

Editorial

Identity in ellipsis: An introduction



Ellipsis is a phenomenon whereby certain parts of sentences are left unexpressed. The unexpressed material can correspond to various kinds of syntactic chunks. With respect to syntactic category and constituent size, they can be a noun/noun phrase, a predicate, or the entire clause to the exclusion of a single constituent (known as nominal ellipsis, predicate ellipsis and clausal ellipsis respectively). The following example demonstrates the well-studied verb phrase/post-auxiliary ellipsis in English:

- (1) John might like this movie, and Bill might, too.

There are various aspects to the theoretical interest that surrounds ellipsis. One aspect is concerned with the question of how the missing material is represented in the grammar. According to non-structural approaches, the ellipsis “site”, i.e. the missing verb phrase following *might* in (1), has no internal structure or corresponds to an anaphoric element whose resolution is just like that of other anaphors (see for example [Dalrymple et al., 1991](#); [Hardt, 1993](#); [Ginzburg and Sag, 2000](#); [Culicover and Jackendoff, 2005](#)). Structural approaches on the other hand assume some kind of non-atomic structure being present in the ellipsis site. In some accounts, this structure is present in the syntax, but fails to be pronounced ([Ross, 1969](#); [Lasnik, 2001](#); [Merchant, 2001](#) among others), whilst in other accounts the ellipsis site is empty in the syntax but is filled at LF by material that is copied/re-used from elsewhere in the discourse ([Williams, 1977](#); [Fiengo and May, 1994](#); [Chung et al., 1995, 2011](#) among others).

Identity in ellipsis concerns the question to what extent the elided material needs to be identical to its antecedent in the preceding discourse. In many (but not all) cases of ellipsis, there is a linguistic expression in the immediately preceding discourse that functions as the antecedent for the ellipsis. In example (1), ellipsis of the predicate *like this movie* is dependent on the availability of a structurally and interpretationally similar predicate antecedent in the immediately preceding linguistic discourse (here and in many examples below, elided material is indicated by ~~strikeout~~, following structural approaches, and antecedents are marked by *italics*).

- (2) John might *like this movie*, and Bill might ~~like this movie~~, too.

It seems intuitive to say that the elided phrase and its antecedent are in some sense identical: they both involve the same predicate *like this movie*. This similarity is clearly a condition on the successful application of ellipsis. After all, if there is no such similarity, ellipsis is not allowed: an example like (1) does not allow ellipsis of its predicate if that predicate is *enjoy this movie* or *like that movie*—while such predicates would be well-formed in these contexts when pronounced:

- (2') John might *like this movie*, and Bill might, too.
≠ John might *like this movie*, and Bill might ~~enjoy this movie~~, too.
≠ John might *like this movie*, and Bill might ~~like that movie~~, too.

It is not a priori clear how to define the kind of similarity and the degree of similarity that must exist between the elided material and its antecedent for the ellipsis to be well formed. In structural approaches—which this introduction will predominantly focus on—the quest for identity boils down to specifying whether identity is requested to hold in the (morpho)syntactic or the interpretational component of the grammar (including discourse representation and information

structure), or both. Theories based on syntactic identity adhere to the view that identity is calculated on the basis of syntactic representations, including LF-representations derived from surface syntactic structure. In a case like (1)/(2), this would mean that the deleted predicate is *formally* identical to the predicate phrase in the antecedent: the verb and its argument are the same and have the same structural relation to each other. Semantic theories of identity on the other hand propose that the unpronounced material is similar to the meaning of the antecedent material, requiring for example that the antecedent and elided material be truth-conditionally equivalent. If identity is syntactic, antecedent and elided material should be found in the same kind of syntactic contexts and show the same syntactic composition. If identity is defined with respect to meaning, the syntactic contexts/syntactic composition could be different, as long as the formal differences do not translate into a semantic one that makes the meanings non-identical.

To decide between these options, research on the identity condition has concentrated on finding the limits of *tolerable* and *intolerable* semantic and formal mismatches (terms borrowed from Thoms 2015) between the antecedent and its presumed elliptical counterpart. For instance, an elided lexical predicate can mismatch in form. In (3a), inflected *likes* can antecede the infinitival *like*, representing a tolerable mismatch. In (3b) on the other hand, we see a case of an intolerable mismatch: the elided auxiliary *be* cannot deviate in the same way from its antecedent *is*.

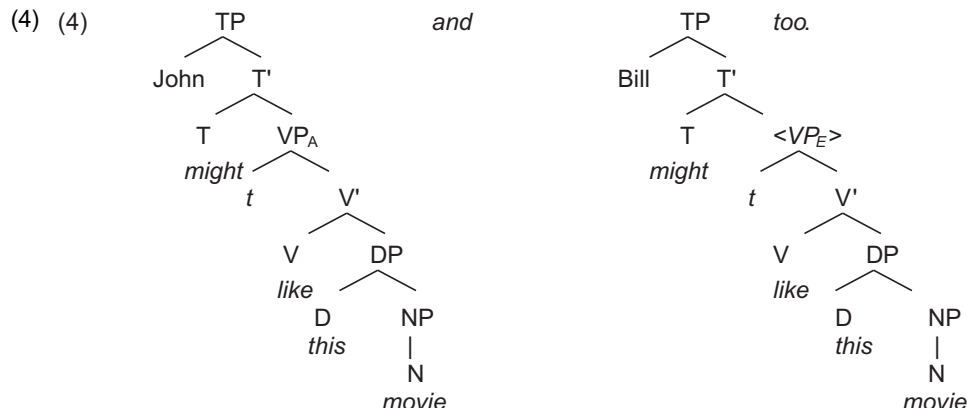
- (3) a. John *likes this movie* and Bill might ~~like this movie~~, too.
 b. * John *is fond of this movie* and Bill might ~~be fond of this movie~~, too.

The purpose of this introduction is to highlight the core tenets of syntactic and semantic identity theories, and to review some data that frequently figure as arguments for each. Due to space limitations, this introduction will not be able to do justice to the full range of proposals and empirical observations and their historical development, nor will it be able to place the issues in the fast growing psycholinguistic literature on processing and parsing ellipsis (see among others Arregui et al., 2006; SanPietro et al., 2008; Frazier, 2013; Aparicio et al., 2014 and references found in there). For further information on identity in ellipsis the reader is referred specifically to van Craenenbroeck and Merchant (2013), Barros (2014) and to works introducing ellipsis phenomena from various perspectives, such as Lappin (1996), Johnson (2001, 2008), Merchant (2001, 2013b), Aelbrecht (2015) and the forthcoming *The Oxford Handbook of Ellipsis* edited by Jeroen van Craenenbroeck and Tanja Temmerman.

1. Syntactic approaches

Syntactic approaches to ellipsis identity hold that elliptical material and its antecedent should be isomorphic in their syntax, defined over phrase markers of some sort, such as surface syntactic or LF representations. Syntactic accounts of ellipsis identity have been put forward in both early days of generative syntax and more recent times, among others by Chomsky (1964, 1965), Ross (1967), Sag (1976), Williams (1977), Kitagawa (1991), Fiengo and May (1994), Chung et al. (1995, 2011), Lasnik (1995), Fox (2000), Tomioka (2008), Tanaka (2011b), Johnson (2012a), Merchant (2013a).

