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Ellipsis phenomena

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19.1 Introduction

Ellipsis phenomena – or deletions, in traditional generative terms – involve a number of cases where otherwise expected material goes missing under some conditions. As is usual, we will restrict our attention to just a few cases of what could in principle fall under St Isidore's definition of ellipsis;[1] in particular, we present and examine cases of missing sentential material, predicate material, and nominal material, known roughly as clausal ellipsis, predicate ellipsis, and nominal ellipsis, respectively.

How to formulate a condition ensuring 'recoverability of deletion' has been a central question since the dawn of generative grammar. It was addressed in passing in Harris (1957), Lees (1961), and Smith (1961), and is the subject of discussion at some length in Chomsky (1965: esp. pp. 177–84). In this chapter, we review a number of phenomena with a bearing on this question, and show that the great strides that have been made in understanding a wide variety of data and in their analytical coverage point the way to a deeper understanding of the nature of syntax and its component parts. In particular, ellipsis data are profitably used as a center-piece of arguments that syntax is not surfacist (or 'lexical' in Chomsky 1965's sense). Put differently, there is strong evidence suggesting that ellipsis sites contain an abstract – i.e., unpronounced – syntactic represen-tation. Viewed from this perspective, the 'recoverability of deletion' ques-tion becomes one of identity: to what extent and in what way is the abstract syntactic structure of the ellipsis site identical to the overt syn-tactic structure of its antecedent?

A second question, one with a much less elaborate research tradition, concerns ellipsis licensing. As discussed in detail by Lobeck (1995) (though see also Zagona 1982 for an early predecessor), even when deletion is perfectly recoverable, it does not necessarily yield a well-formed result:

(1)   *John read the long book and I read the short [$_{NP}$ *e*].

Regardless of whether one assumes the ellipsis site (marked *e* in (1)) to contain abstract syntactic structure, and regardless of whether one takes syntax or semantics (or a mix of both) to define the anaphoric relation between an ellipsis and its antecedent, it seems clear that the elided NP in (1) is sufficiently recoverable. In spite of this, however, ellipsis is disallowed. This shows that on top of recoverability, there is a second well-formedness condition on ellipsis, one that commonly goes by the name of licensing, to the effect that not every phrase is elidable. Generally speaking, ellipses seem to group at the clausal, predicate, and nominal level, yielding clausal ellipsis, predicate ellipsis, and nominal ellipsis, respectively. It is these three broad subtypes that we will focus on in the next three sections. For each type we first discuss the evidence for postulating abstract syntactic structure inside the ellipsis site. Based on these findings, we then turn to recoverability, in particular focusing on morphosyntactic discrepancies between antecedent and ellipsis site, while the final part of each section deals with licensing.[2]

19.2   Predicate ellipsis

19.2.1   The main types of predicate ellipsis

Predicate ellipsis can be roughly defined as a type of ellipsis in which the main predicate of the clause is missing – often together with one or more of its internal arguments – but in which the inflectional domain and the canonical subject position are outside the scope of the ellipsis and hence remain unaffected. The examples in (2) illustrate the main ellipsis phenomena that fall under this rubric.

(2)   a. John likes candy, but Bill doesn't __.   (Verb Phrase Ellipsis)
       b. She'll read something to Sam, but she won't __ to Bill.
                                                                (Pseudogapping)
       c. John will eat candy and Bill will do __, too.   (British English *do*)
       d. Jan wil niet meedoen, maar hij moet __.
                                                                (Modal Complement Ellipsis)
          John wants not participate but he must
          'John doesn't want to participate, but he has to.'
       e. Ben will be in the garden, though he'd rather not be.
                                                                (Predicate phrase ellipsis)

Without a doubt the most famous member on this list is Verb Phrase Ellipsis (henceforth VPE). It is fair to say that this construction – particularly in its English incarnation – has dominated the literature on ellipsis in the first few decades of generative grammar. Accordingly, the literature on VPE is vast and we cannot do full justice to it here, but key publications

include Hankamer and Sag (1976), Sag (1976), Williams (1977), Zagona (1982), Hardt (1993), Fiengo and May (1994), Lobeck (1995), Fox (2000), and Johnson (2001).

Pseudogapping was first identified and named by Stump 1977 (see also Levin 1978, 1979 for early discussion). While he argued that 'pseudogaps' involve a process different from VPE, ever since Jayaseelan 1990 it has become standard practice to analyze this construction as VPE with additional extraction of a VP-internal constituent (in (2b) the PP *to Bill*) to a position outside of the ellipsis site. This is the account proposed by Johnson (1996), Lasnik (1999b, 1999c) (2001a), Kennedy and Merchant (2000), Takahashi (2003, 2004), Gengel (2007), Merchant (2008a), and Aelbrecht (2010) (though see Hardt 1993, Lobeck 1995 for a differing view), the main debate in this strand of literature centering around (a) identifying the type of movement responsible for extracting the remnant out of the ellipsis site, and (b) identifying the exact size of the ellipsis site (an issue we return to below).

The examples in (2c) and (2d) are more recent additions to the predicate ellipsis spectrum. The former is a British English construction that is on the surface identical to VPE, but for the presence of a non-finite form of the verb *do* next to the ellipsis site (see Chalcraft 2006, Haddican 2007, Aelbrecht 2010, Thoms 2010, and Baltin 2010), while Modal Complement Ellipsis (cf. (2d)) only differs from VPE – again, on the surface – in that the licensing verb is obligatorily a (deontic) modal. It is attested in Dutch, German, French, Spanish, and Italian, and discussed by Dagnac (2010) and Aelbrecht (2010).

Example (2e) illustrates a kind of predicate ellipsis that is rarely discussed. It concerns cases where a non-verbal predicate (which could be a PP, AP, DP, or some other category) has gone missing. If examples such as these genuinely involve PP/AP/DP/ . . .-ellipsis, they differ noticeably from the other examples in (2), all of which involve the deletion of a verbal projection (see below for discussion). Another option, though, would be to assume that (2e) involves VP-deletion as well, but with prior extraction of *be* to a position outside of the ellipsis site (along the lines of Thoms 2010). It should be clear that more research is needed on this subtype of predicate ellipsis.

Having introduced the central characters of this section on predicate ellipsis, we now turn to the evidence suggesting that the ellipsis site in all these constructions contains unpronounced syntactic structure.

19.2.2 Unearthing the unspoken VP

In line with the existing research tradition on ellipsis, we primarily focus on VPE in this section, turning to the other types of predicate ellipsis only if they yield different empirical results or if they add an additional perspective on the issue under investigation. As pointed out in Section 19.1,

ellipsis can be used as a prime counterargument against the claim that syntax is surfacist or non-abstract. In this section we present two strands of research corroborating that statement. The logical structure of these two case studies is identical: if an ellipsis site contains unpronounced syntactic structure, it should partake in the same morphosyntactic processes that one also finds in non-elliptical syntax. The processes we focus on here are agreement and movement.

19.2.2.1 Agreement

Phi-feature agreement between the subject and the finite verb (see Chapter 17) has taken center stage in generative theorizing since its inception and continues to do so today. In current Minimalist work this phenomenon is argued to be the result of an Agree-relation between a Probe (T°) carrying uninterpretable and/or unvalued phi-features and a Goal (the subject-DP) endowed with the interpretable/valued counterparts of those features (see Chomsky 2000b et seq.), and while there are defi-nitely alternatives around (see, e.g., Bobaljik 2008), what all proposals to date have in common is that both the host and the target of agreement have to be syntactically represented in order for the relation between the two to materialize. Consider in this respect the examples in (3).

(3) a. I didn't think there would be many linguists at the party, but there were/*was.
     b. I didn't think there would be a linguist at the party, but there *were/was.

The verb *was/were* agrees with the unpronounced associate DP inside the ellipsis site (*many linguists* in (3a) and *a linguist* in (3b)), thus strongly suggesting that the understood meaning of the elided VP is syntactically present as well. While these facts were already observed by Ross (1969), they have featured only sporadically in the ellipsis literature (cf. in partic-ular López 1995 and van Craenenbroeck 2010a).

19.2.2.2 Movement

Ellipsis sites can be extracted out of. If they contain an unpronounced but otherwise fully regular syntactic representation, this is precisely as expected. The (lack of) transparency of ellipsis sites for syntactic move-ment operations has become a lively research topic in recent years, so we can only present the main lines of the debate here and refer to the original papers for details. In this section we first discuss the three main types of movement (X°, A, A′), then we highlight the special position pseudogap-ping has in this debate, and finally we turn to ellipsis sites that cannot be (or can only partially be) extracted out of.

   Head movement of the main verb out of VPE-sites yields so-called V-stranding VP-ellipsis. It is attested in Irish, Hebrew, Portuguese, Galician, Russian, Swahili, and Ndenduele (see McCloskey 1991, 2004,

Ngonyani 1996, Sherman (Ussishkin) 1998, Doron 1999, Goldberg 2005, Martins 1994, 1996, Santos 2009, Gribanova 2009, Schoorlemmer and Temmerman 2010). Some examples are given in (4) and (5) (Goldberg 2005:2).

(4) Q: Šalaxt etmol et ha-yeladim le-beit-ha-sefer?
      send.2sg yesterday ACC the-children to-house-the-book
   A: Šalaxti.
      send.1sg
   'Q: Did you send the children to school yesterday? A: I did.'

                                      (Hebrew)

(5) Dúirt mé go gceannóinn é agus cheannaigh.   (Irish)
   said I that buy it and bought
   'I said I would buy it and I did.'

A central issue surrounding the phenomenon of V-stranding VPE is the so-called Verbal Identity Requirement.[3] It concerns the generalization in (6) (Goldberg 2005:171), which is illustrated by the Irish example in (7) (Goldberg 2005:168):

(6) Verbal Identity Requirement
   The antecedent- and target-clause main Vs of VP ellipsis must be identical, minimally, in their root and derivational morphology.

(7) *Léigh mé an dán ach níor thuig.
   read[PAST] I the poem but not[PAST] understand[PAST]
   INTENDED: 'I read the poem, but didn't understand it.'

In spite of the fact that the verb *thuig* 'understand' has raised out of the ellipsis site and hence is perfectly recoverable, V-stranding VPE is not allowed. As stated in the generalization in (6) the verb in the antecedent has to be identical to the verb in the elliptical clause (modulo inflectional morphology, see also below, Section 19.2.3). What makes this pattern even more striking is the fact that such a stringent identity requirement on material that has been extracted out of the ellipsis site appears to be absent in the case of phrasal (A- or A′-) extraction. In (8a) the DP *Mary* has undergone subject raising out of the complement of *seem*, while (8b) illustrates a case of topicalization (the DP *tomatoes* having moved from the object position of *like*). We return to such cases in more detail below.

(8) a. John seems to be happy, but Mary doesn't.
   b. Potatoes I like, but tomatoes I don't.

To date, there is no comprehensive account of the Verbal Identity Requirement (though see the references mentioned above for various possible approaches). As such, it remains one of the (many) open questions in the field of ellipsis.

A-movement out of VPE-sites is widely attested. VPE occurs productively in passives, unaccusatives, and raising constructions. Some representative examples are given below.

(9)   a. John was arrested, and Bill was too.
      b. John arrived at the party before Nika did.
      c. John seems to be happy, but Mary doesn't.

Likewise, A′-extraction out of an elided VP is also possible. This is illustrated below for *wh*-movement (10a), topicalization (10b), relativization (10c) and QR (10d).

(10)   a. I know which books you like and which ones you don't.
       b. Potatoes I like, but tomatoes I don't.
       c. Give me the books you like and the ones you don't.[4]
       d. A nurse will examine every patient and a doctor will too.

$$(\forall > \exists, \exists > \forall)$$

This topic has sparked a lot of research in recent years. Roughly speaking, it is centered around two issues. The first concerns characterizing the conditions under which A′-extraction out of VPE-sites is allowed, while the second focuses on locality restrictions on the movement operations involved. As for the former, it was first observed by Sag (1976) that A′-extraction out of an elided VP is subject to a fairly stringent focus requirement. In Schuyler's (2002:18) phrasing, "there must be a contrastively focused expression in the c-command domain of the extracted phrase." This explains why there is a contrast between the examples in (11) (the a-example is adapted from Merchant 2008b):

(11)   a. *They attended a lecture on a Balkan language, but I don't know which they did.
       b. ED attended a lecture on carpenting, but I don't know what MARY did.

While in (11a) there is no contrastive focus in between the ellipsis site and the moved *wh*-phrase, in the grammatical (11b) the subject is focused and A′-extraction out of the VPE-site is allowed. This issue has been taken up in various ways by Williams (1977), Evans (1988), Fiengo and May (1994), Schuyler (2002), Kennedy (2002), Takahashi and Fox (2005), Merchant 2008a, and Hartman (2010). The consensus nowadays is that the ill-formedness of (11a) is due to the violation of a constraint dubbed 'MaxElide' by Merchant (2008b), which states that in the case of A′-extraction out of an ellipsis site,[5] the biggest possible constituent should be elided. In (11b) focus on the subject prevents anything bigger than the VP to be elided, but in the absence of such focus (as in (11a)) MaxElide requires that clausal ellipsis (in particular sluicing, see below, Section 19.4) take place instead of VPE.

