

# Ellipsis and Anaphora

## I. Relevant phenomena<sup>1</sup>

The question assigned for Option C centers on **anaphora** [‘anaphore’ au sens de ‘relation anaphorique’], understood as the relation that holds between an **anaphor** [‘anaphore’ au sens du segment discursif] and an **antecedent** [‘antécédent’], where the interpretation of the anaphor is determined on the basis of that of the antecedent. This is illustrated in examples (1a,b,c,d).<sup>2</sup> More specifically it is important to distinguish [Cornish 1999:41ff] between the **antecedent-trigger** [‘déclencheur d’antécédent’] and the antecedent. Under this definition the antecedent is the content that is understood and the antecedent-trigger is the discourse-segment that allows one, in combination with the anaphor, to access the antecedent. Consider (1e). Obviously, it is the segment *Did Mary go home?* that allows us to interpret the anaphor *so*. However, this is an interrogative construction and what is needed to interpret *so* is the corresponding declarative *Mary went home*. Thus, *Did Mary go home?* is the antecedent-trigger and *Mary went home* is the antecedent. Notice that one cannot simply say that the sequence *Mary go home* is the antecedent since it does not contain the past tense information, yet that past tense information is present in the interpretation of *so* in this example. Crucially, the necessary antecedent simply does not appear in the discourse. As will appear below, there are cases where the differences between the antecedent-trigger and antecedent are much larger.

- (1) a. Ann saw Mary<sub>i</sub> yesterday. She<sub>i</sub> was tired.  
b. Mary went home. She did so because she was tired.  
c. Barack Obama made a surprise visit to Afghanistan yesterday. The President congratulated...  
d. John then said this: "I cannot accept your offer".  
e. —Did Mary go home? —I think so.

In this sense, anaphora is opposed to **deixis** [H&P:1451-3], i.e. situations where the reference of certain expressions is obtained not by recovering an antecedent from the linguistic context but directly in the extralinguistic context. The referent can either be determined in relation to properties of the utterance-act (most importantly the time and place of the utterance-act, the speaker and the addressee; items that function this way are sometimes called ‘shifters’ [‘embrayeurs’]) or by some form of ‘pointing’ to elements in the non linguistic context. The use of *I* in (1e) is a case of deixis: it refers to the speaker in the utterance-act. An anaphor can be either a **proform** [H&P:1461], i.e. an anaphor with little inherent semantic content of its own, or a phrase. Proforms are usually single words, as is the case for *she* in (1a) or *so* in (1e). In (1b), however, *do so* is phrasal proform. We can be more specific and say that *She* in (1a) is a pro-NP, that *did so* in (1b) is a pro-VP and that *so* in (1e) is a pro-clause. In (1c), *the president* is an anaphor, in that its interpretation depends on the previous utterance of *Barack Obama*, but it is not a proform. In most cases the anaphor follows the antecedent (this is ‘retrospective anaphora’) but in some cases the antecedent can follow, as in (1d). This is called ‘anticipatory anaphora’ or ‘cataphora’.

**Ellipsis** [H&P:1456] can be analyzed as a case of anaphora., where the anaphor is a null proform. In (2a), *seen John* can be considered to be the antecedent-trigger of the ellipsis, and similarly for

- 1 Throughout this document, to make things as simple as possible, the various phenomena will be referred to using the terms that seem most usual and/or clearest. The choice of terms is never intended to suggest that a specific analysis is being adopted. For instance, ‘Right Node Raising constructions’ were initially called by that name because they involved a transformation raising an identical final constituent out of a coordination of two sentences (see below). Following general usage, including that of many people who do not support the initial analysis, we continue to use the term here to refer to these constructions without in any way assuming that the original analysis is the correct one.
- 2 In example sentences, the interpretative dependency between the anaphor and its antecedent is indicated either by coindexing them (1a) or by underlining the antecedent and double underlining the anaphor (1b,c,d). It should be noted that coindexation and underlining are only meant to clarify the relevant interpretation of the sentences (in an appropriate context, (1a) might be interpreted with *she* having *Ann* as its antecedent). These devices are not intended to represent a specific analysis unless otherwise mentioned.

the other cases in (2). (2b) provides an instance of anticipatory ellipsis.<sup>3</sup>

- (2) a. I haven't seen John yet, but I will Ø soon.  
b. Though I haven't yet had time to Ø, I will be seeing John soon.  
c. The guide went into the next room and the tourists followed Ø.  
d. I was very happy with my daughters. Both Ø got very good results.

