Comparative explorations in the middle-field

Robin Jenkins, Ph.D.

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ABSTRACT

This thesis investigates a number of issues related to locality of syntactic and PF movement, where a range of seemingly unrelated points of cross-linguistic variation follow from a single factor: the location of the middle-field phase.

The starting point is a novel differential object-marking (DOM) pattern from Uyghur, where objects high in specificity are accusative case-marked. Additionally, when objects are dislocated, although case-marking is required, a specific interpretation of the objects is not forced. In this way, Uyghur's DOM pattern contrasts with the typical DOM pattern in Turkish, where both dislocated and non-dislocated objects must be case-marked and specific. Chapter 2, which develops a new account of DOM, shows that this contrast can be traced to a difference in the middle-field phase boundary, where this phasal variation is tied to a difference in clause structure. This point of variation between Turkish and Uyghur is shown to ramify across a highly diverse set of phenomena, including: scope, long-distance scrambling, and case-marking in impersonal constructions. Further, the same type of phasal variation explains certain contrasts in object agreement in Bantu languages.

Chapter 3 concerns variation in Turkish and Uyghur verb-stranding ellipsis (VSVE), including whether VSVE observes the Verbal Identity Requirement between the antecedent and stranded verb, and whether extraction from VSVE is possible. I show these areas of

variation reduce to the phasal status of the VSVE target. Chapter 4 shows the conclusions reached for Turkish/Uyghur VSVE extend to Japanese, Korean, Hindi-Urdu, European Portuguese, Swahili, Greek, Russian, and BCS. These chapters also establish several novel generalizations concerning when movement (of various types) out of the VSVE target is possible, which also hold for verb-echo answers. I show that whether Verbal Identity Requirement holds correlates with whether Ā-extraction out of the VSVE site is possible and explain the correlation in phase-theoretic terms.

Chapter 5 investigates the rarely discussed phenomenon where a manner adverb surfaces exceptionally ”high” in VP-ellipsis (**Martha loudly will eat chips* vs. *Bill will quietly eat chips but Martha loudly will*). I show the adverb here undergoes “last resort” PF movement, also discussing the nature of PF movement more generally.

Comparative explorations in the middle-field

Robin Jenkins

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Robin Jenkins

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APPROVAL PAGE

Doctor of Philosophy Dissertation

Comparative explorations in the middle-field

Presented by

Robin Jenkins, B.A., M.A.

Major Advisor _____
Željko Bošković

Associate Advisor _____
Mamoru Saito

Associate Advisor _____
Adrian Stegovec

University of Connecticut

2026

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Chapter 1

Introduction

This thesis is an investigation into a number of areas of cross-linguistic variation that on the surface appear to be unconnected, including: differential object marking, scopal possibility of quantificational elements, long-distance scrambling, impersonal constructions, object agreement patterns, and verb-stranding VP-ellipsis. While these phenomena are highly diverse and on the surface appear unrelated, this thesis argues that the cross-linguistic variation observed in each case can be traced to a single point of architectural variation: the location of the middle-field phase. The central claim of this thesis is that languages systematically differ regarding which middle-field phrase serves as the phase, which in turn delimits a domain for syntactic operations. Due to this systematic cross-linguistic difference in syntactic domains (i.e. phases), variation across a wide-range of diverse surface phenomena is observed.

Before turning to the empirical and theoretical contents of this thesis, I will outline the theoretical starting point that this thesis proceeds from, namely, the contextual nature of syntactic domains.

The concept of "syntactic domains" plays a central role in syntactic theorizing, where

such domains regulate the boundaries of where a syntactic operation may apply. In the earliest iteration of this concept, Chomsky (1973, 1977) proposed that certain projections, namely, TP and DP (in contemporary terminology), were "bounding nodes" and that movement operations cannot apply if that movement step involves crossing more than one bounding node (i.e. the Subjacency Condition):

(1) a. … X … [α … [β … Y …] …] … X …

b. α,β are either TP or DP ("bounding nodes")

c. **Subjacency Condition**: A cyclic rule cannot move a phrase from a position Y to a position X (or conversely) in (1a). (Chomsky 1977: 73)

On this account, the reason that (2) is ungrammatical is due to a subjacency violation, namely, *wh*-movement has crossed two bounding nodes in a single movement step. Specifically (simplifying somewhat), the only way to derive (2) is for *what* to move directly from its base position in the lower clause up to the matrix Spec, CP. However, this movement step would involve crossing TP twice (first in the embedded clause and again in the matrix clause). This movement step thus violates Subjacency (1c), hence (2) is ungrammatical. Conversely, (3) is grammatical because *what* moves in successive-cyclic steps. First, it moves to the embedded Spec, CP (crossing only one TP) and then moves to the matrix Spec, CP (again crossing only one TP) and, thus no movement step involves crossing more than one bounding node at a time.

