

# On timing of ellipsis: Evidence from extra deletion processes\*

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In this paper, I introduce a hitherto undescribed ellipsis variety present in a number of head-final languages including Eastern Armenian, Digor and Iron Ossetic, and Turkish. The material deleted under this type of ellipsis demonstrably does not form a constituent. I show that this phenomenon cannot be analyzed as a series of constituent deletions. I propose that this ellipsis variety involves extra deletion of some material adjacent to a gapping site (specifically, a part of a DP or a PP) rather than mere deletion of a constituent. I proceed to argue that the existence of extra deletion necessarily implies that deletion must take place after linearization.

## 1. Introduction

In the literature pursuing deletion-based approaches to ellipsis, for all the differences between specific proposals, deletion is standardly assumed to occur at PF, see e.g. Chomsky (1995); Merchant (2001), Aelbrecht (2010), Thoms (2010); Lipták & Griffiths (2014); Weir (2014); Abe (2015); Bruening (2015); Ott & Struckmeier (2018), and Griffiths (2018). The PF stage of derivation, however, has been shown to possess a rather complex structure, with various phenomena, such as some kinds of movement and agreement, being relegated to the postsyntactic stage, see e.g. Arregi & Nevins (2012); Bobaljik (2008), Bhatt & Walkow (2013), Embick & Noyer (2001), and Harbour (2003). Possible “landmarks” that designate various stages of the PF derivation include (but are not limited to) Vocabulary Insertion, linearization, establishing agreement (if the latter is assumed to occur at the PF) and various types of PF-level movement. It bears asking therefore at which stage of postsyntactic derivation deletion occurs. While it is impossible to order deletion with respect to every conceivable postsyntactic operation, I will provide here an argument in favor of placing it after linearization.

An (2016, 2019), on the basis of several ellipsis constructions in Korean (and putatively, in other languages) proposed that there is a process of deletion that occurs after linearization and operates on contiguous strings. His evidence comes from what he called *extra deletion* processes. These are situations where an instance of ellipsis demonstrably licensed in syntax, such as the formation of fragment answers, can actually delete a slightly larger amount of material than expected. The condition being that extra deleted material is linearly adjacent to the “main” ellipsis site. Given that adjacency is only established after linearization, this can be taken as evidence for a specific timing of deletion.

In this paper, I introduce a previously undescribed type of ellipsis in Digor and Iron Ossetic (Iranian, Indo-European), Eastern Armenian (Indo-European), and Turkish. I argue that this construction requires an extra deletion analysis, thus strengthening the conjecture that ellipsis occurs after linearization. It remains to be seen whether all instances of ellipsis are amenable to this kind of analysis.

Specifically, I explore extra deletion associated with gapping. Gapping is an ellipsis variety that mainly occurs in coordinations, and deletes the verb in one of the coordinands (1).

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- (1) a. Mary keeps a dragon, and John ~~keeps~~ a unicorn.  
 b. Dutch  
 Karel schrijft met een potlood en  
 K. writes with a pencil and  
 John ~~schrijft~~ met een pen  
 J. writes with a pen  
 'Karel writes with a pencil and John with a pen.' Neijt (1979: 19)

The process to be discussed in this paper occurs in head final languages and deletes the verb and a non-subconstituent of a noun phrase or of an adpositional phrase adjacent to the verb, as is schematized in (2). Purely for presentational purposes, I will call this phenomenon *slending*: SLightly Extended Noun Deletion.

- (2) [ Verb ] & ... [ <sub>YP</sub> Z ~~W-Y<sup>0</sup>~~ Verb ]

The sentences in (3) illustrate slending for Digor Ossetic. In (3a), regular forward gapping is shown; (3b) and (3c) schematically illustrate two instances of slending, while (3b') and (3c') show actual language data. In (3b) the case-marked NP head *χedzar-i* house-LOC is deleted together with the verb, while the modifying adjective *dorgin* 'made of stone' is retained. In (3c), slending targets the verb and the PP 'about European languages.' Besides the verb, it deletes the postposition *tuxxej* 'about' and the head of its complement DP, *evzag-t-i* language-PL-GEN. The modifying adjective 'European' is retained.

- (3) a. Digor Ossetic  
 ez tʃikola-j tserun soslan=ba leʃken-i ~~tseruj~~  
 I Chikola-LOC<sup>1</sup> I.live Soslan=CTR Lesken-LOC lives  
 'I live in Chikola, and Soslan, in Lesken.'
- b. [ ... ] ... [ ... [ <sub>DP</sub> Adj. N<sup>0</sup>-CASE ] V (XP)]  
 Antecedent clause Ellipsis Clause
- b'. ez [jetʃi ʁedin χedzar-i] tser-un  
 I that wooden house-LOC I.live  
 soslan=ba [atʃi dorgin χedzar-i] ~~tser-uj~~  
 Soslan=CTR this stone house-LOC lives  
 'I live in that wooden house, and Soslan lives in this stone house.'
- c. [ ... ] ... [ ... [ <sub>PP</sub> [ <sub>DP</sub> Adj. N<sup>0</sup>-CASE ] P<sup>0</sup> ] V (XP)]  
 Antecedent clause Ellipsis Clause
- c'. soslan kavkazzag evzag-t-i tuxxej radzurdta  
 Soslan Caucasian language-PL-GEN about spoke  
 medine=ba jevropag evzag-t-i tuxxej radzurdta  
 Madina=CTR European language-PL-GEN about spoke  
 'Soslan spoke about Caucasian languages, and Madina spoke about European languages.'

<sup>1</sup> Glosses: ABL ablative; ACC accusative; ALL allative; AUX auxiliary; COM comitative; COMP complementizer; CTR contrastive topic; CVB converb; DAT dative; DEF definite; EP epistemic; GEN genitive; INS instrumental; LOC locative; MP modal particle; PL plural; SUP superessive.

Although not all the speakers of the respective languages accept such sentences, a significant proportion of the speakers I have consulted do so<sup>2</sup>. The existence of this type of speaker is sufficient for the main theoretical purpose of the paper.

The paper is organized as follows. In Section 2, I provide the necessary background about the languages this paper deals with, and two ellipsis varieties slending is similar to, N'-deletion and gapping. In Section 3, I lay out the basic properties of slending. In Section 4, the key technical part of the paper, I present the main proposal and show that it predicts the properties of slending. In Section 5, I discuss alternative proposals and show that they fail to derive the properties of slending. In Section 6, I briefly discuss the conditions under which slending can be observed and putative instances of slending in other languages. Section 7 concludes.

## 2. Background

In this section, I provide some necessary background about the languages under discussion and about the ellipsis varieties slending is interestingly similar to, specifically, about N'-deletion and gapping.

### 2.1 Background on the languages of the study

My evidence comes from Iron and Digor Ossetic (Iranian; Indo-European), Eastern Armenian (Armenian; Indo-European), and Turkish (Oghuz; Turkic)<sup>3</sup>. They all are head-final languages with moderately rich case systems. While scrambling is fairly free in all these languages, they tend to have verb-final clauses.

The crucial evidence will come from deletions that reach into noun phrases, and therefore I will briefly overview the structure of the noun phrase in these languages. I stay agnostic as to the existence of a DP layer in Ossetic and Turkish<sup>4</sup>, as this does not seem to be directly relevant for the present study. Eastern Armenian has an overt article<sup>5</sup> =ə/=ən, Dum-Tragut (2009), and therefore I assume it to project a DP. For a sustained argument in favor of the DP in Eastern Armenian, see Megerdumian (2008), and in the closely related Western Armenian, Sigler (1996). The exact nature of the maximal projection of a noun is not relevant for my present purposes, however, and I will refer to it as the extended noun phrase, or xNP in short.

Extended noun phrases in all these languages are rigidly head-final and do not exhibit concord of any kind. Case and number marking (and, in the case of Eastern Armenian, also definiteness marking, and in the case of Turkish, possession marking) only appears on the head noun at the right edge of the xNP. The relevant morphological marking is highlighted with bold in (4).

- (4) a. Digor Ossetic  
 soslan-i      atʃi      ragon      limen-**t-en**  
 Soslan-GEN    this      old      friend-PL-DAT  
 'to these old friends of Soslan's'

<sup>2</sup> Of the informants consulted, this type of examples were accepted by 3 out of 5 speakers of Turkish, all the 4 speakers of Eastern Armenian from Syunik province and Iran (but by none of 3 speakers from Erevan and Gyumri), 8 out 10 speakers Digor Ossetic, and 2 out of 4 speakers of Iron Ossetic.

<sup>3</sup> A remark on presentation of the data is in place here. For Turkish, I use the standard orthography; and for Ossetic and Armenian, IPA-based transcriptions. For descriptions of the transcriptions used here, see Vaux (1998) for Armenian; and Erschler (2018) for Ossetic.

<sup>4</sup> For Turkish, much of the literature argues for existence of the DP, see e.g. Öztürk & Taylan (2016), Kornfilt (2018), and the references there. However, Bošković & Şener (2014) argue that Turkish only projects the NP. For Ossetic, Erschler (2019) provides evidence in favor of the DP.

<sup>5</sup> I mark it here as an enclitic and gloss it DEF. It is irrelevant for my purposes whether it is a suffix or a clitic, and what its precise semantics is.

- b. Armenian  
 Aram-i ajt erek hin ənker-**ner**=ə  
 Aram-DAT this 3 old friend-PL=DEF  
 ‘three old friends of Aram’s’
- c. Turkish Bošković & Şener (2014)  
 Can-ın şu (eski) üç (eski) bisiklet-i  
 John-GEN that old three bicycle-3SG.POSS  
 ‘those three old bicycles of John’s’

While in all the languages under consideration the neutral order of main constituents is SOV, they allow non-verb-final sentences, see Kornfilt (1997: 91) for Turkish, Erschler (2018a: 876) for Ossetic, and Dum-Tragut (2009: 555) and Kahnemuyipour & Megerdumian (2011: 157; 2017: 81) for Eastern Armenian<sup>6</sup>. However, contrastive constituents are fronted in all these languages, and remnants under ellipsis are naturally contrastive to their correlates, see the discussion in Section 2.3 below. Accordingly, in the elliptic clauses throughout this paper, I show the deleted verb in the clause-final position.