The second research question related to A′-extraction out of VPE brings us right back to the core issue of this section, i.e., the claim that there is unpronounced syntactic structure inside ellipsis sites. To the extent that this is true, it not only predicts that elided VPs should be able to host traces of movement, but also that such movement operations should be subject to the same locality restrictions as their non-elliptical counterparts, even if the relevant locality domain is situated entirely inside the ellipsis site. The data in (12) (taken from Merchant 2008b:143–44) show that this prediction is borne out.[6]

(12) a. *Abby DOES want to hire someone who speaks GREEK, but I don't remember what kind of language she DOESN'T.
      b. *BEN will be mad if Abby talks to Mr Ryberg, and guess who CHUCK will.
      c. *They got the president and 37 Democratic Senators to agree to revise the budget, but I can't remember how many Republican ones the DIDN'T.

Compare these examples to their full, non-elliptical counterparts:

(13) a. *Abby DOES want to hire someone who speaks GREEK, but I don't remember what kind of language she DOESN'T want to hire someone who speaks.
      b. *BEN will be mad if Abby talks to Mr Ryberg, and guess who CHUCK will be mad if Abby talks to.
      c. *They got the president and 37 Democratic Senators to agree to revise the budget, but I can't remember how many Republican ones the DIDN'T get the president and to agree to revise the budget.

The fact that the VPE-examples in (12) are as ungrammatical as the non-elliptical data in (13) represents – in Culicover and Jackendoff's (2005:11 n8) terms – "impressive evidence of the reality of the invisible structure." None of the examples in (12) overtly contains an island. The fact that they are nonetheless ill-formed then strongly suggests that the offending syntactic representation is covertly present (see Sag 1976, Haïk 1987, Postal 2001, Lasnik 2001a, Fox and Lasnik 2003, Kennedy and Merchant 2000, Merchant 2001, 2008b, and Kennedy 2003 for additional discussion).[7]

Summarizing this section so far, we have shown that VP-ellipsis sites allow for extraction via X°-, A- and A′-, movement, thus corroborating the claim that they contain unpronounced syntactic structure. In so doing, we have focused exclusively on VP-ellipsis. In the remainder of this section we turn to the other types of predicate ellipsis outlined in (2) and discuss to what extent they have featured in the extraction debate. Pseudogapping occupies a specific position in this respect. Recall that this construction is commonly analyzed as VPE with prior extraction of a VP-internal

constituent out of the ellipsis site. To the extent that this analysis is on the right track, the very existence of pseudogapping provides evidence in favor of postulating invisible structure. At the same time, however, a number of researchers (see Jacobson 1992, Hardt 1993, Lobeck 1995) have argued against the extraction analysis of pseudogapping and more-over, have argued that what looks like extraction from VPE-sites is in fact pseudogapping with a fronted remnant. Put differently, in an example like (10a) (repeated below), the trace of *wh*-movement would in fact be outside of the ellipsis site.

(14)   I know which books you like and which ones$_i$ you don't ___ t$_i$.

The relevance of this analysis for the topic of this section should be clear: if the *wh*-phrase does not originate inside the ellipsis site, an important argument in favor of abstract syntactic structure falls away. As Johnson (2001) points out, however, the analysis sketched in (14) is rendered unlikely by a number of empirical differences between pseudogapping and A′-extraction out of VPE-sites. First of all, while the former is incompatible with preposition stranding, the latter is not.

(15)   a. *Sally will stand near Mag, but he won't Holly.
       b. ?I know which woman FRED will stand near, but I don't know which woman YOU will.

Second, pseudogapping cannot remove part of a noun phrase, but A′-extraction can:

(16)   a. *While Holly didn't discuss a report about every boy, she did every girl.
       b. I know which woman HOLLY will discuss a report about, but I don't know which woman YOU will.

Third, while the locality restrictions on pseudogapping are more akin to those found in Dutch scrambling, A′-extraction shows the hallmarks of regular successive-cyclic movement:

(17)   a. *While Doc might claim that O. J. Berman had read his book, he wouldn't the paper.
       b. I know which book DOC might claim O. J. Berman had read, but I don't which book PERRY might.

It seems fair to conclude, then, that A′-extraction out of VPE-sites cannot be reduced to pseudogapping. As a result, the argument in favor of abstract syntactic structure stands.

   Our reasoning so far took the form of a one-way implication: the possibility of extraction implies the presence of unpronounced structure. In much of the literature on this topic, however, the inverse implication is – explicitly or implicitly – also assumed to hold. For example, null complement anaphora (see below, Section 19.4) licenses none of the extraction

options available to VP-ellipsis and as a result is assumed not to contain
any internal structure (see Depiante 2000 and references mentioned there;
cf. also van Craenenbroeck 2010a for relevant discussion):

(18) a. *Which films did he refuse to see, and which ones did he agree?
      b. *These films he refused to see and those he agreed.
      c. *I know the films he refused to see and the ones he agreed.
      d. A movie executive refused to see every film, and an intern agreed.

                                                                (∃>∀, *∀>∃)

Recent work on Modal Complement Ellipsis (MCE) and British English *do*
(BE *do*), however, has called this second implication into question (cf. in
particular Aelbrecht 2010 and Baltin 2010). What is remarkable about
these types of predicate ellipsis is that they allow some, but not all extrac-
tions. Relevant examples (culled from the references just mentioned) are
given in (19) and (20).

(19) a. Die   broek moet nog niet gewassen worden, maar hij mag
         those pants must yet not washed   become but   he may
         wel al.   (Dutch)
         PRT already
         'Those pants don't have to be washed yet, but they can be.'
      b. ?*Ik weet niet wie Kaat WOU uitnodigen, maar ik weet wel wie
         ze MOEST.
         I know not who Kaat wanted invite but I know aff who she
         had.to
         'I know who Kaat WANTED to invite, but I don't know who she
         HAD to.'

(20) a. John might seem to enjoy that, and Fred might do____too.
      b. *Although we don't know what John might read, we do know
         what Fred might
         do___.

As these data show, both MCE and BE *do* allow for A-movement (passive in
(19a) and subject raising in (20a)) out of the ellipsis site, but A′-extraction
yields an ill-formed result.[8] From the point of view of the two-way impli-
cation discussed above, such mixed behavior is unexpected: an ellipsis site
should either be transparent for all types of movement, like VP-ellipsis, or
for none at all, like null complement anaphora. Without going too deeply
into the details of their account, what both Aelbrecht and Baltin argue is
that MCE and BE *do* contain a full-fledged (but unpronounced) syntactic
structure, and that the limited extraction possibilities illustrated above are
due to the timing of the ellipsis operation. Roughly speaking, the ellipsis
process operative in MCE and BE *do* happens at a point during the syntactic
derivation when A-movement has, but A′-movement has not yet taken
place. As a result, it bleeds the latter and the mixed data pattern in (19)/

(20) arises. More generally, what this means is that the absence of extraction can no longer be taken to be a diagnostic for the absence of syntactic structure inside an ellipsis site. In particular, it could well be that even null complement anaphora involves abstract syntax, but that the timing of the ellipsis process in this specific construction precludes any movement operation from targeting material inside the ellipsis site.

19.2.2.3 Summary

In this section we have reviewed a body of work on predicate ellipsis that, even though very diverse, converges on the conclusion that (VP-)ellipsis sites contain abstract syntactic structure. As pointed out in Section 19.1, this conclusion naturally leads one to a particular formulation of the question of recoverability: To what extent and in what way is the abstract elliptical structure identical to the overt syntax of the ellipsis antecedent? This forms the main focus point of the next section.

19.2.3   Syntactic or semantic identity?

The 'recoverability of deletion' question typically presents itself as one of division of labor: it is clear that the ellipsis site and its antecedent have to be identical in some sense for the deletion to be recoverable, but the question is which component of the grammar – and accordingly, what type of representation – is used for measuring this identity. While answering this question is non-trivial and a lot of research efforts have been devoted to it, it is clear that what is *not* at stake is surface identity, be it of a phonological or a morphological nature. Put differently, it is not the case that a phrase has to be string-identical to another one in order for it to be elidable. This is poignantly illustrated in the following example (adapted from Arregui *et al.* 2006), which shows that mere homophony (in this case, of *right* and *write*) does not suffice to render an ellipsis site recoverable:

(21)   *Injustices, he rights, but books he doesn't __.

Less 'exotic' examples of surface mismatches show that morphological identity is not required either. Consider the following pair (from Merchant 2009a):

(22)   a. Emily played beautifully at the recital and her sister will __, too.
       b. Emily played beautifully at the recital and her sister will play beautifully at the recital, too

As the non-elliptical example in (22b) illustrates, the elided verb in (22a) is not surface identical to its counterpart in the antecedent clause (simple past vs. infinitive). In spite of this lack of morphological identity, however, this instance of VP-ellipsis is perfectly recoverable. This shows once more that surface identity is not what makes ellipsis recoverable.

The two obvious candidates for measuring identity are syntax and semantics, i.e., some researchers have argued that ellipsis sites and their antecedents have to be identical in structure (see Chomsky 1965, Ross 1969, Sag 1976, Hankamer and Sag 1976, Williams 1977, Hankamer 1979, Chao 1987, Rooth 1992a, Lappin 1992, Fiengo and May 1994, Lappin 1996, Chung *et al.* 1995, and many others), while others maintain that identity of meaning is what is required (see Dalrymple *et al.* 1991, Hardt 1993, 1999, Kempson et al. 1999, Asher *et al.* 1997, 2001, Ginzburg and Sag 2000, Merchant 2001, Hendriks 2004, Hendriks and Spenader 2005, and many others), with still others arguing for a combination of both (see Kehler 2002, Chung 2006, Merchant 2007, and van Craenenbroeck 2009). One of the standard ways of distinguishing between such proposals involves looking at mismatches between an ellipsis site and its antecedent. Semantic theories of ellipsis resolution predict that variations of form are allowed as long as they do not affect the interpretation, while syntactic theories predict that any deviation in syntactic structure – even if semantically vacuous – should lead to a recoverability failure. In this section we focus on four types of ellipsis–antecedent mismatches.[9]

The first set of data builds on the examples in (22). As was pointed out by Warner (1985) and further discussed by Lasnik (1995) and Potsdam (1997), the type of morphological mismatch illustrated in (22) is disallowed with auxiliaries:

(23) a. *Emily was beautiful at the recital and her sister will __, too.
      b. Emily was beautiful at the recital and her sister will be beautiful at
         the recital, too.

While the switch from simple past in the antecedent to infinitive in the ellipsis site proceeds without hiccups in the case of a lexical verb like *play*, with a functional verb like *be* ungrammaticality ensues. As such, these data represent a case where it is variability in form rather than meaning that determines ellipsis possibilities. Lasnik (1995) argues that the distinction between (22a) and (23a) is due to the fact that functional verbs enter the derivation fully inflected, while lexical ones acquire their inflection in the course of the derivation. This means that while there is a stage in the derivation at which the simple past and the infinitive of *play* are syntactically identical, this is not the case for *was* versus *be*. Viewed from this perspective, then, the morphological mismatch data in (22)/(23) constitutes an argument in favor of a syntactic identity theory of ellipsis resolution. This line of reasoning has been called into question, however, by Potsdam (1997), who argues that the distinction between (22a) and (23a) is not one of (lack of) syntactic identity or lexical vs. functional verbs, but rather concerns the fact that the antecedent for ellipsis contains a(n X°-) trace in (23a) but not in (22a). Assuming that the presence of such a trace disrupts (syntactic or semantic) identity between antecedent and ellipsis site, it follows that VPE is licensed in (22a), but not in (23a), and the

argument favoring the syntactic theory disappears. While Potsdam does not offer an explanation for the identity disrupting behavior of Xº-traces – and note that XP-traces *are* allowed in ellipsis antecedents, see (8b) – the data in (24) do suggest that he is on the right track: when the antecedent is headed by a non-finite – i.e., non-moved – auxiliary, morphological mismatches are (much more) acceptable:

(24) a. Of course, if we had wanted to ___, we could have been great. But we didn't need to __.
      b. Of course, if we had wanted to be great, we could have been great. But we didn't need to be great.

It seems fair to say, then, that at the current state of research, the relevance of the data in (22)–(24) for the recoverability question remains unsure.

The second set of mismatch data concerns one of the – if not *the* – prototypical cases of form variation without (truth-conditional) semantic import: active–passive mismatches. As was explicitly and extensively discussed by Hardt (1993) (though see also Sag 1976, Dalrymple *et al.* 1991, Fiengo and May 1994, Johnson 2001, Kehler 2002, Frazier 2008, Arregui *et al.* 2006, Kim *et al.* 2011, and Merchant 2007, 2008a), the fact that such mismatches are allowed – under certain yet to be fully understood circumstances – constitutes prima facie strong evidence for a semantic identity account of ellipsis.