According to syntactic theories of identity, ellipsis can only apply if the elided material is represented by a phrase marker that is isomorphic to the corresponding phrase marker in the antecedent. For an example like (1), isomorphism requires strict lexical and structural identity between the representation of the antecedent predicate (VP_A), and the elliptical one (VP_E), as illustrated in (4) with a basic syntactic representation of the clause.



Isomorphism means that the phrase marker corresponding to the antecedent VP_A must contain the exact same nodes and terminal elements as the elliptical VP_E , marked with angled brackets: this requirement is satisfied as both VP_A and VP_E contain $VP, V', V, DP, D, NP, N, t(\text{race}), \text{like}, \text{this}, \text{movie}$. The only difference concerns the binders of the traces: these are bound by different entities from outside the ellipsis site. Material extracted out of the ellipsis site need not be identical to a parallel element in the antecedent clause.¹

Apart from the content of traces, syntactic isomorphism theories must also allow for mismatches in inflectional material between antecedent and ellipsis site, as was already pointed out in the first explicit discussion of the identity condition in ellipsis in transformational grammar, Chomsky (1965). Chomsky held the view that deletion must adhere to syntactic identity, but he also observed that deletion (called “erasure transformation” at the time), does not require total identity. To define the condition on recoverability of deletion (p. 177–184), he considers examples with comparatives like (5), analyzed as involving the deletion operation illustrated:

- (5) a. John is more clever than Bill = John is more than Bill ~~is-clever~~ clever
 b. these men are more clever than Mary = these men are more than Mary ~~is-clever~~ clever

In (5a), *clever* and *is* are deleted under complete identity with an overt equivalent, but in (5b) the copula is non-identical to its antecedent (*are* vs. *is*). These examples show that the identity condition does not require *inflectional* identity between phrase markers. According to Chomsky this follows from the fact that inflectional features are determined by the larger syntactic context, namely material outside the elliptical site. Features determined by the larger context should be recoverable even if deleted, thus these types of features are not considered in the calculation of identity.²

Chomsky's observation has been confirmed in many languages and across elliptical constructions. It has also become clear that the role of the outside context is very specific. In the current way of thinking, inflectional feature mismatches are considered possible in two configurations. One such configuration has the mismatching feature belong to a syntactic head *external* to the ellipsis site. The other has the mismatching feature inside the ellipsis site, valued by an agreement controller that occurs external to the ellipsis site.

To illustrate the latter first, consider for example gender and number features on predicative adjectives (ex. 6 from Nunes and Zocca, 2009, ex. 7 from Depiante and Masullo, 2001, see also Saab, 2008, Merchant, 2014) and subject agreement on Hungarian verbs as in (8). The inflectional features on the elided predicative adjective or verb can mismatch with respect to that of their antecedent (*alto* vs. *alta*, *alto* vs. *altos*, *nevetett* vs. *nevettek*).³

- (6) O João é alto e a Maria também é ~~alta~~. *Brazilian Portuguese*
 the João is tall-MASC-SG and the Maria also is tall-FEM-SG
 ‘João is tall and Maria is too.’

¹ A curious exception is the so-called V-stranding ellipsis phenomenon, which elides a (VP or TP-type) category that has been vacated by the verb prior to deletion (Doron, 1990, 1999; McCloskey, 1991; Gribanova, 2013 among others). The verb that appears “stranded” outside the ellipsis site in this form of ellipsis must be lexically identical to a parallel verb in the antecedent (Goldberg, 2005): it must share the same stem and derivational morphology, while it can differ in inflectional morphology. Consider for illustration the case of Irish, which has two cognates for the verb *miss*, an Irish word and English one. If the antecedent clause contains one of the two, the elliptical response needs to contain the same item and cannot switch to the other one (McCloskey, 2005).

- (i) A: Ar mhiss-eáil tú é? B: * Chrothnaigh.
 COMP.INTER missed you him miss.PAST
 ‘Did you miss him?’ ‘I did.’

See Schoorlemmer and Temmerman (2012) and Gribanova (2013) for accounts of the lexical identity effect, and Thoms (2015) for illustration and novel observations about parallelism requirements in V-stranding ellipsis in Gaelic.

² To quote the precise formulation, Chomsky (1965) specified that features can either be inherent features or be added by agreement transformations, determined by the syntactic context. Inherent features cannot vary under ellipsis (p. 182): “[...] 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*”. In this definition, non-distinctness is defined as in distinctive feature theory: two entities are distinct if one is positively and the other is negatively specified with respect to a feature, and not unspecified for it. This in essence means that if two elements differ only in transformationally introduced features, they are considered non-distinct and thus count as identical.

³ Note that inflectional mismatches on elliptical nouns are more intricate as gender features are not variable on all nouns. Some classes of nouns have non-variable features (cf. i) that cannot change under ellipsis and others that can only vary under some conditions. For the complexities of gender identity on nouns/pronouns see Merchant (2014) and Johnson (2014).

- (i) * Juan es un buen tío y María también. *Spanish*
 Juan is a.M good.M uncle.M and Maria also
 ‘Juan is a good uncle and Maria is also (a good aunt).’

- (7) El alumno es alto y los profesores también ~~son altos~~. Spanish
 the student-MASC-SG is tall-MASC-SG and the student-MASC-PL also are tall-MASC-PL
 'The student is tall and the teachers too.'
- (8) Péter nevet-ett. A lányok is ~~nevet-tek~~. Hungarian
 Péter laugh-PST.3SG the girl.PL also laugh-PST.3PL
 'Péter laughed. The girls, too.'

Concerning the other option, mismatching inflectional features can also belong to a head *external* to the ellipsis site. As a variant of (1) above, consider (9a, b), where the head that encodes tense information and which regulates tense morphology, Tense, is found outside the category that is eliminated by predicate ellipsis, the VP, and thus is free to vary, cf. the structure in (10) (see Lasnik, 1995 for this approach). The representation in (10) boils down to saying that there is in fact no mismatch between the antecedent and the elided constituent in the first place.

- (9) a. John *liked this movie*, and Bill will ~~like this movie~~, too.
 b. John *saw this movie*, and Bill will ~~see this movie~~, too.
- (10) John liked this movie and Bill will, too.
 [_{TP} John T_[pst] -ed [_{VP} *t* like this movie]] and [_{TP} Bill will + T_[fut] <[_{VP} *t* like this movie]>], too.

Importantly, material that is inside the ellipsis site (and is not agreed-with from outside) cannot vary.

When the elided chunk corresponds to the entire TP, and thus subsumes the tense specification, tense must be identical to that of the antecedent. In clausal ellipsis, such as sluicing, the missing TP must be interpreted identical to its antecedent. The following example does not support any other reading but a past one in the sluiced clause.

- (11) John liked this movie, but I don't remember why.
 [_{TP} John T_[pst] -ed [_{VP} *t* like this movie]], (...) [_{CP} why <[_{TP} John T_[pst] -ed [_{VP} *t* like this movie]]>].

Note that this mode of explanation of morphological variability relies on non-lexicalist approaches to inflectional morphology, which separate tense inflection from the verbal stem in the syntactic representation and derive their combination at a different level (both for regular and for morphologically irregular verbs, i.e. PAST + *like* yields *liked*; PAST + *see* yields *saw*). In this approach, the acceptability of the above examples in (9) follows if the precise morphological form of the verb does not enter the calculation of identity, identity is calculated before the tense affix and the stem are combined. Lexicalist approaches to morphology would need to capture the facts differently by loosening syntactic identity somehow, such that it should be blind to inflectional material.