It is also possible to consider that ellipsis is simply the omission or deletion of the relevant antecedent (in the case of omission, it is assumed that the antecedent is never present at any level in the structure of the sentence; in the case of deletion, it is assumed that the antecedent *was* present at a given level of structure, e.g. deep-structure in transformational terms, and that it has been removed by some linguistic mechanism). In any case, it should be noted that the difference between antecedent-trigger and antecedent applies in exactly the same way in the case of ellipsis as in the case of anaphora. For example, in (2a) the antecedent-trigger is *seen John* but the antecedent is *see John*.

In what follows, we will first list a set of central phenomena. These must be well understood by the candidates and can be at the center of the topic of a lesson. We will then review a set of peripheral phenomena. These must be sufficiently known to be identified and to establish contrasts with central phenomena. They can appear peripherally in the topic of a lesson. We will conclude by listing a series of phenomena which are excluded from the question.

## A. The Central phenomena

### 1. Topics linked to the Noun Phrase and Noun

- a. Third person personal pronouns [H&P:1463ff, especially 1468-1475]. First and second person pronouns are deictic (except in certain specific cases) and are thus excluded. [Wales 1996 for an overview; Büring 2005, especially chapters 1,3,4 covers the central syntactic and semantic problems involved; Ariel 1990, Gundel, Hedberg and Zacharski 1993, Kehler 2002 chapter 6 cover the choice of pronouns in discourse]
- b. Third person reflexive pronouns [H&P:1483ff, Quirk et al. §6.23-28], both in their complement use (*John saw himself in the mirror*) and in their emphatic use (i. *John himself knows the answer*; ii. *Mary did the work herself*), which are very different both in their syntactic properties and in their semantics and pragmatics. [Wales 1996; Büring 2005, especially chapters 1,3,4 covers the central syntactic and semantic problems involved; Kuno 1987 and Zribi-Hertz 1989 discuss long distance bound reflexives and their use in discourse; Edmonson and Plank 1978 and Gast and Siemund 2006 discuss intensive/emphatic reflexives]
- c. Reciprocals [H&P:1499ff, Quirk et al. §6.31], both in their compound (*John and Mary know each other*) and split (*Each of the girls knew the others*) constructions. [Kim and Peters 1998]
- d. Anaphoric uses of demonstratives [H&P:1506ff, Quirk et al. §6.40-6.44 and §12.19] (i. —*He's coming tomorrow*. —*That's surprising*.; ii. *Mary said this: "I don't know"*; iii. *In the late 80's Chomsky developed an analysis of pronouns reflexives under the heading of 'binding theory'. That analysis has been immensely influential in the field, despite its obvious shortcomings.*) [See also Ariel 1990, Gundel, Hedberg and Zacharski 1993 for the choice of demonstratives as anaphors in discourse.]
- e. Anaphoric uses of determiners and quantifiers (what H&P[1511] call 'fused head constructions')

3 Following up on the previous note, the use of Ø to mark the ellipsis site is only intended to clarify the relevant interpretation of the example under investigation and is not supposed to mean that we are adopting a specific analysis. More generally, as discussed below, it is in many cases possible to treat the same phenomenon as a case of a proform or of ellipsis. Following Huddleston and Pullum 2002 and many others, we use 'ellipt' as the verb corresponding to the noun 'ellipsis'. We reserve the term 'elision' (used by some authors in the sense we are giving to 'ellipt') for morphophonological reduction which has entirely different properties, most importantly the fact that there is no antecedent involved, see below).

