EXPANDING THE TYPOLOGY OF V2 VPE: THE CASE OF KASHMIRI[*]

Mysteriously, verb-second (V2) languages are known to exhibit auxiliary-stranding verb phrase ellipsis (VPE) but to lack verb-stranding VPE even though the inflected verb must leave the VP (Mikkelsen 2006; Lacara 2014). Sailor (to appear) claims that V2 languages do not exhibit V-stranding VPE because VPE bleeds V2 in the following way: the formal feature that drives ellipsis (on T) is introduced derivationally prior to the feature driving V2 (on C). Only languages with verb movement triggered by T for the purposes of combination with tense and agreement, as in Hebrew (Goldberg 2005), will exhibit V-stranding VPE. In this paper I offer evidence that Sailor's approach is on the right track; the Indic language Kashmiri is a V2 language in which both auxiliary-stranding and V-stranding VPE co-occur because T is independently a trigger for V movement (Munshi and Bhatt 2009). The facts of Kashmiri also support the claim (Sailor 2013) that tag questions are derived via VPE: Kashmiri dependent tag questions pattern precisely with VPE with respect to what can be stranded. This paper establishes that VPE in V2 languages may be both V-stranding and aux+V-stranding, expanding the known typology. More importantly, the findings support a particular approach to the timing and interaction of the major operations in the grammar and suggest that any approach to V2 must account for the variation in the presentation of VPE in V2 languages.

1 Introduction

There is a rich and growing research program using X-stranding XP ellipsis phenomena as a tool to diagnose the nature of X-movement in a language. (e.g. Goldberg 2005; Toosarvandani 2009; Gribanova 2013a,b; Lipták and Saab 2014). As the reasoning goes, if X-stranding XP ellipsis is available in a language, then the language has routine head movement of X to some position outside of XP. Thus, investigation of VP-ellipsis has much to tell us about movement of the verb outside of VP.

While verb-second (V2) languages have been important to research on head movement crosslinguistically (den Besten 1977; Travis 1984; Holmberg and Platzack 1991; Zwart 1997; Roberts and Roussou 2002; Roberts 2010 i.a.), a puzzle arises concerning verb phrase ellipsis (VPE) in these languages. Though we understand the verb to have moved outside the verb phrase in V2 constructions, V2 languages seem to lack V-stranding VPE, and instead only admit VPE in which the auxiliary is stranded adjacent to the ellipsis site.

(1) Mona vaskede ikke bilen, men Jasper gjorde/*vask-et DANISH
Mona wash-PST not car.DEF but Jasper did/wash-PART
'Mona did not wash the car but Jasper did.' (Houser et al 2008:(5',5''))

(2) *Johan leste ikke *Lolita*, men Marie leste. NORWEGIAN
Johan read.PST not *Lolita*, but Marie read.PAST
Intended*:* 'Johan didn't read *Lolita*, but Marie did.' (Sailor, to appear:(7b))

Several proposals have been advanced to account for this seemingly contradictory state of affairs (Mikkelsen 2006; Lacara 2014; Sailor to appear), crucially hinging on the timing of the operations of ellipsis and head movement in the grammar. At issue are several questions critical to the investigation of V2: is head movement for the purposes of combining with tense and agreement morphology the same process as head movement to satisfy the V2 requirement, and do both of these types of movement take place in the narrow syntax?

[*] Acknowledgements go here.

In recent work, Sailor (to appear) claims that both V2 and ellipsis are operations controlled by formal features in the syntax, but V2 languages do not exhibit V-stranding VPE because VPE bleeds V2. Stated formally (adapted from Sailor, to appear:(17)):

(3) **Condition on V-stranding VP ellipsis**

A language L has V-stranding VPE iff:

(a) L has V movement out of VP triggered by the feature [V*] on head α

(b) L has VP ellipsis triggered by the merger of head β bearing [E]; and

(c) satisfaction of the [V*] on α is derivationally prior to the merger of β, or α=β.

In this view, only languages with verb movement triggered by a head below C, such as Hebrew (Goldberg 2005), will exhibit V-stranding VPE. V2 languages in which a head in the C domain serves as the only probe for verb movement will not exhibit V-stranding VPE because the ellipsis of the VP would render the verb inaccessible before it could undergo head movement. In these languages only auxiliaries already present in or inserted into the derivation can meet the V2 requirement in VPE structures. Sailor's condition in (3) does leave open the possibility that there could be a language that is both V2 and has a verb movement trigger which is below C, resulting in V-stranding VPE, but to my knowledge no such language has been identified. Table 1 illustrates the gap in the typology.

(4) Table 1

	Non-V2 example	**V2 example**
Aux-stranding VPE only	English	Danish
V-stranding VPE only	Hebrew	--[1]
Aux & V-stranding VPE	Portuguese	??

The Indic language Kashmiri is a V2 language often overlooked in the investigation of V2-related phenomena. In this paper I present new empirical evidence that Kashmiri exhibits both auxiliary-stranding and V-stranding VPE.

(5) a. Təm cha ciTh' liichmIts ganT-as.
3SG AUX.PST letter write-PSP hour-for
'He wrote a letter for an hour.'
b. Kabir ti **cha** ____.
Kabir also AUX.PST
'Kabir did also (write a letter for an hour).'

(6) a. tsI dikh pagaah təmis kitaab
2SG give-FUT tomorrow 3SG.DAT book
'You will give him a book tomorrow'
b. Kabir ti **di-yi** ____.
Kabir also give-FUT
'Kabir will also (give him a book tomorrow)' (lit. 'Kabir will also give.')

I follow others (Bhatt 1999; Munshi and Bhatt 2009) in claiming that T is independently a trigger for verb movement in Kashmiri for the purposes of combination with tense and agreement morphology, resulting in V-to-T movement in all tensed clauses. T-to-C

[1] This configuration could only arise in a verb-second language that lacked auxiliary verbs.

movement of the verb then follows to meet the language's V2 requirement in V2 environments. I also present new corroborating data, including auxiliary+V-stranding VPE and VPE-derived dependent tag questions in Kashmiri. Kashmiri exhibits just the pattern predicted to exist by the condition in (3) above, and thus the empirical gain here is to fill gaps in the known typology of VPE in V2 languages.

These data support an approach to V2 languages in which both verb movement to satisfy the V2 requirement and verb movement for the purposes of combining with tense and agreement morphology, as well as the operation ellipsis, are feature-driven processes of the narrow syntax (Matushansky 2006; Merchant 2001; Roberts 2010). It is the specific features which drive distinct types of head movement, the heads on which these features are located, and the basic order in which heads are merged, that determine the relative order of head movement and ellipsis operations in a given language.