While lexical verbs allow for inflectional mismatches, *be* and *have* (both in their main verb and auxiliary use) in English are exceptions to this: they do not allow certain types of mismatches in inflectional form when elided under VP ellipsis (cf. 3 above). They can elide under complete morphological identity, but not when mismatching in form as in (12) below, a generalization that was made by Warner (1986, 1993), see also Lasnik (1995) and Nunes and Zocca (2009) for similar data in Brazilian Portuguese:

- (12) a. * John was here and Mary will ~~be here~~, too.
 b. * John is happy today and he often has ~~been~~ in the past.
- (13) Warner's Auxiliary Verb Generalization (Warner, 1993)
 In cases of ellipsis of a VP headed by an auxiliary verb, the auxiliary must have the same morphological form as its antecedent.

These examples provide strong arguments for a syntactic definition of identity and have received an analysis in those terms by Lasnik (1995). Lasnik assumes that *have* and *be* enter the derivation fully inflected, and when finite, they raise to tense in overt syntax. As a consequence of their being inflected in the syntax already and keeping their form constant throughout the derivation, there is no stage in the derivation at which (the trace of) *was* and *be* are syntactically identical in (12a), and lack of syntactic identity leads to ungrammaticality.

- (14) * John was here and Mary will ~~be here~~, too.
 [_{TP} John was + T_[pst] [_{VP} *t_{was}* here]] and [_{TP} Mary will + T_[fut] <[_{VP} *be* here]>], too.

As [Potsdam \(1997\)](#) has shown, however, Lasnik's solution is too strict, in particular because it incorrectly rules out mismatches between non-finite forms of *be/have*, which fare much better than pairs involving a finite form (see also [Nunes and Zocca, 2009](#) for a different critique of Lasnik's solution):

- (15) a. John is being examined, but Jack really should ~~be examined~~, also.
 b. He might be attending AA sessions, I know his mother has ~~been attending AA sessions~~.

Instead of morphological identity, the facts in (12) should rather be explained with reference to the form of the antecedent: according to Potsdam, the ill-formed examples all contain a head-trace (left behind by the raised auxiliary) that is wrongly positioned, for reasons that are not very clear. [Thoms \(2015\)](#) takes up this issue and identifies the reason to be a breakdown of parallelism. [Merchant \(2015\)](#) suggests that *be* cannot be elided in environments where it is the sole overt indicator of tense shift with respect to the antecedent clause.

1.1. Some arguments for syntactic identity

Next to the behaviour of *have/be*, several other empirical phenomena support the view that the identity condition should be at least partly syntactic. The remainder of this section lists three of these: a lexico-syntactic condition that rules out novel material in the ellipsis site; argument structure alternations and the variable distribution of voice mismatches. This list does not by any means comprise all arguments that have been adduced for syntactic identity, see [Tanaka \(2011a, b\)](#), [Saab \(2014\)](#), [González-Vilbazo and Ramos \(2012\)](#), [Rooryck and Schoorlemmer \(2014\)](#), as well as [Thoms \(2015\)](#), [Merchant \(2015\)](#), [Cecchetto et al. \(2015\)](#) for others.

1.1.1. The No new words condition

The first of the supporting arguments is a strong lexico-syntactic condition that rules out new lexical material in the ellipsis site. It was identified by [Chung \(2006\)](#) in sprouting, a sluicing-type ellipsis where the *wh*-phrase remnant has no overt correlate in the antecedent. Unlike sluicing, which allows for preposition stranding, sprouting with P-stranding is ill-formed. The preposition must be pied-piped and cannot be stranded inside the ellipsis site.

- (16) a. They're jealous, but it's unclear of who ~~they are jealous of~~.
 b. * They're jealous, but it's unclear who ~~they are jealous of~~.
 (17) a. Joe was murdered, but we don't know by who ~~he was murdered~~.
 b. * Joe was murdered, but we don't know who ~~he was murdered by~~.

This paradigm shows that ellipsis sites may not contain any new words (apart from traces/copies of moved material) when compared to their antecedent: when the preposition is stranded and thus forms part of the elided material, it violates the condition that Chung formulates in (18) (with reference to the Minimalist notion of numeration, the set of words contained in a derivation). This is often referred to as the *No new words* condition and although formulated for sluicing, is generally assumed to hold for other types of ellipsis as well (see [Rouveret, 2011](#) for its formulation for VP ellipsis):

- (18) Chung's lexical identity condition on sluicing/*No new words*
 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.

As Chung says, the effect of (18) also shows up in sprouted material modifying nominals without an antecedent:

- (19) ?* She read, but we're not sure by which author ~~she read something~~.

The fact that (18) also holds for prepositions that are entirely void of meaning, such as *of* in (16b) is strong evidence that this condition is formal in nature and cannot be explained with reference to semantics/pragmatics. In later work, Chung proposes to capture (18) by an independent sluicing-specific syntactic identity condition called the *Case condition* (going back to [Ross, 1969](#)):

- (20) Case condition on sluicing
 If the interrogative phrase is a DP, it must be Case-licensed in the ellipsis site by a head identical to the corresponding head in the antecedent clause.

According to Chung, (18) can explain the effect of the *No new words* condition: in (16b) the remnant is a DP and is case-licensed by a stranded preposition in the ellipsis site. Such a prepositional head, however, is lacking a corresponding head in the antecedent. In (16a), the remnant is a PP and (20) is therefore inactive. While for these facts involving P-stranding, the Case condition can replace the *No new words* condition, it cannot rule out the ungrammatical (19), where the remnant is not a DP, and thus the Case condition is inactive. This suggests that the *No new words* condition cannot be subsumed by the Case condition in sluicing. Furthermore, as Thoms (2015) shows on the basis of English, and Vicente (to appear) on the basis of other languages, the theoretical status of the Case condition in sluicing is doubtful (see also Barros, 2014 for refinements to be made with respect to its application to abstract and morphological case).

1.1.2. Argument structure invariance

Another strong argument for identity being sensitive to syntactic structure comes from the observation that argument structure alternations are forbidden under ellipsis; that is, antecedent and elided material cannot mismatch in their argument structure (Levin, 1982; Chung et al., 2011; Chung, 2013; Johnson, 2001; Merchant, 2013c). Consider image-impression alternation with the verb *embroider* (Levin, 2003). As (20) shows, the verb *embroider* has two possible argument structures. They are truth-conditionally equivalent (Barros, 2014):

- (21) a. They embroidered a table-cloth with peace signs.
b. They embroidered peace signs on a table-cloth.

Even though (21a) and (21b) mean the same, they cannot be exchanged for one another under ellipsis, such as TP ellipsis involved in sluicing:

- (22) a. * They embroidered something with peace signs, but I don't know on what ~~they embroidered peace signs~~.
b. * They embroidered something on the table-cloth, but I don't know with what ~~they embroidered the table-cloth~~.