(25) a. passive antecedent + active ellipsis site
        This problem was to have been looked into, but obviously nobody did __.
      b. active antecedent + passive ellipsis site
        The janitor should remove the trash whenever it is apparent that it needs to be __.

In both of these examples, the ellipsis site differs syntactically but not semantically from its antecedent, strongly suggesting that it is semantics rather than syntax that regulates identity under ellipsis. As was pointed out by Merchant (2007), however, this clear picture dissolves as soon as the data in (25) are contrasted with those in (26).

(26) a. passive antecedent + active ellipsis site
        *Joe was murdered, but we don't know who.
      b. active antecedent + passive ellipsis site
        *Someone murdered Joe, but we don't know who by.

What these examples show is that clausal ellipsis – in this case sluicing, see below (Section 19.4) for discussion – does not allow for active–passive mismatches. From the point of view of a semantic identity theory, either active and passive are semantically identical or they are not. If the former, then both (25) and (26) should be as good as (25); if the latter, they should both be as bad as (26). The fact that they display mixed behavior is very

hard to account for from a semantic perspective. Syntactically, however, the contrast can be made sense of: suppose the functional head responsible for active and passive voice (Voice° in Merchant's analysis) is included in a clausal ellipsis site, but sits outside of a VPE-site. That means that in the case of VPE, antecedent and ellipsis site are syntactically identical (i.e., neither active nor passive), while in the case of sluicing they are not, thus accounting for the contrast between (25) and (26). Although Merchant's analysis is not uncontested (see in particular Arregui *et al.* 2006, Frazier 2008 for an alternative account in terms of processing), it constitutes one of the strongest arguments for syntactic identity to date.[10]

A third type of mismatch was first noted by Bresnan (1971a) and Sag (1976:157ff.) and has recently been discussed by Merchant (to appear b). It concerns the behavior of negative polarity items (see Chapter 21) under ellipsis (examples taken from Merchant to appear b):

(27) John didn't see anyone, but Mary did.
      a. . . . but Mary did see someone.
      b. *. . . but Mary did see anyone.
      c. $\exists x.see(Mary, x)$

(28) John saw someone, but Mary didn't.
      a. $\neq$ . . . but Mary didn't see someone.
      b. $=$ . . . but Mary didn't see anyone.
      c. $\neg\exists x.see(Mary, x)$

While one can easily argue that the semantics of *someone* and *anyone* are identical – both of them corresponding to an existentially bound variable – it is less clear if their syntax is as well. To the extent that it is not, these data constitute an argument for a semantic identity theory of ellipsis. Merchant to appear b illustrates what the syntax of polarity items (and determiners more generally) would have to look like in order for the data in (27)/28) to be amenable to a syntactic identity account. In particular, the determiner-part of *someone/anyone* (i.e., *some/any*) has to be syntactically underspecified for polarity (both of them receiving the following feature specification: D[Indef; Pol:__]). As a result, they are syntactically identical and can be interchanged under ellipsis.[11] The head responsible for differentiating *some* from *any* (Σ° in Merchant's account) is situated outside of the ellipsis site and hence does not enter into the recoverability issue that is at stake here.[12] While this account of polarity arguably has a high degree of abstractness, there are more ellipsis data suggesting that a lexical decomposition of determiners is sometimes required (Johnson 2001:(107), cited in Merchant to appear b, see also Jacobs 1980, Giannakidou 2000, Potts 2000 for related discussion):

(29) I could find no solution, but Holly might.
      a. $\neq$ . . . but Holly might find no solution.
      b. $=$ . . . but Holly might find a solution.

Given that VPE is allowed here, the determiners *a* and *no* have to be identical. This would follow if both of them enter the derivation unspecified for polarity, with a higher head valuing their polarity feature. Syntactic identity would then be calculated over the pre-valued representation. Summing up, polarity mismatches under ellipsis can either be seen as an argument in favor of the semantic identity theory of ellipsis, or they offer a unique window on the sub-word syntax of polarity items.[13,14]

The fourth and final type of mismatch under discussion here concerns pronoun/name-equivalences under ellipsis dubbed 'vehicle change' by Fiengo and May (1994). An example is given in (30).

(30)   a. They arrested Alex$_i$, even though he$_i$ thought they wouldn't __.
         b. *They arrested Alex$_i$, even though he$_i$ thought they wouldn't arrest Alex$_i$.

If the VP-ellipsis site in (30a) were completely identical to its antecedent, this example would violate principle C of the Binding Theory just as the non-elliptical (30b) does. The fact that it is well-formed, then, suggests that the proper name *Alex* has 'transformed' – hence the metaphor 'vehicle change' – into the pronoun *he*, thus avoiding the binding violation. The basic premise of these data is the same as that of the polarity facts in (27)/(28): while one can easily argue that the denotation of *Alex* and *he* is identical under the relevant assignment function, syntactically there seems to be a substantial difference between these two DPs. Even Merchant's (to appear b) syntactic account of polarity items introduced above would be to little or no avail here. Specifically, one is hard-pressed to find a common, unspecified syntactic core for *he* and *Alex* such that an Agree- or checking-relation with a higher functional head can turn the first into a pronoun and the second into a proper name. As such, vehicle change presents a strong argument for a semantic identity theory of ellipsis resolution.

All in all, the jury is still out on which module of the grammar is responsible for measuring the identity between a (predicate) ellipsis site and its antecedent. Both positions have their advocates, arguments, and counterarguments, and this promises to be a fruitful area of research for many years to come.[15]

19.2.4   Licensing and cross-linguistic variation in predicate ellipsis
Recoverability is only one side of the ellipsis coin: even if they are perfectly (syntactically and semantically) recoverable, only VPs in specific syntactic environments can be elided. Consider a relevant contrast in (31).

(31)   a. *Moby Dick* was being discussed and *War and Peace* was being __ too.
         b. *Moby Dick* was discussed and *War and Peace* was __ too.

In these examples the same VP is targeted by deletion. Moreover, this VP is recoverable, as there is a salient antecedent in the first clause that is entirely (syntactically and semantically) identical to the ellipsis site, and yet VP-ellipsis is only allowed in the complement of *was*, not in that of *was being*. This issue is known as the licensing question, and contrary to the puzzles discussed above it has received only a limited amount of attention in the literature; while most of the early studies on VPE noted that the construction was limited to specific syntactic contexts, hardly of them any addressed the question of why that should be the case. The most significant contribution in this area is Lobeck (1995), but licensing is also addressed in Zagona (1982, 1988a), Johnson (2001), Merchant (2001), van Craenenbroeck 2010a, Aelbrecht (2010) and Thoms (2010). Lobeck argues that ellipsis sites are empty pronominals (*pro*) that have to be head-governed (essentially following the ECP). In the case of VP-ellipsis, the relevant head governor is T°. This means that we find VPE whenever T° is lexically filled, i.e., in the complement of modals, infinitival *to*, and the auxiliaries *have*, *be*, and *do*:

(32) a. Rudy can't jitterbug, but Debby can __.
      b. Rudy can't jitterbug, but he wants to __.
      c. Rudy hasn't jitterbugged, but Debby has __.
      d. Rudy is jitterbugging, but Debby isn't __.
      e. Rudy likes jitterbugging, but Debby doesn't __

Moreover, whenever a lexical verb raises to T°, it should license ellipsis as well. This is borne out by possessive *have* in British English ((33), data from Thoms 2010), and by the cases of V-stranding VPE discussed in Section 19.2.3.

(33) a. I haven't a copy of *Lolita*.
                          (OK in British English, * in American English)
      b. Rab has a copy of *Lolita* and Morag has __ too.
                          (OK in British English, * in American English)

As (33a) shows, British English differs from American English in allowing possessive *have* to raise across negation (to T°), while the b-example illustrates that verb raising of this type correlates with VPE-licensing. On closer inspection, however, this simple picture breaks down in a number of cases. First of all, negation can also license VPE (data from Potsdam 1997 and Johnson 2001):

(34) a. John's happy, but I'm not __.[16]
      b. I consider Bill intelligent and I consider Sally not __.
      c. Ted hoped to vacation in Liberia but his agent recommended that
         he not __.

Second, infinitival VPE (i.e., VPE licensed by infinitival *to*) is subject to an additional set of restrictions. Roughly put, it has to be 'close enough' to a higher lexical head (a requirement both Zagona 1988a and Lobeck 1995 implement in terms of head movement of *to* to some higher position). The data in (35)–(37) show the lack of infinitival VPE in adjunct clauses, subject clauses and (certain) infinitival *wh*-questions (all examples are from Johnson 2001).[17]

(35)   Mag Wildwood came to read Fred's story and I also came to __.

(36)   a. You shouldn't play with rifles, because to __ is dangerous.
        b. You shouldn't play with rifles, because it's dangerous to __.

(37)   a. Mary was told to bring something to the party, so she asked Sue what to __.
        b. John wants to go on vacation, but he doesn't know when to __.

Third (and as was already illustrated in (32a)), VPE cannot be governed by an auxiliary in the *ing*-form (Johnson 2001):[18]

(38)   Doc Golightly is being discussed and Sally is being __ too.

Fourth and finally, some but not all epistemic modals can license VPE (the relevant distinction being necessity vs. possibility, cf. Gergel 2009):

(39)   a. Mary must be a successful student, and they say Frances must __ too.[19]
        b. ? Mary must be a successful student, and they say Frances may __ too.

If the epistemic necessity modal is not adjacent to the ellipsis site, however, the contrast with possibility modals disappears and ellipsis licensing is allowed:

(40)   A: I wonder if Mary has already talked to that employee. B: She must have __ because his desk is empty.

All in all, then, the licensing contexts of VPE in English constitute a fairly diversified group, and there is no unified account of them to date. One that comes reasonably close is that of Thoms (2010). He proposes that ellipsis is a side-effect of copy deletion in movement chains. In a nutshell, if for whatever reason the lower copy in a movement chain fails to be deleted, ellipsis of the sister of the higher copy can serve as a Last Resort rescue strategy in order to ensure that the structure can be linearized. This means that ellipsis is dependent on movement, i.e., every ellipsis site has been moved out of, or to put it in terms of licensing: ellipsis is licensed by movement.[20] Thoms cogently extends his account to epistemic modals and *ing*-forms (presenting non-movement accounts for both of them) and to negation (which he argues moves to a focus position), but he is forced to set aside infinitival VPE. However, the more fundamental problem with his account (one that

Thoms himself also acknowledges) is that it overgenerates. If ellipsis is contingent on movement, then every movement operation should in principle be able to license ellipsis, contrary to fact. For example, given that in Dutch main verbs raise out of the VP (due to the V2-requirement in this language), we expect to find V-stranding VPE, but we do not:

(41)   * Jan eet appels en ik eet ook __.
        John eats apples and I eat also
        INTENDED: 'John is eating apples and I am too.'

More generally, what the example in (41) shows is that ellipsis licensing is directly related to cross-linguistic variation; a head licensing ellipsis in one language might not do so in another. For example, the different types of predicate ellipsis introduced at the beginning of this section are all assumed to have different licensors. Modal Complement Ellipsis in Dutch, German, French, Italian, and Spanish is only licensed in the complement of root modals (Aelbrecht 2010, Dagnac 2010; the Dutch example in (42c) is from Aelbrecht 2010):

(42)   a. Jan wil helpen, maar hij kan niet.
            John want help but he can not
            'John wants to help, but he can't.'
       b. * John heeft geholpen, maar Marie heeft niet.
            John has helped but Mary has not
            INTENDED: 'John has helped, but Mary hasn't.'
       c. * Jan zou liever niet te laat komen, maar hij wil wel eens.
            John would rather not too late come but he wants aff prt
            INTENDED: 'John would rather not be too late, but it sometimes happens that he is.'

Similarly, Aelbrecht (2010) argues that British English *do* is licensed by the auxiliary *do* rather than by T° or modals (though see Baltin 2010 for an opposing view). It is important to realize that a difference in ellipsis licensor frequently means a difference in size of the ellipsis site. For instance, British English *do* is argued to involve VP-deletion (Aelbrecht 2010, Baltin 2010), VP-ellipsis deletion of *v*P (Merchant 2007), pseudogapping deletion of VoiceP (Merchant 2008a) and MCE deletion of an even bigger portion of the clausal structure (Aelbrecht 2010). While these differences are sometimes put to good analytical use (see above on the Aelbrecht/Baltin analysis of the limited extraction possibilities in MCE and BE *do*), one cannot help but feel that a generalization is being missed by treating all these cases of predicate ellipsis separately. In this respect we agree with Johnson (2008:3) that the field of ellipsis still bears too many signs of the construction-specific days of generative grammar; a unified account of the four types of predicate ellipsis discussed here would be a first step towards rectifying that situation.