2 Background: V2 languages and VPE

2.1 The facts

Verb phrase ellipsis is the non-pronunciation of a verb phrase based on identity with a verb phrase in an antecedent clause. In languages like English, an auxiliary verb is stranded adjacent to the ellipsis site.

(7) Jai brought the fruitcake, or rather Ayesha did ~~[VP bring the fruitcake]~~.

Attested in a range of languages (Irish (McCloskey 1991), Hebrew (Doron 1991, Goldberg 2005), Portuguese (Martins 1994), and Russian (Gribanova 2013a, b)), is another variety of VPE in which it is the main verb that is stranded.

(8) Q: Šalaxt etmol et ha-yeladim le-beit-ha-sefer? HEBREW
send.PST.2S.F yesterday ACC the-children to-house-the-book
'Did you send the children to school yesterday?'
A: Šalaxti ...
send.PST.1SG
'I did.' (*lit.*: 'Sent.') (Goldberg 2005:(1))

(9) Èto daže esli ja vody v rot naberu? RUSSIAN
that even if I water.GEN in mouth collect.1SG.FUT
'Is that even if I fill my mouth with water?'
Daže esli i naberëte. Da ved′ ne naberëte, ne naberëte že!
even if and collect. Yes but NEG collect, NEG collect EMPH
'Even if you fill (it with water). But you won't fill (it with water), you won't fill (it with water)!' (Ju. O. Dombrovskij. *Fakul'tet nenužnyx veščej, cast′ 2*, 1978) (Gribanova 2013a:(1))

Turning now to V2 languages, the East Scandinavian languages are known to exhibit VPE (in contrast to other Germanic languages such as Icelandic and standard German (Thoms 2012; Platzak 2012)). However, they appear to only permit auxiliary-stranding verb phrase ellipsis (Mikkelsen 2006; Houser et al 2008; Sailor to appear), and to lack verb-stranding VPE. We illustrate the basic facts here with Danish, which features second position main verbs (10) and auxiliaries (11) in matrix clauses.

(10) Fra hjernen **kom** de i hvert fald ikke. DANISH
From brain-DEF came they in any case not
'They didn't come from the brain.' (Mikkelsen 2006:(10))

(11) Hende **havde** han genkendt forrige tirsdag. DANISH
Her had he recognized last Tuesday
'He had recognized her last Tuesday' (Mikkelsen 2006:(9))

Mikkelsen (2006) and Houser et al (2008) assume the analysis of V2 in Danish in which the inflected verb moves to C in all matrix clauses (following e.g. Vikner 1995, Schwartz and Vikner 1996). Despite this movement of the verb out of VP in Danish, VPE can strand only an auxiliary or modal (12), not a finite main verb (13):

(12) Jeg har prøvet at male det… men jeg **kan** ikke DANISH
I have tried to paint it… but I can not.
'I have tried to paint it… but I can't.' (Mikkelsen 2006:(7))

(13) *Vore øjne opfatter det ikke, men biers øjne **opfatter**. DANISH
Our eyes perceive it not but bees-POSS eyes perceive
Intended: 'Our eyes don't perceive it, but bee's eyes do perceive (it).'
(Mikkelsen 2006:(45))

Further, if no other auxiliary is present in a clause with VPE, the auxiliary verb *gøre* 'do' is inserted to host tense and agreement morphology (*gøre*-support) (14). It is then *gøre* which is stranded before the ellipsis site.

(14) Vore øjne opfatter det ikke, men biers **gør** DANISH
Our eyes perceive it not but bees-POSS do
'Our eyes don't perceive it, but bees' (eyes) do.' (Mikkelsen 2006:(46))

Given these facts in Danish, it would seem that V2 and VPE do not interact in the way we might expect. Although the verb is ultimately found outside the VP, V-stranding VPE is not available.

2.2 The timing of V2 and ellipsis

One way to understand the puzzle presented by the absence of V-stranding VPE in V2 is to constrain the relative ordering of the two operations. Sailor (to appear) argues that we can dismiss proposals in which both head movement and ellipsis are analyzed as freely orderable post-syntactic PF processes (Boeckx and Stjepanović 2001) based on evidence from Hebrew, in which verb movement out of the VP must necessarily precede VPE to produce V-stranding VPE. On the other hand, the evidence from Danish above suggests that there must be some languages in which VPE precedes verb movement out of the VP.

The remainder of the proposals we examine here adopt the dominant approach to ellipsis advanced in Merchant (2001) in which a morphosyntactic feature [E] located on a functional head marks the head's complement for non-pronunciation at PF. Thus, the determination of the size of the elided constituent is made in the narrow syntax and is driven by a formal feature. In this view VPE of any variety occurs when the [E] feature is on T and the vP complement of T is marked for non-pronunciation.

(15) Ayesha contributed to the campaign, and maybe [$_{TP}$ Jai [$_{T[E]}$ did [$_{\sout{vP}}$~~contribute to the campaign~~]]].

In addition, Aelbrecht (2010) provides evidence for the claim that once a constituent is marked for ellipsis, the material within it becomes inaccessible for additional syntactic operations, such as movement. We will thus assume that once the vP is marked for non-pronunciation, no further extraction is possible out of that constituent.

The remaining question is then how verb movement interacts with VPE in a V2 language like Danish. Mikkelsen (2006) maintains that V2 V-to-C verb movement is

post-syntactic (following Chomsky 2001, Zwart 2001), and that Danish has no independently motivated V-to-T movement (Vikner 1995). Under this view, we should expect VPE to bleed V2. Since the verb remains within the VP for the entire syntactic derivation, in a structure in which T bears the [E] feature there will never be an opportunity for the verb to leave the verb phrase and it is rendered inaccessible (Aelbrecht 2010). In such a scenario there are two remaining ways that a language like Danish could meet the V2 requirement. If an auxiliary verb is already present in the derivation, this verb could satisfy V2 post-syntactically. The result would be aux-stranding VPE, as in (11) above. If no auxiliary verb is present, *gøre*-insertion becomes necessary, both to host tense and agreement morphology and to satisfy the V2 requirement as in (14).

Given this analysis, how does V-stranding VPE arise in languages like Hebrew, Irish, and Russian? Mikkelsen proposes that V-to-T movement for the purposes of combination with tense and agreement morphology is indeed syntactic, and has the potential to occur before, or at least simultaneously with, the point at which the vP is marked for ellipsis (presumably the introduction of the T head). Thus in these languages, as opposed to in V2 languages, the V can escape an elided VP, resulting in the V-stranding VPE we see above in (8)-(9).