## 2.2 Case marking in xNPs without overt heads

It is well known that extended noun phrases may lack an overt head noun under certain syntactic and discourse conditions. Whether it is a result of some deletion (usually called N'-deletion in the literature), or an occurrence of a null noun, is not easy to determine, see the discussion in Saab (2018) and the references cited there), and I will not attempt to do this for the languages under study here, either. Whatever should be the correct analysis, the important thing to note is that whenever xNPs without an overt head noun are used in sentences, case marking always appears at the right edge of the xNP. In all the sentences in (5), the head ‘dog(s)’ is missing from the ablative-marked xNP in the second conjunct. Case and number marking is then carried by the respective adjective.

- (5) a. Iron Ossetic  
 medinəfaw k<sup>w</sup>əj-tə warzə urfət-\*(**ej**)=ta tərfgə kənə  
 Madina black dog-PL loves white-PL-ABL=CTR fear.CVB does  
 ‘Madina likes black dogs, and fears white ones.’
- b. Armenian  
 vart<sup>h</sup>an=ə spitak fan=ən=e sirum  
 Vartan=DEF white dog.DAT=DEF=AUX.3SG love.PRTC  
 isk/bajc **sev-\*(its<sup>h</sup>)**=e vaxenum  
 CTR/but black-ABL=AUX.3SG fear.PRTC  
 ‘Vartan likes the white dog, and fears the black one.’
- c. Turkish  
 Ayşe siyah köpeğ-i seviyor **beyaz-\*(dan)** ise korkuyor  
 Ayshe black dog-ACC loves white-ABL CTR fears  
 ‘Ayshe likes a black dog, and fears a white one.’

Furthermore, in Ossetic fragment answers, the case marking must be retained on the adjective. Armenian and Turkish speakers, on the other hand, allow for the case marker to be missing to a varying degree.

<sup>6</sup> In Eastern Armenian, the frequency of SVO clauses is particularly high.

- (6) a. Digor Ossetic  
 A: ketʃi kuj-əj terʃi?  
 which dog-ABL you.fear  
 'Which dog are you afraid of?'  
 B: wors-\*(əj)  
 white-ABL  
 'The white (one)'
- b. Armenian  
 A: Vahan=ə vor ʃən-its<sup>h</sup>=e vaxenum?  
 Vahan=DEF who dog-ABL=AUX.3SG fear.PRTC  
 'Which dog does Vahan fear?'  
 B: sev-?(its<sup>h</sup>)  
 black-ABL  
 'The black (one)'
- c. Turkish<sup>7</sup>  
 A: Ali hangi köpek-ten korkuyor?  
 Ali which dog-ABL fears  
 B: siyah-?(dan)  
 black-ABL  
 'A: Which dog does Ali fear? B: The black one.'

To recapitulate, xNPs without overt noun heads typically bear the morphological marking that the respective xNP with an overt head would bear.

## 2.3 Gapping

Slending closely resembles a well-studied ellipsis variety, gapping, see an overview of its properties and of available proposals in Johnson (2018), and a specific analysis in Erschler (2018b) to be adopted here. Recall that under gapping, the lexical verb and the auxiliary, if there is any, are missing, but the sentence would remain grammatical should they be reconstructed. This is illustrated by the English sentence in (7a), and the Russian and Dutch ones in (7 b-c). In more commonly studied cases, this construction occurs in coordinations.

- (7) a. Some will eat beans, and others ~~will eat~~ rice.
- b. Russian  
 Vas'ja p'jot vodku a Oleg p'jot samogon  
 Vasya drinks vodka.ACC CTR Oleg drinks moonshine.ACC  
 'Vasya drinks vodka and Oleg moonshine.'

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<sup>7</sup> For Turkish, a caseless fragment answer can plausibly have a pseudocleft source. An answer to the question 'What does Ali fear?' could be such as shown in (i). (Instead of (i), use (6c) to illustrate the availability of the pseudo-cleft structure, in other words, repeat 6cA and provide the pseudo-cleft answer to it: "What Ali fears is a black."

- (i) Ali-nin kork-tuğ-u beyaz köpek-(Ø-tir)  
 Ali-GEN fear-NMZ-POSS white dog-COP-EP  
 'What Ali fears is white dog.'

Now, the caseless fragment *beyaz* can be the result of N or N' ellipsis in (i). İnce (2012: 182) reports case drop in Turkish fragment answers to be impossible, but the native speakers I have consulted allow it to some degree.

- c. Dutch  
 Karel schrijft met een potlood en  
 K. writes with a pencil and  
 John ~~schrijft~~ met een pen  
 J. writes with a pen  
 'Karel writes with a pencil and John with a pen.' Neijt (1979: 19)

Gapping is attested in all of the languages under discussion here (8). In the Armenian sentence in (8c), the antecedent can have either SOV or SVO order. As was discussed in Section 2.1, I assume that the SOV order is basic and accordingly treat the ellipsis site as verb-final.

- (8) a. Iron Ossetic  
 foʃlan fəʃʃən bəxordta xetəg=**ta** welibəx ~~bəxordta~~  
 Soslan meat.pie eat.PST.3SG Khetag=CTR cheese.pie eat.PST.3SG  
 'Soslan ate a meat pie and Khetag a cheese pie.'
- b. Turkish İnce (2009)  
 Burak kütüphane-ye gitti, Mustafa (da) hastane-ye ~~gitti~~  
 Burak library-DAT went Mustafa also hospital-DAT went  
 'Burak went to the library and Mustafa to the hospital.'
- c. Eastern Armenian  
 petros-ə <spanets<sup>h</sup>> gajl-i-n, <spanets<sup>h</sup>>  
 Peter-DEF killed wolf-GEN-DEF killed  
 isk poɸos=ə aɸves-i-n ~~spanets<sup>h</sup>~~  
 CTR Paul=DEF fox-GEN-DEF killed  
 'Peter killed the wolf, and Paul the fox.'

As first explicitly noticed by Kuno (1976), remnants under gapping must contrast with their correlates in the antecedent. In Ossetic, if two conjuncts contrast, the first XP in the second clause has to be overtly marked as a contrastive topic by the enclitic =*ta* (Iron Ossetic)/=*ba* (Digor Ossetic). The presence of this marking is a necessary prerequisite for gapping in coordinations. The conjuncts are usually coordinated asyndetically (9a). The Iron Ossetic sentences in (9b-c) show that gapping is impossible without contrast marking with overt coordinators – *eme* 'and' in (9b), and *fele* 'but' in (9c).

- (9) a. Iron Ossetic  
 foʃlan fəʃʃən bəxordta xetəg=**ta** welibəx ~~bəxordta~~  
 Soslan meat.pie ate Khetag=CTR cheese.pie ate  
 'Soslan ate a meat pie and Khetag a cheese pie.'
- b. \*foʃlan fəʃʃən bəxordta **eme** xetəg welibəx ~~bəxordta~~  
 Soslan meat.pie ate and Khetag cheese.pie ate  
 'Soslan ate a meat pie and Khetag a cheese pie.'
- c. \*foʃlan fəʃʃən bəxordta **fele** xetəg welibəx  
 Soslan meat.pie ate but Khetag cheese.pie  
~~bəxordta~~  
 ate  
 'Soslan ate a meat pie but Khetag a cheese pie.'

In Eastern Armenian, gapping requires the contrastive conjunction *isk* (10), Dum-Tragut (2009: 421-422).

- (10) Eastern Armenian  
 kujr=ə k<sup>h</sup>əgna dəprots **isk** ink<sup>h</sup>e man<sup>h</sup>ap<sup>h</sup>art<sup>h</sup>ez k<sup>h</sup>əgna  
 sister=DEF will.go school.NOM CTR he.NOM kindergarten.NOM will.go  
 ‘The sister will go to school, and he to kindergarten.’ Dum-Tragut<sup>8</sup> (2009: 421)

In Turkish, however, gapping is possible without overt contrastive marking, Kornfilt (1997: 120).

### 3 Slending

In this section, I describe the phenomenon my argumentation is based upon. In Section 3.1, I discuss the simplest cases of slending. In Section 3.2 I show that slending deletes non-constituents. In Section 3.3 I explore the relationship between slending and gapping.

#### 3.1 Basic properties

Now let us systematically describe the phenomenon under discussion in this paper. Slending occurs in coordinations and deletes the verb along with a part of an adjacent XP.

Although not all the speakers of the respective languages accept such sentences, a significant proportion of the speakers do, see Footnote 2 in Section 1. In Eastern Armenian, the construction is restricted to the dialects spoken in (the southernmost) Syunik Province of Armenia, and Iran. In the rest of the languages of this study, the variation appears to be purely idiolectal.

In the simplest case, slending deletes, besides the verb, the head noun of an xNP with its case marker. The remaining part of the xNP does not bear case marking, which is surprising in the view of the discussion in Section 2.2. This is illustrated in (11) for Digor and Iron Ossetic, Eastern Armenian, and Turkish. Normally, we would expect the case marking to appear on the fragment xNP, that is to say, we would expect *dorgin* ‘made of stone’ to be marked with the locative *-i* in (11a); *wurf* ‘white’ to be marked with the ablative *-ej* in (11b); *met* ‘big’ to be marked with the ablative *-it<sup>h</sup>* in (11c); and *beyaz* ‘white’ to be marked with the ablative *-dan* in (11d). To repeat, I assume that clauses in Armenian are underlyingly verb-final.

- (11) a. Digor Ossetic  
 ez [jetʃi ʁedin xɛdʒar-i] tser-un  
 I that wooden house-LOC live  
 soslan=ba [atʃi dorgin xɛdʒar-i] tser-uj  
 Soslan=CTR this stone house-LOC lives  
 ‘I live in that wooden house, and Soslan lives in this stone house.’  
 b. Iron Ossetic  
 ʃoʃlan [alan-ə [ʃaw k<sup>w</sup>əz-ɐj]] tɛrfə  
 Soslan Alan-GEN black dog-ABL fears  
 alan=ta [ʃoʃlan-ə [wurʃ k<sup>w</sup>əz-ɐj]] tɛrfə  
 Alan=CTR Soslan-GEN white dog-ABL fears  
 ‘Soslan fears Alan’s black dog, and Alan (fears) Soslan’s white (dog).’

<sup>8</sup> The glosses and transcription were modified to conform to the conventions used in the present paper.

- c. Eastern Armenian  
 Vahan= $\emptyset$  <jekav> p<sup>h</sup>ok<sup>h</sup>ər gjuɤ-its<sup>h</sup> <jekav>,  
 Vahan=DEF arrived small village-ABL arrived  
 isk Ara=n [mets gjuɤ-its<sup>h</sup>] jekav  
 CTR Ara=DEF big village-ABL arrived  
 'Vahan arrived from a small village, and Ara from a big village.'
- d. Turkish  
 Cem siyah köpekten korkuyor,  
 Cem black dog.ABL fears  
 Can ise [beyaz köpekten] korkuyor  
 Can CTR white dog.ABL fears  
 'Cem fears a black dog, and Can, a white one.'