(2) * [$_{CP}$ What$_i$ does [$_{TP}$ Martha wonder [$_{CP}$ why [$_{TP}$ Peter bought t$_i$]]]]?

(3) [$_{CP}$ What$_i$ does [$_{TP}$ Martha think [$_{CP}$ t$_i$ that [$_{TP}$ Peter bought t$_i$]]]]?

The key point is that, on this account, syntactic domains are fixed by bounding theory, that is, which phrases count as bounding nodes are rigidly defined. In any context where TP or

DP is projected, TP and DP are bounding nodes and delimit locality domains for syntactic operations.

A crucial shortcoming of the bounding approach stems from the approach's assumption that certain nodes are uniformly defined as bounding nodes; that is, that they always delimit a syntactic locality domain regardless of their syntactic context. However, there are clear cases that indicate that a phrase delimits a syntactic domain in certain contexts but not others. As shown in (4a), when a clause is the complement argument of a verb, the clause can be transparent to extraction. But when the clause is an adjunct, as in (4b), it is opaque for extraction. From the perspective of bounding theory, in both (4a) and (4b) the *wh*-phrases never cross more than one TP bounding node per movement step and thus there is no subjacency violations. Consequently, we may expect both the complement argument clause in (4a) and the adjunct clause in (4b) to be transparent to *wh*-extraction. Similarly, as shown in (5a), extraction out of a clausal subject is impossible despite only involving movement steps that cross a single bounding node at a time.[1]

(4) a. $[_{CP}$ What$_i$ did $[_{TP}$ Martha $[_{VP}$ think $[_{CP}$ t_i that $[_{TP}$ Peter ate $t_i]]]]]$?

b. * $[_{CP}$ What$_i$ did $[_{TP}$ you eat nuts $[_{CP}$ t_i since $[_{TP}$ you were drinking $t_i]]]]$?

[1]Note that the contrast between (4a), and (4b) and (5a) can be explained with independent principles, e.g. Condition on Extraction Domain (Huang 1982), as in (i.). Briefly, the reason that (4b) and (5a) are ruled out is because the CP adjunct and the CP subject are not properly governed by a lexical head (but the complement argument CP in (4a) is properly governed by matrix V). The key point for present purposes is that (i.) does not directly follow from bounding theory's definition of syntactic domain-hood (i.e. bounding nodes) and so an independent principle is needed to constrain extraction. The Condition on Extraction can also explain the asymmetry in (6) on the next page given that in (6a), since the DP is the complement argument of V, hence properly governed by V, but in (6b), since the DP is in Spec, TP, it is not properly governed by a lexical X.

i. Condition on Extraction Domain:
   a. A phrase A may be extracted out of a domain B only if B is properly governed;
   b. A properly governs B if and only if A governs B and: (a) A is lexical category, or (b) A is co-indexed with B;
   c. α governs β if and only if $\alpha = X^0$ and every maximal projection dominating α also dominates β and vice versa.

(5) a. * [$_{CP}$ Peter$_i$ [$_{CP}$ t_i that [$_{TP}$ Bill criticized t_i]] disturbed Martha].

b. [$_{CP}$ [$_{CP}$ That [$_{TP}$ Bill criticized Peter]] disturbed Martha].

In the nominal domain, bounding theory also faces similar issues that stem from the context-insensitivity of the definition of bounding nodes. Like clauses, DPs display extraction asymmetries. When a DP is the complement argument of a verb, as in (6a), *wh*-extraction is possible. But when a DP is the subject, as in (6b), *wh*-extraction is impossible.

(6) a. [$_{CP}$ Who$_i$ did [$_{TP}$ Martha see [$_{DP}$ a picture of t_i]]]?

b. * [$_{CP}$ Who$_i$ did [$_{TP}$ [$_{DP}$ a picture of t_i] disturb Martha]]?

From the bounding theoretic perspective, both (6a) and (6b) are expected to be ungrammatical. In both cases, *who* moves in a single step from inside the DP to the matrix Spec, CP, crossing two bounding nodes in a single step, DP and TP. Bounding theory therefore predicts that both (6a) and (6b) are ungrammatical. It important to emphasize that the issue here is not only the narrow issue that bounding theory makes the wrong prediction in (6a). Rather, the issue is that bounding theory, quite generally, does not have the resources to differentiate (6a) and (6b). Since DP is defined as a bounding node whenever it is present, DP counts a bounding node regardless of whether the DP is complement of a verb, as in (6a), or the subject of a clause, as in (6b). In this respect, bounding theory faces the same problem in the nominal domain that it faces in the clausal domain, namely, that bounding theory involves a conception of syntactic domains that are insensitive to the broader syntactic context and hence has difficulty in accounting for the contextual nature of when a given domain is transparent or opaque to syntactic operations.

