implausibility. I could probably list 1,000 films that should be on that (#this/#the) list rather than Armageddon, but will restrain myself to one: Touch of Evil. (Ian Honest, Hessle, East Riding of Yorkshire, Letter to Radio Times, 29.07-4.08.06, p. 136)

There are two demonstrative NPs here, that film in line 5, and that list in line 9. The first retrieves a referent which enjoys a high degree of topicality just prior to the point of use13, but the second maintains the reference to an entity (‘the list of 25 films featured in the RT edition of 22 July 2006’) which has a somewhat lower degree of topicality at the point of use. Now, given the “reinitialising” function of the subsequent reference to the former referent in line 5 at the start of a new paragraph (marking the introduction of a new discourse unit, which is thereby signposted as going to be about this particular film), the pronoun it would not have been felicitous here (see also (7b) further on in this respect). See Pu (2011: 99) on discourse unit boundaries in English and Chinese texts, and the effect

13 ‘The film Armageddon’ has already been retrieved by a high-accessibility expression, the 3rd person pronoun it in line 4.
Indexicals and context

which episode shifting has on the types of indexicals used to retrieve erstwhile topical referents. One motivation for the anadeictic use of the first instance of *that* rather than *this* in (6) is the negative stance adopted by the writer in relation to the referent; thus he is certainly not subjectively identifying with it (quite the reverse). The use of proximal *this* would have had this effect (Cheshire, 1996; Cornish, 2001): see as an illustration examples (2) and (5) above.

The pronoun *it* would not have been appropriate in place of the distal demonstrative NP *that list* in line 9, either. This is because unstressed third person pronouns signal referential continuity. So since the referent in question is no longer topical at the point of reference\(^{14}\), an attempt at retrieval via a 3rd person pronoun is unacceptable\(^{15}\). In (6), the distal demonstrative NPs could well be replaced by definite NPs headed by the same nouns as used in the antecedent-trigger expressions, since the lexical heads of these NPs both correspond to presupposed information: namely, *I rate the film as one of the most…*, and *… 1,000 films that should be on the list…*\(^{16}\), while in (3), such a replacement would be completely unacceptable: witness #... until I’m absolutely sure I want to invest the amount of time. This shows that, unlike the situations in (6), the one in (3) does not involve anaphora (nor indeed, ‘strict’ anadeixis) as such, *stricto sensu*. Note also that substituting the proximal demonstrative NP *this film* for the distal *that film* in line 5 would be felicitous—though it would lose the connotation of a “negative” stance subjectively adopted towards the intended referent, mentioned above—, but not the proximal *this list* for *that list* in line 9. This is because

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14 Up to that point, the paragraph has been dealing only with the film *Armageddon*, no mention having been made in it of the list of 25 films featured in the RT edition of 22 July 2006.

15 See in this respect Linde’s (1979) conclusions on the conditions for use of tokens of the pronoun types *it* and *that* in oral descriptions of apartment layouts. The broad outlines of her characterization (that the pronoun *it* refers to entities which are in current attention focus, while *that* specializes in picking out those which are outside it) are confirmed by a series of experiments reported in Brown-Schmidt et al. (2005). See also McCarthy’s (1994) comparable position regarding the respective discourse-functional properties of English *it, this* and *that*.

16 This would be a nice illustration of the potentially anadeictic functioning that definite NPs may subserve in context.
the referent of the latter has been supplanted as macro-topic in the first paragraph by ‘the film Armageddon’ in the second. All this is consistent with the predictions derivable from the Scale of indexicality given in Figure 2. See Fossard, Garnham & Cowles (2012) for experimental reading-time results that confirm the “strict-anadeictic” potential of (distal) demonstrative NPs.

Finally, let us look at discourse anaphora:

(7)  

a. Discourse anaphora: A to B: “Where are my keys? B to A: Well, I saw them (those/those/they/these) on your desk 10 minutes ago.”

b. “Militants want cleric freed

A militant Palestinian splinter group, the Islamic Army, has demanded that Britain release a Muslim cleric in return for the freedom of BBC reporter Alan Johnston. #He (/this/ those/those/journalist) was kidnapped on March 12.” (The Guardian Weekly, 18.05.07, p. 2)

As a who-interrogative, A’s utterance in (7a) manifests the canonical topic-focus information structure – “About my keys, where are they?” –, ‘speaker A’s keys’ being set up as the topic referent (i.e. a “figure”, cognitively speaking) whose current whereabouts B is being asked to determine. So in B’s reply, the use of an unaccented 3rd person pronoun (them) in purely anaphoric continuity with respect to the situation evoked by A’s utterance, is perfectly natural. Neither of the demonstrative pronouns those or these would be acceptable as potential alternatives here. So the situation is the mirror image of (6), representing ‘strict’ anadeixis, in fact.

In (7b) by contrast, although the use of a 3rd person pronoun (he) in line 3 was actually attested here, it is felt to be infelicitous in this context (hence the crosshatch). For the 3rd person masculine singular human-denoting pronoun he, signalling canonical anaphora, is used to retrieve a referent introduced in a peripheral phrase within the initial sentence, the adjunct PP in return for the freedom of BBC reporter Alan Johnston. Note that there could be a comma (or a pause in the spoken version) between the words cleric and in here, showing that this adjunct may be a sentence modifier. Another relevant factor is that the discourse unit corresponding to the indexical sentence (He was kidnapped on March 12) is not in continuity with the preceding discourse: it is a quasi-parenthetical predication, giving details about the most recently introduced referent, Alan Johnston, and is no
longer adding further information about the Muslim cleric, the macro-topic of this short text. This is analogous to the situation prevailing in example (6), where (‘strict’) anadeictic, not canonical discourse-anaphoric, expressions were used to this end. So in describing pronominal and other references\textsuperscript{17}, we clearly need to take account of the discourse downstream of the reference, as well as of the discourse context of the antecedent-trigger (see also Kleiber, 1994 on this issue, and in more general terms, Garnham & Cowles, 2008: cf. their “Janus” model of NP anaphor processing).