Clearly, the two patterns illustrate two distinct lexical choices on the predicate, and ellipsis is tied to the lexical choice being made in the antecedent. According to the line of work initiated by Hale and Keyser (1993), alternating pairs in argument structure alternations have different syntactic representations. For example, the predicates in (21a) and (21b) contain distinct light verbs introducing the *on* PP and the *with* PP. With reference to such differences in internal composition of the predicate phrase, Merchant (2013c) rules out the mismatching pairs in (22) as non-identical syntactic representations of the elided predicate phrase (vP_E) and the antecedent verb phrase (vP_A).

- (23) a. $vP_A = [_{vP_A} \text{ they } v [_{vP} \text{ something } v_{[trans]} [_{vP} \text{ with peace signs } v_{[with]} [_{vP} \text{ embroider}]]]]$
b. $vP_E = [_{vP_E} \text{ they } v [_{vP} \text{ peace signs } v_{[trans]} [_{vP} \text{ on what } v_{[on]} [_{vP} \text{ embroider}]]]]$

The ungrammaticality boils down to the non-identity between the v_{with} and v_{on} heads that introduce the oblique arguments (possibly traced back to a violation of the *No new words* condition in (18), as the mismatching light verb in the ellipsis site represents a new morpheme).⁴

1.1.3. The uneven distribution of voice mismatches

A third argument in favour of syntactic identity comes from the uneven distribution of voice mismatches across elliptical constructions. Active/passive mismatches are allowed in contexts of predicate ellipsis, but not in instances of clausal ellipsis (sluicing, stripping, fragment answers) (see Sag, 1976; Dalrymple et al., 1991; Hardt, 1993; Fiengo and May, 1994; Johnson, 2001; Kehler, 2002; Arregui et al., 2006; Tanaka, 2011a; Merchant, 2001, 2008a, 2013c for discussion and refinements).

⁴ In an even more recent account, Barros (2014) and Barros and Vicente (2015) propose to rule out argument structure alternations (as well as P-stranding under sprouting and voice mismatches) with the identity condition in (i):

- (i) *Remnant condition* (Barros, 2014)
The remnant must have a syntactic correlate, which is a semantically identical XP in the antecedent.

In this account, the ungrammaticality of the mismatches in (22) follows because the PP and the DP meanings of the correlate-remnant pairs (*something/on what* (22a); *something/with what* (22b)) are not identical. The condition in (i) is in fact one part of the identity condition Barros (2014) proposes for sluicing, for the other part see Section 2.

- (24) a. The janitor must remove the trash whenever it is apparent that it should be ~~removed~~.
 b. The system can be used by anyone who wants to ~~use it~~.
- (25) a. * Someone murdered Joe but we do not know who by ~~Joe was murdered~~.
 b. * Joe was murdered, but we don't know who ~~murdered Joe~~.

Semantic accounts of identity have a problem explaining the contrast between the two set of examples—if the mismatching predicates are allowed in (24), because active and passive versions are truth-conditionally identical, they should also be allowed in (25). Syntactic identity theories, however, can handle the data, and can derive the contrast with reference to the size of the elided material if voice specifications can be argued to be external to the predicate ellipsis site and thus variable, a strategy that Merchant (2013c) follows (with reference to the analytical strategy of “unpacking” the material in the antecedents as in Johnson, 2001, see also the explanation of inflectional mismatches in 10 above).⁵ In his account, the elliptical material in predicate ellipsis corresponds to the complement (vP) of a functional Voice head. Since the voice head is outside the ellipsis site, its content (a passive or active feature) can vary:

- (26) A: ... the janitor must [VoiceP Voice [act] <[VP t V_[trans]] [VP remove the trash]] >
 E: ... it should be [VoiceP Voice [pass] <[VP t V_[trans]] [VP removed t]] >

In TP ellipsis contexts, the elided material in turns *contains* the voice specifications, and thus any differing feature value on this head counts as non-identical, ruling out ellipsis as ill-formed.

- (27) A: <[TP Joe was [VoiceP Voice [pass] [VP t V_[trans]] [VP murdered t]]] >
 E: [CP who <[TP t_{who} [VoiceP Voice [act] [VP t V_[trans]] [VP murdered Joe]]]] >

The ill-formedness of the data in (25) thus supplies evidence that identity is defined on syntactic representations. (25) can only be ruled out if identity is sensitive to syntactic (feature) specification, in contrast to (24).⁶

2. Semantic identity

Semantic accounts of ellipsis identity state the identity relation over semantic representations of the antecedent and ellipsis site (see among others Dalrymple et al., 1991; Hardt, 1993, 1999; Asher et al., 1997; Kempson et al., 1999; Ginzburg and Sag, 2000; Prüst, 1993; Merchant, 2001; Hendriks, 2004; Hendriks and Spenader, 2005; Barker, 2013).

In non-structural approaches to ellipsis, identity must be defined on semantic representations by necessity, as in these works, there are no syntactic representations of the elided material. In Dalrymple et al. (1991), for example, ellipsis is explained with reference to information retrieval, stated in a higher-order unification algorithm. When encountering a missing piece in a VP ellipsis example as (28a), ellipsis resolution requires the forming of a property-denoting expression from the antecedent material (arrived at by abstracting over parallel elements in A and E) (28b). Applying this property to the ellipsis remnant, we arrive at the meaning of the elliptical clause (28c).

- (28) a. Dan likes golf and George does, too.
 b. $P = \lambda x. \text{like}(x, \text{golf})$
 c. $\lambda x. \text{like}(x, \text{golf})(\text{George}) = \text{like}(\text{George}, \text{golf})$

In this account, the content of the ellipsis is defined as, and thus per definition identical to, the property denoting expression P. Since in this approach, and other non-structural ones, no identity condition is postulated, the challenge is to

⁵ The “unpacking” of the antecedent in Johnson (2001) refers to the analysis of categorial mismatches under VP ellipsis like (i), originating from Hardt (1993). This example presents a grammatical instance of VP ellipsis that finds its antecedent inside the italicized derived noun.

(i) David Bagelman is a great *laugher* and when he does ~~laugh~~, his eyes wrinkle at you [...].

Johnson (2001), with reference to Fu et al. (1996), suggests that the missing verb phrase at some abstract level of representation is identical to the verb inside the nominalization [_N [_V *laugh*]-er]. Tanaka (2011b), and Miller and Hemforth (2013), however, show that this account both under- and overgenerates. Not all derived nominals allow for such a conversion, and some non-derived ones allow for it, too. In addition, the grammaticality of the ellipsis in cases like (i) depends on specific discourse properties of the antecedent.

⁶ See also Kobele (2015) for a novel piece of data supporting the validity of this approach to voice mismatches.

explain what syntactic matching effects such as those reviewed in the previous section follow from. See Kim (2015) for a proposal within the Direct Interpretation approach on this issue.

Concerning semantic identity theories within structural approaches to ellipsis, the most influential account of ellipsis identity in semantic terms is the so-called “e-GIVENNESS” account proposed by Merchant (2001). The theory is built on the finding of Rooth (1992) and Tancredi (1992) that ellipsis (like deaccenting) is subject to a semantic condition according to which the antecedent clause/phrase must be (or imply) a focus alternative to the phrase/clause containing the ellipsis.⁷ Differently from Rooth’s proposal, however, Merchant shows that for ellipsis to hold, this relation must go both ways in the form of entailment. That is, the semantic identity relation should be stated as a mutual entailment condition between the ellipsis site and its antecedent, requiring that the elliptical material and its antecedent be truth-conditionally equivalent. Using the definition of *givenness* for non-focused material, as defined in Schwarzschild (1999), Merchant’s condition is defined in (29).⁸

- (29) a. Focus condition on ellipsis (Merchant, 2001:38)
 An XP α can be deleted only if α is e-GIVEN.
 b. e-GIVENNESS (Merchant, 2001:26)
 An expression E counts as e-GIVEN iff E has a salient antecedent A, and modulo \exists -type shifting, (i) A entails F-clo(E), and (ii) E entails F-clo(A).
 c. F-closure (Merchant, 2001:14)
 The F closure of α , written F-clo(α), is the result of replacing F-marked parts of α with \exists -bound variables of the appropriate type (modulo \exists -type shifting).