(i. *I have several possibilities here, which do you prefer?*; ii. *I'm amazed by my students' results at the exam: all succeeded, several got very high marks and one made no mistakes at all.*) [There is a scattered discussion of these phenomena in Quirk et al. §6.45-62, §12.17-18 and §12.54-58, Halliday and Hasan 147-166 (and 98-102 on cardinal number and indefinite article *one*); see also Nerbonne, Iida and Ladusaw 1990].

f. Pro-nominal *one* [H&P:1511ff], e.g. *a big one, the one from Paris* (note that pro-nominal *one* has a plural: *three big ones* and, since it is count, must be preceded by a determiner when it is singular). It must be distinguished from elliptical uses of numeral *one*: *I bought one Ø*. [See also Quirk et al. §6.55 and §12.15-16, Halliday and Hasan 1976, 91-98, Nerbonne, Iida and Ladusaw 1990, Culicover and Jackendoff 2005, chapter 8].

g. The anaphoric use of full NPs (*Barack Obama made a surprise visit to Afghanistan. The President met with...*), including associative anaphora (*He wanted to buy a house but the roof was damaged and...*). [See Ariel 1990 and Gundel, Hedberg and Zacharski 1993 for choice of full NPs vs pronouns in discourse; on associative anaphora see for instance Hawkins 1978: 123ff]

h. Unrealized NP arguments of verbs, specifically implicit subjects of non finite forms, i.e. Chomsky's 'PRO' (*John<sub>i</sub> wanted Ø<sub>i</sub> to open the door*) and null complement anaphora [H&P:1527ff] (*The guide<sub>i</sub> entered the room and the tourists followed Ø<sub>i</sub>*). [On implicit subjects of non finite forms, see especially Culicover and Jackendoff 2005 chapter 12; On null complement anaphora see Shopen 1973, Hankamer and Sag 1976, Fillmore 1986, Groefsema 1995, Quirk et al. §12.65]

## 2. Topics linked to the Verb Phrase and Verb

a. Stranded auxiliaries ('VP ellipsis', 'Post-auxiliary ellipsis') [H&P:1519ff, Quirk et al. §12.59-60 and §12.64] (*If you don't eat it, I will Ø*), including stranded *to* [H&P:1526ff] (*I'll go to the party if I want to Ø*), stranded auxiliary *do* [H&P:1523ff] (*I didn't think he would come, but he did Ø*), and 'pseudogapping', i.e. cases where the auxiliary is followed by complement (—*That shouldn't surprise<sub>i</sub> anyone. —Well, it did Ø<sub>i</sub> me.*) [H&P:p.1520, Quirk et al. §12.62]. [The literature on VP-ellipsis is enormous. Among the more important references are Sag 1976, Hankamer and Sag 1976, Kehler 2002 chapter 2, Culicover and Jackendoff 2005 chapter 8, Schachter 1978, Guimier 1981; on pseudogapping see Levin 1986].

b. *Do so* anaphora [H&P:1529ff] and *do it/this/that* anaphora [H&P:1532]. [See Hankamer and Sag 1976, Guimier 1981, Quirk et al. 1985 §12.21-26, Halliday and Hasan 1976 112-129, Culicover and Jackendoff 2005, chapter 8, Houser 2010]

c. Gapping (In cases of sentential coordination, ellipsis of the verb and auxiliaries in the second conjunct so that only the subject and a complement are left *Mary will meet John and Peter Ø Sam* [H&P 1337-41, Quirk et al. §13.92-93])<sup>4</sup> and Right Node Raising (RNR, 'coordination avec mise en facteur commun', coordination of two incomplete constituents followed by a shared remainder. RNR usually applies to coordinate sentences or VPs. *You are Ø, and always will be Ø, my best friend* [Quirk et al. §13.95-96]). [On gapping, see Kehler 2002 chapter 4, Culicover and Jackendoff 2005, chapter 7; on Right Node Raising see §§]