19.3   Clausal ellipsis

19.3.1   The main types of clausal ellipsis

Clausal ellipsis can be defined as a subspecies of ellipsis whereby an entire clause is missing, including the canonical subject position and the agreement domain, but often to the exclusion of one or more clause-internal constituents. As we will see in this section, those constituents are usually argued to move to the left periphery of the clause prior to deletion. Clausal ellipsis comprises at least the following subtypes:

(43)   a. Ed killed someone, but I don't know who.   (sluicing)

b. Ed is eating, but I don't know what.   (sprouting)

c. Ed gave a lecture, but I don't know what about.   (swiping)

d. Jef eid iemand gezien, mo ik weet nie wou da.   (spading)
Jef has someone seen but I know not who that
'Jef saw someone, but I don't know who.'

e. A: What did you buy? B: A boat.   (fragment answers)

f. John likes sandals and Mary stiletto heels.   (gapping)

g. Ed likes stiletto heels and Maggy too.   (stripping)

h. Ed wanted Bill to help Mary, but he refused.
(null complement anaphora)

As already indicated by the naming convention, the first four constructions on this list form a unit, with the first one, sluicing, as the most basic (and well-known) type. The term sluicing refers to the phenomenon whereby an entire constituent question is missing, except for the *wh*-phrase.[21] It was first discovered (and named) by Ross (1969), and has since been analyzed by van Riemsdijk (1978), Chao (1987), Lobeck (1991), (1995), Chung *et al.* (1995), Romero (1998), Ginzburg and Sag (2000), Lasnik (2001a), Merchant (2001), and Culicover and Jackendoff (2005), among several others. Sprouting is a subtype of sluicing (first discussed in depth by Chung *et al.* 1995, but mentioned in most of the literature on sluicing) whereby the sluiced *wh*-phrase has no overt correlate in the antecedent clause: while in (43a) *who* in the elliptical clause corresponds to *someone* in the antecedent clause, there is no such overt correlate for *what* in (43b). In swiping constructions a *wh*-PP has been sluiced, but the canonical order of preposition and *wh*-phrase (the former preceding the latter: *about what*) has been inverted. Swiping is an acronym (coined by Merchant 2002) for 'Sluiced Wh-word Inversion with Prepositions In Northern Germanic' and it is analyzed by Ross (1969), Rosen (1976), van Riemsdijk (1978), Lobeck (1995), Chung *et al.* (1995), Kim (1997), Culicover (1999), Richards (1997b, 2001), Merchant (2002), Culicover and Jackendoff (2005), Hasegawa

(2007), Hartman and Ai (2007), Hartman (2007), and van Craenenbroeck (2010a). Finally, spading is a type of sluicing whereby the sluiced *wh*-phrase is followed by a demonstrative pronoun. It is exemplified here for dialectal Dutch, but has been attested in Frisian, French, Czech, Northern Norwegian, Serbo-Croatian, and certain dialects of German. Spading is briefly noted for Frisian by Hoekstra (1993) and discussed in depth by van Craenenbroeck 2010a, who also coined the name (which is an acronym for 'Sluicing Plus A Demonstrative In Non-insular Germanic').

Fragment answers are subsentential XPs with the same propositional content and assertoric force as utterances of fully sentential syntactic structures. The literature on this topic is vast and can be roughly divided into two camps. A first set of researchers (Hankamer 1979, Morgan 1973, 1989, Stanley 2000, Reich 2002, 2003, Brunetti 2003a, 2003b, Merchant 2004, Valmala 2007, Ludlow 2005) argue that fragments are derived from a fully clausal source via ellipsis, while others (in particular van Riemsdijk 1978, Hausser and Zaefferer 1978, Yanofsky 1978, Carston 2002, Ginzburg and Sag 2000, Jackendoff 2002, Barton 1990, Stainton 1995, 1997, 1998, 2005, 2006a, 2006b) attempt to derive the properties of fragments without appealing to ellipsis.

Gapping and stripping are often considered to be two of a kind: both of them have to be directly coordinated with their antecedent and they seem to differ only in the number of constituents remaining after ellipsis: one (accompanied by a polarity element) in the case of stripping and more than one in the case of gapping.[22,23] Once again, the literature on this topic is quite extensive (Sag 1976, Neijt 1979, Pesetsky 1982b, Kim 1998, Depiante 2000, Hoji 1987, 1990, Fukaya and Hoji 1999, Hoji and Fukaya 2001, Fukaya 2002, 2007, Chao 1987, Reinhart 1983, 1991, McCawley 1991, Coppock 2001, Hankamer 1979, Hartmann 2000, Hudson 1976, Jackendoff 1971, Lin 2002, Ross 1970, Steedman 1990, Depiante 2000, Ackema and Szendrői 2002, Johnson 2009), with some more recent work (see in particular Johnson 2009) arguing that gapping does not involve ellipsis at all, but rather is a subspecies of across-the-board movement.

Null complement anaphora (NCA) is the odd man out in this list in that it involves the deletion of an entire clausal complement without there being any 'survivors,' i.e., clause-internal XPs that surface next to the ellipsis site. As pointed out above (in Section 19.2.2.2), the elliptical constituent in cases of NCA is commonly considered to contain no internal syntactic structure, and as such is assumed to be more akin to null pronominals (or deep anaphora in Hankamer and Sag's 1976 terminology).[24] For discussion of NCA, see Shopen (1972, 1973), Hankamer and Sag (1976), Grimshaw (1979), Saeboe (1996), and Depiante (2000).

Space limitations prevent us from discussing all the types of clausal ellipsis listed in (43) in detail. We will focus on sluicing (and its subtypes) and fragment answers in the remainder of this section. The logical structure of the section is the same as that of the previous two: we first present evidence in

favor of the hypothesis that ellipsis sites contain unpronounced syntactic structure and then focus on recoverability and licensing.[25]

19.3.2   Clausal ellipsis as movement + deletion

Just as was the case with predicate ellipsis, extraction out of clausal ellipsis sites counts as strong evidence in favor of postulating an abstract syntactic structure for such constructions, the idea being that this structure has to be present in order to host the foot of the movement chain. When it comes to the different types of movement, however, differences begin to emerge between predicate and clausal ellipsis. First of all (and unsurprisingly), A-movement out of clausal ellipsis sites is unattested. Given that the landing-site of such A-movement is contained inside the ellipsis site, any movement beyond that position would not be A-movement. The second difference, however, is less obvious: it turns out that there are no known cases of head movement out of clausal ellipsis sites. Consider in this respect the sluicing data in (44).

(44)   A: John has invited someone from his office.
       B: Really? Who (*has)?

(45) $[_{CP}$ Who $[_{C'}$ has $[_{TP}$ he t_{has} invited t_{who}? $]]]$

Under the – fairly standard, cf. Merchant (2001) for discussion – assumption that sluicing involves TP-deletion, the perfective auxiliary *has* should raise out of the ellipsis site and occur to the right of the sluiced *wh*-phrase, contrary to fact. It thus looks like head movement is being bled by ellipsis.[26] A particularly striking case in this respect involves clausal ellipsis in *yes/no*-questions in Hungarian (van Craenenbroeck and Lipták 2008). As shown in (46), in embedded *yes/no*-questions the finite verb obligatorily bears the interrogative suffix -*e*; this suffix cannot attach to any constituent other than the verb (see (47), with -*e* attached to the preverbal focus *János*), which van Craenenbroeck and Lipták take to be an indication that the verb undergoes head movement to the interrogative head hosting the suffix.

(46)   Kiváncsi vagyok, hogy JÁNOS ment-**e** el.
      curious I.am COMP János went-**Q** PV
      'I wonder if it was János who left.'

(47)   * Kiváncsi vagyok, hogy JÁNOS-**e** ment el.
      curious I.am COMP János-**Q** went PV
      'I wonder if it was János who left.'

Under ellipsis, however, the *e*-suffix *can* attach to a preverbal focus; in fact, this is the only option in this context:

(48)   János meghívott egy lányt, de   nem tudom hogy ANNÁT*(-e).
      John invited a   girl but   not I.   know that Anna-Q
      'John invited a girl, but I don't know if it was Anna.'

Van Craenenbroeck and Lipták take this to mean that while the inter-rogative head hosting the *e*-suffix is outside of the ellipsis site and hence remains overt, the movement operation combining the finite verb with this suffix has been bled by ellipsis. The interaction between head movement and ellipsis has sparked some discussion in the literature (see Merchant 2001:62–74, Lasnik 1999b, 1999c, 2001a, Boeckx and Stjepanovic 2001, Baltin 2002, van Craenenbroeck and Lipták 2008, Schoorlemmer and Temmerman 2010, Thoms 2010), and though some of these papers focus on the intriguing discrepancy between predicate ellipsis (where in the case of V-stranding VPE head movement out of an ellipsis site is fine, see above) and clausal ellipsis, a unified account of all these cases is still lacking. As a result, the interaction between head movement and clausal ellipsis does not pro-vide any conclusive evidence for postulating unpronounced syntactic structure.

As far as A′-movement is concerned, however, things are different. As pointed out above, one of the possible ways of analyzing clausal ellipsis with one or more XP-remnants is by assuming that those XPs have moved into the left periphery of the clause prior to the ellipsis process. To the extent that such an account is successful, all the subspecies listed in (43) – with the exception of NCA – bear witness to the abstractness of syntax in elliptical constructions. In order for this line of reasoning to go through, however, the postulated movement operations would have to bear the hallmarks of regular, non-elliptical A′-movement. One such characteristic is locality. As it turns out, fragment answers (49a), sprouting (49b), contrast sluicing (49c), and adjunct sluicing (49d) are indeed sensitive to island restrictions (data in (49a–c) from Merchant 2009a):[27]

(49)   a. A: Did each candidate$_2$ agree on who will ask him$_2$ about TAXES (at tonight's debate)?
           B: *No, about FOREIGN POLICY.
       b. Tony sent Mo a picture that he painted, but it is not clear with what.
           = <Tony sent him the picture t$_{\text{with what}}$>
           ≠ <Tony sent him a picture [that he painted t$_{\text{with what}}$]>
       c. She knows a guy who has five dogs, but I don't know how many cats.
           = <he [=the guy who has the five dogs] has t$_{\text{how many cats}}$>
           ≠ <she knows a guy who has t$_{\text{how many cats}}$]>
       d. They were looking for a man who could solve the problem in a certain way, but I don't know how.
           = <they were looking for a man t$_{\text{how}}$>
           ≠ <they were looking for a man [who could solve the problem t$_{\text{how}}$]>

The fact that these familiar locality restrictions show up in ellipsis contexts constitutes very strong evidence for a movement+deletion-analysis of clausal ellipsis and hence for the existence of unpronounced syntactic structure.

This important conclusion is sometimes overshadowed by the (admittedly puzzling) fact that sluicing with indefinite correlates is *not* sensitive to islands. Some representative examples are given in (50).

(50)   a. They want to hire someone who speaks a Balkan language, but I don't remember which.
       b. Every linguist$_1$ argued with a philosopher who took issue with one of his$_1$ claims, but I can't remember which one of his$_1$ claims.

Data such as these have received a fair amount of attention in the literature (Ross 1969, Chung *et al.* 1995, Merchant 2001, 2004, 2006, Fox and Lasnik 2003, Culicover and Jackendoff 2005, Temmerman 2010), with some authors arguing against a movement account (and in some cases also against the existence of abstract syntactic structure), while others have taken these data as an indication that island violations are to be situated in the PF-component (and as a result, they can be undone by not pronouncing the violation; see also Chapter 18, note 7).[28] That said, a full account of all relevant cases of island (in)sensitivity is still lacking.

Aside from locality, the second main strand of argumentation in favor of unpronounced syntactic structure inside ellipsis sites comes from connectivity effects between the extracted remnant and the postulated elided structure. We discuss three types of connectivity here: preposition stranding, case matching, and binding (for additional arguments, see in particular Merchant 2004 and Agüero-Bautista 2007). As for preposition stranding, Merchant (2001) first observed that there is a close correlation between elliptical and non-elliptical syntax in this respect:

(51)   Preposition Stranding Generalization (PSG)
       A language *L* will allow preposition stranding under sluicing iff *L* allows preposition stranding under regular *wh*-movement.

In order to see this generalization in action, consider the data in (52)–(55). The second example shows that English is a language that allows preposition stranding under regular, overt *wh*-movement. Similarly, in sluicing (see (52)), when the correlate of the sluiced *wh*-phrase is a PP (in this case *with someone*), that *wh*-phrase can either surface as a PP or as a DP. In the latter case, it has stranded its preposition inside the ellipsis site in a manner completely parallel to the overt movement operation in (53). The Greek data in (54)–(55) on the other hand, display the opposite pattern: Greek allows preposition stranding neither in overt nor in elliptical syntax.

(52) Peter was talking with someone, but I don't know (with) who.

(53) Who was Peter talking with?