For our previous example in (28), the calculation of e-GIVENNESS yields identical results for antecedent and elided predicates, as they trivially entail each other. Since e-GIVENNESS is satisfied, the antecedent and the elided predicates count as identical and ellipsis is well-formed.

- (30) Dan likes golf and George does [_{VP} ~~like golf~~], too.
 F-clo(νP_A) = $\exists x.x$ likes golf
 F-clo(νP_E) = $\exists x.x$ likes golf

Recent works have shown that Merchant’s mutual entailment condition in (29) must be enriched with other semantic/pragmatic conditions, for clausal ellipsis types such as sluicing and fragments (AnderBois, 2010, 2011; Weir, 2014; Barros, 2014; Ginzburg and Sag, 2000). AnderBois (2010, 2011) proposes that beyond truth-conditional entailment, sluicing also requires semantic/pragmatic isomorphism when it comes to *issues* raised by the elliptical clause and its antecedent—their inquisitive content (as defined in the framework of Inquisitive Semantics) must be the same. The

⁷ Rooth (1992) actually puts forward a hybrid proposal of identity in which the identity condition must be partly semantic and partly syntactic, involving a syntactic isomorphism condition (or redundancy relation) and a semantic relation of contrast requirement between (the structure containing) the ellipsis site and (the structure containing) the antecedent. The latter states that the ordinary semantic value of the antecedent VP (or a phrase containing it) should be or should imply an element of the focus value of the elided VP (or a phrase containing it). (Note that Rooth (1992) specified this condition specifically for VP ellipsis.)

(i) Semantic condition on ellipsis (Rooth, 1992) (as quoted in Merchant, 2001 p. 13)
 A VP α in XP_E can be deleted only if there is an XP_A , where $[[XP_A]]^O$ either is or implies an element from $[[XP_E]]^F$.

In this definition, $[[\alpha]]^O$ is the ordinary semantic value of the expression, and $[[\alpha]]^F$ is the focus value of α , the set of alternatives to the expression which are derived from α by replacing all focus-marked entities by variables.

As Merchant (2001) shows, while this condition gives the right result for sentences involving deaccented material, it overgenerates for ellipsis: it incorrectly allows for cases in which the elliptical clause is implied by the antecedent, but the antecedent is not implied by the ellipsis site, cf. the following example in which the elliptical VP must contain the same object as its antecedent.

- (ii) a. John was reading the book while BEN was (~~reading the book~~).
 b. * John was reading the book while BEN was (~~reading~~).

The (b) example fulfils Rooth’s focus condition as *John was reading the book* implies *John was reading* and *John was reading* is an element of the set of alternatives corresponding to *BEN was reading*. For Rooth, the focus condition in (i) therefore must be coupled with a requirement for syntactic isomorphism to rule out the missing (b) possibility. Since the VP *read the book* is not isomorphic to *read* (they do not contain the same number of nodes arranged in the same way), syntactic isomorphism rules out (ii).

⁸ \exists -type shifting is a type-shifting operation that existentially binds unfilled arguments, such as traces left by movement, and it also raises expressions to type $\langle t \rangle$.

antecedent clauses in the following two examples are truth-conditionally identical, but only the positive version containing *someone*, an indefinite pronoun with inquisitive meaning raises the same issue as the embedded question in the sluice.

- (31) a. Somebody left, but I don't know who.
b. * It is not the case that nobody left, but I don't know who.

In a different semantic tradition, this condition is captured in terms of a requirement that the antecedent clause and the sluiced question must refer to the same *question-under-discussion* (QuD), as stated by Barros (2014) for sluicing in the following sluicing specific condition.

- (32) *The Sluice Condition* (Barros, 2014)
The sluiced question and the Question under Discussion (QuD) made salient by the antecedent must have the same answer at any world of evaluation.

A similar condition is stated for fragments by Weir (2014) (see also Reich, 2007), ruling out ill-formed fragments of the following kind, where the response in B does not reply to the question under discussion in A's utterance (which inquires about reasons). Note also that VP ellipsis (in B') is perfectly fine:

- (33) A: Why did John go to the party?
B: *Mary ~~went to the party~~, and John does everything Mary does.
B': Mary did ~~go to the party~~, and John does everything Mary does.

Before closing this section, it is important to mention that beyond a suitably formulated identity condition, ellipsis is also subject to other types of specific semantic conditions that are not defined as identity conditions in the literature, such as the inheritance of content effect (Chung et al., 1995; Messick et al., 2015) or Kennedy's syntactico-semantic generalization about argument-contained ellipsis (Kennedy, 2008). Another condition that rears its head in many different types of ellipsis and in ways that extend beyond the issue of identity alone is a condition called *parallelism*. In its most concrete form, this notion means parallelism of scope, and can in fact be stated as the structural condition in (34), following the formulation in Fox and Lasnik (2003) (see also Fox, 2000; Merchant, 2001; Fox and Takahashi, 2005; Winkler, 2005; Griffiths and Lipták, 2014; Thoms, to appear on effects of parallelism).

- (34) *Scopal Parallelism in ellipsis*
Variables in the antecedent and the elided clause are bound from parallel positions.

Although scopal parallelism is a well-formedness requirement for clausal and predicate ellipsis and by all means defines one aspect of the necessary similarity between elliptical clause and its antecedent, it has hitherto not been defined as an identity condition itself and brought in connection with formal mismatches. Thoms (2015) is the first work that attempts to do exactly this, defining the identity condition proper in terms of scopal parallelism.

2.1. Arguments for semantic identity

In this section, phenomena are presented that provide evidence that the identity condition must be at least partly semantic. The arguments to follow come from vehicle change phenomena, tolerable formal mismatches in the IP-domain and the availability of non-isomorphic underlyers, such as clefts. Just like in Section 1.1, the list of arguments is far from complete. For other arguments, see Merchant (2001), Yoshida (2010) and Webber (1978) et seq on split antecedents among others.

2.1.1. Vehicle change

One piece of evidence for semantic identity accounts come from so-called *vehicle change* phenomena. While syntactic accounts of identity fail to derive these, semantic accounts predict them. Vehicle change is the name of a curious formal mismatch allowed under ellipsis (and only there): non-pronominals can be equivalent to pronominals provided they have the same reference (Dalrymple et al., 1991; Fiengo and May, 1994). This effect is responsible for the fact that nominals that are normally subjected to Principle C of the binding theory are subject to Principle B instead under ellipsis. In the next example, the object cannot be represented as a proper name in the ellipsis site, but must be a pronoun:

- (35) They arrested Alex_i, though he thought they wouldn't {~~arrest him~~, /* Alex_i }.