The account proposed in Mikkelsen (2006) explains the puzzle exhibited by Danish, but requires the assumption that V2 movement in Scandanavian languages takes place at PF. Since then, an alternative view has emerged arguing that V2 movement in these languages is indeed a process of the narrow syntax (though space limitations prohibit a thorough review of this work here -- see Matushansky 2006; Roberts 2010; Hartman 2011; Mikkelsen 2011, 2015 i.a.). Building on the basic reasoning found in Mikkelson 2006, Sailor (to appear) develops a new approach to the puzzle in which we understand both V-to-T movement for the purposes of combination with tense and agreement morphology and V-to-C movement for the satisfaction of V2 as syntactic operations (see also Lacara 2014 for a similar proposal).

Sailor (to appear) claims that V2 languages do not exhibit V-stranding VPE as we might expect because VPE bleeds V2 based on their relative derivational timing in the narrow syntax, as mediated by formal features on functional heads. In this view, V2 is the result of a formal feature [V*] on the C head that prompts movement of the verb to C, stopping at each head in between. The question of whether a VPE language features aux-stranding or V-stranding VPE is thus one of the timing of the merging of functional heads. To restate the Condition on V-stranding VPE:

(16) **Condition on V-stranding VP ellipsis**

A language L has V-stranding VPE iff:

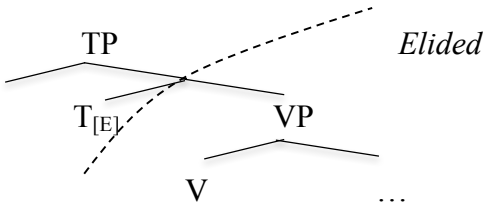
(a) L has V movement out of VP triggered by the feature [V*] on head α

(b) L has VP ellipsis triggered by the merger of head β bearing [E]; and

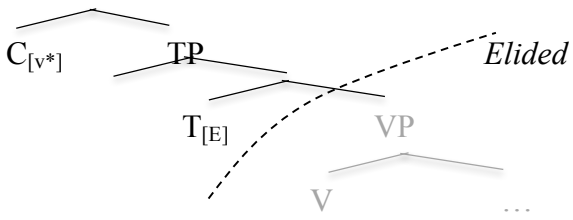
(c) satisfaction of the [V*] on α is derivationally prior to the merger of β, or $\alpha=\beta$.

Under this account, in a V2 language like Danish, the merger of T head with the [E] feature precedes the merger of the C head with the [V*] feature, meaning VPE will bleed V2 and no V-stranding VPE is possible. This is schematized in (17) below:

(17) Aux-stranding VPE V2 languages (Sailor, to appear)
Step 1: Merger of $T_{[E]}$ triggers VPE; material inside VP rendered inaccessible

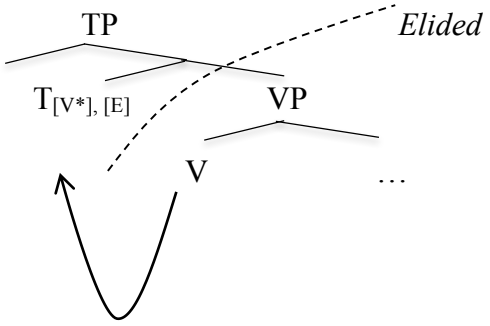


Step 2: Merger of $C_{[v*]}$ looks for verb to attract but cannot attract verb inside elided VP – this will result in aux/*do*-stranding



On the other hand, in V-stranding VPE languages like Hebrew, the [V*] feature is hosted on T, prompting the verb to move to T for the purposes of suffixation with case and agreement morphology. Thus the verb has the potential to leave the VP before the [E] feature on T marks its complement for ellipsis (rendering it inaccessible).

(18) V-stranding VPE
Merger of $T_{[V*], [E]}$ triggers V-movement and VPE



We thus see how Sailor's VVPE condition can derive both aux-stranding VPE in V2 languages and V-stranding VPE in non-V2 languages. Under this account both ellipsis and head movement are operations of the narrow syntax whose relative timing is controlled by the positioning of formal features on functional heads and the order of the merger of those heads. Further, both head movement meeting the V2 requirement and head movement to T are viewed as occurring in the same component of the grammar.

Importantly, both Mikkelsen's (2006) and Sailor's (to appear) accounts assume the symmetric approach to Danish V2 in which the tensed/inflected verb is found in C in all V2 clauses. However, another leading strand of research advocates for an asymmetric account of V2 in a range of languages, in which some second position verbs are actually

found in T, and others in C (e.g. Travis 1991; Zwart 1997). Mikkelsen (2011) reanalyzes Danish as a language in which subject-initial V2 clauses with unmarked information structure are those in which the second position verb moves to T instead of to C. At first blush this new view of Danish might seem to pose a challenge for Sailor's (to appear) account of the timing of V2 and ellipsis, since T would need to have features prompting movement of the verb to T and the subject to Spec, TP. These features would be co-present with the [E] feature on T, and thus the Danish main verb should, in these contexts, be able to escape the vP before/simultaneous to the point at which it is marked for ellipsis. This would mean that Danish should allow V-stranding VPE, counter to fact.

However, Mikkelsen's (2011) precise implementation of A-bar movement and V2 in Danish actually results in an account compatible with Sailor's Condition on V-stranding VP ellipsis. Mikkelsen suggests (following Chomsky 2008) that C possesses an Edge Feature (EF) and an Agree Feature (AF). If the clause is information-structurally or clause-typally distinguished, only AF passes to T; the remaining EF on C forces a V2 clause in which the initial constituent is in Spec, CP and the verb in C. For an unmarked subject-initial V2 clause, on the other hand, C may pass both EF and AF to T, and both then may be satisfied by Internal Merge to Spec, TP.

The crucial point here is that whether or not a V2 clause ultimately has the finite verb in C or T is determined by the interaction between C and T, and thus cannot be established until C is introduced. In clause with VP-ellipsis, the [E] feature on T will have already marked the vP for non-pronunciation by the time C is introduced, rendering the main verb inside vP inaccessible. Only an auxiliary (if present) or *gøre* 'do' will be available to host tense and agreement features and to ultimately remain in T or raise to C. Thus Sailor's (to appear) Condition on V-stranding VP ellipsis turns out to be compatible with either the symmetrical or asymmetrical approaches to V2, and the availability of V-stranding VPE can still be determined by the timing of the introduction of functional heads (and the formal features thereon) in the narrow syntax.[2]

Returning to the V-stranding VPE condition as stated above, we can note that it leaves open an additional possibility: a language in which the [V*] feature can occur on both T and C. Such a language would be V2 but would also exhibit V-stranding VPE since it would have regular V-to-T movement. To my knowledge, the recent literature on this topic does not explore this possibility. The remainder of this paper asserts that the Indic V2 language Kashmiri is just such a language -- one in which we find both aux-stranding and V-stranding VPE.