(54) I Anna milise me kapjon, alla dhe ksero *(me) pjon.
the Anna spoke with someone but not I.know with who
'Anna spoke with someone, but I don't know with who.'

(55) *Pjon milise me?
who she.spoke with
INTENDED: 'Who did she speak with?' (Greek; Merchant 2001:94)

Merchant shows that this two-way correlation holds in twenty-five languages (seven of which allow preposition stranding).[29] Under the assumption that ellipsis sites contain no internal syntax, such a correlation would be coincidental and unexpected. As such, the PSG represents a strong argument in favor of the analysis of sluicing under discussion here.

The second type of connectivity effect was already observed by Ross (1969), but is further worked out and elaborated upon by Merchant (2001, 2004). It concerns the fact that in languages with morphological case marking, sluiced *wh*-phrases bear the exact same case that they would in non-elliptical *wh*-questions (compare (56a) with (56b)). Under the assumption that this structure is also present (but remains unpronounced) in sluicing, this correlation follows naturally. In the absence of such abstract structure, however, this case matching requires additional theoretical machinery (see, e.g., Ginzburg and Sag 2000, Culicover and Jackendoff 2005, Progovac *et al.* 2006).

(56) a. Er will jemandem schmeicheln, aber sie wissen nicht, {*wer/
*wen/ wem}.
he wants someone.DAT flatter but they know not who.NOM
who.ACC who.DAT
'He wants to flatter someone, but they don't know who.'
b. Er will jemandem schmeicheln, aber sie wissen nicht, {*wer/
*wen/ wem}
he wants someone.DAT flatter but they know not who.NOM
who.ACC who.DAT er smeicheln will.
he flatter wants
'He wants to flatter someone, but they don't know who he wants
to flatter.'

Third, both sluiced *wh*-phrases and fragment answers show binding connectivity with material inside the elliptical clause. Some representative examples are given below.

(57) a. Every professor$_i$ wanted to talk about one of his$_i$ books, but
         I don't remember
         which one of his$_i$ books.
      b. A: What does every professor$_i$ want to talk about?
         B: One of his$_i$ books.

In both of these examples the pronoun *his* in the ellipsis remnant can acquire a bound variable reading, with the DP *every professor* as the binder. Under the standard assumption that such binding requires c-command at one stage of the derivation, and given that no such relation is established between the pronoun and the overt DP *every professor* in the antecedent, variable binding must take place inside (the unpronounced syntactic structure of) the ellipsis site.

Summing up, even though the absence of head movement out of clausal ellipsis sites and the island insensitivity of certain types of sluicing are puzzling from the point of view of an abstract syntax analysis of ellipsis, there is ample evidence from locality and connectivity suggesting that this abstract structure nonetheless exists. We now turn to the recoverability condition on this unpronounced structure.

19.3.3 Recoverability: clefts and no new words

The question of whether the identity relation between an ellipsis site and its antecedent is syntactic or semantic in nature once again hinges on the type of discrepancies one finds between the two. Some of these mismatches have already been discussed and/or are identical to those found for predicate ellipsis. For example, the fact that no active–passive mismatches are found in sluicing (see above, example (26)) constitutes prima facie evidence for a syntactic identity requirement (though see the discussion in Section 19.2.3 for a more nuanced view). Similarly, vehicle change and category mismatches are attested in clausal ellipsis, just like they are in predicate ellipsis. At the same time, however, certain types of mismatches are specific to clausal ellipsis. In part this is simply related to the fact that the ellipsis site is bigger, and as a result, there are more elements that can diverge. For instance, a sluicing site can differ from its antecedent in finiteness (data from Merchant 2001):

(58) a. Decorating for the holidays is easy if you know how.
         = how <to decorate for the holidays>
         ≠ *how <decorating for the holidays>
      b. I'll fix the car if you tell me how.
         = how <to fix the car>
         ≠ how <I'll fix the car>
      c. I remember meeting him, but I don't remember when.
         = when <I met him>
         ≠ *when <meeting him>

In all of these cases there is a clear syntactic difference between the structure of the antecedent and that of the ellipsis site, but semantically they seem to be completely parallel. As such, discrepancies like these constitute evidence against a syntactic identity account for ellipsis.

Another type of mismatch that is specific to clausal ellipsis concerns sprouting. Consider the data in (59).

(59) a. She was eating, but I don't know what.
      b. She solved the puzzle, but I don't know where/when/how.
      c. She finished her homework, but I don't know with whose help.

At first sight, the antecedent clause and the sluiced clause are not syntactically identical in (59a). In particular, while the latter contains a trace/copy of the moved *wh*-phrase *what* in object position, the former features the intransitive use of the verb *eat*. Semantically, however, the two clauses are equivalent: there is a mutual entailment relation between *she was eating* and *she was eating something*. Just as was the case with the polarity item mismatches in Section 19.2.3, we can proceed in two ways at this point: either we take sprouting to favor the semantic theory, or we refine the syntax such that ellipsis site and antecedent become syntactically isomorphic. In this particular case, what this would mean is that implicit arguments such as the understood object of *eat* have to be structurally represented. While this might seem like a small (yet not uncontroversial) price to pay, example (59b) suggests that not only arguments, but also null adjuncts have to have a syntactic representation. That is, every clause comes with syntactically represented place, time, and manner variables.[30] To the extent that one is not willing to go down that road, the data in (59a–b) support the semantic theory of ellipsis resolution. However, (59c) shows that this theory is not without its problems either: given that there is no obvious semantic equivalence between finishing one's homework and finishing one's homework with someone's help (the former not entailing the latter), the semantic theory would wrongly predict sluicing not to be an option here. Whether or not the syntactic theory would fare any better depends on whether the manner variable in the antecedent can count as syntactically identical to the trace of *with whose help* in the ellipsis site. At any rate, it is clear that sprouting poses non-trivial problems for the recoverability theory of ellipsis.

As Chung 2006 has pointed out, these problems are worsened when one considers the absence of preposition stranding under sprouting. The relevant data are in (60) and (61).

(60) a. *They're jealous, but it is unclear who.
      b. *Joe was murdered, but we don't know who.
      c. *Last night he was very afraid, but he couldn't tell us what.

(61) a. They're jealous, but it is unclear of who.
      b. Joe was murdered, but we don't know by who.
      c. Last night he was very afraid, but he couldn't tell us of what.

As the examples in (61) show, it is perfectly possible to sprout a
wh-PP. Moreover, as was discussed in the previous section, English is a
language that allows preposition stranding under sluicing (see (52)
and surrounding text). When these two are combined, however, as
in (60), sharp ungrammaticality ensues, or in the words of Chung
2006:82, languages "allow a preposition to be stranded in (the elided
IP of) sluicing, *as long as the remnant has an overt correlate in the antecedent
IP*" (original italics). Let us consider what this means for semantic and
syntactic identity theories of ellipsis. Note that the prepositions in
(60)–(61) are of a purely grammatical nature, i.e., they make no semantic
contribution to the sentence. Hence, stranding them inside the ellipsis
site should not affect the semantic identity relation between the ellipsis
and its antecedent, and a semantic theory would wrongly predict the
examples in (60) to be as good as those in (61). However, the same
holds for the syntactic approach: in order to accommodate the data in
(61) this theory has to allow for implicit PP-arguments to be structurally
represented in the antecedent, but that same mechanism would
ensure syntactic isomorphism between ellipsis site and antecedent in
(60) as well. In short, the contrast between (60) and (61) can be captured
straightforwardly by neither the semantic nor the syntactic recoverability
theory of ellipsis. What Chung proposes is that these facts should be
handled by a(n additional)[31] lexical requirement, which she phrases as
follows:

(62) Every lexical item in the numeration of the sluice that ends up (only)
       in the elided IP must be identical to an item in the numeration of the
       antecedent CP.

In order words, an ellipsis site cannot contain any 'new' words, words
that are not already present in the antecedent. As far as we know, this
is the only compelling case where a lexical requirement on ellipsis
has been proposed. How it should be integrated into the syntactic
and semantic theories discussed elsewhere in this chapter is an open
question.
    The final type of mismatch we focus on here concerns the use of clefts or
copular clauses as the underlying structure for sluicing – sometimes
incorrectly referred to as pseudosluicing; see note. 34 for terminological
clarification. Consider again the basic spading example in (43d) (repeated
below).

(63)   Jef eid iemand gezien, mo ik weet nie wou da.
       Jef has someone seen but I know not who that
       'Jef saw someone, but I don't know who.'

Van Craenenbroeck (2010a) argues at length that the example in (63)
derives from the cleft in (64) rather than from the regular *wh*-question
in (65).

(64) Jef eid iemand gezien, mo ik weet nie wou da da was da Jef
      gezien eit.
      Jef has someone seen but I know not who that that was that Jef
      seen has
      'Jef saw someone, but I don't know who it was that he saw.'

(65) Jef eid iemand gezien, mo ik weet nie wou da Jef gezien eit.
      Jef has someone seen but I know not who that Jef seen has
      'Jef saw someone, but I don't know who Jef saw.'

The evidence in support of this claim comes from a series of empirical
correspondences between spading and clefts, which set them apart from
regular *wh*-questions. Consider for example the data in (66)–(68):

(66) A: Jef ei   nie alliejn Lewie gezien. B: Nieje? Wou   nog?
          Jeff has   not just   Louis seen   no   who else
      'A: Jeff hasn't just seen Louis. B: No? Who else?'

(67) *Wou <nog> was da   <nog> da   Jef gezien ou?
       who else   was thatDEM   else   thatC Jeff seen   had

(68) A: Jef ei   nie alliejn Lewie gezien. B:* Nieje? Wou <nog>
          da   <nog>?
          Jeff has not just   Louis seen   no   who else
          thatDEM else

While sluiced *wh*-phrases can be modified by *nog* 'else' (66), such modifi-
cation is disallowed both in clefts (67) and in spading (68). Moreover, the
same data pattern emerges with respect to case marking, modification by
negation and affirmation, multiple *wh*, non-overt antecedents, and exhaus-
tivity. All of these empirical parallelisms follow straightforwardly under
the assumption that a spaded example such as (63) is the elliptical version
of the cleft in (64). To the extent that this is on the right track, however,
spading poses a substantial problem for the syntactic identity theory of
ellipsis: given that the antecedent clause in (63) does not contain a cleft, it
is not syntactically isomorphic to the ellipsis site in any straightforward
sense – for one, it is monoclausal, while the cleft structure in the ellipsis
site is biclausal). Semantically, however, the two structures are identical
(see van Craenenbroeck 2010a:56–62 for detailed discussion). In short, the
fact that a cleft can be sluiced under identity with a non-cleft structure
provides strong evidence in favor of a semantic recoverability condition on
ellipsis.

Interestingly, clefts have been argued to underlie certain non-spading
variants of sluicing as well. As was already pointed out by Merchant
(2001:100–102), the Preposition Stranding Generalization does not
seem to be equally strong in all languages. In fact, some of them at first
sight present downright counterexamples for the PSG. Spanish is a case in
point:

(69) *¿Qué   chica rubia   ha   hablado Juan con?
     what   girl   blonde   has talked Juan with
     INTENDED: 'What blonde girl did Juan talk to?'

(70) Juan ha hablado con una chica rubia, pero no sé   cuál
     Juan has talked with a   girl blonde but   not know which
     'Juan talked to a blonde girl, but I don't know which.'

While (69) shows that Spanish is a non-preposition stranding language, the second example illustrates that under sluicing preposition stranding does appear to be an option. As such, these data directly contradict the PSG. However, a number of authors have proposed – not just for Spanish, but for similar facts in French, Italian, Polish, Brazilian Portuguese, and English – that what underlies the sluice in (70) is not a regular *wh*-question with concomitant preposition stranding, but rather the cleft (or copular clause) in (71) (see Vicente 2008, Szczegelniak, 2005, 2008, Rodrigues *et al.* 2009, van Craenenbroeck, 2010a:115, 2010b; and see Almeida and Yoshida 2007 and Sag and Nykiel 2008 for an opposing view):

(71) Juan ha hablado com una chica pero no sé   cuál es *pro*.
     Juan has talked with a   girl but not know which is it
     'Juan talked to a girl, but I don't know which girl it was.'

Supporting evidence for this analysis once again comes from empirical parallelisms between clefts or copular clauses on the one hand and P-stranding sluicing on the other. For instance, while a sluiced *wh*-phrase in Spanish can generally be modified by *más* 'else,' this is not possible when a preposition has been stranded (see (72)), which matches the absence of *más*-modification in clefts, shown in (73).

(72) Juan ha hablado con una chica rubia,   pero no sé
      Juan has talked with a   girl blonde but not know
      *(con) qué   chica más.
      with what girl   else
      'Juan talked to a blonde girl, but I don't know to what other girl.'

(73) * Juan ha   hablado con una chica rubia, pero no sé
       Juan has talked   with a girl blonde but not know
       qué chica más es *pro*.
       what girl   else is it
       *'Juan talked to a blonde girl, but I don't know to what other girl it was.'