Figure 4 presents the various indexical referring procedures seen so far in this paper, also in the form of a Scale. In fact it is the “procedural” counterpart of Figure 2, which attempted to characterize the indexical properties of each of a range of categories of phoric markers.

\textit{Pure deixis} > \textit{Discourse deixis} > \textit{‘Recognitional’ anadeixis} > \textit{‘Strict’ anadeixis} > Pure anaphora

\textit{anadeixis}\textsuperscript{--\textsuperscript{------------------------}--}\textit{anadeixis}\textsuperscript{------------------------}\textit{anadeixis}\textsuperscript{--\textsuperscript{------------------------}--}

Figure 4: Scale of indexical referring procedures (Figure 2 in Cornish 2011: 760)

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). However, unlike ‘discourse deixis’, a potential referent does in fact exist prior to the act of reference: 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: in the case of ‘strict’ anadeixis, the referent is simply being retrieved from prior discourse, while with discourse deixis, a new referent is being created and installed in the interlocutors’ working memory, as it is in the case of the canonical deictic procedure.

\textsuperscript{17} For example, the new-topic introducing function of proximal demonstrative NPs as in (5).
5. Summary and Conclusions

Each subtype of indexical referring procedure, then, is constrained by specific contextual conditions: **canonical deixis** ((2)) clearly requires access (by default) to the context of utterance, in which a previously unattended-to, thus inactive, referent (or index) is susceptible of being brought to psychological salience – the immediate effect of all deictic references. It has a considerable effect on the context downstream of the act of reference, since it results in new settings for the basic deictic parameters. Canonical deixis may also be displaced to a represented or fictional domain (Bühler's 1990 “Deixis am Phantasma”).

**Discourse deixis** ((3), (5)) for its part presupposes – by anticipation, in the case of the proximal NP in (5) – the existence of a representation of the previously constructed discourse: here the indexical within its immediate predicative context serves as an instruction to operate upon such a representation, and to create out of it a partially new, salient discourse entity. In both types of instance, once the act of reference in question has been performed and its upshot successfully negotiated by the discourse partners, the way is clear for purely anaphoric salience-maintaining references via unaccented 3rd person overt or zero pronouns, the referent having been placed on top of the cognitive table.

“**Recognitional**” anadeixis ((4)) involves the use of the deictic procedure as applied to a (presumed) shared memory representation of a past event, situation or individual – or indeed, of a stereotypical one. As in the previous two cases, that referent is by no means presumed to be salient or already attended-to by the addressee at the point of use. It is the location of that referent within a particular referential domain (shared episodic or semantic long-term memory) that characterises this type of indexical reference.

**‘Strict’ anadeixis** ((1), (6)), whereby the referent targeted is locally available within the immediate discourse context, but may be currently less than topical therein, requires access to a ranked mental representation of potentially competing discourse referents at the point of use in terms of their relative salience levels. This type of indexical reference serves to
make a currently non-topical referent topical, and hence retrievable via purely anaphoric (pronominal or zero) references downstream.

**Discourse anaphora** ((7a)) for its part, like discourse deixis and ‘strict’ anadeixis, assumes the availability of a salient mental representation of the recently constructed discourse. It serves as a signal to continue the focus of attention established – or assumed to be established – at the point of use; as such, the entire micro-discourse unit containing the anaphor(s) is marked out as needing to be integrated with its immediate discourse context, thereby creating a composite, internally coherent higher-level unit of discourse (compare (7a) and (7b) in this respect).

The three last-mentioned indexical procedures differ, however, in that discourse anaphora, unlike discourse deixis or ‘strict’ anadeixis, presupposes that the discourse referent it accesses is in fact psychologically salient for the addressee or reader at the point of occurrence of the indexical expression, and, downstream of the reference, that the host predication is maintaining the situation evoked upstream of it. ‘Strict’ anadeixis, for its part, presupposes that a relevant distinguishable discourse referent is already available, though not necessarily salient, within the discourse memory, whereas discourse deixis does not.

Finally, if we look back at the expression types which realize the various indexical procedures presented in section 4, it is interesting to observe that three out of the five types of procedure (discourse deixis, recognitional anadeixis and ‘strict’ anadeixis) are expressed in the examples given via the use of tokens of the same indexical expression type – namely, singular distal demonstrative NPs (*that* N, as used in examples (3), (4) and (6), respectively). This indexical may equally well realize canonical deixis too, of course. But clearly, as we have seen, the nature of its indexical reference is distinct in each case, the cognitive accessibility of the referent targeted (or created) shifting as a function of the type of indexical procedure used. So there would appear to be no “basic” cognitive status “en langue” associated with the use of this expression type, contrary to what is claimed by the Givenness Hierarchy (Gundel et al., 1993), where *that* N codes the status “familiar” (see Figure 3), or the Accessibility Marking Scale (Ariel 1990), where its potential referent has an “intermediate”
accessibility level. See also in this respect the discussion of definite and proximal-demonstrative NPs at the end of §3.2 above.

It seems clear from the examples and analyses above that what responds to the referential challenge at hand is the intrinsic indexical referential potential of each expression type, in conjunction both with the host predication and (above all) with the type of indexical procedure being applied: its referent’s particular level of cognitive accessibility in context is then deducible from each such act of indexical reference. These levels, then, are not objectively given, but shift according as the context is dynamically re-set with every new act of utterance.

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