This in effect means that an R-expression counts as identical to a pronoun under ellipsis. For syntactic theories, this presents a puzzle, as there is no evident level of abstraction at which the pronoun *him* and the proper name *Alex* are syntactically equivalent (though see Postal, 1966, Elbourne, 2005 as well as Merchant, 2008b, Johnson, 2012b). For semantic theories, the equivalence is easy to obtain. For example, under e-GIVENNESS, antecedent and elided predicate are mutually entailing just in case *Alex* and *him* refer to the same person.

- (36) They arrested Alex, though he thought they wouldn't [_{VP} *t* ~~arrest him~~]
 F-clo(_{VP}_A) = $\exists x.x$ arrest Alex
 F-clo(_{VP}_E) = $\exists x.x$ arrest him

Vehicle change thus provides arguments for semantic identity.⁹ In the same vein, variation between the exact shape of indexical elements in (37) (*here* vs. *there*; *you* vs. *I*) follow from semantic identity as well (Sag and Hankamer, 1984).

- (37) a. A: Are you coming over here?
 B: Yes, I am ~~coming over there~~.
 b. A: When did you arrive?
 B: Yesterday ~~I arrived~~.

The fact that quantificational expression in the antecedent of ellipsis can give rise to an E-type reading of a definite anaphoric (pro)nominal can also receive an account in terms of semantic identity. This effect was first observed by Sag (1976), who noted that (38) is ambiguous between two readings (% stands for variability in judgments in this non-elliptical paraphrase, as given by Sag):

- (38) Sandy greeted everyone when Betsy did.
 interpretation (i) Sandy greeted everyone when Betsy greeted everyone.
 interpretation (ii) Sandy greeted everyone when Betsy greeted them/% him.

The first reading, where *everyone* is syntactically identical to its correlate is predicted to be grammatical by syntactic identity theories. The second reading, however, violates syntactic isomorphism (the definite pronominal is not part of the antecedent), and can only be explained if identity is defined at an abstract level of meaning (see Elliott and Sudo, 2014 for a formulation of a dynamic e-GIVENNESS account for this).¹⁰

2.1.2. Tolerable finiteness and modality mismatches

The second set of arguments for semantic identity come from observations about tolerable formal mismatches in tense, finiteness and modality specification in sluicing such as those in (38) (Klein, 1993; Merchant, 2001; Thoms, 2013 among others)

⁹ It is important to note that syntactically conditioned conversions, such as those between polarity items and their non-polarity counterparts as in (i) (Bresnan, 1971; Sag, 1976), also treated as instances of vehicle change in Fiengo and May (1994), can be accounted for within syntactic identity theories.

(i) John didn't see anyone, but Mary did {~~see someone~~ / * ~~see anyone~~}.

Sag suggests that if *anyone* and *someone* are both represented as existential quantification at the level of logical form, the identity between the two can be accounted for. Merchant (2013a) shows that this route is viable and follows Klima (1964) in saying that these expressions have variable morphological realizations determined by the syntactic context. Assuming that polarity items have a syntactic feature [Pol: _], valued under a c-commanding negation (or other licensors), the morphological realization of the pronoun can be derived to be different, depending on the valuer: if the valuer is positive, valuation and lexical insertion yield *someone*; if it is negative, they yield *anyone*. This way, the *some/any* alteration can be modelled by saying that *some* has a polarity feature valued by a positive polarity phrase [Pol:Pos] and *any* a negative one [Pol:Neg]. Using this agreement-based theory, syntactic identity between antecedent vP and elided vP can be upheld (see ii) and the phenomenon can be reduced to a case of inflectional variance, see Section 1.1.

(ii) A: [_{TP} John didn't [_{ΣP} Σ[Pol:Neg] [_{VP} see [_{DP} D[Indef, Pol] one]], but ...
 E: [_{TP} Mary did [_{ΣP} Σ[Pol:Pos] < [_{VP} see [_{DP} D[Indef, Pol] one]] >

¹⁰ Sag (1976) actually proposes that the ellipsis under reading (ii) in (38) is identical to its antecedent at the level of LF, as the elliptical verb phrase and antecedent verb phrase contain the same bound variable. Sag defines these verb phrases as *alphabetic variants* of each other, and states that identity of logical forms is a sufficient condition for deletion as long as alphabetic variants are tolerated.

- (39) a. I remember meeting him, but I don't remember when ~~I met him~~.
 b. A: Amuse me!
 B: What with should I amuse you?
 c. Politiker würden gern helfen, aber sie wissen nicht wie ~~sie helfen sollten~~.
 politicians would.SUBJ prt help.INF but they know.INF not how they help.INF should
 'Politicians would like to help, but they don't know how.'

As these examples show, a tensed clause can have a gerundive antecedent (cf. 39a) and certain modals can count as equivalent to an imperative (cf. 39b) or a subjunctive form of the verb, as in the German (39c).¹¹ What these data involving IP-level mismatches first and foremost show is that syntactic identity and the *No new words* condition need not be met in these examples. Some form of semantic equivalence, on the other hand, can capture the data. Intuitively, the imperative/deontic modal mismatch is due to the fact that imperatives and deontic modals have an identical meaning component, they both impose obligation (see e.g. Portner, 2007).

2.1.3. Tolerable cases of non-isomorphism

A third set of arguments for semantic identity come from data containing ellipsis that is arguably syntactically non-isomorphic to its antecedent. There are several such non-isomorphic constructions possible (see Barros et al., 2014 on this point), the best known of which is clefts and pseudoclefts that can be found as underlying sources of sluicing following an antecedent that does not contain a cleft.

Consider the following three examples by Rodrigues et al. (2009), Fortin (2007) and Barros (2014) respectively (for other examples see Potsdam, 2007; van Craenenbroeck, 2007, 2010; Barros and van Craenenbroeck, 2013):

- (40) Juan habló con alguien pero no sé quién ~~es la persona con la que~~ habló Juan Spanish
 Juan spoke with someone but not know who is the person with the that spoke Juan
 'Juan spoke with someone, but I don't know who (the person that he spoke to was).'
- (41) Terry got married against someone's wishes, but I don't know whose ~~it was/* he got married wishes against~~.
- (42) Either something's on fire, or Sally's baking a cake, but I don't know which ~~it is~~.

As the above authors argue, ellipsis in these cases must apply to a cleft, a conclusion necessitated in the case of (40) and (41) by the observation that these sluices feature apparent preposition stranding, which Spanish does not have in its grammar, and nor does English when it comes to the idiom *against someone's wishes*. The conclusion that the underlying form in (42) must be a cleft comes from the fact that with disjunctive antecedents no isomorphic continuation is possible, and that this kind of sluicing is only possible in languages that allow for an overt cleft continuation in these cases (Barros, 2014).

These examples show that the ellipsis site in sluicing can demonstrably contain cleft structures and thus be structurally non-isomorphic to their non-cleft antecedent. For semantic theories of identity, the cleft continuations pose no problem as the antecedent and elliptical clause have the same meaning.¹² For syntactic theories of identity, the data are more difficult to explain. The ellipsis site in these cases contains a different phrase marker as well as a number of new words (such as the pivot of the cleft (*it*), and a predicative copula (*is/was*) and even more in the case of pseudoclefts), violating

¹¹ Arguments for semantic identity from finiteness/modality mismatches usually also comprise mismatches with *how*-infinitives in the ellipsis site, such as (i) and (ii), first listed in Merchant (2001).