The relevance of these data for the 'recoverability of deletion' issue is the same as that of spading: apparent PSG-violations in non-preposition stranding languages show that sluicing can elide a cleft or copular

structure in the absence of such a structure in the antecedent, thus lending strong support to semantic identity theories of ellipsis resolution.

Summing up, while some of the antecedent–ellipsis mismatches found in clausal ellipsis are parallel to those attested in predicate ellipsis, others are quite specific. Most notably, sprouting seems to pose problems for both the syntactic and the semantic theory of ellipsis identity (and in favor of a lexical recoverability requirement), while spading and apparent PSG-violations present a strong case against syntactic isomorphism.

19.3.4　Licensing: the *wh*/sluicing-correlation

Lobeck (1995:54–62) and Merchant (2001:54–61) point out that sluicing (in English) is restricted to – i.e., only licensed in – constituent questions. That is, there is no IP-deletion in declaratives (74a), *yes*/*no*-questions (74b), infinitival declaratives (74c), or relatives (74d) (examples from Merchant 2001:56–59).

(74)　a. *It was painted, but it wasn't obvious that __.
　　　b. *The Pentagon leaked that it would close the Presidio, but no-one knew for sure
　　　　 whether/if __.
　　　c. *Sue asked Bill to leave, but for __ would be unexpected.
　　　d. *Somebody stole the car, but they couldn't find the person who __.

Lobeck is an advocate of the so-called proform analysis of ellipsis, i.e., she assumes sluiced clauses contain a null IP-proform that acquires internal syntactic structure by copying in the antecedent clause at LF. What the data pattern in (74) shows, Lobeck argues, is that this IP-proform has to be properly head-governed by a C°-head that is endowed with a strong [+wh]-specification. Merchant on the other hand encodes the distribution of sluicing in a Minimalist, PF-deletion based analysis of this construction. According to him, the sole distinction between an elliptical clause and its non-elliptical counterpart is the presence in the former of a feature, dubbed [E], with the following specifications:

(75)　a. the syntax of [E]: E[$u$wh*,uQ*]
　　　b. the phonology of [E]: Φ_{IP} ø/E __
　　　c. the semantics of [E]: [[E]] = λp : e-GIVEN(p) [p]

Of interest to us here is the requirement in (75a).[32] It represents Merchant's version of the licensing requirement on sluicing, and tries to capture the data pattern in (74) by stating that [E] itself has to check certain syntactic features, in particular [+wh,+Q]. Given that it can only check these features in a local relationship with the C° found in constituent questions, this is the only context where the syntactic requirements of [E] will be met, and accordingly, where sluicing will take place.

The downsides of the Lobeck/Merchant-approach are (a) that it is specific to sluicing, and (b) that it is specific to English(-type languages).[33] In

particular, given that they by definition occur in non-interrogative con-
texts, fragment answers require a different head governor in Lobeck's view
and a different [E]-feature in Merchant's analysis. Moreover, languages in
which the *wh*-phrase does not move all the way up to specCP require an [E]-
feature with a different syntactic feature specification. Consider in this
respect the Hungarian sluicing example in (76).

(76)   János meghívott egy lányt, de   nem tudom   hogy kit.
       John invited   a   girl-A but not   know-1SG that who-A
       'John invited a girl, but I don't know who.'

As is well known, *wh*-phrases in Hungarian target a preverbal focus posi-
tion in the low left periphery (a position typically identified as specFocP;
see É. Kiss 1987 et seq.). The relative position of the complementizer *hogy*
'that' and the sluiced *wh*-phrase *kit* 'who' in (76) suggests that sluicing can
take place from this low focus position as well. That means that in
Hungarian the [E]-feature does not have [+wh,+Q] as its syntactic specifica-
tion, but rather [+Foc]. Van Craenenbroeck and Lipták (2005, 2006, 2009)
pursue this line of reasoning and propose the following generalization:

(77)   **The *wh*/sluicing-correlation**
       The syntactic features that the [E]-feature has to check in a language *L*
       are identical to the strong features a *wh*-phrase has to check in a
       regular constituent question in *L*.

The intuition behind (77) is that the type of clausal ellipsis a language has is
completely determined by the type of *wh*-movement it has. In languages
patterning like English (e.g., Dutch, German, French), *wh*-phrases move all
the way up to specCP to check [+wh,+Q]-features and accordingly, this is
also the feature specification of [E], and sluicing is only found in constitu-
ent questions. In Hungarian-type languages (e.g., Russian, Romanian,
Serbo-Croatian, Bulgarian, Polish), on the other hand, *wh*-phrases only
check a [+Foc]-feature. The [E]-feature inherits this specification, and any
constituent that checks a focus- (or more generally, an operator-)feature is
predicted to license clausal ellipsis. The data in (78)–(80) show that this is
borne out for foci, quantifiers, and *is* 'also, even'-phrases:[34]

(78)   János meghívott valakit   és azt   hiszem, hogy Bélát.
       János pv-invited someone-a and   that-a think   that Bélá-a
       'János invited someone and I think it was Béla whom he invited.'

(79)   Tudtam, hogy János meghívott néhány embert,
       knew   that János pv-invited some   people-a
       de   nem   tudtam, hogy mindenkit.
       but not   knew   that everyone-a
       'I knew that János invited some people, but I didn't know that he
       invited everyone.'

(80)   Tudtam, hogy János meghívott néhány   embert, de   nem
knew   that   János pv-invited some people-a but not
tudtam, hogy Marit   is
knew   that   Mari-a   also
'I knew that János invited some people, but I didn't know that he
invited Mari, too.'

The generalization in (77) thus not only encodes the cross-linguistic differ-ence between English and Hungarian sluicing, it also leads to a unified view on regular, *wh*-sluicing, and the non-interrogative instances of clausal ellipses in (78)–(80). In fact, even within English the *wh*/sluicing-correlation might allow for a unified account of various types of clausal ellipsis. Under the assumption (argued for by den Dikken and Giannakidou 2002 and den Dikken 2003) that *wh*-phrases in English target specCP in embedded ques-tions but specFocP in matrix questions, the generalization in (77) predicts that English should allow non-*wh*-sluicing, but only in matrix contexts. This ties in nicely with the fact that fragment answers cannot be embedded:

(81)   A: What did Ernie buy?
B: a. A banana.
b. *Bert said that a banana.

Although clearly more work needs to be done in order to work out the full cross-linguistic picture (see in this respect also Temmerman 2010), it is fair to say that the research into the cross-linguistic syntax – i.e., licensing – of clausal ellipsis is more detached from its construction-specific roots than predicate ellipsis is.

19.4   Nominal ellipses

In many languages, a head noun or nominal phrase can be missing from a nominal expression. That it or some stand-in for it is nevertheless still present and active in the syntax is apparent from the fact that such missing nouns can still control agreement on all the usual targets for agreement by nouns (adjectives, determiners, verbs, etc.), as in the follow-ing Spanish examples (from Eguren: 2010), where material marked by <> is elided:

(82)   a. Antes bebía   cerveza alemana y ahora solo bebo
before I.drank beer.f.sg German.f.sg and now only I.drink
<cerveza> española.
beer.f.sg Spanish.f.sg
'I used to drink German beer before, and now I only drink
Spanish beer.'

b. Al principio llegaron estudiantes de físicas y luego
    at.the start arrived.3pl students of physics and later
    llegaron <estudiantes> de químicas.
    arrived.3pl students of chemistry
    'At the start students of physics arrived, and later students of
    chemistry arrived.'

It is important to distinguish such nominal ellipses from nominalizations
of adjectives (or numerals, etc.). Some of the typical tests are the following
(from Giannakidou and Stavrou 1999):

(83) Tests for distinguishing nominal ellipsis from nominalizations
      a. Does X need a nominal antecedent, or can it be used out of the
          blue? (Ellipses – unlike nouns – tend to need overt linguistic
          antecedents, though not always.)
      b. Does X form a comparative (or superlative[35])? If yes, then it is
          ellipsis.
      c. Does X have the full range of meanings found in uncontroversially
          adjectival uses? (Nominalizations, like lexical compounds, often
          acquire or are restricted to a subset of the expected range of
          meanings.)
      d. Does X form a plural with plural nominal morphology (where
          this differs from adjectival desinences)? If not, then it is ellipsis.
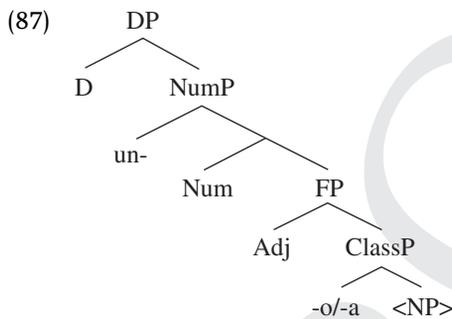
For example, *poor* in English is a nominalization by most of the above
tests: it needs no antecedent, it does not form a comparative, and it
does not have the full range of meanings found when used as a
modifier of nouns. (The last test does not give a meaningful result in this
case, as the nominalization is a collective, which triggers plural agreement
on predicates and cannot be pluralized or used as a predicate itself: **He is
a poor.*)

(84) a. The poor deserve our help.
      b. *If you have money, you should help the poorer (than you).
      c. A: Look at the poor kitty stuck in the tree!
          B: *That's no poor – he lives there.
      d. *The poors are everywhere in this town!

An especially well-studied area of nominal ellipsis comes from the
Romance languages, which show an important pattern of variability
with respect to the kinds of antecedents that can identify nominal
ellipses, and the forms of co-occurring determiners that appear with ellip-
ses. A typical example comes from Spanish, as discussed in Depiante:
(2001), in which a special form of the indefinite determiner appears (the
same one that appears in partitives; see especially Sleeman: 1996 for
discussion):

(85) a. un muchacho lindo
         a guy   good-looking
      b. *uno muchacho lindo

(86) (Viste a algunos muchachos?) (Did you see some guys?)
      a. *Vi a un (lindo).
         I.saw ACC a (good-looking)
      b. Vi a uno (lindo).
      c. uno de los muchachos
         one of the guys

Such facts led Alexiadou and Gengel (2008) to conclude that the nominal ending -*o*/-*a*, normally appearing on the noun (such as *muchach-o*), is an independent head (a classifier) in the syntax. When the noun fails to raise to the head hosting the ending (where it normally hosts the affix), it can exceptionally attach instead to the indefinite determiner, just as was the case for the Hungarian marker -*e* discussed in Section 19.3.2 above:

(87)
```
              DP
            /    \
          D      NumP
          |     /    \
         un-  Num     FP
                     /   \
                   Adj    ClassP
                         /      \
                       -o/-a    <NP>
```

Other researchers (see Kester: 1996 for one example), maintaining traditional lexicalist assumptions about the forms of the articles, propose constraints to regulate the appearance of these exceptional determiners.

19.4.1 Featural identity in nominal ellipsis

One important generalization that seems to emerge from the literature[36] is the surprising fact that some nouns behave like adjectives in predicate position: that is, in predicate positions, number and gender on some (but not all) nominals can vary.

The basic facts were first discussed for Spanish; they are partly reproduced here. Gender on *predicate* nominals may be ignored, but only sometimes: when the nominal takes its gender as a result of agreement with a controller outside the ellipsis site, its value can vary in the pair (as in (88a) from Masullo and Depiante 2004), while if the nominal has a lexically specified (inherent) gender, this is impossible:

(88) a. Juan es un   buen   abogad-o y María también (es un-a
        Juan is a.m.sg good.m.sg lawyer-m.sg and Maria also   (is a-f.sg
        buen-a   abogad-a).
        good-f.sg lawyer-f.sg)
    b. * Juan es un   buen   tío   y   María también (es un-a
        Juan is a.m.sg good.m.sg uncle.m.sg and Maria also   (is a-f.sg
        buen-a tía)
        good-f.sg aunt.f.sg)

A full paradigm is given from Brazilian Portuguese, as discussed in Nunes
and Zocca (2005), Bobaljik and Zocca (2009), and Nunes and Zocca (2010)
(the same facts hold in Greek as well):

(89) a. O   João é médico   e   a   Maria também é. [médica]
        the João is doctor-masc and the Maria also   is doctor-fem
        'João is a doctor and Mary is too.'
    b. A   Maria é médica   e   o   João também é. [médico]
        the Maria is doctor-fem and the João also   is doctor-masc
        'Maria is a doctor and João is too.'

(90) a. ?O Paulo é ator e   a   Fernanda também é. [atriz]
        the Paulo is actor and the Fernanda also   is actress
        'Paulo is an actor and Fernanda is also an actress.'
    b. ??A Fernanda é atriz   e   o   Paulo também é. [ator]
        the Fernanda is actress and the Paulo also   is actor
        'Fernanda is an actress and Paulo is an actor.'

(91) a. *O Drácula é conde e   a   Mina também é. [condessa]
        the Dracula is count and the Mina also   is countess
        'Dracula is a count and Mina is a countess.'
    b. *A   Mina é condessa e   o   Drácula também é. [conde]
        the Mina is countess and the Dracula also   is count
        'Mina is a countess and Dracula is a count.'