The variants of the sentences in (11) with case marking retained on the rightmost remnant are all grammatical, compare (11a) with (12a), and (11e) with (12b). The examples in (14) represent regular gapping and N'-deletion or an equivalent null noun<sup>9</sup>.

- (12) a. Digor Ossetic  
 ez [jetʃi xedin xɛɖzar-i] tser-un  
 I that wooden house-LOC live  
 soslan=ba [atʃi dorgin- $\emptyset$ -i] tser-uj  
 Soslan=CTR this stone-LOC lives  
 'I live in that wooden house, and Soslan lives in this stone house.'
- b. Turkish  
 Cem siyah köpekten korkuyor,  
 Cem black dog.ABL fears  
 Can ise [beyaz- $\emptyset$ -dan] korkuyor  
 Can CTR white-ABL fears  
 'Cem fears a black dog, and Can, a white one.'

In the sentences in (11), it is the expected case marking that is missing from the remnant. More generally, the remnant under slending appears without any morphological marking that would have been inherited from the head noun. For instance, in Digor Ossetic, numerals trigger dedicated morphology on head nouns, see Erschler (2018a) for details.

- (13) Digor Ossetic
- |    |                             |                     |    |                                 |                     |
|----|-----------------------------|---------------------|----|---------------------------------|---------------------|
| a. | ts'əχ                       | fetk'u              | b. | duwwet's'əχ                     | fetk'u-j            |
|    | green                       | apple               |    | two                             | green apple-NUM.NOM |
|    | 'green apple'               |                     |    | 'two green apples' (nominative) |                     |
| c. | duwwet's'əχ                 | fetk'u-je(m)-en     |    |                                 |                     |
|    | two                         | green apple-NUM-DAT |    |                                 |                     |
|    | 'two green apples' (dative) |                     |    |                                 |                     |

In a DP without an overt head noun, the numeral marking will appear on the right edge.

<sup>9</sup> That is to say, the case-marked xNP fragments in sentences such as in (12) can be generated independently of gapping, in the same way as they are generated in (5) above. The nature of the mechanism that generates case-marked xNP fragments is irrelevant for my present purposes.



(14) Digor Ossetic

duwwə ts'εχ-i	duwwə	ts'εχ-em-en
two green-NUM.NOM	two	green-NUM-DAT
'two green ones'		'for two green ones'

Now, DPs with numerals can participate in slending, and the numeral-induced marking disappears under slending, exactly like case marking. In (15), the remnant ts'εχ 'green' does not carry the expected numeral morphology, namely the -i morpheme.

(15) Digor Ossetic

soslan	duwwəsurχ	fetk'u-j	bax <sup>w</sup> ardta	
Soslan	2	red	apple-NUM ate	
mədinə=ba	erte	ts'εχ	fetk'uj	bax <sup>w</sup> ardta
Madina=CTR	3	green	apple-NUM ate	
'Soslan ate 2 red apples, and Madina, 3 green (ones).'				

The same holds true for regular plural marking – in neither of the sentences (16a-c) is the reading possible where the singular of 'dog' is reconstructed in the second conjunct.

(16) a. Digor Ossetic

soslan	saw	kuj-t-εj	tərsuj
Soslan	black	dog-PL-ABL	fears
χetəg=ba	wors	<del>kuj-t-εj</del>	<del>tərsuj</del>
Khetag=CTR	white	dog-PL-ABL	fears
'Soslan fears black dogs, and Khetag, white ones.'			

b. Eastern Armenian

Context <sup>10</sup> : In the neighborhood, there is a pack of black dogs, and a pack of white dogs.				
Vart <sup>h</sup> an=ə	spitak	fən-er-it <sup>h</sup> =e	vaxenum,	
Vartan=DEF	white	dog-PL-ABL=AUX.3SG	fear.PRTC	
isk	Vahan=ə	sev	<del>fən-er-it<sup>h</sup>=e</del>	<del>vaxenum</del>
CTR	Vahan=DEF	black	dog-PL-ABL=AUX.3SG	fear.PRTC
'Vartan fears the white dogs, and Vahan, the black (ones).'				

c. Turkish

Ayşe	beyaz	köpek-ler-i	seviyor	
Ayshe	white	dog-PL-ACC	loves	
Ali	ise	siyah	<del>köpek-ler-i</del>	<del>seviyor</del>
Ali	CTR	black	dog-PL-ACC	loves
'Ayshe likes the white dogs, and Ali the black (ones).'				

As in gapping (see the discussion in Section 2.3 above), the remnants under slending must contrast<sup>11</sup> with the syntactic material in the antecedent. The contrast manifests itself in the obligatory use of an overt contrastive marker in the sentence. In Ossetic, it is the enclitic =ba in Digor (16a) and =ta in Iron; in Armenian, it is the contrastive conjunction isk (16b); and in Turkish, slending requires the contrastive marker ise (16c), the marker *da* 'but', or contrastive

<sup>10</sup> The context is needed to ensure that the dogs in the sentence be referential. In a generic statement such as 'Vahan fears white dogs', it would be more natural to have 'dog' in the singular.

<sup>11</sup> It requires a separate study whether this contrast is reflected in the prosody of respective utterances. Such a study is unfortunately well beyond the scope of the present paper. At any rate, under slending, the lexical items in the ellipsis site have to have contrasting lexical items in the antecedent, exactly as it is the case with plain gapping.

intonation. For the sake of consistency, the Turkish slending examples in this paper all with *ise*. In Ossetic and Armenian, the contrastive marking is identical with the one used under regular gapping, see the discussion in Section 2.3. In the case of plain coordination, where the conjunction used is ‘and’, slending is ungrammatical in all the languages under discussion (17).

- (17) a. Iron Ossetic  
 \*medinə gətsəɫ wəndɟ-ə sərə  
 Madina small street-LOC lives  
 ɐmə ʃoflan ʃtər wəndɟ-ə sərə  
 and Soslan big street-LOC lives  
 ‘Madina (lives) on a small (street) and Soslan lives on a big street.’ (intended)
- b. Eastern Armenian  
 \*Vahan=ə <jekav> p<sup>h</sup>ok<sup>h</sup>ər gjuɤ-its<sup>h</sup> <jekav>  
 Vahan=DEF arrived small village-ABL arrived  
 jɛv Ara=n mets gjuɤ-its<sup>h</sup> jekav  
 and Ara=DEF big village-ABL arrived  
 ‘Vahan arrived from a small village, and Ara from a big one.’ (intended)
- c. Turkish  
 \*Cem büyük ev-de yaşıyor (ve) Can küçük  
 Cem big house-LOC is.living (and) Can small  
 yaşıyor  
 is.living  
 ‘Cem lives in a big house, and Can in a small one.’

### 3.2 Slending deletes syntactic non-constituents

The material deleted in the simplest examples of slending, such as in (11) above, that is, the verb and the head of the adjacent xNP obviously do not form a syntactic constituent. Moreover, in more complicated instances of slending, the deleted part of the adjacent XP does not need to be a subconstituent of the XP either. For instance, a postposition with the head noun of its complement may be deleted, stranding a case-unmarked modifier of the noun (18).

- (18) a. Digor Ossetic  
 soslan [[kavkazzag evzag-t-i] tuxxɛj] radzurdta  
 Soslan Caucasian language-PL-GEN about spoke  
 medinə=ba [[jevropag evzag-t-i] tuxxɛj] radzurdta  
 Madina=CTR European language-PL-GEN about spoke  
 ‘Soslan spoke about Caucasian languages, and Madina spoke about European languages.’
- b. soslan [[erigon filgojmag-i] xetstɛ] dzoruj  
 Soslan young woman-GEN with talks  
 medinə=ba [[zerond filgojmag-i] xetstɛ] dzoruj  
 Madina=CTR old woman-GEN with talks  
 ‘Soslan is talking with a young woman, and Madina, with an old (one).’
- c. Eastern Armenian  
 Vahan=ə <kangarav> [[mets tan] dimats<sup>h</sup>]  
 Vahan=DEF stopped big house.DAT in.front.of  
 <kangarav>  
 stopped

d. Turkish  
 Can [[büyük kızı-n-dan] önce] gelmiş,  
 Can big daughter-3SG-ABL before arrived  
 Ayşe ise [[küçük kızı-n-dan] önce] gelmiş  
 Ayshe CTR small daughter-3SG-ABL before arrived  
 ‘Can arrived before his eldest daughter, and Ayshe before her youngest one<sup>12</sup>.’

(19) a. Iron Ossetic  
 foʃlan [[jɛ=kɛʃter fərt-ə] xɛzar-mɛ] ɐrbasədi  
 Soslan 3SG=younger son-GEN house-ALL arrived  
 medine=ta [[jɛ=xɪʃter fərt-ə]— xɛzar-mɛ] ɐrbasədi  
 Madina=CTR 3SG=older son-GEN house-ALL arrived  
 ‘Soslan came to the younger son’s house and Madina, to the older one’s.’

b. Eastern Armenian  
 The context: Ara and Vahan needed to talk with two Tigran's sons.  
 Vahan=ə <jekav> [[mets təɾa-ji] tun] <jekav>  
 Vahan=DEF arrived big son-GEN house arrived  
 isk Ara=n [[pʰokʰər təɾa-ji] tun] jekav  
 CTR Ara=DEF small son-GEN house arrived  
 'Vahan arrived in the elder son's house, and Ara in the younger one's.'

c. Turkish  
 Can [[büyük kızı-n-ın] ev-in-e] gelmiş,  
 Can big daughter-3SG-GEN house-3SG-DAT arrived  
 Ayşe ise [[küçük kızı-n-ın] ev-in-e] gelmiş  
 Ayshe CTR small daughter-3SG-GEN house-3SG-DAT arrived  
 'Can arrived in his eldest daughter's house, and Ayshe, in her youngest one's.'