(i) a. Decorating for the holidays is easy if you know how [_{TP} ~~to decorate~~].
 b. I'll fix the car if you tell me how [_{TP} ~~to fix the car~~].

Tanaka (2011b) provides convincing arguments, however, these examples should be discounted from the list as *how*-infinitives in these examples are idiosyncratic in many ways and most likely contain not sluicing proper, but predicate ellipsis followed by an independent process of non-pronunciation of the infinitival *to*.

¹² Barros (2014) shows that clefts and their non-cleft antecedents do differ in some aspect of their interpretation, such as exhaustivity, but such configurations nevertheless satisfy the answerhood-based semantic/pragmatic Sluice Condition defined in (32).

the *No new words* condition, so syntactic accounts would need some tweaking to explain the well-formedness of these data.¹³

3. Synthesis and the contribution of the articles in this volume

The previous two sections have introduced the major issues that enter the discussion of identity in ellipsis by providing examples of both syntactic and semantic approaches and some empirical coverage of these proposals. While the proper characterization of the identity condition is still not in sight, the evidence reviewed appears to suggest that one needs both kinds of approaches. In other words, at least part of the identity requirement is syntactic, and another part is semantic. One analytic possibility is to state identity as a Janus-faced issue, as is proposed in hybrid theories, such as Rooth (1992), Chung (2006, 2013), Merchant (2008a, 2013c), van Craenenbroeck (2012), AnderBois (2010), (see also Kehler, 2002). These adhere to the view that recovery of elided material is guided by both semantic and syntactic identity conditions.

The challenge for current theories of ellipsis identity is to define how semantics and syntax complement each other, whether there are ways of deriving one from the other. Another challenge is empirical, predictions of both types of theories should be tested against a cross-linguistically representative set of data, which would be a welcome shift from the English-based theorizing that has characterized the last few decades.

The papers in this volume take up both of these challenges. Empirically, they are rich in novel observations in languages other than English. Thoms, Merchant, Cecchetto et al., and Kim provide new data and generalizations for syntactic identity from different languages: Thoms furnishes novel evidence for identity from Scottish Gaelic, Cecchetto et al. from Italian Sign Language, Merchant from bilingual code switching, and Kim reviews case matching effects in sluicing in Korean. The first three papers also put forward novel arguments for a syntactic identity condition. Thoms proposes an all-encompassing theory of Parallelism-based syntactic identity defined as a requirement of isomorphic variable binding configurations. Kobele offers a derivational model of ellipsis resolution similar but not identical to LF copying that straightforwardly derives many syntactic identity effects. Kim argues for a non-sentential approach with contextual constraints deriving syntactic connectivity effects.

The rest of this section summarizes the results of these five papers.

Gary Thoms in *Syntactic identity, Parallelism and accommodated antecedents* makes a case for syntactic identity, but one in which the identity relation permits some “looseness” by allowing accommodated antecedents. The paper shows that many violations of identity, such as voice mismatches, sprouting with preposition stranding, some instances of case-mismatches (from Chung, 2013) can be traced back to a violation of parallelism, the latter defined as an isomorphism requirement with respect to binding configurations regulating the position of binders and bindees in A-bar movement and head movement. As a crucial argument towards this conclusion, the paper reconsiders the patterns of *Warner’s Auxiliary Verb Generalization* as well as novel data from Scottish Gaelic V-stranding ellipsis that resemble the distribution of English *have/be* under ellipsis. In Gaelic, the stranded verb and its antecedent can differ in being a lexical or an auxiliary verb, but only in one direction: an auxiliary can antecede the ellipsis with a finite verb (43a), but a finite verb may not antecede ellipsis where the verbal element is an auxiliary (43b).

- (43) a. A: $[\text{FinP } T_{[\text{pres}]} + \text{aux}_i \quad [\text{TP } \text{subj } t_i \dots [\text{VP } V \dots]]]$
 E: $[\text{FinP } T_{[\text{fut}]} + V_i \quad < [\text{TP } \text{subj } t_i \dots [\text{VP } t_i \dots]] >]$
 b. A: $[\text{FinP } T_{[\text{past}]} + V_i \quad [\text{TP } \text{subj } t_i \dots [\text{VP } t_i \dots]]]$
 E: $* [\text{FinP } T_{[\text{pres}]} + \text{aux}_i \quad < [\text{TP } \text{subj } t_i \dots [\text{VP } V \dots]] >]$

Taking auxiliaries to be base generated higher than lexical verbs in T, and both raising to Fin, Thoms argues that the ungrammatical configuration can be captured as a violation of parallelism of binding configurations: a variable cannot provide an antecedent for ellipsis of a non-variable, which explains (43b). The author argues the opposite pattern is well-formed, however, as parallelism can be calculated on the basis of near-identical accommodated antecedents, which in this case means that a variable can be accommodated in the position of the verb. Thoms defines accommodation as a

¹³ One possible way of “tweaking” syntactic identity theories is to allow the identity relation to compare the elided material not only to its actual linguistic antecedent, but also to an antecedent that is *accommodated* on the basis of the linguistic one (Johnson, 2012a; van Craenenbroeck, 2013). As van Craenenbroeck (2013) argues, the lexical ingredients of clefts (copulas and *it*) should be freely available upon accommodation as such entities are even available in the absence of linguistic antecedents (Merchant, 2004). Discourse initial fragments, for example, are arguably contained in a non-pronounced cleft structure, as indicated by the use of the tag question appended to the fragment in the next example:

(i) ~~It is~~ nice weather, isn’t it?

See Thoms (2013, this volume) for an alternative syntactic identity theory based on the possibility of accommodation.

process yielding structurally defined alternatives to the antecedent, following [Katzir's \(2007\)](#) syntactic model of accommodation, wherein alternatives can be derived by deletion, contraction and substitution of material, but only up to the level of complexity of the accommodated material. Importantly, accommodation cannot increase the complexity of the source e.g. by adding a verb, thus ruling out accommodation in the case of (43b). Thoms' model thus allows for the 'looseness' of identity via structurally and semantically restricted accommodation.

Jason Merchant's contribution *On ineffable predicates: Bilingual Greek-English code switching under ellipsis* extends the search for the identity condition into bilingual code-switching and identifies contexts in which elliptical code-switching produces grammatical results that are ungrammatical without ellipsis taking place. On the basis of the findings of [González-Vilbazo and Ramos \(2012\)](#) and [Nee \(2012\)](#), Merchant shows that bilingual code-switching in elliptical utterances adheres to a strong syntactic requirement: code-switching in sluicing (whereby the antecedent and the *wh*-remnant are in different languages) is only grammatical if the *wh*-remnant shows the case required by the predicate in the antecedent. On the basis of this, Merchant defines the *Code-Switching Ellipsis Generalization* stating that ellipsis sites under code-switching always involve switching back to the language of the antecedent—which is evidence that ellipsis is resolved by identity to the linguistic material and not to semantic meaning (as the meaning is the same in both languages involved in the switch):

(44) Code-Switching Ellipsis Generalization

All apparently cross-language ellipses involve code-switching at the ellipsis side (into the language of the antecedent).