These researchers identify the three classes of predicative nouns given in
Table 19.1: *lawyer*-type nouns (allowing gender switches in both direc-
tions), *uncle*-class nouns (allowing gender switches in neither direction),

Table 19.1. Classes of nouns under NP-ellipsis

Class	masc antecedent fem ellipsis	fem antecedent masc ellipsis
Abogado 'lawyer' /médico 'doctor' (m↔f) nouns	yes	yes/?
tio 'uncle' /princess (invariant) nouns	*	*
actress (mf) nouns	yes	*

and *actress*-type nouns (allowing gender switches in only one direction, from masc to fem).

In these languages, the masculine is unmarked by two other tests for gender markedness:

(92) a. as médicas = a group of female doctors only
      b. os médicos = a group of male doctors, or a mixed group

(93) a. Tem um médic-o   na   figura? Tem, a   Maria.
         have a   doctor-masc in-the picture have the Maria
         'Is there a doctor in the picture? Yes, there is Maria.'
      b. Tem uma médic-a   na   figura? #Tem, o   João.
         have a   doctor-fem in.the picture have   the João
         'Is there a doctor-fem in the picture? #Yes, there is João.'

One possibility for accounting for this pattern of data is to claim that certain nouns behave as predicate adjectives when used in predicate positions, whether because they undergo a lexical process that changes their category or because their nominal feature set simply is the same an adjectival one: for a recent example of the latter idea, see Zamparelli (2008) who claims that "nouns that form bare predicates have an impoverished set of features (in particular, no set value for gender), and can be licensed by entering in an agreement relation with the subject of the predication" (p. 101). Zamparelli identifies several classes of nouns that behave this way, and these are the ones that allow for a bare use (without indefinite article), which he calls 'role' nouns: in particular nouns denotings professions, family relations, other relations, compounds with *capo*, and nouns indicating nationality (*Pole, Italian, Swede*), and perhaps adherence (*Muslim, Catholic, atheist*).

(94) a. Carlo è (un) insegnante.
         Carlo is (a)   teacher
      b. Marta è (una) {parente / cugina } di Marco.
         Marta is (a)   relative   cousin   of Marco

Another possibility for analyzing these differences would be to claim that gender is invariant on *tío, tía*, but that on nouns like *abogado, abogada*, the suffix is a classifer morpheme (in predicate use) or a gender marker (in non-predicate use). Though gender and noun class systems have much in common, they are distinct (see Corbett 1991 for some discussion of the differences). In particular, Corbett notes that the same noun may appear with different classifiers yielding different interpretations. For example, Rice (2000), following Poser (1996), argues that what are traditionally called 'genders' in Athabaskan languages are in fact noun class markers; in Carrier, for example, there are three morphemes that appear on the verb that seem to depend on an NP argument: *d-, n-, ø*. But some nouns, such as the word for 'rope,' sometimes do not trigger

the marker (despite the fact that this marker does occur on this verb with other nouns):

(95)　a. tl'u **d**i-n-cha　　　　　　　　　　　　　　(Rice 2000:327)
　　　　　rope **sticklike**-perfective.viewpoint-be.big
　　　　　'The rope is thick.'
　　　b. tl'u n-yiẕ
　　　　　rope perfective.viewpoint-be.long
　　　　　'The rope is long.'

Applying this to the ellipsis cases, then, would lead us to conclude that the 'gender' affixes are systematically ambiguous: adjectival-like agreement suffixes (like noun classifiers in Athabaskan) when in predicates, and true gender elements when in arguments.

　　Finally, Nunes and Zocca (2010) suggest the following analysis, in brief.

(96)　a. Juan is a [abogad-∅:_ and Maria too is an [abogad-ø[:_
　　　b. Juan is a [tí-[ø: and Maria too is a [t-ø[:*fem*]]
　　　c. Brad is an act- and Angelina is too an [Agr act-ø]
　　　　　Angelina is an [Agr act-ø*fem*] Brad is too an [Agr act-]

None of these approaches deal very satisfactorily with the fact that in argument positions, however, only number can vary; gender does not vary in any class of noun. This is illustrated here with data from Spanish from Masullo and Depiante (2004) (the facts appear to be the same in Portuguese and Greek).

(97)　a. Juan visitó a　　su [tío　　　　　|abogado]　y　　Pedro visitó
　　　　　Juan visited ACC his　uncle.m.sg lawyer.m.sg and Pedro visited
　　　　　a　　los　　　　<{ tíos　　| abogados}> suyos.
　　　　　ACC the.m.pl uncle.m.pl lawyer.m.pl his.emph.m.pl
　　　　　'Juan visited his {uncle | lawyer}, and Pedro visited his ({uncles|
　　　　　lawyers}).'
　　　b. * Juan visitó a　　su {tío　　　　　|abogado}　y　　Pedro visitó
　　　　　Juan　visited ACC his　uncle.m.sg lawyer.m.sg and Pedro visited
　　　　　a　　la　　<{tía　　　| abogada}> suya.
　　　　　ACC *the.f.sg aunt.f.sg lawyer.f.sg　his.emph.f.sg*
　　　　　('Juan visited his {uncle | lawyer}, and Pedro visited his ({aunt |
　　　　　lawyer}).')

This ban on gender variation is not about the *form*; gender-variable nouns with invariant form (such as *testigo* 'witness,' *dentista* 'dentist,' *estudiante* 'student,' *poeta* 'poet,' and the like) also fail to alternate between genders in argument position (while still able to alternate in number):

(98)　a. El　　　　　testigo　no　se　presentó a　la　audiencia.
　　　　　the.masc witness not self attended to the hearing
　　　　　'The witness did not attend the hearing.'

   b. La   testigo no se   presentó a la audiencia.
      the.fem witness not self attended to the hearing

                               (Masullo and Depiante 2004)

(99) a. El fiscal   interrogó   al   testigo del   crimen
      the prosecutor interrogated ACC.the.masc.sg witness to.the crime
      y   el juez a   la   testigo del   robo.
      and the judge ACC the.f.sg witness to.the robbery

     b. *El fiscal   interrogó   a   la testigo   del   crimen y
      the prosecutor interrogated ACC the witness.fem to.the crime   an
      el juez interrogó   al   del   robo.
      the judge interrogated ACC.the.masc witness to.the robbery

     c. El fiscal   interrogó   a   los   testigos del   crimen
      the prosecutor interrogated ACC the.m.pl witnesses to.the crime
      y   el juez   interrogó   al   del   robo.
      and the judge interrogated ACC.the.m.sg witness to.the robbery

     d. El fiscal   interrogó   al   testigo del   crimen y
      the prosecutor interrogated ACC.the.m.sg witness to.the crime   and
      el juez interrogó   a   los   del   robo.
      the judge interrogated ACC the.m.pl witnesses to.the robbery

The generalization seems to be the following (see Merchant:2011 for discussion):

(100) **Gender and ellipsis generalization** When gender is variable (as on determiners, clitics, adjectives, and some nominals under certain conditions), it may be ignored under ellipsis. When gender is invariant (on nouns in argument positions, and on some nominals in predicative uses), it may not be ignored under ellipsis.

This echoes Chomsky's (1965:179–180) remarks: "the features added to a formative by agreement transformations are not part of the formative in the same sense as those which are inherent to it." Chomsky formulates his condition on erasure operations (including ellipsis, and relativization) as follows:[37]

(101) a term X of the proper analysis can be used to erase a term Y of the proper analysis just in case the inherent part of the formative X is not distinct from the inherent part of the formative Y.

                                (Chomsky 1965: 182)

As Chomsky notes, this condition unfortunately cannot distinguish cases of erasure under ellipsis (in his case, in comparatives) from erasure of the internal head in relative clauses (where all features must match); he leaves this as an unsolved problem.

19.4.2   The role of agreement in licensing NP-ellipsis

A final topic that has attracted significant interest in the literature on NP-ellipsis is the role of agreement on elements outside the ellipsis site. Both Lobeck: (1995) and especially Kester (1996), among others, look at this question in some detail. As Kester (1996) points out, NP-ellipsis in Dutch is licensed by adjectives with overt morphological agreement (found with common gender nouns in all declensions, and with neuters only in 'definite' environments):

(102)   'indefinite' adjectival declension (after *een* 'a,' *geen* 'no,' etc.)
      a. Ik heb een groen-e   fiets   en jij   een zwart-e.
         I   have a   green-AGR bike.COM and you a   black-AGR
         'I have a green bike and you have a black one.'
      b. *Ik heb   een groen konijn   en jij   een zwart.
         I   have a   green rabbit. NEUT and you a   black.
         'I have a green rabbit and you have a black one.'

(103)   'definite' adjectival declension (after *de/het* 'the,' Ø)
      a. Ik heb de groen-e   fiets   en jij   de zwart-e.
         I   have the green- AGR bike.COM and you the black- AGR
         'I have the green bike and you have the black one.'
      b. Ik heb   het groen-e   konijn   en jij   het zwart-e.
         I   have the green- AGR rabbit. NEUT and you the black- AGR.
         'I have the green rabbit and you have the black one.'

Corver and van Koppen (2009) propose an analysis of these facts that takes the morpheme *-e* not to mark (just) agreement, but focus (see also Gengel 2007, but cf. Eguren 2010 for some objections). They provide three reasons to doubt that *-e* is merely an agreement morpheme. First, they show that in colloquial Dutch, one can sometimes find *-e* on an adjective modifying an elided *neuter* noun after the indefinite article:

(104)   Over konijnen gesproken . . . (Talking about rabbits . . .)
                                      [colloquial Dutch]
      % Ik heb gisteren   een zwart-e _ zien lopen.
        I   have yesterday a   black- **e** see   run
      'I saw a black one running yesterday.'

Second, although an agreeing form can sometimes signal a semantic difference, as with *groot/grote* meaning variously 'great' and 'large' as in (105a), in NP-ellipsis contexts such as (105b), the obligatory *-e* fails to resolve the ambiguity: just in this case, the 'agreeing' form can have either reading.

(105)   a. Ik heb gisteren   een [groot / grot- e] pianist horen spelen.
   [colloquial Dutch]
         I   have yesterday a   big   / big- e   pianist hear   play
         'I heard a great / large pianist play yesterday.'

    b. Ik heb gisteren   een echt grot-e _ horen spelen.

                                 [colloquial Dutch]

     I   have yesterday a   real big-e   hear   play

     'I heard a truly great / large one play yesterday.'

Finally, participles ending in *-en* (a 'strong' ending) used as attributive adjectives do **not** take adjectival inflection, unless accompanied by NP-ellipsis:

(106)   a. het doorbakken(*-**e**) konijn
            the well.baked- **e**   rabbit
       b. het doorbakken*(-**e**) _
            the well-baked-**e**

These differences indicate, according to Corver and van Koppen (2009), that *-e* realizes a Focus head in the nominal domain, yielding the following structure for NP-ellipsis, with an E feature on the Focus head licensing deletion of its complement.

(107)
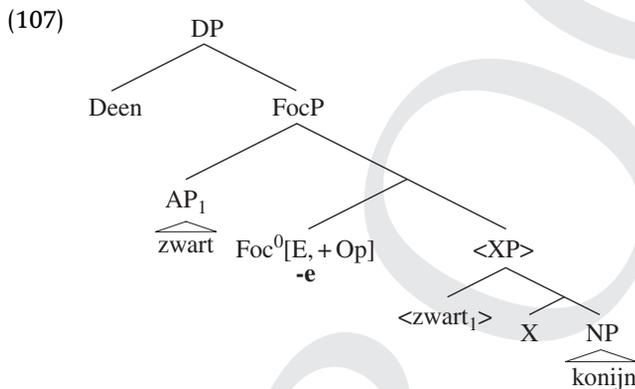
19.4.3   **Concluding remarks**

Just as we have seen for predicate and clausal ellipses, there remain many open questions concerning ellipsis in the nominal domain. Addressing such questions further leads us to consideration of topics such as the nature of pro (which some recent work has suggested does not exist as such, its putative effects reducible instead to ellipsis of pronouns; see Takahashi 2008a, 2008b for a recent approach) and of null nouns and *one*-anaphora (see Panagiotidis 2003a, 2003b, for important recent discussion).

19.5   Conclusion

A major reason ellipsis continues to garner such sustained interest is its location on the frontlines of any debate about the division of labor

between syntax and semantics: as such, the analysis of elliptical phenomena can play a crucial role – pro or con – in arguments about the nature of syntactic representations, the role of syntax in meaning, and in the putative sometime absence of syntax from the mechanisms that generate propositional content even in the narrowest sense.