(20) 
$$* \left[ \begin{array}{c} \dots \\ \text{Antecedent} \end{array} \right] \dots \left[ \begin{array}{c} \dots [\text{DP1 Adj. N}^0\text{-CASE}] \\ \text{Ellipsis Clause} \end{array} \right] [\text{DP2 Adj. N}^0\text{-CASE}] \quad \forall$$

a. Iron Ossetic  
 \*foʃlan jɛ=xɪfter fərt-məwurf maʃinə-jəl fəsədi  
 Soslan 3SG=elder son-ALLwhite car-SUP went  
 alan=ta jɛ=kɛfter fərt-mə fərx maʃinə-jəl fəsədi  
 Alan=CTR 3SG=younger son-ALL red car-SUP goes  
 ‘Soslan went to the elder son in a white car, and Alan (went) to the younger (son) in a red (car).’ (intended)

11

- b. Eastern Armenian
- |             |         |        |           |                                   |                                      |
|-------------|---------|--------|-----------|-----------------------------------|--------------------------------------|
| *vahan=ə    | <jekav> | spitak | dzi-ov    | p <sup>h</sup> ok <sup>h</sup> ər | gjuɤ-its <sup>h</sup> ,              |
| Vahan=DEF   | arrived | white  | horse-INS | small                             | village-ABL                          |
| <jekav>     | isk     | ara=n  | sev       | <del>dzi-ov</del>                 | mets <del>gjuɤ-its<sup>h</sup></del> |
| arrived CTR | Ara=DEF | black  | horse-INS | big                               | village-ABL                          |
- ~~jekav~~  
arrived  
'Vahan arrived on a white horse from a small village, and Ara (arrived) on a black (horse) from a big (village). (intended)
- c. Turkish
- |       |       |                             |         |                              |             |
|-------|-------|-----------------------------|---------|------------------------------|-------------|
| *Ali  | siyah | kedi-yi                     | büyük   | oğlu-n-a                     | verdi,      |
| Ali   | black | cat-ACC                     | big     | son-3SG-DAT                  | gave        |
| Ayşe  | ise   | [beyaz <del>kedi-yi</del> ] |         | [küçük <del>oğlu-n-a</del> ] | verdi       |
| Ayshe | CTR   | white                       | cat-ACC | small                        | son-3SG-DAT |
- 'Ali gave the black cat to the elder son, and Ayshe (gave) the white (cat) to the younger (son).' (intended)

### 3.3 Interim conclusion

To summarize the properties of slending discussed in this section, it occurs in coordinations, and deletes the verb and a part of a DP or PP adjacent to the verb. The deleted part of the DP or PP need not be a subconstituent. Given that ellipsis is standardly assumed to target constituents, the apparent failure of slending to do so begs explanation.

## 4. Analysis

In this section, I lay out my analysis of slending. I propose that slending is a result of gapping, which is licensed in narrow syntax, followed by PF deletion of some material adjacent to the ellipsis site.

My proposal extends the analysis that An (2016) initially developed for case drop at the edge of fragment answers and extended to several other phenomena in An (2019), modulo differences in licensing conditions between the phenomena. The logic of the presentation is as follows. In this section, I will lay out the proposal and show that it derives the properties of slending described in Section 2.3 above. To argue in favor of this specific analysis, I will show in Section 5 that possible alternative analyses fail to predict the observed properties of slending.

The key ingredients of the proposal concern the timing of deletion, and the manner in which deletion proceeds. As for the timing of deletion, I propose to locate deletion after linearization of the structure. As for the manner in which deletion proceeds, I propose that it removes a contiguous string that includes the linearization of the vP marked for deletion under gapping. Crucially, deletion may also reach into material linearly adjacent to the gapping site, without any restrictions on constituency. Such deletion of extra material was called EXTRA DELETION by An (2016).

In Section 4.1, I introduce a Move-and-Delete analysis of gapping that I adopt in my analysis. In Section 4.2, I propose a stage-by-stage derivation of slending, and in Section 4.3, show that this proposal indeed derives the properties of slending discussed in Section 3.

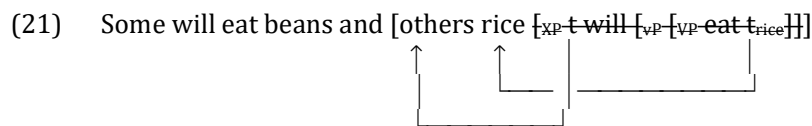
### 4.1 The move-and-delete analysis of gapping

In this subsection, I present an analysis of gapping that derives it by movement of remnants out of an appropriate XP with subsequent deletion of this XP.

I concur with much of the literature in that ellipsis is licensed in the narrow syntax by a dedicated E-feature, see e.g. Merchant (2001); Aelbrecht (2010), and the ensuing literature. The

E-feature instructs the computational system to not pronounce a certain constituent provided some semantic identity conditions are met. After the merger of an E-feature, the derivation proceeds essentially in the same manner as if the E-feature were absent. At an appropriate stage of the PF derivation, however, deletion in the proper sense occurs – that is, the expected phonological content of the ellipsis site remains silent, whatever the precise mechanism of this operation. My proposal specifies the moment when deletion happens, and some properties of this operation.

To apply this kind of approach to gapping, a number of accounts<sup>13</sup>, including Jayaseelan (1990); Lasnik (1999); Coppock (2001); Lin (2002); Baltin (2003); Takahashi (2004), Vanden Wyngaerd (2007), İnce (2009), and Gengel (2013) assume that the material that survives gapping moves out of the constituent to be deleted, and then ellipsis proceeds, as schematically shown in (21) and (28). The nature of the evacuating movement varies across the proposals. The size of the deleted constituent may also vary across languages. While for English it is typically assumed to be the VP or the vP<sup>14</sup>, it can in principle be significantly larger. For instance, Ai (2014) proposes that in Mandarin Chinese, the entire IP gets deleted. Some of the accounts of this type, e.g. Aelbrecht (2007), Gengel (2013), and Farudi (2013), explicitly use the E-feature-based approach to ellipsis licensing.

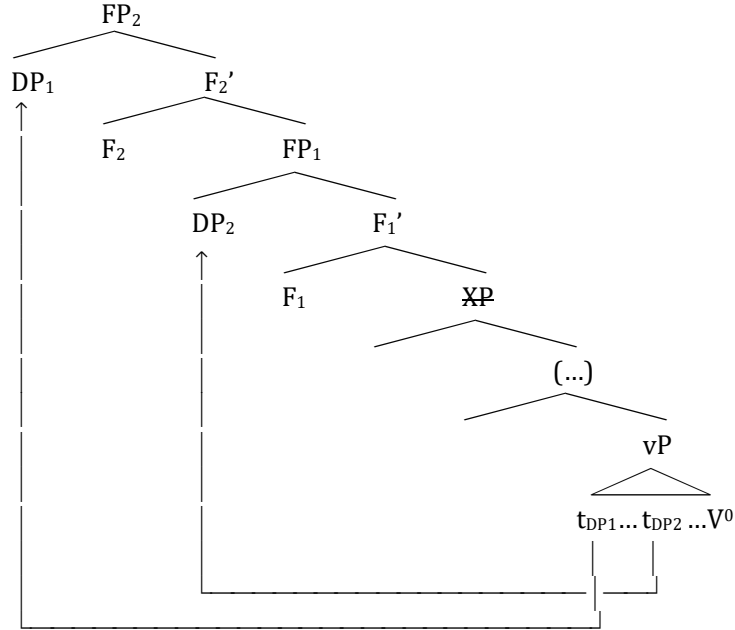


To be more precise, to create the remnants, the material that survives gapping moves out of the constituent to be deleted into the specifiers of some left peripheral projections, FP<sub>1</sub> and FP<sub>2</sub> in (22), which are specified as ContrTopP and ContrFocP in Turkish in İnce (2009). Given that all the languages under discussion countenance DP scrambling, and require fronting of contrastive constituents, movement of a DP out of a vP or a larger constituent is unproblematic. The remnant XP then undergoes deletion.

<sup>13</sup> An influential alternative account of gapping in English has been proposed by Johnson (2009). Under his analysis, gapping is a result of across-the-board movement of an approximately vP-sized constituent. For arguments against applicability of this account to English, see Vicente (2010), for arguments against its applicability to a number of other languages (including Digor and Iron Ossetic), see Erschler (2018b) and references there.

<sup>14</sup> See, however, Potter & Yoshia (2017) for a proposal that English gapping may involve large conjunct coordination as well.

(22)



As the precise size of the deleted XP and the precise labels of the targeted positions are not important for my purposes (they could also vary across the languages investigated), these are left unspecified above. Crucially, the deleted XP must minimally be a vP. This follows from the fact that the antecedent and the gapping site match in voice in all known cases<sup>15</sup>. For Turkish, İnce (2009) argues that the deleted constituent is as large as a CP, with the remnants moving to the specifier above this phrase.

Analyses of this type vary in their assumptions about how ellipsis is licensed and do not specify at which stage of postsyntactic derivation deletion occurs. In principle, they are compatible with any implementation of PF deletion.

#### 4.2 Derivation of slending

As for the derivation of slending, I propose that it takes place in several steps. At Step 1, gapping is licensed in syntax, as was described in Section 4.1 above. At Step 2, linearization and Vocabulary Insertion proceed. As the relative order of these two operations is immaterial for my purposes, and cannot be established on the basis of the data addressed in this paper, I leave their relative order unspecified. At Step 3, deletion proceeds<sup>16</sup>. It targets the linearization of the constituent whose deletion was licensed at Step 1, and it may include a contiguous part of the adjacent string. What part of the adjacent string can be deleted is subject to some constraints, which are not fully clear at present.

In (23), this is illustrated for the case when the head noun of an adjacent xNP is deleted, examples of which we have seen in (11). The scheme is given in (23a), whereas the Turkish sentence in (23b) ((11e) repeated) gives a specific example. To repeat, the XP that is deleted under gapping is at least of the size of vP. Its precise size does not affect the reasoning.

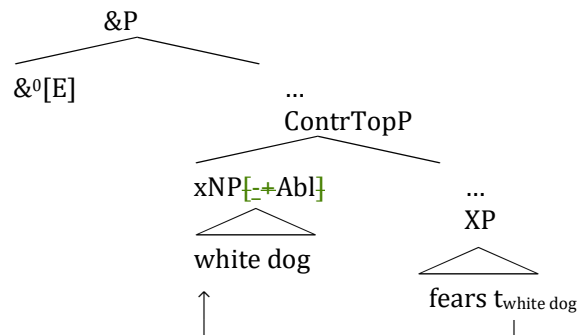
<sup>15</sup> This follows from the assumptions that, first, the ellipsis site must match the antecedent in interpretable features, and, second, that the voice of a clause is determined on the level of the vP, see e.g. a discussion in Merchant (2013).

<sup>16</sup> The phenomena under discussion do not provide evidence necessary to order deletion with respect to other DM operations, for instance, phonological readjustments. More research is needed to establish the relative order of deletion and of parsing into prosodic constituents.