[2] The recasting of the analysis of asymmetric V2 found in Mikkelsen 2015 is more problematic for Sailor's condition, as she suggests that in V2 clauses in which the V is in T, the clause itself is only a TP – no CP is projected. Note that as verb movement in V2-TPs is feature-driven in Mikkelsen's (2015) account, it must be a process of the narrow syntax and no appeal to PF verb movement can help to derive the VPE facts. This change leaves unanswered not only the question of why there is no V-stranding VPE in Danish but also the question of why verbs never appear in T in non-V2 environments in the language. For these reasons I set this particular re-analysis aside here. See the conclusion to the present article for further discussion.

3 V2 and VVPE: Kashmiri

3.1 Kashmiri is V2

Kashmiri is an outlier among Indic languages in that it is obligatorily V2; unfortunately, it is often overlooked in wider studies of V2 phenomena. Kashmiri V2 has been described extensively elsewhere (Bhatt and Yoon 1992; Wali and Koul 1997; Bhatt 1999; Manetta 2006, 2011; Bhatt and Munshi 2009), so here I provide only a brief outline of the core properties of interest. Any type of constituent may occupy first position provided the tensed verb is second, illustrated in (19a-e). Two constituents may not appear before the verb in typical declaratives, as in (19f-g).

(19) a. aslam-an **dits** mohn-as kitaab raam-ini khəətri raath KASHMIRI
aslam-ERG gave Mohan-DAT book Ram-DAT for yesterday
'Aslam gave Mohan a book for Ram yesterday.' (Wali & Koul 1997:(25))
b. mohnas **dits** aslaman kitaab ramini khəətri raath
c. kitaab **dits** aslaman mohnas ramini khəətri raath
d. raamini khəətri **dits** aslaman mohnas kitaab raath
e. raath **dits** aslaman mohnas kitaab raamini khəətri
f. *raath aslaman **dits** raamini khəətri mohnas kitaab
g.* aslaman mohnas **dits** kitaab ramini khəətri raath

Both tensed main verbs (in (19) above) and tensed auxiliary verbs (in (20) below) may satisfy the V2 requirement.

(20) a. laRk **chu** dohay skuul gatsh-aan
boy AUX daily school go-PART
'The boy goes to school every day.' (Bhatt 1999:36)
b. *laRk dohay skuul gatsh-aan **chu**

Further, Kashmiri, like Yiddish and Icelandic (Diesing 1990; Santorini 1992; Vikner 1995), is obligatorily V2 in both main and embedded clauses.

(21) miraayi **cha** pat-aa [ki aslam-an **dits** mohn-as kitaab**]**
Mira AUX know-PRF.M that aslam-ERG give.PRF Mohan-DAT book
'Mira knew that Aslam gave a book to Mohan.'

Underlying word order is presumably verb-final based on the unmarked clause-final positioning of non-finite verbs:

(22) me chu [tem-sund batI **ran-un**] khar-aan.
I AUX he-OF food cook-INF dislike-PART
'I dislike his cooking of food.' (Bhatt 1999:126)

As will be important for the analysis proposed below, there are several types of tensed clauses which are not verb second: relatives/correlatives and conditionals. In these environments the unmarked position for the verb is clause final.

(23) [yosI (kitaab) samiir-an raaj-as **dits**] [so kitaab…]
which book.F Samir-ERG Raj-DAT give.PST.FSG that book.F
'the book that Samir gave to Raj, that book…' (Munshi and Bhatt 2009:(18a))

(24) [agar samiir tse yi kitaab **diyii]**, teli …
if Samir 2SG.DAT this book.F give.FUT, then …
'if Samir gives this book to you, then…' (Munshi and Bhatt 2009:(23a))

With these properties in mind, we can now turn to examining verb phrase ellipsis in Kashmiri.

3.2 Kashmiri VPE

Kashmiri exhibits VPE in which an inflected second-position auxiliary/modal is stranded, as we would expect on analogy with Scandinavian V2 languages and under either the Mikkelson (2006) or Sailor (to appear) approaches.

(25) a. Təm cha ciTh' liichmIts ganT-as.
3SG AUX.PST letter wrie-PSP hour-for
'He wrote a letter for an hour.'
b. Kabir ti cha ____.
Kabir also AUX.PST
'Kabir did also (write a letter for an hour).'

(26) Təm-is pazi garI gatsh-uun pagaah. Salim-as ti pazi _____ .
3SG-DAT should home go-INF tomorrow. Salim-DAT also should
'He should go home tomorrow. Salim also should (go home tomorrow).'

In addition, Kashmiri appears to exhibit V-stranding VPE in which the inflected second-position main verb is stranded.

(27) a. toh' kər-iv yi kəəm jaan patTh.
2PL do-FUT.2PLPS this work good way.
'You will do this work well.'
b. bI ti kar-I ____ .
1SG also do-FUT.1SG
'I will also do (this work well).'

(28) a. tsI dikh pagaah təmis kitaab
2sg give-FUT tomorrow him.DAT book
'You will give him a book tomorrow'
b. Kabir ti di-yi _____.
Kabir also give-FUT
'Kabir will also give (him a book tomorrow).'

South Asian languages including Kashmiri are known to have processes allowing internal arguments to go missing, including null object pronominals (Davison 2013) and potentially argument ellipsis (Simpson, Chowdhury, and Menon 2013). In the case of verb-stranding VPE, it can be difficult to distinguish the VVPE string from the string in which just the internal argument alone has been elided. For this reason the examples in (27)-(28) employ the "adverb test" developed for South Asian languages in Simpson, Chowdhury, and Menon 2013 (also used and discussed in detail for Hindi-Urdu VPE in Manetta 2016 and Manetta in prep). Since there is no independent process by which adverbs within the VP may be omitted in Kashmiri (that is, there is no "adverb drop"), we can trust that when the VP-internal arguments and adverb are both elided but may be interpreted as present in the elliptical structure, this is truly an instance of VVPE.

Kashmiri also passes another diagnostic test for V-stranding VPE developed for Russian in Gribanova 2013b and used for Hindi-Urdu in Manetta (2016, in prep). In this test a VP is elided which contains two disjoined VPs within it. Assuming Kashmiri does not permit null realization of disjunction (unlikely – see Payne 1985; Winter 1995), this must indeed be a true instance of V-stranding VPE.