We have concentrated here on the traditional three kinds of ellipsis studied in generative linguistics – predicate, clausal, and nominal ellipses – but we by no means intend to imply that these phenomena are exhaustive of the domain. Indeed, they are not: there are a number of other phenomena that have an equal claim to the label 'ellipsis' and to our theoretical attention, including a wide variety of other 'missing' elements or other cases where the narrow propositional content appears to be richer than traditional theories of lexical and compositional meaning would seem to derive. The question of whether and, if so, how the analysis of such areas of enriched content and contextualism should influence our understanding of the phenomena discussed in this chapter is just one of the many reasons these domains remain rich and productive areas of investigation.

Notes

1. See the *Etymologiarum, Liber I 'De grammatica',* ch. XXXIV 'De Vitiis', sec. 10: "Eclipsis est defectus dictionis, in quo necessaria verba desunt" ('Ellipsis is an incompletion of speech, in which necessary words are missing').
2. An issue which space considerations prevent us from going into in any detail in this chapter concerns the question of whether ellipsis can only target syntactic constituents. While this is certainly the mainstream position in generative grammar, it is not uncontested. See in particular Hankamer (1979), Wilder (1995), Den Dikken *et al.* (2000), and Ackema and Szendrői (2002) for accounts of non-consituent deletion.
3. One could argue that the very identification of V-stranding VPE also represents a central research issue in this area. In particular, as has been argued in detail by Goldberg (2005), one should take care to distinguish V-stranding VPE from (possibly multiple) null arguments, a task that proves to be especially tricky in languages with extensive pro-drop. See Otani and Whitman (1991), Hui-Ju Grace (1998, 2002), Soowon (1999), and Goldberg (2005: Chapter 2) for discussion.
4. A special case of relativization out of a VPE-site concerns Antecedent Contained Deletion (ACD), illustrated in (i).

   (i) John read every book I did.

   The literature on ACD is too vast for us to do justice to it here. See in particular Bouton (1970), Sag (1976), May 1985, Baltin (1987b), Hornstein (1995), Kennedy (1994, 1997b), Merchant (2000a, 2000b), and Fox (2002) for discussion.

5. Though see Hartman (2010), who argues MaxElide also holds for X°- and A-movement.

6. Note that in each of these examples the focus requirement discussed in (11) and surrounding text is met. This means that the ill-formedness of the data in (12) is not due to a violation of MaxElide.

7. For completeness' sake, we should add that some – in particular, clausal – types of ellipsis have been argued to *repair* island violations as well. We return to such cases in Section 19.3.2 below.

8. The data pattern for BE *do* is more complex than is suggested here. See Baltin (2010) for refinement and discussion.

9. One type of mismatch that we will not discuss is the occurrence of sloppy readings (see Chapter 15) under ellipsis. On the one hand, this phenomenon can be dealt with successfully in both syntactic and semantic identity theories, while on the other (and more importantly), sloppy readings also show up in contexts where no ellipsis is involved (see Hobbs and Kehler (1997 for a quick overview), which suggests that the analysis should not be ellipsis-specific either (a point that was already made very convincingly by Tancredi 1992; see Merchant, to appears for discussion).

10. In the context of this section on predicate ellipsis it is worth noting that pseudogapping and modal complement ellipsis add additional complexity to the debate on active–passive mismatches. The former does not allow such mismatches at all, which Merchant (2008a) takes to be an indication that pseudogapping deletes a larger chunk of the verbal domain – in particular, a constituent including the Voice°-head – than VP-ellipsis. MCE on the other hand, allows mismatches with a passive antecedent and an active ellipsis site, but not in the other direction (Aelbrecht 2010). Although no account of these data has been proposed to date, they do fit the general pattern that passive-to-active mismatches are judged better than active-to-passive ones (cf. in particular Arregui *et al.* 2006, Frazier 2008)

11. As for why the wide-scope reading in (28a) is disallowed, see Fox (2000).

12. It is worth pointing out that this kind of solution is unformulable on a Postal (2000)-style approach to *any*-NPIs , according to which the negation that licenses them in fact originates within the noun phrase (i.e., '*not+any* N'). This means that if one could argue explicitly that syntactic identity is required for ellipsis, this would allow one to argue against a Postalian approach to NPIs. See Section 21.3.2.2, for further discussion. Many thanks to Marcel den Dikken for drawing our attention to the incompatibility between the account presented here and that of Postal.

13. Note that the behavior of minimizers under ellipsis (see (i)) differs from that of the polarity items discussed in the main text. As Merchant (to appear b) shows, it is not the case that minimizers are ungrammatical

when they are not licensed by negation. Rather, they receive their literal, non-idiomatic reading. Given that the same holds in non-elliptical contexts (see (ii)), these examples should not be classified as antecedent–ellipsis mismatches.

 (i)   John didn't sleep a wink, but Mary did __.
(ii)   John didn't sleep a wink, but Mary did – in fact, she slept all morning!

14. The same fate befalls category mismatches between antecedent and ellipsis site. Consider the following example (from Hardt 1993):

(i)   David Begelman is a great laugher, and when he does __, his eyes crinkle at you the way Lady Brett's did in *The Sun Also Rises*.

The NP *laugher* acts as antecedent for the elided VP *laugh*. As such, this example appears to constitute evidence for a semantic identity theory of ellipsis. However, Johnson (2001) analyzes these examples as involving deverbal nouns, which contain a VP at some level of representation, and it is this VP that antecedes the instance of VPE in the complement of *does*.

15. One type of mismatch between ellipsis and antecedent that we had to leave out due to space limitations concerns split antecedents. As was pointed out by Webber (1978), a VPE-site can take the conjunction of two preceding VPs as its antecedent:

(i)   Sally wants to sail around the world, and Barbara wants to fly to South America, and they will _ , if money is available.

The elided VP here refers to 'sail around the world and fly to South America' even though that conjoined VP is not part of the preceding discourse. Accordingly, examples such as these have been taken to constitute evidence for a semantic identity theory of ellipsis. See Baltin (2010) and Elbourne (2008) for additional discussion.

16. Note that in this example it is not the verb that serves as ellipsis licenser. As discussed by King (1970) among many others, contracted auxiliaries cannot license VPE:

(i)   *John is not happy, but I'm _.

17. As a reviewer points out, the facts are even more complicated than is suggested here. In particular, in subject infinitives with a lexical subject, infinitival VPE *is* allowed:

(i)   For Fred to leave early wouldn't surprise me, but for Pete to _ certainly would.

18. There is disagreement in the literature on whether an *ing*-form can license VPE when it is not adjacent to the ellipsis site (see also (40) for the relevance of adjacency). Aelbrecht (2010) claims that it cannot on

the basis of examples such as that in (i), while Sag (1976:26) presents (ii) as well-formed.

 (i) *I hadn't been thinking about it, but I recall Morgan having been _.

(ii) Which bothers you more: John's having been arrested for drug dealing, or Bill's having been _?

19. One of our reviewers disagrees with this judgment and points out that for him/her VPE in the complement of epistemic *must* is well-formed.

20. To be more specific, Thoms argues that only A′- and X°-movement can license ellipsis, see the original paper for details.

21. Though see below, Section 19.3.4, for a refinement re. non-interrogative sluicing.

22. Traditionally, gapping is claimed to allow only two remnants, but for several languages this seems to be too strict, see, e.g., Aelbrecht (2007) on gapping in Dutch. Whatever the exact number, though, it should be clear that gapping is only allowed with a highly limited number of remnants.

23. It might not be intuitively clear to what extent gapping constitutes clausal ellipsis – rather than, for example, simple deletion of the main verb. While the latter analysis was clearly prominent in the earliest literature on this topic, ever since Sag (1976) and Pesetsky (1982b) it has become fairly standard to analyze gapping as involving movement of the remnants to the left followed by deletion (or across-the-board (ATB) movement, see below) of the rest of the clause. That gapping has to target more than just the main verb is also suggested by examples such as (i):

(i)   John wanted to begin to sell candy and Bill _ apples.

24. Hankamer and Sag (1976) made a distinction between deep and surface anaphora, the former being base-generated, the latter derived transformationally via deletion. Deep anaphora included *do it*, sentential *it*, NCA, and *one*-pronominalization, whereas surface anaphora were exemplified by VPE, sluicing, stripping, gapping, conjunction reduction, and *so*. Criteria for distinguishing between the two types of anaphora included the ability to appear without a linguistic antecedent (deep anaphora), the requirement that the anaphor be strictly syntactically identical to its antecedent (surface anaphora), and the requirement that the antecedent be a syntactic constituent (surface anaphora).

25. Comparative constructions are also a traditionally fertile breeding ground for ellipsis, with a wide variety of ellipsis types attested in reduced clausal comparatives; there is widespread agreement that there is, however, no particular operation of Comparative Ellipsis aside from the other ellipsis processes described in this chapter

(see Lechner 2004, Corver 2006a, and Merchant 2009b). Accordingly, we do not devote any attention specifically to comparatives in the main text of this chapter.

26. As pointed out by Merchant (2001:62ff.) the data discussed here fall under the broader generalization formulated in (i):

   (i)   Sluicing-COMP generalization

   In sluicing, no non-operator material may appear in COMP.
   Given that (i) does not explicitly refer to (head) movement, it also correctly rules out cases of Doubly-Filled COMP or second-position clitics in sluicing contexts. To the extent that (48) is an example of sluicing, however, (and see below, Section 19.3.4, for discussion that it is), the *e*-suffix is in violation of the Sluicing-COMP generalization.

27. Similar locality effects are found in gapping and stripping, see Johnson (1996, 2009), Coppock (2001), Winkler (2005), Lechner (2001), Merchant (2009a).

28. Island violations are not the only contexts of so-called elliptical repair. See van Craenenbroeck and den Dikken 2006, Richards (2001: Chapter 4), Lasnik (to appear), and in particular Merchant (2008b:152–53) for further cases.

29. Recently, a number of (apparent) counterexamples to the PSG have been reported in the literature. These facts will be addressed in the next section.

30. We leave *why*-sluices out of the discussion here, as this *wh*-phrase might be base-generated in the left periphery (see Culicover 1991, Reinhart 1981a, Rizzi 1990a), in which case it would play no role in determining the degree of identity between antecedent and ellipsis site.

31. Note that the requirement in (62) is not meant to replace syntactic or semantic identity. As the example in (i) shows, the mere requirement that an ellipsis site cannot contain any 'new' words vastly overgenerates:

   (i)   *John likes Sue, but I don't know why.

32. The phonology of [E] in (75b) is fairly straightforward: it instructs whatever PF or post-PF mechanism is responsible for phonological realization not to parse its complement. The semantics of [E] in (75c) encodes the identification or recoverability requirement on the elided phrase (see above, Section 19.3.3). Roughly, an expression is e-GIVEN when it has an appropriate, salient antecedent. What the formula in (75c) says, then, is that semantic composition cannot proceed if the complement of [E] is not e-GIVEN. In other words, only phrases that have an appropriate, salient antecedent (i.e., whose content is recoverable from this antecedent) can be elided.

33. Additionally, neither Lobeck nor Merchant can account for *why* the distribution of sluicing is as in (74). Although this is an issue that has not been satisfactorily answered yet, relevant discussion can be found in Romero (1998) and Hartman (2007).

34. The correlation in (77) also predicts that *wh-in-situ* languages should not allow for any clausal ellipsis. This ties in nicely with Merchant's (1998) claim that what looks like sluicing in Japanese in fact does not involve clausal ellipsis, but arises through the combination of pro-drop and copula drop in a copular clause with a *wh*-phrase as predicate. Merchant dubs this phenomenon 'pseudosluicing,' see the original paper for details, and cf. also Merchant (2001:115–20), van Craenenbroeck (2010a:79–81) for related discussion.

35. In English, the superlative itself licenses NP-ellipsis, so this form is not a reliable test in this language; see Kester (1996).

36. A literature that space prevents us from doing any sort of justice to here; see for example Ritter (1988), Bernstein (1993a), Picallo (1991), Sleeman (1996), Kester (1996), Panagiotidis (2003a, 2003b), Alexiadou and Gengel (2008), Marchis and Alexiadou (2008), Corver and van Koppen (2007, 2009), Depiante and Hankamer (2008), Barbiers (2005a), Brucart (1987, 1999), Depiante and Hankamer (2008), Giannakidou and Stavrou (1999), Depiante and Masullo (2001), Kornfeld and Saab (2002), Nunes and Zocca (2005).

37. For some speakers, apparently these contrasts carry over into the adjectival domain as well. Chomsky (1965), in the long footnote 35 (pp. 233–234.), cites Vaugelas:1647 as follows:

Vaugelas (1647, pp. 461–462) maintains that such a *façon de parler* cannot be considered either "absolument mauvaise" or "fort bonne," and suggests that it be avoided when masculine and feminine forms of the Adjective differ. Thus, a man speaking to a woman should not say *je suis plus beau que vous*, but should rather ("pour parler régulièrement") resort to the paraphrase *je suis plus beau que vous n'êtes belle*, although it would be perfectly all right for him to say *je suis plus riche que vous*.

It need hardly be added that French *riche* is an adjective that shows no gender distinctions.