- b. Turkish  
 Cem siyah köpekten korkuyor,  
 Cem black dog.ABL fears  
 Can ise [~~beyaz köpekten~~] korkuyor  
 Can CTR white dog.ABL fears  
 'Cem fears a black dog, and Can, a white one.'

I assume that the E-feature that licenses gapping is hosted by the conjunction head &<sup>0</sup>. It agrees with the head whose complement XP is and licenses the deletion of the latter (;). I stay agnostic as to the syntactic status of the contrast marker *ise*. Following Ince (2009), I assume that the DP ‘white dog’ moves into Spec ContrTopP, which corresponds to FP in (22) above, see e.g. Sener (2010).

- (24) the derivation of slending: step 1



At the 2ND STEP, the structure is linearized and Vocabulary Insertion occurs (**Error! Reference source not found.**). The linearization of the XP marked for deletion under gapping only contains the verb *korkuyor* ‘fears’. The xNP ‘white dog-ABL’, which has moved out of the XP marked for deletion, is linearly adjacent to the verb.

- (25) the derivation of slending: step 2

... [beyaz köpek-ten] [XP korkuyor]  
white dog.ABL fears  
*marked for deletion in syntax*

At the 3RD STEP, the string containing the linearization of the XP and a part of the adjacent xNP is deleted (26).

(26) the derivation of slending: step 3

Can	ise	[beyaz köpekten]	—	[ <sub>XP</sub> — korkuyor]
Can	CTR	white dog.ABL		fears

'... Can (fears) a white (dog).'

The only clear constraint on the variety of extra deletion discussed here is that it cannot reach inside words. If it could, we would expect it to be able to only delete the morphological marker on the right edge of the remnant DP, e.g. the locative case marker in the sentences<sup>17</sup> in (27). In this respect, slending is different from extra deletion in Korean fragment answers and right-dislocated topics discussed by An (2016; 2019), where it is case markers that get extra deleted. The differences between Korean and the languages under discussion have to be left for further research.

(27) a. Iron Ossetic  
 \*foʃlan ʃtər      goret-ə      sərə  
 Soslan big      city-LOC      lives  
 alan=ta      gəʈsʈəl qew-ə      sərə  
 Alan=CTR      small village-LOC      lives  
 'Soslan lives in a big city, and Alan, in a small village.' (intended)

b. Eastern Armenian  
 \*vahan=ə      mets      tən-um=e      aprum,  
 Vahan=DEF      big      house-LOC=AUX.3SG      live.NMLZ  
 isk      ara=n      p<sup>h</sup>ok<sup>h</sup>ər      bənak<sup>h</sup>aran-um=e      aprum  
 CTR      Ara=def      small      apartment-LOC=AUX.3SG      live.NMLZ  
 'Vahan lives in a big house, and Ara, in a small apartment.' (intended)

c. Turkish  
 \*Cem büyük ev-de      yaşıyor  
 Cem big house-LOC      is.living  
 Can ise küçük daire-de      yaşıyor  
 Can CTR small apartment-LOC is.living  
 'Cem lives in a big house, and Can in a small apartment.'<sup>18</sup> (intended)

It is impossible to establish the relative order of deletion and Vocabulary Insertion without additional theoretical assumptions. If we adopt the proposal of Embick & Noyer (2001: 562) that linearization and Vocabulary Insertion occur simultaneously, deletion necessarily follows VI given that it must follow linearization. On the other hand, if we adopt the proposal of Arregi & Nevins (2012: 4) that VI follows linearization and all linear displacements, the conclusion depends on the status of case markers in the languages under discussion.

<sup>17</sup> In all the three sentences, the head nouns differ between the antecedent and the ellipsis site, to make them fully contrastive. Otherwise, the degradedness could have resulted from retention of non-contrasting material in the ellipsis site.

<sup>18</sup> Güliz Güneş (p.c.) informs me that with identical adjectives, and contrast only falling on nouns, this sentence improves.

(i)	Cem	büyük	(bir)	ev-de	yaşıyor,	Can	ise	büyük	(bir)	daire
	Cem	big	IDF	house-LOC	is.living	Can	CTR	big	idf	apartment

'Cem lives in a big HOUSE, and Can, in a big APARTMENT.'

I do not have a ready explanation of this phenomenon, but hypothesize that (i) is derived by a process different from slending.



If case markers spell out dissociated morphemes, then we can conclude that deletion follows the insertion of such morphemes. Notice that the case marker on the remaining fragment of the xNP does not surface under slending, as illustrated for the Turkish ablative in (31).

On the other hand, if case markers instantiate syntactic terminals, we cannot make a conclusive argument about the relative ordering of VI and deletion – the missing case marker could have been deleted as a syntactic terminal prior to insertion. I leave this matter for further research.

### 4.3 Deriving the properties of slending

Let us see how the current proposal derives the properties of slending described in Section 3.

First, the fact illustrated in (20) that slending may only target one DP automatically follows from the requirement that deletion operates on contiguous strings (28).

- (28)    \* $[_{xNP} \dots \text{Adj } N^0\text{-CASE}]$                        $[_{xNP} \dots \text{Adj } N^0\text{-CASE}]$                        $\{_{XP} \dots V\}$   
    Extra deletion                      Extra deletion                      Gapping

The fact that the morphological marking that normally appears on the right edge of the constituent disappears under slending (see (11) for case marking, and (16) for number marking) follows from the assumption that deletion occurs after Vocabulary Insertion. As no xNP-internal concord exists in Ossetic, Turkish, and Armenian, the remnant cannot receive the relevant morphological marking after the case or number exponent is inserted as a suffix to  $N^0$ .

Furthermore, if any substring of the linearized constituent can be deleted, we derive the facts shown in (18) and (19) above about postposition phrases (29a) and about xNPs with possessors (29b).

- (29)    a.             $[_{PP} \quad [_{xNP} \text{Adj } N^0\text{-CASE}] \text{---} P^0]$                        $\{_{XP} \dots V\}$   
    Extra deletion                      Gapping
- b.             $[_{xNP} \dots \text{Adj } N^0\text{-CASE}] \text{---} N^0\text{-CASE}$                        $\{_{XP} \dots V\}$   
    Possessor                      Possessum  
    Extra deletion                      Gapping

### 4.4 An extra prediction: Slending with prepositional phrases

Additionally, this analysis makes a prediction concerning prepositional phrases. If extra deletion can reach into any type of constituent, we would expect it to be able to target preposition complements. This prediction is borne out. Out of the languages under discussion, prepositions are robustly present in Armenian, Dum-Tragut (2009). Some of the prepositions obligatorily assign a non-nominative case to their complements. This allows us to tell apart slending (which leaves behind a case-unmarked fragment) from gapping with a nominative-marked<sup>19</sup> independently generated xNP fragment.

Now, slending is possible into preposition complements in Armenian, as is illustrated in (30a) for the complement of the preposition *arant<sup>s</sup>* ‘without’, which assigns the dative to its complement. As is expected under our analysis, the adjective *kartser* ‘youngest’ surfaces without the case marker. The sentence in (30b) makes the same point for the preposition *i=dems* ‘in front of’.

<sup>19</sup> The nominative has null morphological marking in Armenian. For all the other morphological cases, that is not so.

- (30) a.      vahan-ə      <jekav>      arants<sup>h</sup>      avag      vordu      <jekav>  
              Vahan=DEF      arrived      without      eldest      son.DAT      arrived  
              isk      ara-n      arants<sup>h</sup>      kərtser      ~~vordu~~      <jekav>  
              CTR      Ara-DEF      without      youngest      son.DAT      arrived  
              ‘Vahan arrived without his eldest son, and Ara without his youngest one.’
- b.      vahan=ə      <kangarav>      i=dems      mets      tan  
              Vahan=DEF      stopped      in.front.of      big      house.DAT  
              <kangarav>  
              stopped  
              isk      Ara=n      i=dems      p<sup>h</sup>ok<sup>h</sup>ər      ~~tan~~  
              CTR      Ara=DEF      in.front.of      small      house.DAT  
              ~~kangarav~~  
              stopped  
              ‘Vahan stopped in front of a big house, and Ara in front of a small one.’

The Armenian phenomenon cannot be replicated in the other languages of my sample: Turkish lacks prepositions altogether, see e.g. Kornfilt (1997), while Ossetic has only one preposition that takes DPs, *ene* ‘without’, which can assign null case to all lexical nominals, Erschler (2018a), so slending is indistinguishable from gapping in this case.

- (31) Digor Ossetic  
              soslan ene      e=kəster      furt(-ej)      erbatsudej  
              Soslan without      3SG=younger      son-ABL      arrived  
              medine=ba      \*(ene)      e=xəster(-ej)      ~~furt-ej~~      ~~erbatsudej~~  
              Madina=CTR      without      3SG=elder      son-ABL      arrived  
              ‘Soslan arrived without his younger son, and Madina without her older son.’ (intended)

To recapitulate the discussion of this section, the analysis based on extra deletion successfully derives the properties of slending. However, to make the main theoretical point of this paper, namely that deletion proceeds after linearization, we need to show that reasonable alternatives to the extra deletion analysis of slending do not work.

## 5. Possible alternative analyses

In this section, I sketch several logically possible alternative analyses of slending and show that they cannot go through. The key properties of slending that severely restrict the range of possible analyses are the following. First, slending deletes non-constituents (23), second, the deleted part of the XP that is reached into by slending is not necessarily a subconstituent of that XP (29). Third, the XP that is reached into by slending has to be immediately adjacent to the verb (28).

For obvious reasons, every conceivable approach to ellipsis cannot be addressed here, and I focus here only on three. First, in Section 5.1 I discuss string deletion, conceptually the simplest way to account for non-constituent deletion. Second, in Section 5.2, I address what is possibly the most widespread approach to non-constituent deletion in the current literature, namely one that decomposes non-constituent deletion into a series of constituent deletions.

We have seen in Section 3.3 that in some pretheoretical sense slending is dependent on gapping. In Section 5.3 I address dependent ellipsis analysis – an approach to situations of this type advanced in Ackema & Szendrői (2001), who build upon a rather idiosyncratic analysis of ellipsis in Williams (1997). Finally, in Section 5.4, I address in situ deletion analyses.

### 5.1 String deletion

The simplest way to account for non-constituent deletion would be to assume that we are dealing here with simple string deletion – some string is deleted at the PF. Admittedly, approaches that

posit string deletion of this type are rare in the literature, however, they are not fully absent: Wilder (1997) and Hartmann (2000) proposed an analysis of this type for Right Node Raising, and Hofmeister (2010), for the ellipsis involved in formation of *either ... or* constructions.