As pointed out in Bošković 2014, 2024b, 2026, in contrast to the bounding framework, in Chomsky's *Barriers* framework, whether a phrase induces an opaque domain for extraction is a contextual matter. As Bošković (2014, 2024b, 2026) puts it, one cannot tell

whether a phrase is a barrier without looking at the broader syntactic context in which it occurs (which was not the case with bounding nodes). To illustrate, consider the clausal extraction asymmetry in (4a) vs. (4b) and (5a) from the perspective of the Barriers framework. In this framework (simplifying somewhat), CP is the relevant phrase which can make a clause transparent or opaque for extraction; that is, CP can be a barrier. As (4a) shows, when a CP is the complement argument of a verb, as in (4a), the CP is not necessarily an opaque context for extraction. But when the CP is not a complement argument of the verb, as with the adjunct CP in (4b) or the CP subject in (5a), the CP is always opaque for extraction. All of this is captured in the Barriers framework.[2] The Barriers framework can also explain the extraction asymmetry in the nominal domain; that is the contrast in (6a) vs. (6b), the relevant difference being that the DP is a complement argument of the verb in (6a) but the subject in (6b) (see fn. 2 for relevant definitions).

The key point is that while in the bounding framework certain phrases always create

[2]On the Barriers approach (Chomsky 1986), movement cannot proceed across an XP that is a barrier, where barrier-hood and the conditions on movement are defined as in (i.) and (ii.) below, where (i.) essentially gives complement arguments a special status. Briefly, on the Barriers approach, since the complement argument CP in (4a) is directly θ-marked by the matrix V, CP is not a barrier, and thus, *wh*-movement out of the CP is permitted. But in the case of the CP adjunct (4b) and CP subject (5a), the CPs are not directly θ-marked by a lexical X and are a barriers. Further, since the CPs are either adjuncts or arguments, the *wh*/topicalizing phrases cannot adjoin to CP here to move out. Thus, extraction out of adjunct and subject CPs is blocked (in fact, extraction out of the subject crosses two barriers, because the CP in Spec, TP makes TP a barrier too, given (id.), which accounts for why extraction out of subjects is worse than out of adjuncts). Note, for the *wh*-island in (2), since the embedded CP immediately dominates TP, which is a blocking category, CP is a barrier. Furthermore, since the embedded Spec, CP is filled by *why* and CP is argument, *what* cannot move to the embedded Spec, CP nor adjoin to CP, hence its movement crosses the CP barrier.

i. a. α directly θ-marks β only if α and β are sisters;
   b. An XP is a blocking category if it is not directly θ-marked by a lexical head (i.e. is not a complement argument);
   c. An XP that is a blocking category is a barrier, unless it is TP;
   d. An XP is that immediately dominates a blocking category is barrier.

ii. a. Movement cannot cross a barrier XP;
   b. Movement can proceed out of a barrier XP, if the moving element YP adjoins to XP;
   c. A YP cannot adjoin to XP, if XP is an adjunct, argument, or a TP.

locality domains independent of their syntactic context; in the Barriers framework whether a phrase delimits a locality domain depends on the syntactic context around that phrase. Thus, when a CP is the complement argument of a verb it can be transparent to extraction, but when a CP is an adjunct or subject it is opaque. Similarly, when a DP is the complement argument of a verb it can be transparent, but when it is a subject it is opaque. Abstracting away from labels, the difference is that in the bounding framework if XP is a bounding node in one context, XP is a bounding node in every context; in the Barriers framework, if XP is a barrier in one context, XP is not necessarily a barrier in every context. Put differently, in the bounding framework, one needs to only look at the syntactic category of a phrase to know if it delimits a locality domain, but in the Barriers framework the category of the phrase is not enough and one must inspect the surrounding syntactic context to determine if the phrase delimits a locality domain.

In much contemporary Minimalist theory, the phrases which delimit syntactic domains and regulate syntactic dependencies are defined as "phases." Chomsky (2000, 2001) proposes that which phrases count as phases are: vP and CP (and potentially DP). On this approach, phases play a crucial role in regulating movement dependencies through the Phase Impenetrability Condition (PIC) (7), which blocks syntactic dependencies from crossing a phasal domain.[3]

(7) In a phase α where H^0 is a phase head, the domain of H^0 is not accessible to operations outside of α, only H^0 and its edge (= Spec, HP). (Chomsky 2000)

When a moving phrase crosses a phase, the PIC (7) requires the moving phrase to have the Spec of the phase as an intermediate landing site. Thus, the reason that *what* in (8) undergoes successive cyclic movement, stopping at every CP and vP along its path, is due to

[3]Note that the definition in (7) is the "strong" PIC definition from Chomsky 2000, which I will use for expository purposes in this chapter.

the phasal status of vP and CP and the PIC. Concretely, *what* must have every intermediate Spec, vP/CP along its movement path as an intermediate landing site due to the PIC.