d. Sluicing (elliptical interrogative structures —*I met someone at work this morning. —Who Ø? —A new guy called Smith. You should meet him too. —What Ø for?* [Quirk et al. §12.63]) [On sluicing see Chung, Ladusaw and McCloskey 1995, Merchant 2001, Culicover and Jackendoff 2005, chapter 7]

e. Bare argument ellipsis (sentences reduced to a single argument —*Who did you visit? —My brother.*) [see Culicover and Jackendoff chapter 7].

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4 If there are other complements or adjuncts in the first conjunct, they are generally ellipted in the second conjunct: *Mary gave a book to John for his birthday and Ann Ø a record ØØ.*

### 3. Topics linked to adverbs and AdvP:

a. Anaphoric uses of *then*, *there* and *here* (*I met him in London in 1985. He was working for the Independent then. He had been there for a couple of years.*) [H&P 1549-1563, Quirk et al. §8.51ff and §8.39ff]

b. Anaphoric uses of *so* and *not* (*—Is he coming? —I hope so, I hope not.*) [H&P 1535-1538, Quirk et al. §12.27-30, Halliday and Hasan 1976 130-141, Cornish 1992, Mauroy 1997]

### ***B. Peripheral phenomena***

#### **1. Deixis** [H&P: 1451-3; Lyons 1977:Vol. II, Chap 15]

As mentioned briefly above, we are using ‘deixis’ as a cover term for both so-called shifters (elements whose referent is determined in relation to properties of the utterance-act) and cases of ‘pointing’, i.e. cases where the referent is not accessed via a textually given antecedent-trigger. Excluding deixis from the scope of the question raises theoretical problems in that many authors (Bühler 1934, Lyons 1975, Cornish 1999) consider anaphora to be a derivative phenomenon, based on deixis. Cornish, for instance, denies that there even is a clear separation between both phenomena. In many cases the required antecedent is not present as such in the discourse and must be retrieved through inference from an antecedent-trigger. The relevant inferences may involve the non linguistic context, giving rise to mixed cases. It is thus necessary to provide the candidates with an introduction to deixis. However, there will be no questions centered on deixis.

#### **2. The prosodic realization of proforms and ellipses and its effects on interpretation**

This problem is obviously central from a theoretical point of view. However, as neither oral nor prosodically annotated corpora will be available it will be impossible for candidates to focus on these topics. Candidates may however discuss hypotheses about the likely prosody of certain examples when relevant (for example, the presence of intonation breaks and a Fall-Rise before the elliptical site in RNR structures *John went to London and vMARY / to CORK et John IS / and always vWILL be, / my closest FRIEND*).

### ***C. Excluded phenomena***

#### **1. Comparative structures**

Elliptical constructions which are restricted to comparative structures are excluded. Comparatives have specific and complex syntactic and semantic properties which would take us too far afield.

#### **2. Coordination**

Apart from gapping and so-called RNR reduction in coordinate structures is excluded. Note that many of the phenomena which are often treated in terms of ellipsis cannot in fact be analyzed as such. For instance a sentence like *Mary and Joan met* cannot be obtained via ellipsis from *\*Mary met and Joan met*, which calls into question the whole idea of treating sentences like *Mary and Joan ate* as elliptical. [see Quirk et al. §13.45.]

#### **3. Relative pronouns and relative clauses**

Relative pronouns are excluded because, on the one hand, the relationship between relative and antecedent raises no interesting problems, being syntactically defined, and, on the other hand, the

distribution of relative pronouns is governed by specific principles which are irrelevant with respect to ellipsis and anaphora in general. Also so called ‘reduced relatives’ (*a book costing \$10*) are excluded as a simple elliptical analysis is not generally applicable (*\*a book which is costing \$10*). Similarly, participials such as *When leaving, ...* are excluded as there is no reason to consider them to be reductions of e.g. *?When you are leaving, ...* (one would usually say: *When you leave, ...*). However, the specific case of so called ‘continuative relatives’ (*for every year we put off marriage, our chances of divorce go down. Which brings us to this question: if you're going to wait [...]*) will be included as a peripheral question since they alternate with anaphoric uses of demonstratives (*This brings us...*).