However, in our case this analysis overgenerates. If any string could be deleted, we would expect that a part of an xNP could be deleted without deleting the verb<sup>20</sup>. In actuality, this is impossible. The sentence in (32a) is an attempt to delete the head noun *χəzar-ə* house-LOC when the respective DP *qədən χəzar-ə* wooden house-LOC that precedes the verb, and the sentence in (32b) is an attempt to do the same with a clause-final DP.

- (32) Iron Ossetic
- a. \*foʃlan asə durən χəzar-ə sərə mədine=ta  
 Soslan this stone house-LOC lives Madina=CTR  
 wəsə qədən ~~χəzar-ə~~ sərə  
 that wooden house-LOC lives  
 ‘Soslan lives in this stone house, and Madina lives in that wooden house.’ (intended)
- b. \*... mədine=ta sərə wəsə qədən ~~χəzar-ə~~  
 Madina=CTR lives that wooden house-LOC  
 ‘Idem’ (intended)

One might argue that ungrammaticality of (32) results from the fact that the verbs are identical in both conjuncts, while all the remnants need to contrast for slending to be grammatical. However, if the verbs in the antecedent and the ellipsis site don’t match, it is still impossible to delete the case-marked noun (33) without marking the adjective with the respective case.

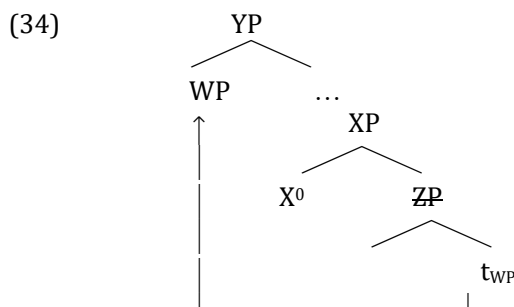
- (33) a. Iron Ossetic  
 foʃlan faw k<sup>w</sup>əz-əj əppələ  
 Soslan black dog-ABL praises  
 alan=ta urʃ\*(-əj/k<sup>w</sup>əz-əj) tərʃə  
 Alan=CTR white(-ABL/dog-ABL) fears  
 ‘Soslan praises the black dog, and Alan fears the white one.’
- b. Turkish  
 Cem siyah \*(köpek-ten) korkuyor Can ise  
 Cem black dog-ABL fears Can CTR  
 beyaz\*(-dan/köpek-ten) nefret ediyor  
 white(-ABL/ dog-ABL) hate is.doing  
 ‘Cem fears a black dog, and Can hates a white dog.’

Accordingly, simple string-based deletion cannot derive the properties of slending.

## 5.2 Slending as a series of constituent deletions

A standard way to account for apparent non-constituent deletion is to assume that what happens is a series of constituent deletions, each of which may be preceded by movement of the remnants out of a constituent to be deleted, see a.o. Kennedy & Merchant (2000) and Sailor & Thoms (2014).

<sup>20</sup> This is not to say that the aforesaid papers predict this particular kind of deletion – they deal with entirely different phenomena.



A natural way to decompose slending is into verb deletion (gapping) and some kind of deletion within the DP/PP. To account for deletion within the DP/PP, two logical possibilities exist: either some material is evacuated from the XP, after which the XP is deleted, or some subconstituent(s) are deleted within the XP.

Before we consider each of these options in more detail, let us address the difficulties faced by any of them. Specifically, first, it is unclear how to make deletion in a DP or PP conditional on gapping. Indeed, as we have seen in (32) and (33), it is impossible to delete a case-marked N<sup>0</sup> without deleting the verb.

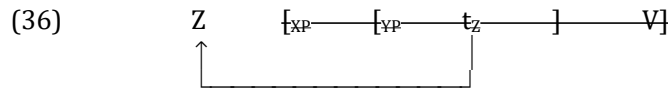
Another challenge faced by any such account is to explain why such a deletion can only occur in the DP or PP immediately adjacent to the ellipsis site (35).

- (35) a.  $*[_{DP} \dots \text{Adj N}^0\text{-CASE}]$   $[_{DP} \dots \text{Adj N}^0\text{-CASE}]$   $[_{XP} \dots V]$   
extra ellipsis gapping
- b. Turkish  
\*Ali siyah kedi-yi büyük oğlu-n-a verdi,  
Ali black cat-ACC big son-3SG-DAT gave  
Ayşe ise [beyaz ~~kedi-yi~~] [küçük kızı-n-a] verdi  
Ayshe CTR white cat-ACC small daughter-3SG-DAT gave  
'Ali gave the black cat to the elder son, and Ayshe (gave) the white (cat) to the younger daughter.' (intended)
- c.  $*[_{DP} \dots \text{Adj N}^0\text{-CASE}]$   $[_{DP} \dots \text{Adj N}^0\text{-CASE}]$   $[_{XP} \dots V]$   
extra ellipsis extra ellipsis gapping
- d. Turkish  
\*Ali siyah kedi-yi büyük oğlu-n-a verdi,  
Ali black cat-ACC big son-3SG-DAT gave  
Ayşe ise [beyaz ~~kedi-yi~~] [~~küçük oğlu-n-a~~] verdi  
Ayshe CTR white cat-ACC small son-3SG-DAT gave  
'Ali gave the black cat to the elder son, and Ayshe (gave) the white (cat) to the younger (son).' (intended)
- e. Armenian  
\*vahan=ə jekav spitak dzi-ov p<sup>h</sup>ok<sup>h</sup>ər gjuḵ-its<sup>h</sup>  
Vahan=DEF arrived white horse-INS small village-ABL  
isk Ara=n sev ~~dzi-ov~~ mec gjuḵ-its<sup>h</sup> jekav  
CTR Ara=DEF black horse-INS big village-ABL arrived  
'Vahan arrived on a white horse from a small village, and Ara (arrived) on a white one from a big one.' (intended)

Although it is unclear how to achieve this end in a non-stipulative manner, assume for the sake of the argument that it can be done somehow. As we will see in the next two sections, constituent-deletion analyses will still overpredict.

### 5.2.1 Move and delete

Assume that a remnant Z of the verb-adjacent YP is extracted from it<sup>21</sup>, after which the YP is deleted by gapping (36).



To account for the properties of slending, we need to assume that the following entities can be evacuated out of their host constituents:

- adjective(s) out of a DP, to account for sentences such as in (37);

- (37) Turkish
- |     |       |                   |                     |
|-----|-------|-------------------|---------------------|
| Cem | siyah | köpek-ten         | korkuyor,           |
| Cem | black | dog-ABL           | fears               |
| Can | ise   | [beyaz köpek-ten] | <del>korkuyor</del> |
| Can | CTR   | white dog-ABL     | fears               |
- 'Cem fears a black dog, and Can, a white one.'

- adjective(s) out of a possessor of a DP, to account for sentences such as in (38);

- (38) Armenian
- |           |         |                                       |          |               |
|-----------|---------|---------------------------------------|----------|---------------|
| Vahan=ə   | jekav   | [ <sub>DP</sub> [ <sub>DP</sub> mets  | təʁa-ji] | tun],         |
| Vahan=DEF | arrived | big                                   | son-GEN  | house         |
| isk       | Ara=n   | [ <sub>DP</sub> [ <sub>DP</sub> pokər | təʁa-ji] | tun] jekav    |
| CTR       | Ara=DEF | small                                 | son-GEN  | house arrived |
- 'Vahan arrived in the elder son's house, and Ara in the younger one's.'

- adjective(s) out of the complement DP of a postposition, to account for sentences such as in (39).

- (39) Digor
- |            |  |              |          |       |
|------------|--|--------------|----------|-------|
| soslan     | [ <sub>PP</sub> [ <sub>DP</sub> ɐrɪgon | filgojmag-i] | χetstse] | ɖɔrɔj |
| Soslan     | young                                  | woman-GEN    | with     | talks |
| medine=ba  | [ <sub>PP</sub> [ <sub>DP</sub> zərond | filgojmag-i] | χetstse] | ɖɔrɔj |
| Madina=CTR | old                                    | woman-GEN    | with     | talks |
- 'Soslan is talking with a young woman, and Madina, with an old (one).'

None of these extractions are attested in the languages under discussion in the absence of ellipsis. For Turkish, see Bošković & Şener (2014). The sentences in (40a-b) illustrate that extraction out of the DP is impossible in Armenian. The sentences without split DPs in (40c-d) provide the baseline.

- (40)
- |    |                             |           |                      |
|----|-----------------------------|-----------|----------------------|
| a. | Eastern Armenian            |           |                      |
|    | *sev(-its <sup>h</sup> )=em | vaxenum   | ʃən-its <sup>h</sup> |
|    | black-ABL=AUX.1SG           | fear.PRTC | dog-ABL              |
- 'I fear a/the black dog.' (intended)

<sup>21</sup> We cannot assume that YP gets evacuated from XP prior to the extraction of Z, for the reasons of freezing, see Corver (2017) and references there.

- b. \*Vahan-i=em                      vaxenum                      fən-its<sup>h</sup>  
 Vahan-GEN=AUX.1SG      fear.PRTC                      dog-ABL  
 'I fear Vahan's dog.' (intended)
- c. sev      fən-its<sup>h</sup>=em                      vaxenum  
 black      dog-ABL=AUX.1SG                      fear.PRTC  
 'I fear a/the black dog.'
- d. vahan-i                      fən-its<sup>h</sup>=em                      vaxenum  
 Vahan-GEN                      dog-ABL=AUX.1SG                      fear.PRTC  
 'I fear Vahan's dog.'

Likewise, extraction out of a DP is impossible in Ossetic (41 a-b) even when the DP is not embedded in a PP. The grammatical sentences in (41 c-d) provide the baseline.

- (41) Ossetic
- a. \*faw(-ej)                      tərʃən      k<sup>w</sup>əz-əj  
 black-ABL                      I.fear      dog-ABL  
 'I fear a black dog.' (intended)
- b. \*foʃlan-ə                      tərʃən      k<sup>w</sup>əz-əj  
 Soslan-gen                      I.fear      dog-ABL  
 'I fear Soslan's dog.' (intended)
- c. <tərʃən>                      faw      k<sup>w</sup>əz-əj                      <tərʃən>  
 I.fear                      black      dog-ABL                      I.fear  
 'I fear a black dog.'
- d. <tərʃən>                      foʃlan-ə                      k<sup>w</sup>əz-əj                      <tərʃən>  
 I.fear                      Soslan-GEN                      dog-ABL                      I.fear  
 'I fear Soslan's dog.'