(8) $[_{CP}\text{What}_i$ does $[_{TP}$ Martha $[_{vP}$ t_i think $[_{CP}$ t_i that $[_{TP}$ Peter $[_{vP}$ t_i bought $t_i]]]]]$?

As discussed in Bošković 2014, 2024b, 2026, on this approach, phases and the PIC bear a striking similarity to bounding nodes and the Subjacency Condition. As was shown, which phrases count as bounding nodes are context invariant, i.e. they are always TP and DP. In parallel, which phrases count as phases on Chomsky's (2000; 2001) approach are context invariant, i.e. they are always vP and CP (and DP). Further, the principles which regulate movement dependencies are defined on these context invariant domains on both approaches. On the bounding approach, the Subjacency Condition (1) blocks links in movement chains from crossing more than one bounding node at a time. On the phase approach, the PIC (7) requires movement dependencies that involve crossing a phase to have the Spec of the phase an an intermediate landing site.

While the original approach to phases defined which phrases count as phases rigidly, a number of works, notably, Bobaljik and Wurmbrand 2005; Bošković 2005, 2012, 2013, 2014, 2015; den Dikken 2007; Gallego and Uriagereka 2007; Takahashi 2011; Todorović 2016; Wurmbrand 2013, 2017, among others, have argued that whether a phrase counts as a phase is a contextual matter. These works argue that whether a given phrase counts as a phase cannot be determined in isolation (as is the case with Chomsky's (2000; 2001) original proposal), but rather whether a phrase counts as a phase depends on the broader syntactic context that the phrase occurs in. On some of the approaches above, the contextual factors that determines the phasal status of an XP are tied to particular features of XP (or surrounding phrases), which can affect the phasal status of XP. For example, Takahashi (2011) ties phasehood to Case-assignment, namely, an XP can only be a phase if X

assigns Case (e.g. vP is a phase when v has an [ACC]-assigning feature) or selects for a phrase that assigns Case (e.g. CP is a phase when C selects for a finite T that has a [NOM]-assigning feature). Importantly, on such approaches, whether XP is a phase or not in a given configuration does not correspond to any structural differences. Rather, the relevant factors are the properties of the relevant XPs (e.g. whether whether vP is a phase depends on whether v assigns Case and whether CP is a phase depends on whether C selects for a finite, [NOM]-assigning T). On the other hand, Bošković (2012, 2013, 2014) proposes a contextual approach to phases where the phasal status of an XP is directly tied to the broader syntactic structure that XP occurs in. Thus, Bošković proposes that what determines whether an XP is a phase (or not) is whether XP is highest phrase in the extended domain of a lexical head (i.e. N, V, A, P).[4] On this approach, in contexts where XP is the highest phrase in an extended domain it is the phase, as in (9) where XP is the highest phrase in the extended domain of the lexical head α and YP is outside of the extended domain. But in other contexts, when another phrase, ZP, projects above XP in the extended domain of α, XP is not the phase, rather the higher phrase ZP is, as in (10).

(9) $[_{\text{YP}}\ \text{Y}\ [_{\textbf{XP=phase}}\ \text{X}\ \ldots\ [_{\alpha\text{P}}\ \alpha\ \ldots]]]$

(10) $[_{\text{YP}}\ \text{Y}\ [_{\textbf{ZP=phase}}\ \text{Z}\ [_{\text{XP}}\ \text{X}\ \ldots\ [_{\alpha\text{P}}\ \alpha\ \ldots]]]]$

On this approach, phasal variation is directly tied to variation in syntactic structure, namely, whenever there is variation regarding the phasal status of XP, there is a corresponding variation in the syntactic structure around XP (i.e. variation in whether XP is the highest projection in an extended domain).

A major theoretical advantage of the contextual approach in Bošković 2014 is that this approach does not require stipulating a connection between the phasal status of X and

[4]There is also the clausal domain, where the highest projection is also a phase. I will ignore the clausal domain in the discussion below (for relevant discussion see Wurmbrand 2013, 2017 and Bošković 2015).

(presumably) independent properties of X (i.e. the Case-assigning properties of X) nor does it require parametric variation of phasehood itself (i.e. in some languages XP is a phase but in other languages XP is not a phase). On the approach in Bošković 2014, the relevant factor that determines phasehood is uniform: whether XP is the highest projection in the extended domain of a lexical head. The source of variation in phasal domains is independent variation in syntactic structure (i.e. (9) vs. (10)). To illustrate this difference between the contextual approach in Bošković 2014 versus those other approaches, consider the following contrast. While English allows for P-stranding, as in (11), other languages, such as Russian, do not (12a).