Merchant also shows that while the antecedent in code-switching examples corresponds to the other language, reconstructing the ellipsis site using the material of the antecedent can fail for reasons having to do with morpho-syntactic composition. In spontaneous utterances of Greek-English bilinguals, the following Greek question can be answered with an elliptical English answer (B1) lacking a verb phrase, but cannot be answered in the same way when the verb phrase is pronounced in Greek:

(45) A: Píres tin tsánda mazí su?
took.2s the bag with you
'Did you take the bag with you?'

B1: Yes, I did.

B2: * Yes, I did píra tin tsánda mazí mu
take.ACT.PERF.PAST.1s the bag with me

B3: * Yes, I did pern tin tsánda mazí mu
take[stem.form] the bag with me

Merchant argues that the predicates in B2 and B3 are ineffable (cannot be pronounced) because of a morphological problem in the derivation of the Greek verb form. A Greek verb cannot be morphologically convergent without the verbal stem establishing a local relation with the Tense head, but Tense is occupied by the English auxiliary in these examples. Ellipsis, understood here as vocabulary non-insertion, saves the derivation, as the partial feature bundle does not get matched with a vocabulary item. In effect this comes down to a morphological *repair* effect of ellipsis that saves an otherwise unpronounceable structure.

The paper by **Carlo Cecchetto, Alessandra Cecchetto, Carlo Geraci, Mirko Santoro and Sandro Zucchi** *The syntax of predicate ellipsis in Italian Sign Language (LIS)* is a study of predicate ellipsis in Italian Sign Language, an SOV language with postverbal modal/auxiliary markers. Predicate ellipsis is earmarked by the obligatory presence of an adverbial sign such as SAME, AS-WELL, NO or YES, and can contain modals, future auxiliaries or the perfective marker. The authors argue that the ellipsis in such clauses corresponds to English-type auxiliary-stranding VP ellipsis (and not stripping), observing that it can be embedded, and it can precede its antecedent. Against this background, the paper offers an argument for syntactic identity from the realm of adverb incorporation, a phenomenon in which adverbs can be signed in a single lexical item together with the verb. Incorporated and non-incorporated adverbs can express the same meaning:

(46) MARIO MEAT EAT QUICKLY. /MARIO MEAT EAT-QUICKLY.
'Mario eats meat quickly.'

Under predicate ellipsis, however, with a contrastive remnant in the elliptical clause, the use of the incorporated form is ungrammatical in the same reading:

(47) MARIO MEAT EAT QUICKLY. GIANNI SAME SLOWLY.
'Mario eats meat quickly. Gianni does that slowly.'

(48) MARIO MEAT EAT-QUICKLY. GIANNI SAME SLOWLY.

‘*Mario eats meat quickly. Gianni does that slowly.’

The authors argue that this pattern is explained under syntactic identity: the ungrammaticality of (48) with the given reading is due to the fact that the ellipsis site contains the predicate MEAT EAT-QUICKLY, and cannot be expressed via the non-incorporated pattern, even though the two patterns are truth-conditionally identical. The authors also present an argument for syntactic identity from the realm of strict/sloppy identity, and note that vehicle change effects are observed as well, posing problems for strict syntactic identity theories just as in other languages.

Gregory Kobele's contribution, *LF copying without LF*, offers a derivational copying account of ellipsis resolution in the minimalist grammar formalism (Stabler, 1997). Departing from standard minimalist practice, the notion of structure that Kobele appeals to is that of the derivational process itself. Standard notions of substructures, such as subtrees, or (less standardly) subtrees with missing pieces, are, from this perspective, derivational subprocesses and derivational subprocedures respectively. Ellipsis resolution involves copying the meaning derived by a procedure (i.e. the meaning derived by repeating a sequence of derivational steps) at the ellipsis site. In this, the proposal differs from LF copying accounts in that the material that is copied from antecedent to ellipsis site is not a representation, but rather the meaning of a derivation. In Kobele's model, ellipsis is an operation, which he represents as $*e^*$, parameterized by the type of the derivational process whose meaning is to be copied. The notion of derivational type is of the same kind as the more familiar semantic types, with the difference being that the atomic derivational types represent the syntactic category of the objects which are the result of the derivations. The different types guide the copy mechanism and allow distinct types of elliptical processes to be dissimilar in their properties (gapping, sluicing, VP ellipsis, etc.). One deficiency of the present account is that the types of elliptical processes Kobele needs do not line up in a one-to-one manner with our intuitive categorization of elliptical constructions (gapping, sluicing, VP ellipsis, etc.). Thus in this system active-active and passive-passive VPE are not instances of the same type, and therefore could in principle be found one without the other in some language.

In Kobele's system, it is always possible to apply an ellipsis operation provided the syntactic type of the argument is appropriate. The meaning of an ellipsis operation is determined by identifying an antecedent (a derivational subprocess) of the correct type in the discourse context, and simply reusing its meaning. If there is no appropriate antecedent, the meaning of the ellipsis site cannot be reconstructed. Kobele shows that the proposed mechanism straightforwardly derives syntactic identity effects in many contexts, such as voice mismatches; or the ban on preposition stranding in sprouting, and the P-stranding generalization of Merchant (2001). The ban on P-stranding in sprouting for example follows from the fact that the antecedent of sprouting never contains a preposition, thus neither can what is copied into the ellipsis site.

Jongbok Kim's *Syntactic and Semantic Identity in Korean Sluicing: A Direct Interpretation Approach* provides a non-structural approach to Korean sluicing and sprouting. The author argues against structural approaches to sluicing that assume a deletion operation following focus movement of the remnant, or operating on a pseudocleft. The key argument against the latter comes from the availability of multiple sluicing, which contrast with the availability of multiple clefts in the language, and which counts as an argument for adopting a Direct Interpretation approach in which sluicing does not represent a sentential utterance. The account is cast in the Construction-based HPSG framework, within which ellipsis resolution is based on a Dialogue Game Board (DGB), the latter being a record of conversational events, contextual parameters, and the question under discussion, which serve as the base on which non-sententials are resolved. The analysis is thus discourse based, and syntactic connectivity effects, such as categorial equivalence between remnant and correlate as well as case connectivity follow from constructional constraints of the construction, and the various features of the contextual information. Korean shows the equivalent of the ban on preposition stranding in sluicing: while structural cases can be missing on the remnant in sluicing, they cannot be missing on the remnant in sprouting. To explain this fact without reference to syntactic structure, Kim proposes the *Full instantiation constraint*, which requests that syntactic information (e.g. case features) not available at surface but updated in the DGB needs to be fully specified in the subsequent syntax. He puts forward the claim that such a constraint facilitates parsing. In sprouting, the case on the correlate is needed to allow the interlocutor to identify the issue/the question under discussion, as there is no overt indefinite in the antecedent that could signal it (in the sense of AnderBois, 2010).

4. The background of this issue

This special issue contains selected papers of the conference *Identity in ellipsis*, held at the Leiden University Centre for Linguistics (LUCL), Leiden University on 20–21 September 2013. This conference was organized within the NWO VIDI project *Focus and ellipsis* (2008–2014, project holder Anikó Lipták), with financial support by the *Netherlands Organisation for Scientific Research* (NWO). Many thanks to all conference participants for their participation and useful discussion. On the organizational side, thanks to Enrico Boone and Bobby Ruijgrok for their help with the organization of the meeting and to LUCL and Leiden University for hosting the event.

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