It is not even possible in Ossetic to move an adjective past a possessor in a DP, as the contrast between (42a) and (42b) shows.

- (42) Iron Ossetic
- a. foʃlan-ə                      faw      k<sup>w</sup>əz-əj                      tərʃən  
 Soslan-GEN                      black      dog-ABL                      I.fear  
 'I fear the black dog of Soslan's.'
- b. \*faw      foʃlan-ə                      k<sup>w</sup>əz-əj                      tərʃən  
 black      Soslan-GEN                      dog-ABL                      I.fear  
 'I fear the black dog of Soslan's.' (intended)

However, ellipsis analyses often do recur to kinds of movement that are illicit without ellipsis, see e.g. Kennedy & Merchant (2000) and Arregi (2010). Again, for the sake of the argument, assume that these types of movement are possible under ellipsis.

Slending can strand more than a single adjective (43), and given that a string of adjectives cannot form a subconstituent of a DP (or of xNP), we necessarily conclude that several extractions must be possible from a single DP.

- (43) Iron Ossetic
- a.
- |            |                             |           |       |
|------------|-----------------------------|-----------|-------|
| mədinə     | gətsʰəl qədən               | χəzar-ə   | sərə  |
| Madina     | small wooden                | house-LOC | lives |
| foʃlan=ta  | ftər ag <sup>w</sup> əridur | χəzar-ə   | sərə  |
| Soslan=CTR | big brick                   | house-LOC | lives |
- ‘Madina (lives) in a small wooden (house), and Soslan lives in a big brick house.’
- b.
- |            |                    |               |       |
|------------|--------------------|---------------|-------|
| mədinə     | zərond burχil      | foʃgojmag-imə | zurə  |
| Madina     | old blonde         | woman-COM     | talks |
| foʃlan=ta  | erəgon fawuxil     | foʃgojmag-imə | zurə  |
| Soslan=CTR | young black-haired | woman-COM     | talks |
- ‘Madina (talks with) an old blonde (woman), and Soslan talks with a young black-haired woman.’

However, even if we allow for these movements exceptionally under ellipsis, it is unclear what could prevent other combinations of these movements, for instance, extraction of adjectives out of a possessor and its possessum. In actuality, the resulting sentences are ungrammatical, as illustrated by the Eastern Armenian sentence in (44), where deletion of the heads *katv-i* cat-GEN and *tən-its<sup>h</sup>* house-ABL is attempted in the possessor and the possessum within the same DP.

- (44) Eastern Armenian
- |           |   |                                 |        |         |                                   |                        |
|-----------|---|---------------------------------|--------|---------|-----------------------------------|------------------------|
| *muk=ə    | <p <sup>h</sup> axtj <sup>h</sup> ets <sup>h</sup> >          | [ <sub>DP</sub> [ <sub>DP</sub> | spitak | katv-i] | mets                              | tən-its <sup>h</sup> ] |
| mouse=DEF | fled  |                                 | white  | cat-GEN | big                               | house-ABL              |
|           | <p <sup>h</sup> axtj <sup>h</sup> ets <sup>h</sup> >,<br>fled |                                 |        |         |                                   |                        |
| isk       | hamster=ə   | [ <sub>DP</sub> [ <sub>DP</sub> | sev    | katv-i] | p <sup>h</sup> ok <sup>h</sup> ər | tən-its <sup>h</sup> ] |
| CTR       | hamster=DEF   |                                 | black  | cat-GEN | small                             | house-ABL              |
|           | <p <sup>h</sup> axtj <sup>h</sup> ets <sup>h</sup> ><br>fled  |                                 |        |         |                                   |                        |
- ‘The mouse fled from the white cat’s big house  
and the hamster, from the black cat’s small house.’

Furthermore, even if we assume that such types of movement are possible under ellipsis, we still need to explain the case-marking facts. As we have seen, the remnants under slending do not bear the expected case marking, while in known cases of (possible) extraction out of a DP, extracted adjectives typically bear the case of their initial host. Note that, under gapping, it is impossible to delete a case marker without deleting the head noun it is attached to. In (45), an attempt is made to delete the superessive suffix *-(j)əl* from the remnant *fetime* ‘Fatima’ in the gapped clause.

- (45) Iron Ossetic
- |       |           |            |            |            |                |
|-------|-----------|------------|------------|------------|----------------|
| [alan | <fəmbələ> | mədinə-jəl | <fəmbələ>] | [χetag=ta  | fetime-*(jəl)] |
| Alan  | meets     | Madina-SUP |            | Khetag=CTR | Fatima-SUP     |
- ‘Alan is seeing Madina, and Khetag, Fatima.’

Accordingly, an analysis that assumes that slending is achieved by combination of gapping and movement out of the adjacent XP, followed by deletion of this XP, cannot be implemented.

## 5.2.2 DP or PP internal constituent deletion


As an alternative to the evacuation of remnants, we could assume that slending is a result of gapping and independent (syntactically licensed) ellipsis of a constituent within the DP or PP,

which I will label YP below. YP is evacuated from the gapping site. In that case, to derive slending we would need to posit the following steps of derivation.

**Step 1.** Gapping within XP and ellipsis in YP are licensed.

(46) ... [<sub>XP</sub> ... [<sub>YP</sub>] V]

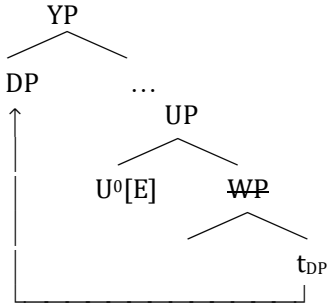
**Step 2.** YP evacuates from XP.

(47) YP [<sub>XP</sub>... t<sub>YP</sub> V]  

 A vertical line with an upward arrow starts from t<sub>YP</sub> and ends at YP, indicating movement.

**Step 3.** Ellipsis in YP and gapping in XP occur.

(48) [<sub>YP</sub> Z ~~WP~~] [<sub>XP</sub>... t<sub>YP</sub> ~~V~~]

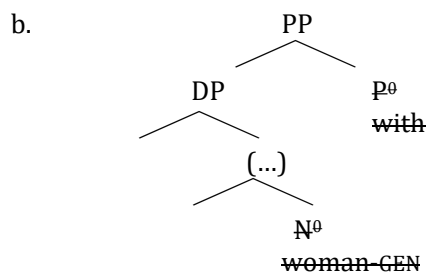
Under standard assumptions about constituent ellipsis, what is deleted must be the complement of some head, as is schematized in (49). The material denoted by Z in (48) corresponds to DP and U<sup>0</sup> in (49). The head U<sup>0</sup> carries the licensing E-feature, which triggers deletion of the complement WP. The remnant, which for the sake of illustration is a DP, moves into the specifier of a higher projection.

(49)  

 A syntax tree diagram. The root node is YP, which branches into DP and an ellipsis (...). The DP node has an upward arrow pointing to it from below. The ellipsis node branches into UP. The UP node branches into U<sup>0</sup>[E] and WP. The WP node branches into t<sub>DP</sub>. A long vertical line with an upward arrow starts from t<sub>DP</sub> and ends at DP, indicating movement.

Given that what is deleted must be a subconstituent, this account will not be able to explain the facts about possessors and PPs. Neither P<sup>0</sup> together with N<sup>0</sup> of its nominal complement, nor N<sup>0</sup> of the possesum together with N<sup>0</sup> of the possessor are complements of any head. For prepositions, this is illustrated in (50). The entire sentence is given in (50a) (which is (18b) repeated), while (50b) shows the deletion that must occur within the PP.

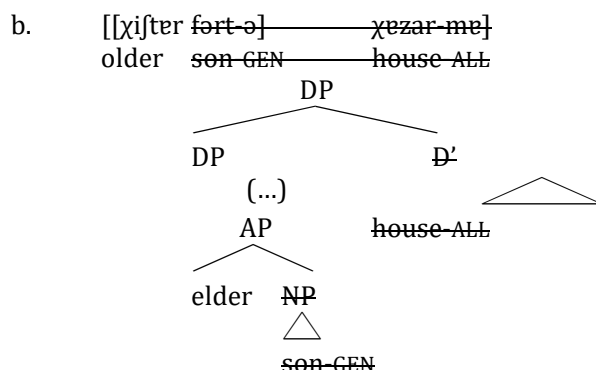
(50) a. Digor Ossetic  
 soslan ɐrigon filgojmag-i χetstse dʒoruj  
 Soslan young woman-GEN with talks  
 mɛdine=ba zɛrond filgojmag-i χetstse dʒoruj  
 Madina=CTR old woman-GEN with talks  
 'Soslan is talking with a young woman, and Madina, with an old (one).'





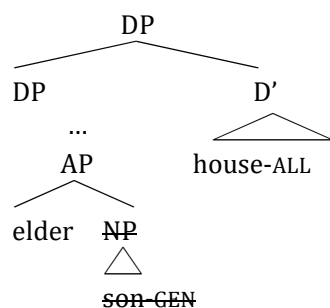
To account for slending into DPs with possessors, (19a) repeated as (51a), we could proceed along the lines of (51b). We can decompose the deletion of the possessum and of the head of the possessor into two separate steps, each of which only deletes a constituent.

- (51) a. Iron Ossetic  
 foʃlan keʃter fərt-ə xəzar-mə ɐrbasədi  
 Soslan younger son-GEN house-ALL arrived  
 mədine=ta [[xifter fərt-ə] xəzar-mə] ɐrbasədi  
 Madina=CTR older son-GEN house-ALL arrived  
 'Soslan came to the younger son's house and Madina, to the older one's.'



However, if we were able to separately delete the head of the possessor (without copying the case morphology to the adjective), we would expect this to be possible without deleting the possessum too. Thus, we would expect (52) to be grammatical, which is not the case.

- (52) b. [[xifter fərt-ə] xəzar-mə]  
 older son-GEN house-ALL  
 \*'to the elder son's house<sup>22</sup>' (intended)

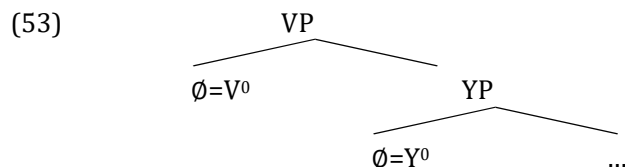


<sup>22</sup> Irrelevantly for us, this phrase is grammatical under the (nonsensical) reading 'to the elder house'.