(11) Where$_i$ are you coming [$_{PP}$ from t_i]?

(12) a. *Čego$_i$ sleduet otkazat'sja [$_{PP}$ ot t_i]?
what follow give.up-self of
'What should one give up?'

b. Ot čego sleduet otkazat'sja? (Abels 2003: 160)

Consider first how other approaches to phases could explain this point of cross-linguistic variation in (11) versus (12a). For example, Abels (2003) (who assumes a rigid approach to phases) hypothesizes that while cross-linguistically all languages share the same PP structure, the difference between languages which allow P-stranding (e.g. English (11)) and languages that do not (e.g. Russian (12a)), is that in languages that allow for P-stranding, PPs are not phases, but in languages that do not allow P-stranding, PPs are phases. Due to this difference in the phasal status of PPs, Abels (2003) argues, there is a difference in whether extraction can proceed out of the PP. In languages like Russian, where PP is a phase, the moving *wh*-item is base-generated as the complement of P and must stop in Spec, PP as an intermediate landing site due to PP's phasal status and the PIC (7) when undergoing movement to a higher position, as in (13a). However, since complement-to-

Spec movement violates anti-locality, (13a) is an illegitimate movement chain and the *wh*-item cannot evacuate the PP.[5] In English, however, PP is not a phase and thus, the moving *wh*-item can move to a position above PP without Spec, PP as an intermediate landing site. Since complement-to-Spec movement within PP is not forced here, there is no anti-locality violation and (13b) is a legitimate movement chain.

(13) a. *[… wh_i … [PP_{phase} t_i [P, P t_i]]] b. […wh_i … [PP [P, P t_i]]]

On this approach, whether PP is a phase or not is a point of parametric variation. In Russian, PP is a phase; in English, PP is not. Crucially, as pointed out in Bošković 2026, positing this type of parametric variation for phases, i.e. parameterizing phasehood, amounts to parameterizing the computational system itself, which is otherwise assumed to be invariant.

Additionally, consider how other contextual approaches which do not correlate phasal variation with variation in structure could account for the above contrast. In particular, consider approaches where phasehood is tied to some other feature, e.g. Case-assigning features as with Takahashi's (2011) approach to phases. In this approach, in order to capture the contrast between (11) and (12a), a stipulation would be needed that in Russian the P assigns Case, hence the PP is a phase, but in English it does not, hence PP is not a phase. However, the Ps in both languages do seem to assign Case to their complement here (in fact, there is no obvious relevant featural difference between them).

Consider now Bošković's (2014) contextual phasehood approach. Bošković (2014) proposes that in languages like Russian the highest phrase in the extended domain of P is PP (as in (14a)), but in English, the highest phrase in the P-domain is XP, which projects above PP (as in (14b)). Thus, in Russian, PP is a phase but in English, PP is not (rather the higher

[5] Anti-locality here being the general constraint that movement cannot proceed in "too short" of a step, e.g. no complement-to-Spec movement within the same phrase, see, e.g., Abels 2003; Bošković 1994, 1997, 2016b; Erlewine 2020; Grohmann 2000 and also discussion in Chapter 2.

XP phrase is). Consequently, in Russian, P-stranding is impossible due to the PIC/anti-locality considerations discussed above (and sketched in (15a) below). But in English, due to this additional structure in PPs, the *wh*-item can escape the PP since movement from the complement of P to the Spec of XP does not violate anti-locality, as in (15b).

(14) a. $[_{YP}$ Y $[_{\textbf{PP=phase}}$ P . . .]]

b. $[_{YP}$ Y $[_{\textbf{XP=phase}}$ X $[_{PP}$ P . . .]]]

(15) a. *$[_{\ldots}$ wh_i . . . $[_{PP_{phase}}$ t_i $[_{P'}$ P $t_i]]]$

b. $[_{\ldots}$ wh_i . . . $[_{XP_{phase}}$ t_i $[_{X'}$ X $[_{PP}$ P $t_i]]]$

Further, Bošković (2014) shows that this type of structural variation in the P-domain can be morphologically manifested. As shown below, in some contexts, Turkish PPs do not permit extraction out of them, as in (16a); in other contexts, such extraction is possible, as in (16b).

(16) a. *Biz $[_{NP}$ Pelin-in arkadaş-ı$]_i$ dün [t_i **için**] para topla-dı-k.
we.NOM Pelin.GEN friend.POSS yesterday for money collect.PST.1PL
'Yesterday, we collected money for Pelin's friend.'

b. Ben araba-nın$_i$ dün [t_i **önün-de**] dur-du-m.
I.NOM car.GEN yesterday in.front.of.3SG.POSS.LOC stand.PST.1SG
'Yesterday, I stood in front of the car (not behind it).'