#### 4. Elliptical phenomena restricted to specific registers

Phenomena such as the omission of first person subject pronouns in diaries as well as the numerous elliptical phenomena that only occur in informal spoken language (*Have you Got your book with you?; I-Dunno.*) are excluded. Note that these phenomena are furthermore distinguished from the central phenomena by the fact that the antecedent is typically deictic, rather than anaphoric.

#### 5. Elision

Elision is a morphophonological phenomenon and the reductions it causes are never interpreted through an antecedent, be it deictic or anaphoric (*I'll leave now*). It thus has no bearing whatsoever on the topic.

#### 6. Anaphora in the sense of presupposition

In certain usages, the terms ‘anaphora’ or ‘anaphoric’ are used to refer to presupposition or preconstruction in a broad sense. Such phenomena are excluded, as well as the use of ‘anaphora’ to denote formal repetition in stylistics or poetics.

## II. Relevant themes

### 1. Syntactic properties

Candidates must know the different syntactic constraints bearing on the various elliptical and anaphoric phenomena mentioned above.

#### Examples

a. It is impossible to have post-auxiliary ellipsis after infinitival *to* when the infinitive is a non-extrapolated subject complement. Extraposition of the subject makes post-auxiliary ellipsis possible.

Good students can easily see, [...] that where such evaluations are instituted, they have some effect. Consequently, if they think their teacher is good, they are faced with a dilemma. To refuse to participate in calumny is right, yet not to Ø will subtract the support their approval will contribute to the tabulations that decide or affect the fate of their teacher. (COCA)

- (1) a. *\*to Ø* is punishable by law.
- b. *to do so* is punishable by law.
- c. it is punishable by law to Ø.

When the infinitive is negated with *not*, ellipsis is possible, though it is in fact difficult to find examples of this type, like the one given above.

b. Variation in the possible elliptical uses of determiners

- (2) a. we raised three perfect daughters . Each Ø has a career and children. (COCA)(cf. *\*Every* Ø

has a ...)

b. Get free entertainment at your local library. Mine  $\emptyset$  has an online catalog that features new and old movies (COCA) (Cf. \*The  $\emptyset$  has an...)

c. A non reflexive pronoun in object position cannot be coreferent with the subject of the clause.

(3) \*Mary<sub>i</sub> saw her<sub>i</sub> in the mirror.

Obviously, candidates should be aware of any syntactic, semantic, or pragmatic explanations available for such constraints. However, for some of these, no such explanation appears to have been suggested in the literature and finding one is far from obvious. Clearly, one cannot expect candidates to propose explanations in such cases, but they must at least be able to recognize and explain known constraints, and be able to see that a given attested example is a counterexample.

## 2. Syntactic and semantic identity between antecedent and antecedent-trigger

As mentioned above, Cornish (1999) establishes a very useful distinction between antecedent and antecedent-trigger. In simple examples, they are identical (*Mary went home. She was tired = Mary was tired*; antecedent = antecedent trigger = *Mary*). However, an inferential process is frequently necessary in order to find the relevant antecedent from the discourse context, for example: *Mary wanted to dance with John that evening, but in the end they didn't  $\emptyset$* . The antecedent of *They* is *Mary and John*, and the antecedent required to fill the ellipsis site following the auxiliary is *dance together*. Yet, neither of these appears in the previous context. They are both inferred from *Mary wanted to dance with John* which is consequently the antecedent-trigger. [H&P: 1460, (e)]

This is a very important question since the constraints on the relation between antecedent and antecedent-trigger vary according to the specific anaphor or elliptical construction under investigation.