(29) a. Təm buuz zi miiraa leekhi mohn-as ciTh' yaa shiil-as mazmuun
3SG.ERG hear.PRF that Mira write-FUT Mohan-DAT letter or Sheila-DAT essay
'He heard that Mira will write Mohan a letter or Sheila an essay.'

b. Na, miiraa leekhi nI _____.
No Mira write-FUT NEG
'No, Mira will not write (Mohan a letter or Sheila an essay).'

Given that Kashmiri passes both the adverb test (Simpson, Chowdhury, and Menon 2013) and the disjunction test (Gribanova 2013b) for V-stranding VPE, and given further that we have support from the position of negation for independent V-to-T movement in Kashmiri as discussed below in section 4.2, we can have confidence in taking (25)-(28) to show that Kashmiri features both aux-stranding and V-stranding VPE. Further corroboration follows in the form of dependent tag questions.

3.3 Corroboration: tag questions and VPE

Sailor (2013), following the intuition in Huddleston 1970, claims that VPE is also the operation that forms dependent tag questions from clausal polar questions. He shows that if a language L has dependent tag questions, that language also independently has VPE (though, of course, the existence of VPE is not sufficient to predict the existence of dependent tag questions (e.g. in Hebrew)). Under this account, a dependent tag question is derived when VPE is applied to a full root yes-no question:

(30) Khushboo can't come to the conference, [$_{CP}$ **can$_i$** she t_i ~~[$_{VP}$ come to the conference]~~]?

Of greatest interest here is Sailor's observation that dependent tag questions pattern with VPE with respect to precisely what can be stranded.

We can illustrate this first in English: since VPE may strand an auxiliary or modal verb but not main verb, dependent tag questions appear with stranded auxiliaries but not with stranded main verbs.

AUX/MOD-STRANDING VPE

(31) Khushboo planned to come to the conference, but she can't/didn't ___.

AUX/MOD-STRANDING TAG QUESTION

(32) Khushboo can/did come to the conference, can't/didn't she?

NO V-STRANDING VPE

(33) a. Khushboo came to the conference.
b. *Unfortunately, Shirin came not ___.

NO V-STRANDING TAG QUESTIONS

(34) *Shirin usually comes to the conference, comes she ___?

If this approach is on the right track, in a V2 language with only aux-stranding VPE, we should expect only aux-stranding tag questions, even if root yes-no questions can be formed with a fronted main verb. This is illustrated here for Danish (adapted from Sailor 2013:(23)-(26)):

DANISH:

ROOT YES-NO QUESTION WITH MAIN V

(35) vaskede Jasper bilen
wash.PAST Jasper car.DEF
'Did Jasper wash the car?' (lit. 'Washed Jasper the car?')

ROOT YES-NO QUESTION WITH AUX

(36) havde Jasper vask-et bilen
have.PAST Jasper wash- PART car.DEF
'Had Jasper washed the car?'

AUX-STRANDING VPE

(37) Mona og Jasper havde vask-et bilen, eller rettere Mona havde
Mona and Jasper have.PAST wash-PART car.DEF or rather Mona have.PAST
'Mona and Jasper had washed the car, or rather Mona had.'

AUX-STRANDING TAG QUESTIONS

(38) Jasper havde vask-et bilen, havde han ikke?
Jasper have.PAST wash-PART car.DEF have.PAST he NEG
'Jasper had washed the car, hadn't he?'

NO V-STRANDING VPE

(39) *Mona og Jasper vask-et bilen, eller rettere Mona vask-et
Mona and Jasper wash-PART car.DEF or rather Mona wash-PART
Intended: 'Mona and Jasper washed the car, or rather Mona washed'

NO V-STRANDING TAG QUESTIONS

(40) Jasper læste ikke bogen, *læste/gørde han?
Jasper read.PAST NEG book.DEF read did.PAST he
'Jasper didn't read the book, did he?'

According to Sailor's account of VPE and V2 movement in Danish, T is the trigger for VPE, but C the trigger for V2, meaning that the main verb cannot escape the VP marked for non-pronunciation in the dependent tag questions above. Thus we see *gøre*-support in tags without modals/auxiliaries in Danish.

However, in languages which do permit V-stranding VPE, we should expect to see V-stranding dependent tag questions. This is illustrated below for Irish (McCloskey 1991, Goldberg 2005). (all Sailor 2013:(6))

IRISH:

V-STRANDING VPE

(41) a. ar chennaigh$_i$ [t$_i$ said teach]?
c.INT buy.PAST they house
'Did they buy a house?'
b. creidim gur chennaigh$_i$
I-believe C.PAST buy.PAST
'I believe they did (buy a house).'

V-STRANDING TAG QUESTIONS

(42) chennaigh said teach, nár chennaigh
buy.PAST they house NEG.Q buy.PAST
'They bought a house, didn't they?'

Given the patterns above, if Kashmiri exhibits tag questions, then we should expect them to be available in both aux-stranding and verb-stranding configurations. This prediction is indeed borne out.

KASHMIRI:

TAG QUESTIONS WITH AUX-STRANDING VPE

(43) Təm cha ciTh' liichmIts, cha-n n-aa?
3SG AUX.PST letter write-PSP AUX-3sgps NEG-Q
'He has written a letter, hasn't he?' (Wali and Koul 1997:7)

(44) Təm-is pazi garI gatsh-uun, paz-es n-aa?
3SG-DAT should home go-INF should-3SGPS NEG-Q.
'He should go home, shouldn't he?' (Wali and Koul 1997:8)

TAG QUESTIONS WITH V-STRANDING VPE

(45) su leekhi nI ciTh', leekh'-aa?
3SG write.3SG.FUT NEG letter write.3SG.FUT-Q
'He won't write a letter, will he?' (Wali and Koul 1997: 7)

(46) su gav dili, gav n-aa?
3SG go.PRF.3SG Delhi.ABL go.PRF.3SG NEG-Q
'He went to Delhi, didn't he?' (Wali and Koul 1997: 307)

Tag questions provide further confirmation that the VPE operation in Kashmiri allows both main verbs and auxiliary verbs to be stranded before the ellipsis site.[3] Before turning to an analysis of these facts, I make one additional empirical observation.

3.4 Hybrid verb stranding

Kashmiri exhibits a hybrid form of VPE to my knowledge unattested among V2 languages, in which both the inflected auxiliary and participial main verb can be stranded together

KASHMIRI – HYBRID VPE

(47) a. Təm cha ciTh' liichmIts ganT-as.
3SG AUX.PST letter write-PSP hour-for
'He wrote a letter for an hour.'

b. Kabir ti **cha** **liichmIts** ____ .
Kabir also AUX.PST write-PSP
'Kabir wrote also (a letter for an hour).'

As Sailor's (2013) account would predict, aux+V-stranding is also possible in Kashmiri tag questions.