(Bošković 2014: 39)

On Bošković's approach, since P-stranding is disallowed in (16a), it should involve a simple PP structure, as in (14a) (where simple PP structures prevent P-stranding for the anti-locality reasons discussed above). In contrast, since P-stranding is allowed in (16b), there is a richer PP structure here (where richer PP structures do not lead to anti-locality violations

with P-stranding), as in (14b). Crucially, the difference between (16a) and (16b) regarding PP structure is morphologically manifested here, where the PP in (16b) is morphologically richer than the PP in (16a) (see Şener 2006 for further discussion regarding the structural composition of Turkish PPs).

While Bošković's contextual approach to phasal variation provides a straightforward explanation of the Turkish P-stranding facts above, it is instructive to consider how Abels' (2003) approach to phasal variation would account for the Turkish P-stranding facts. As discussed above, on Abels' approach, where PPs have the same structure cross-linguistically, whether PP counts as a phase or not is a point of cross-linguistic variation, e.g. in English, PP is not a phase, but in Russian, PP is. The issue with the Turkish P-stranding facts in (16a, 16b) is that this is variation within a language. Subsequently, an explanation in terms of cross-linguistic variation in PP phasehood is not applicable here. Rather, this approach would have to stipulate that whether PP is a phase or not is simply construction specific. In contrast, Bošković's (2014) contextual approach provides a principled account of variation in PP phasehood, which also captures the morphological differences discussed above. On this approach, the relevant factor that determines phasehood is whether XP is the highest phrase in the extended projection of a lexical head. On this account, the key factor regulating the phasal variation among Russian, English, and Turkish PPs is whether PP is the highest phrase in the extended projection of P.

The discussion above shows that languages vary in their extraction patterns, as illustrated by extraction out of PPs in English, Russian, and Turkish, and hence that they vary in their locality domains. Bošković (2022) observes that such differences in locality domains can be captured in essentially two ways: by positing variation in the phase system or by positing variation in syntactic structure. On the first approach, syntactic structure is constant cross-linguistically, and variation in locality domains follows from parameter-

izing whether a given XP counts as a phase. Consequently, two languages may differ regarding whether an XP is a phase without any structural variation. On the approach in Abels 2003, for instance, PP has the same structure in English, Russian, and Turkish; what varies is whether PP is a phase, which is a language-specific parameter, or in the case of Turkish, a construction-specific one. On the second approach, as in the contextual approach in Bošković 2014, the definition of a phase is uniform: the highest XP in the extended projection of a lexical head is a phase. What varies is which XPs project in a given extended projection. In all of English, Russian, and Turkish, the highest XP in the P-domain is a phase, but because the internal structure of that domain differs, a different phrase delimits the phase in each language. On this approach, phasehood is invariant, but the definition of what counts as a phase is structure-sensitive. Put differently, on this approach there can be no variation in phase boundaries without a corresponding structural variation. Importantly, these two options differ in their consequences for the place phases hold in the architecture of the language faculty. Chomsky (2000, 2001, 2008) takes phases to be part of the computational system, and therefore should be invariant across speakers. Thus, parameterizing phasehood amounts to parameterizing the computational system itself. In contrast, Bošković's contextual approach requires no such parameterization. On this approach, variation in phase domains follows from independently motivated variation in syntactic structure, given a structure-sensitive definition of phasehood.

This thesis adopts the contextual approach in Bošković 2014 as its theoretical starting point; that is, differences in phase domains can be traced to differences in syntactic structure. Thus, a consequence of this starting point is that I adopt the assumption that clause structure can vary (i.e. variation in which XPs project along the clausal spine) both cross-linguistically and between constructions in a given language. Given this theoretical starting point, a guiding hypothesis of this thesis is the following:

(17) Languages that systematically differ in terms of phase domains systematically differ in terms of clause structure (i.e. what XPs project in the clausal spine).

The basic intuition of (17) is that if what determines whether an XP is a phase depends on the broader syntactic context that XP occurs in, and the syntactic context that XP occurs in can vary cross-linguistically, then it should be expected that there will be cross-linguistic variation in the phasal status of XP.