## 3. Discourse semantics and pragmatics

Choice of one type of proform rather than another:

accessibility hierarchy, givenness hierarchy (Ariel, Gundel, ...),

'centering theory' (Grosz, Joshi, Prince),

typology of referents (cf. Lyons 1977).

What are the possible antecedents in context?

How does the antecedent lead to a referent?

What is the exact relationship between an anaphor and its antecedent? [H&P: 1457-60] Is there coreference in the strict sense? [H&P:1458, (a)] Or is the relation more complex, as in the cases of associative anaphora or cases like *Everyone<sub>i</sub> said that he/they<sub>i</sub> was/were tired, so we decided to go to bed* where the pronoun corresponds to a bound variable [H&P:1458 (b)]. Note also cases of so-called 'sloppy identity' [H&P:1460, note 5] *John<sub>i</sub> [loves his<sub>i</sub> daughter]<sub>j</sub> and Mary does<sub>j</sub> too* ('loves John's daughter' or 'loves her own' ?) ?

## 4. Ellipsis vs. anaphora

It is well known that the distinction between ellipsis and anaphora is essentially a theory-internal one. For example, in a sequence like "[Ann<sub>i</sub>'s students]<sub>j</sub> surprised her<sub>i</sub>. Many<sub>j'</sub> <sub>j</sub> passed the exam]<sub>k</sub>. She<sub>i</sub> was worried they<sub>j</sub> wouldn't<sub>k</sub>." one can analyse *Many* as a pro-NP, as suggested by the coindexation chosen, but one could also consider it to be a quantifier in an elliptical NP ([<sub>SN</sub> [<sub>Q</sub> many]  $\emptyset$ ]), where the referential link is provided by the ellipsis. Note that if one interprets *many* as a pro-NP, there is no coreference between *Ann's students* and *many*, but rather a case of referential dependency; *Ann's students* is consequently not an antecedent in the strict sense, but an antecedent-trigger. Similarly, *would* can be analyzed as a pro-VP [cf. Schachter 1978] or as an auxiliary

followed by an ellipsis ([<sub>SV</sub> would  $\emptyset_k$ ], the classical analysis). Note further that even usual personal pronouns can be treated as elliptical determiners rather than as cases of anaphora. Thus, in the example, *she* or *they* can be treated as determiners followed by an empty N' constituent, in parallel to the classical treatment of elliptical auxiliaries [This analysis was proposed by Postal 1970].

More generally, the elliptical site can be analyzed either as a zero morpheme (which leads one to treat all cases of apparent ellipsis as anaphors involving zero proforms), or as an actual empty position (in which case ellipsis is analytically distinct from anaphora). Other theoretical problems include the analysis of proforms as resulting from pronominalization transformations (this was the classical transformational position) and, for ellipsis, whether it should simply be analyzed as an empty position in the syntax which gets interpreted on the basis of the surrounding discourse (and non linguistic context) or if it results from actual deletion of previously present syntactic structure. In the latter case, the further question arises of whether the deletion leaves a phonologically empty syntactic structure behind or not.

Similarly, as pointed out by Cornish, in particular, one cannot consider the antecedent as being the referent of an anaphor or ellipsis. More generally, it is not enough to say that the referent is the same as that of the antecedent. As shown in particular by associative anaphora, the referent is an entity accessed on the basis of the antecedent using general knowledge and knowledge of the specific speech situation. All of these theoretical questions can be usefully referred to within a 'leçon' if they are relevant with respect to the subject and corpus. However the major part of the discussion should always be centered on analyzing the phenomena.

## **5. Cataphora or anticipatory anaphora**

Syntactic and discourse conditions on anticipatory anaphora have been discussed in the literature. [See e.g. Büring 2005 for an overview of the syntactic conditions. On the discourse conditions, see e.g. Carden 1982, Mittwoch 1983, Van Hoek 1997.]