HYBRID TAG QUESTION

(48) Təm cha ciTh' liichmIts , **cha-n** **n-aa** **liichimIts**
3SG AUX.PST letter write-PSP AUX-3SGPS NEG-Q write-PSP
'He has written a letter, hasn't he?' (Wali and Koul 1997: 7)

(49) Təm-is pazi garI gatsh-un, **paz-es** **n-aa** **gatsh-un**
3SG-DAT should home go-INF should-3SGPS NEG-Q go-INF
'He should go home, shouldn't he?' (Wali and Koul 1997:8)

In what follows, I show that aux+main verb-stranding verb is a variety of V-stranding VPE, and importantly that the underlying structure is possible in non-elliptical contexts as well, reinforcing the widely held position that the underlying syntax of an elliptical clause should be identical to the syntax of a non-elliptical clause in the language (Ross 1969; Merchant 2001).

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[3] Indeed, if dependent tag questions were derived via VPE generally but Kashmiri did not have V-stranding VPE, it would be quite difficult to explain (45)-(46). Proponents of an NP/PP-drop/ellipsis approach to V-stranding VPE strings would need to argue that just in this case both subject and all VP-internal NPs and PPs must be null. Otherwise the result is ungrammatical:

(i) *miiraa leekhi mohn-as ciTh', leekh-naa mohn-as
Mira write-FUT Mohan-DAT letter write-NEG-Q Mohan-DAT
Intended: '*Mira will write Mohan a letter, won't she Mohan?'

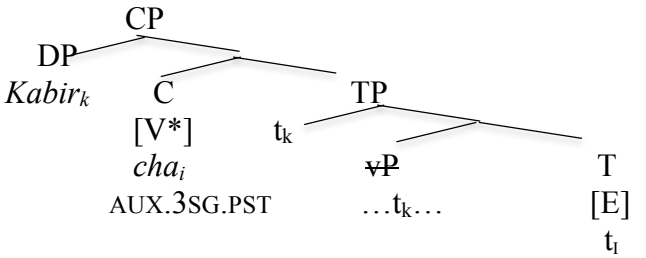
4 The analysis of V2 and X-stranding VPE in Kashmiri

4.1 Deriving VPE

Kashmiri is V2 and exhibits aux-stranding VPE. Thus I will propose a structure in which the copular auxiliary is generated in T and there is appropriately inflected for tense and agreement before moving into C. I will follow Merchant 2001 in the claim that if T possesses the [E] feature its complement vP may go unpronounced. Kashmiri is widely assumed to be a language in which T and all lexical heads are on the right, while the peripheral functional projections of the CP domain are left-headed (producing V2) (Bhatt 1999; Manetta 2006; Munshi and Bhatt 2009; Manetta 2011). Thus I propose that the elliptical clause in (50b) has the syntax in (51). T is introduced with the [E] feature, prompting the vP to go unpronounced. Simultaneously, the tensed auxiliary is base-generated in T and inflected for tense and agreement. Upon the introduction of C, its [V*] feature prompts the verbal material in T (namely the copular auxiliary) to undergo head movement into C. Note that the preverbal XP in Kashmiri would need to always escape the vP before and/or simultaneous to the point at which it is marked for non-pronunciation. Although I won't elaborate that process here, I will assume that it is feature-driven in a manner consistent with the findings in Munshi and Bhatt 2009 and Manetta 2011. The end result is aux-stranding VPE.

(50) a. Təm cha ciTh' liichmIts ganT-as.
3SG AUX.PST letter write-PSP hour-for
'He wrote a letter for an hour.'
b. Kabir ti cha ____.
Kabir also AUX.PST
'Kabir did also (write a letter for an hour).

(51)



Now let us turn to Kashmiri V-stranding VPE. Recall Sailor's condition concerning the appearance of V-stranding VPE:

(52) **Condition on V-stranding VP ellipsis**
A language L has V-stranding VPE iff:
(a) L has V movement out of VP triggered by the feature [V*] on head α
(b) L has VP ellipsis triggered by the merger of head β bearing [E]; and
(c) satisfaction of the [V*] on α is derivationally prior to the merger of β, or α=β.

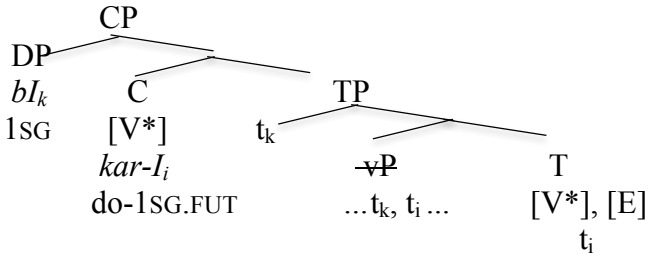
I propose that in Kashmiri not only does C have the feature we have called [V*] above, prompting V movement out of VP (Vikner 1995), but that T also hosts such a feature. When no auxiliary is present in the derivation to combine with tense and inflectional features, the main verb must move to T prior to and independent of its movement to C (for further evidence see section 4.2 below and also Munshi and Bhatt 2009). In T the

main verb becomes inflected with tense and agreement morphology. Upon the introduction of C, the [V*] feature on C prompts the main verb to once again undergo head movement into second position.

This proposed syntax makes possible a derivation in which VPE can strand a main verb, as in (53b). In the tree in (54), the head T has features prompting both ellipsis of its complement [E] and head movement of the verb [V*] (as in Sailor's condition repeated in (52) part (c) in which α=β). The main verb *kar-I* 'do-1SG.FUT' moves into T simultaneous to the process by which the [E] feature marks the vP for non-pronunciation. The verb is then available to make the subsequent move to C when prompted by the [V*] feature on that head.

(53) a. toh' kər-iv yi kəəm jaan patTh.
2PL do-FUT2PLPS this work good way.
'You will do this work well.'
b. bI ti kar-I ____ .
1SG also do-1SG.FUT
'I will also do (this work well).

(54)

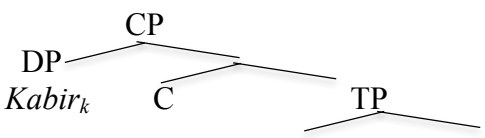


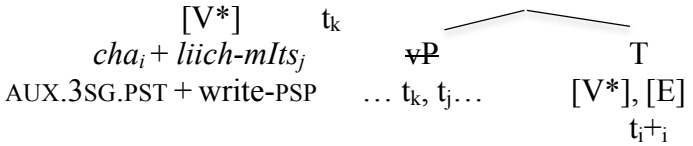
Kashmiri is thus a V2 language with both aux-stranding VPE and V-stranding VPE, as it has both an inventory of modals and auxiliaries, as well as independently motivated V-to-T movement for the purposes of combining the verb with tense, aspect, and agreement morphology. This confluence of properties is precisely what Sailor's condition on VVPE predicts could emerge.