At a more granular level, this thesis is concerned with a particular type of phasal variation: variation in the middle-field phase. There is considerable evidence that a middle-field phrase constitutes a locality domain for syntactic operations (Barss 1986; Chomsky 1986, 2000, 2001; Legate 2003; Rackowski and Richards 2005; Takahashi 1994; van Urk 2020; van Urk and Richards 2015, among others). For example, evidence from binding indicates that a *wh*-phrase moving to Spec, CP, has a middle-field phrase as an intermediate landing site (Barss 1986; Takahashi 1994; see also Fox 1999; Legate 2003). As shown in (18a), *wh*-movement can create anaphor binding contexts, namely, when the anaphor-containing *wh*-phrase moves to the intermediate Spec, CP, it is in a local enough context for the anaphor to the bound by the matrix subject before moving away to its terminal landing site in matrix Spec, CP. In (18b), *himself* is in its base-position in the lower clause and is not local enough to *John* to be bound by it, which causes a Condition A violation.

(18) a. Which picture of himself$_i$ does John$_i$ think [$_{CP}$ t that Mary likes t]?

b. * John$_i$ thinks that Mary likes some picture of himself$_i$

(Takahashi 1994: 16)

In (18a), the *wh*-phrase undergoes successive cyclic movement to the matrix Spec, CP, with the embedded Spec, CP as an intermediate landing site. From this intermediate position, *himself* is local enough to *John* to be bound before further movement to its terminal landing

site in the matrix Spec, CP, thus satisfying Condition A here (note, *himself* cannot be bound from matrix Spec, CP). Importantly, in contexts where the *wh*-phrase cannot move to the intermediate Spec, CP (as with a *wh*-island), Condition A can still be satisfied. While (19a) is still marginal (due to the *wh*-island violation), it is nevertheless clearly more acceptable than (19b), where the anaphor is in its base-position inside the embedded clause, where Condition A cannot be satisfied.

(19) a. ?? [$_{CP}$[Which picture of himself$_i$] does John$_i$ wonder [$_{CP}$ why Mary likes t]]?

b. * [$_{CP}$ John$_i$ wonders [$_{CP}$ why Mary likes some pictures of himself$_i$]]?

c. ?? Which picture does John wonder why Mary likes t?

(Takahashi 1994: 17)

The contrast between (19a) and (19b) is straightforwardly explained if *wh*-movement involves a middle-field intermediate landing site. In (19a), the *wh*-phrase moves to a middle-field intermediate landing site in the matrix clause on its way to matrix Spec, CP. From this position, the anaphor can be bound by the subject, thus satisfying Condition A (Barss 1986; Takahashi 1994). On a phase theoretic approach to syntactic domains, this middle-field intermediate landing site in the matrix clause is the middle-field phase. Consequently, all movement must have the Spec of the matrix middle-field phase as an intermediate landing site when moving to a higher position, e.g. matrix Spec, CP, due to the PIC (7).

Additional evidence for a middle-field phase comes from Malay. In Malay, extraction across a verb blocks the realization of the transitivity voice prefix *meN-*, which is often taken to be the realization of middle-field head associated with voice/transitivity (Cole and Hermon 1998; Sato 2012). As illustrated in (20a) and (20b), when the *wh*-item crosses a verb along its movement path to (matrix) Spec, CP the *meN-* morpheme cannot be realized (compare with subject extraction in (20c)).

(20) a. Saipa$_i$ yang Bill (*mem)-beritahu ibu-nya [$_{CP}$ yang t_i (men-)yintai
who that Bill meN-tell mother-his that (meN-)love
Fatimah]?
Fatimah
'Who does Bill tell his mother that loves Fatimah?'

b. Apa$_i$ yang Ali (*mem-)beri t_i pada Fatimah?
what that Ali meN-gave to Fatimah
'What did Ali give to Fatimah?'

c. Siaap$_i$ t_i (mem-)beli buku ituu?
who meN-bought book that
'Who bought that book?' (Cole and Hermon 1998: 231-232)

That *meN-* cannot be realized when a *wh*-item's movement path crosses it has been interpreted as being a morphological reflex of the *wh*-item moving to Spec of the *meN-* hosting phrase, which affects *meN-*'s realization (Sato 2012; van Urk 2020). Moreover, that *meN-* can never be realized when a *wh*-item crosses it along its movement path indicates that movement to the Spec of this middle-field phrase is obligatory; that is, this middle-field phrase is a phase in Malay and, consequently, all movement that crosses it must have its Spec as an intermediate landing site.

In light of the above facts and ample additional arguments provided in the references given above (see pg. 7), I will take it for granted that there is a middle-field phase cross-linguistically, which forces movement to pass through its edge. An important question arises regarding the exact phrasal identity of this middle-field phase. In the thesis, I pursue the hypothesis that which middle-field phrase serves as the middle-field phase can actually systematically vary cross-linguistically. Further, I argue that this systematic variation in the middle-field phase domain can be traced to systematic cross-linguistic variation in the structure of the clausal middle-field. In this respect, the middle-field variation discussed in this thesis provides evidence for the contextual approach to phases discussed above.