To recapitulate, DP-internal subconstituent deletion cannot account for slending.

### 5.3 Dependent ellipsis

An alternative approach to ellipsis licensing was advanced in Williams (1997) and Ackema & Szendrői (2001). They proposed that (some varieties of) ellipsis under coordination involve dedicated null heads anaphoric to the antecedent, and furthermore, the appearance of a null head of constituent, say, of a null  $V^0$ , licenses the appearance of a null head in the complement of this constituent. In (53), null head  $V^0$  is anaphoric to its antecedent. It licenses the head of the complement YP to be null.



An immediate prediction is that only constituents on the main spine can be targeted. This is not borne out: as we have seen, the head of a possessor can be deleted alongside with the possessum (19), that is, slending can reach into specifiers. Furthermore, adjuncts can be targeted as well, as the sentences with post- and prepositional phrases show, (18) and (30).

Assume, for the sake of the argument, that the analysis of Williams (1997) and Ackema & Szendrői (2001) can be modified to account for dependent ellipsis in adjuncts and specifiers. For instance, we can posit that the specifier and adjuncts of an XP with a null head may have a null head.

However, an additional problem will persist. In their system, a non-null head may not occur between two null ones: it will interrupt the licensing. This is contrary to what we observe in the case of Armenian prepositions (30). In the latter case, slending deletes the verb and the head noun of the NP embedded in the PP, but not the preposition. Accordingly, the proposal of Williams (1997) and Ackema & Szendrői (2001) cannot derive our facts.

### 5.4 *In Situ* Deletion Proposals

Currently, a number of proposals have been advanced where the remnant(s) are assumed to not undergo movement, see e.g. Kimura (2010), Abe (2015; 2016) and Ott & Struckmeier (2018). Such proposals<sup>23</sup>, no matter what role syntactic constituency plays in their implementation, must countenance deletion of non-contiguous material, as illustrated in (54). What survives deletion is F-marked material and, as Ott & Struckmeier (2018) argue, possibly some other material that does not participate in the calculation of the truth value of the ellipsis site. In their specific case, it is modal particles in German.

In the Japanese fragment answer in (54a), the remnant *zibun-no gakkoo-kara* self-GEN school-from ‘from self’s school’ is flanked on both sides by the material that must undergo deletion. Likewise, in the German fragment question in (54b), the modal particle *denn* separates two strings to be deleted.

<sup>23</sup> Bruening (2015) advanced a proposal according to which ellipsis targets either syntactic or prosodic constituents. Similarly to the proposals addressed here, remnants are assumed to not undergo movement. Given that slending demonstrably targets syntactic non-constituents, under Bruening’s approach, the deleted material must form a prosodic constituent. The prosodic structure of the languages under discussion is not studied well enough to evaluate his proposal in the context of the phenomena addressed here, nor, admittedly, is the proposal itself worked out in sufficient detail.

- (54) a. Japanese, Abe (2016: 236, 238)
- A: dono sensei-mo [dono gakkoo-kara okane-o nusunda]  
 every teacher which school-from money-ACC stole  
 doroboo-o tukamaeta no desu ka?  
 thief-ACC caught COMP be Q  
 Lit. 'Every teacher<sub>i</sub> caught a thief that stole money from which school?'
- B: [<sub>TopP</sub> sore-wa [<sub>FP</sub> [<sub>CP</sub> ~~dono~~ ~~sensei mo~~ [[zibun-no  
 it-TOP every teacher self-GEN  
 gakkoo-kara]<sub>F</sub> ~~okane-o~~ ~~nusunda]~~ ~~doroboo-o~~  
 school-from money-ACC stole thief-acc  
 tukamaeta ~~no~~] desu]]  
 caught COMP is  
 '(It) is from self<sub>i</sub>'s school.'  
 = 'Every teacher<sub>i</sub> caught a thief that stole money from self<sub>i</sub>'s school.'
- b. German, Ott & Struckmeier (2018: 397, 403)
- A: Peter invited a couple of people.
- B: Wen<sub>F</sub> hat ~~Peter~~ denn eingeladen?  
 who has Peter MP invited  
 'Who?'

A discussion of the facts that motivate the proposals of Abe's and of Ott & Struckmeier's is entirely beyond the scope of this paper. However, under this type of proposal, it is unclear how an analysis that countenances non-contiguous string deletion would rule out sentences such as the ones in (55) or (44), repeated here as (56).

- (56) a. Turkish
- \*Ali siyah kedi-yi büyük oğlu-n-a verdi,  
 Ali black cat-ACC big son-3SG-DAT gave  
 Ayşe ise [beyaz ~~kedi-yi~~] [küçük kızına] verdi  
 Ayshe CTR white cat-ACC small daughter-3SG-DAT gave  
 'Ali gave the black cat to the elder son, and Ayshe (gave) the white (cat) to the younger daughter.' (intended)
- b. Eastern Armenian
- \*muk=ə <p<sup>h</sup>axt<sup>h</sup>ets<sup>h</sup>> [<sub>DP</sub>[<sub>DP</sub> spitak katv-i] mets tən-its<sup>h</sup>]  
 mouse=DEF fled white cat-GEN big house-ABL  
 <p<sup>h</sup>axt<sup>h</sup>ets<sup>h</sup>>,  
 fled  
 isk hamster=ə [<sub>DP</sub>[<sub>DP</sub> sev katv-i] p<sup>h</sup>ok<sup>h</sup>ər tən-its<sup>h</sup>]  
 CTR hamster=DEF black cat-GEN small house-ABL  
 p<sup>h</sup>axt<sup>h</sup>ets<sup>h</sup>  
 fled  
 'The mouse fled from the white cat's big house  
 and the hamster, from the black cat's small house.'

Accordingly, in situ approaches to ellipsis are unable to account for slending.

To recapitulate the discussion of the last two sections, alternative proposals fail to derive the properties of slending, while the extra deletion analysis successfully does so. Consequently, extra deletion appears to be the most plausible analysis of slending at present.

## 6. Final remarks: Slending in other languages and other (putative) instances of extra deletion

It is natural to ask, first, whether slending occurs in a wider variety of languages, and, second, whether extra deletion occurs with other ellipsis varieties. While the second question has been addressed at some length in An (2019), I deal with the first question in Section 6.1. Specifically, I show that slending is attested in a number of head-final languages without overt concord in the DP.

### 6.1 Slending in other languages

For slending to be possible and observable in a given language, two conditions are necessary: first, the language must be head-final, and second, the morphological concord in the DP must be different from the marking on regular fragments. Head-finalness is necessary for the verb and the head of the targeted DP to be adjacent, whereas the difference between concord marking and regular case/number marking is necessary to distinguish between remnants under slending, in which morphological marking is altogether absent (or perhaps impoverished), and regular DP fragments, in which it is not.

In the Ossetic, Armenian, and Turkish examples with have seen so far, no overt morphological concord obtains. At present, I have data for two head-final languages with impoverished, but non-null concord in the DP, namely Georgian<sup>24</sup> (South Caucasian) and Avar<sup>25</sup> (Northeast Caucasian). Neither of them allows slending. It remains to be seen whether slending can occur in languages with non-null, but impoverished concord, and if not, why.

On the other hand, slending, at least in its simplest form, has been found in a few head final languages without overt concord in the DP, such as Lezgian (Northeast Caucasian) (57a), Standard Uzbek (Karluk; Turkic) (57b), and Tyvan (Northeastern Turkic) (57c). The available sample, however, is too small to draw any conclusions about a correlation between slending and nominal concord.

- (57) a. Yargun Lezgian  
 ali tʃexi k'vala jafamif dʒezva, amma Musa ɬotʃi  
 Ali big house.LOC living does but Musa small  
~~jafamif dʒezva~~  
 living does  
 'Ali lives in a big house, but Musa, in a small one.'
- b. Standard Uzbek  
 Lolæ qizil divan-dæ ötiribdi,  
 Lola red sofa-LOC sat  
 Madina(esæ) jæfil ~~ötiribdi~~  
 Madina(CTR) green sat  
 'Lola was sitting on a red sofa, and Madina, on a green one.'

<sup>24</sup> Georgian exhibits impoverished case agreement in the DP (i).

(i) did-i tʃitel-i pankr-eb-it  
 big-NOM red-NOM pencil-PL-INS  
 'with big red pencils'

<sup>25</sup> In Avar, some adjectives exhibit prefixal gender concord with the head noun. No case or number concord exists in this language, Rudnev (2015).

- c. Tyvan  
 men ulug bazən-da tʃurtaptur-men a vasja bitʃi:  
 I big house-LOC living AUX-PRS.1SG & Vasya small  
~~bazən-da tʃurtaptur~~  
 house-LOC living AUX-PRS.3SG  
 'I live in a big house, and Vasya, in a small one.'

It remains to be seen whether the analysis developed in this paper is applicable to these languages as well. For Uzbek at least, this might not be the case: even the speakers who accept sentences of the type shown in (57b), reject slending in DPs with a possessor (58). For this sentence to become grammatical, the case (and possessive) morphology needs to be reconstructed on the final adjective.

- (58) Standard Uzbek  
 lolæ qizil mato-niŋ ɛn-i-ni ɵltʃædi  
 Lola red cloth-GEN width-DEF-ACC measured  
 madinaesæ jæʃil\*(-i-ni-ŋ/-i-ni) ɵltʃædi  
 Madina(CTR) green-DEF-3SG-GEN/-DEF-ACC measured  
 'Lola measured the width of the red cloth, and Madina, of the green one.'

I leave this issue for further research.

## 7. Conclusion

In this paper, I described and analyzed a previously unknown ellipsis variety, slending. My analysis applies the general idea of An (2016; 2019) and treats slending as an instance of extra deletion – regular gapping spreads into the constituent adjacent to the verb. Furthermore, I have shown that more standard approaches to ellipsis, those that analyze it as constituent deletion (or a series of such), fail to derive the properties of slending.

Given the adjacency requirement, extra deletion is only possible if deletion occurs after linearization. Accordingly, my analysis of slending provides novel evidence in favor of locating deletion after linearization. This conclusion is compatible with a wide class of theoretical assumptions, because linearization is a stage that is necessary in any implementation of broadly generative assumptions about grammar.

So far, in the present paper and in An (2016; 2019), extra deletion has been shown to exist in connection with several specific ellipsis varieties. Accordingly, the conclusion about the timing is now only substantiated for the respective ellipsis varieties. It remains an open question whether other types of ellipsis all occur after linearization. Another major open question concerns the role of prosody in the licensing of extra deletion.

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