Recall that Kashmiri also permits the auxiliary and main verb to be stranded together before a VPE site. I propose that this configuration arises when the participial form of the main verb forms a complex head with the auxiliary verb in T (simultaneous to the point at which the vP is marked for non-pronunciation). This complex head then moves as a unit to C, occupying second position. The result is aux+V-stranding VPE, as in (55b). Indeed, as (56) makes plain, this configuration is really a variety of V-stranding VPE, in that it is a context in which the main verb has left the vP.

(55) a. Təm cha ciTh' liichmIts ganT-as.
3SG AUX.PST letter write-PSP hour-for
'He wrote a letter for an hour.'
b. Kabir ti cha liichmIts _____.
Kabir also AUX.PST write-PSP
'Kabir wrote also (a letter for an hour).'

(56)





This account of aux+V-stranding VPE is supported by the fact that the participial form of the main verb may optionally appear in second position alongside the auxiliary in non-elliptical structures as well (Wali and Koul 1997:220; Koul and Wali 2006:98,120).

(57) Me **chu pormut** akhbaar
1SG.ERG AUX read.PSTPART newspaper
'I have read the newspaper' (Koul and Wali:120).

(58) bI **oosus goomut** baazar
1SG.NOM AUX go.PSTPART market
'I had gone to the market.' (Koul and Wali:120).

Though I have nothing further to say here about the nature of this movement of the participial form to join the auxiliary verb, I will assume that whatever drives this optional displacement in non-elliptical structures is at work in elliptical structures as well, generating the aux+V-stranding in contexts in which might otherwise feature aux-stranding alone.

4.2 Evidence for independent V-to-T

A simple way to support the claim that aux-stranding VPE V2 languages like Danish have no independent process of V-to-T movement is to compare main V2 clauses and embedded clauses, which are tensed but do not feature V2 (Vikner 1995; Mikkelson 2006). In matrix clauses in Danish the verb is found to the left of negation and VP-adverbials (59), whereas in embedded clauses verbs are found to the right of negation and VP-adverbials (60). This suggests that in embedded clauses, the verb remains within the VP and does not independently move to T (Vikner 1995).

(59) Peter drikker ofte kaffe om morgenen. DANISH
Peter drinks often coffee in morning.DEF.
'Peter often drinks coffee in the morning.' (Vikner 1995: (33c))

(60) Vi ved [$_{CP}$ at Peter ofte drikker kaffe om morgenen].
We know that Peter often drinks coffee in morning.DEF.
'We know that Peter often drinks coffee in the morning.'
(Vikner 1995:47: (33f))

In Kashmiri, as in Icelandic and Yiddish (Diesing 1990; Vikner 1995), embedded clauses are also V2, but there are tensed environments in which the V2 requirement does not hold: namely in relative/correlative clauses and conditionals. But as the language is underlyingly head final and TP is understood to be a head-final projection in Kashmiri (Munshi and Bhatt 2009), the position of left-adjoined VP-adverbials is unlikely to be revealing. Instead we must turn to evidence from the position of negation. In V2 environments in Kashmiri, negation is a dependent morpheme suffixed to the finite, second position verb. No material may intervene between the verb and negation.

(61) a. samir **chu** **nI** tsuunTh khEwaan KASHMIRI
Samir AUX.PRS.M.SG NEG apple.SG eat.IMPFV
'Samir does not eat/is not eating the apple.' (Munshi and Bhatt 2009: (10))

b. *samir **chu** tsuunTh khEwaan **nI** (Munshi and Bhatt 2009: (11b))

(62) su **pari-nI** kitaab
he read.FUT.3SG-NEG book
'He will not read the book.' (Munshi and Bhatt 2009: (15b))

Crucially, negation must follow all tense and agreement inflection in the order of suffixation, as in (60)-(61). Further, in yes/no questions, the yes/no question marker *–aa* is suffixed outside negation, producing the fixed order: root+inflection+neg+Q.

(63) samir **chu** **n-aa** dohaay tsuunTh' khEwaan
Samir AUX.PRS.M.SG NEG-Q everyday apples eat.IMPFV
'Doesn't Samir eat apples every day?' (Munshi and Bhatt 2009: (13a))

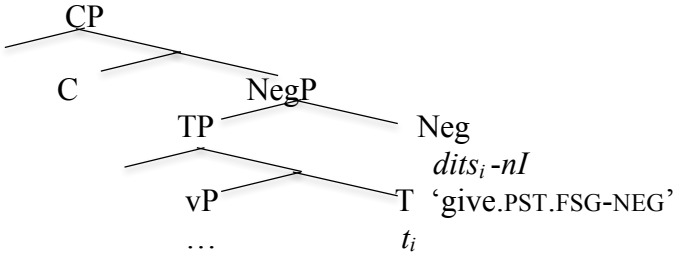
Given this and other similar evidence, Munshi and Bhatt (2009) adopt the account in Bhatt (1999) in which lower/inner negation is understood to be base generated in a Neg head higher than T but below the CP domain. In this view the main verb undergoes head movement to and combines with morphological material in the T head and then moves through the Neg head on the way to C in a V2 clause.

In non-V2 tensed environments, negation may also be suffixed to the clause final tensed verb, and crucially may not be separated from that verb by other material (even if the verb subsequently scrambles elsewhere).[4] This hold for both auxiliary verbs (as in (64)) and main verbs (as in (65)) Munshi and Bhatt argue that the tensed verb thus moves to T in all tensed clauses and then continues into Neg in the presence of negation.

(64) a. agar samir-an ravi-as yi kitaab ditsmIts **aasihe nI**, teli...
if Samir-ERG Ravi-DAT this book.F given be-CF NEG then...
'If Samir had not given this book to Ravi, then...'
b. agar samir-an ravi-as yi kitaab **aasihe nI** ditsmIts, teli...
c. *agar samir-an ravi-as yi kitaab **aasihe** ditsmIts **nI**, teli…
(Munshi and Bhatt 2009:(39))

(65) a. [yosI (kitaab) samiir-an raaj-as **dits-nI**] [so kitaab…]
which book.F Samir-ERG Raj-DAT give.PST.FSG-NEG that book.F
'the book that Samir did not give to Raj, that book…'
b. [yosI (kitaab) samiir-an **dits-nI** raaj-as] [so kitaab…]
c. *[yosI (kitaab) samiir-an **dits** raaj-as **nI**] [so kitaab…]
(Munshi and Bhatt 2009:(35))

(66) (adapted from Munshi and Bhatt 2009:(16))



If the tensed verb did not regularly move to and beyond T in non-V2 environments, we would expect the inflected verb and the negation suffix to be separable. That is, we would

[4] Negation may also appear adjacent to the relative phrase – for these cases Munshi and Bhatt propose a second, higher position for (outer) negation in a left headed wh/focus head which is part of the CP-domain.

expect the verb stem to be able to scramble independent of negation; it cannot. Though space constraints do not permit additional review of the distribution of negation in Kashmiri nor the account that Munshi and Bhatt develop, the key observation for our purposes is that there is evidence from the behavior of negation that Kashmiri has V-to-T movement independent of movement for the purposes of satisfying the second position requirement.

4.3 Deriving tag questions in Kashmiri

According to Sailor (2013), dependent tag questions result when VPE is applied to a typical root yes-no question. In Kashmiri there are three possible remnants in dependent tags: auxiliary verbs, main verbs, and aux+main verb complexes. Root yes/no questions are acceptable in Kashmiri with V1 order, and indeed this word order is strongly associated with bias (Wali and Koul 1997; Munshi and Bhatt 1999), so it is possible that VPE in dependent tags is applied to an underlyingly V1 structure:

(67) chaa samir dohay tsuunTh' khEwaan
AUX.PRS.M.SG.Q Samir everyday apples eat.IMPFV
'Does Samir eat apples every day?' (Munshi and Bhatt 2009:(12c))

In addition, Kashmiri prefers pronominal drop over repetition of pronominal subjects in adjacent conjoined, adjoined, or subordinate clauses (Wali and Koul:199-121). So it is also possible that these yes/no questions feature a null pronominal in Spec, CP, coreferent with the subject of the preceding clause. Under either view, the core observation is that each of these dependent tags can be derived via VPE over a typical root polar question.

Aux-stranding tags as in (66) surface when the aux verb is merged into T (and inflected for tense and agreement morphology) and the vP is marked for non-pronunciation. The auxiliary verb then moves to C, combining when relevant with morphologically dependent negation and the Q marker (Mushi and Bhatt 2009). In the case of V-stranding dependent tag questions as in (67), there is no auxiliary present in the derivation. The verb moves out of vP to T simultaneous to its designation for non-pronunciation (and combines with tense and agreement morphology). The main verb then moves to C, combining when relevant with morphologically dependent negation and the Q marker as above. Finally, aux+V-stranding dependent tags as in (68) arise when the main verb moves out of vP and forms a complex head with the auxiliary verb in T. This complex head then moves to C. Each of these possibilities are schematized below:

AUX-STRANDING TAG QUESTION

(68) Təm cha ciTh' liichmIts, [$_{CP}$ cha-n$_i$ n-aa [$_{TP}$ [$_{vP}$ ~~ciTh' liichmIts~~] t$_i$ $_{TP}$]]?
3SG AUX.PST letter write-PSP has-3SGPS NEG-Q letter write-PSP
'He has written a letter, hasn't ~~(he written a letter)~~?'

V-STRANDING TAG QUESTION

(69) su leekhi nI ciTh', [$_{CP}$ leekh'-aa$_i$ [$_{TP}$ [$_{vP}$ ~~ciTh t$_i$~~] t$_i$ $_{TP}$]]?
3SG write.3SG.FUT NEG letter write.3SG.FUT-Q letter
'He won't write a letter, will he?' (Wali and Koul 1997: 7)

HYBRID TAG QUESTION

(70) Təm cha ciTh' liichmIts , [$_{CP}$ [cha-n n-aa liichimIts$_k$]$_i$ [$_{TP}$ [$_{vP}$ ~~ciTh t$_k$~~] t$_i$ $_{TP}$]]?
3SG AUX.PST letter write-PSP AUX-3SGPS NEG-Q write-PSP letter
'He has written a letter, hasn't he?' (Wali and Koul 1997: 7)

5. Conclusion and future directions

Recent research on V2 languages and VPE has attempted to answer why the required head movement of the main verb out of the VP to satisfy the V2 requirement does not result in V-stranding VPE (Mikkelsen 2006; Lacara 2014; Sailor (to appear)). These accounts depend on timing: VPE must be an operation that renders the main verb inaccessible before it can be displaced to second position. The only "escape hatch" for the verb seems to be movement for the purposes of combining with tense and agreement morphology in T. This movement results in V-stranding VPE in non-V2 languages like Hebrew. This paper reveals that the V-to-T "escape hatch" is also available in a V2 language like Kashmiri, independent of verb movement to satisfy the V2 requirement. The presence of both aux-stranding and V-stranding (as well as aux+V-stranding) VPE in Kashmiri is precisely what Sailor's (to appear) revision to the criteria for X-stranding XP ellipsis predicts.

Though Kashmiri V2 has been well-documented in the descriptive literature, it is often excluded from larger investigations of V2-related phenomena. Thus one of the contributions of this article is to fill gaps in the known typology of VPE in V2 languages and to bring new Kashmiri data to wider attention. Further, the present article contributes to the research program investigating how verb-second interacts with other processes in the grammar. The particular goal here is to hone in on the mechanisms driving displacement of the verb and regulating the relative timing of major syntactic operations. These data support an approach to V2 languages in which both head movements of the verb out of the VP and ellipsis are feature-driven processes of the narrow syntax. The nature of the functional heads and the fixed order in which they are introduced into the derivation thus determine how operations like ellipsis will interact with verb second.

Preliminarily, we can also observe that a timing-based account for the lack of V-stranding VPE in East Scandinavian V2 languages such as found in Mikkelsen 2006 and Sailor (to appear) is incompatible with some asymmetric approaches to V2 (e.g. Mikkelsen 2015). Under the asymmetric approach, the verb in subject-initial V2 clauses with undistinguished information structure is found in T and the subject in Spec, TP. If this were so, we would expect V-stranding VPE to be available in just these scenarios, as satisfaction of the [V*] on T would be simultaneous to the satisfaction of [E] on T, providing an "escape hatch" for the verb. However, this prediction is not borne out; V-stranding VPE is never available in languages like Danish. Only approaches to asymmetric V2 such as in Mikkelsen 2011, in which the ultimate position of the verb is controlled by features introduced derivationally later than T, on C (irrespective of whether the verb ultimately remains in T or C), are compatible with a timing-based account of the VPE facts. Thus, an important task ahead for any asymmetric approach to V2 is to determine how to accommodate the lack of V-stranding VPE in East Scandinavian languages but the availability of V-stranding VPE in Kashmiri.

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