The empirical starting point of this investigation regarding variation in the middle-field phase is a range of seemingly unrelated contrasts observed between two closely related languages: Turkish and Uyghur. Because Uyghur and Turkish are highly similar languages in many respects, these languages are an ideal testing ground for investigating the effects of a single point of structural variation. As shown below, Turkish and Uyghur exhibit a fairly typical differential object marking pattern with objects in their base, clause-medial position. In both Turkish (21) and Uyghur (22), when the object is high in specificity, the object must be marked with accusative case.

(21) a. (ben) doktor arı-yor-um.
1SG doctor look.for-PROG-1SG
'I am looking for a doctor/doctors.'

b. (ben) doktor-**u** arı-yor-um.
1SG doctor-ACC look.for-PROG-1SG
'I am looking for the doctor.'

(22) a. (men) doktor izde-wat-i-men.
1SG doctor look.for-PROG-NPST-1SG
'I am looking for a doctor/doctors.'

b. (men) doktor-**ni** izde-wat-i-men.
1SG doctor-ACC look.for-PROG-NPST-1SG
'I am looking for the doctor.'

However, I observe a novel contrast with respect to differential object marking of dislocated objects. In Turkish, when an object is dislocated it must be marked with accusative case and is obligatorily specific, as in (23). But in Uyghur, while dislocated objects must be marked as well, they do not require a specific interpretation in this position, as in (24).

(23) doktor$_i$-**u** ben t_i arı-yor-um.
doctor-ACC 1SG look.for-PROG-1SG
'I am looking for the doctor.'

(24) Doktor$_i$-**ni** men t_i izde-wat-i-men.
doctor-ACC 1SG look.for-PROG-NPST-1SG
'I am looking for a/ the doctor.'

Further, Turkish and Uyghur exhibit a range of other contrasts across seemingly unrelated phenomena. For example, Turkish disallows long-distance scrambling of objects out of clauses with ACC-marked subjects, as in (25a), while Uyghur permits such scrambling, as in (25b).

(25) a. *Oya$_i$-ya Ali Ayşe-yi t_i yardım et-ti san-ıyor.
Oya-DAT Ali Ayşe-ACC help do-PST.3SG believe-PRES.PROG.3SG
'Ali believes Ayşe to have helped Oya.'

b. Aliyë$_i$-gë Adil Mehmet-ni t_i yerdem ber-di dep angli-di.
Aliyë-DAT Adil Mehmet-ACC help give-PST.3SG C hear-PST.3SG
'Adil heard that Mehmet helped Aliyë.'

Additionally, Turkish and Uyghur display contrasts in impersonal constructions. While Turkish disallows ACC-marking on objects in impersonals, as in (26b), Uyghur requires such marking, as in (27).

(26) a. Hızlı kitap oku-**n**-ur.
quickly book read-IMPRS-AOR
'One does book-reading quickly.'

b. *Bu kitab-ı hızlı oku-**n**-ur.
this book-ACC quickly read-IMPRS-AOR
'One reads this book quickly.' (Legate et al. 2020: 775,790)

(27) Polu-*(ni) ye-**yil**-i-du.
pilaf-ACC eat-IMPRS-NPST-3SG
'One eats the pilaf.'

While the above contrasts may on the surface appear unrelated, I argue that all of the above contrasts (and other additional contrasts discussed in the thesis) can be traced to a single

difference in the middle-field phase between Turkish and Uyghur. In Turkish, vP is the phase (28), but in Uyghur vP is not the phase. Rather, in Uyghur, an additional functional head projects in the middle-field which serves as the phase, as in (29).

(28) $[_{XP}\ X\ [_{\textbf{vP=phase}}\ v\ \ldots]]$

(29) $[_{XP}\ X\ [_{\textbf{FP=phase}}\ F\ [_{vP}\ v\ \ldots]]]$

Further, I will argue that the kind of phasal variation exhibited between Turkish and Uyghur, i.e. (28) vs. (29), is not merely local to Turkish and Uyghur. Rather, this kind of variation can be observed across a range of languages and accounts for a number of phenomena, for example, object agreement patterns in Bantu. In Swahili, when an object is in its canonical position, it agrees with the verb, as in (30). Additionally, when such objects undergo Ā-movement, as with the object relative in (31), object agreement is retained. In Bemba, when the object is in its canonical position, as in (32), the object agrees with the verb as well. But when such objects undergo Ā-movement, as in (33a), agreement with the object is impossible (cf. (33b)).

(30) Juma a-li-*(**wa**)-kutana walimu
Juma SM.3SG-PST-2.OM-meet 2.teachers.
'Juma met the teachers'

(Henderson 2006: 61)

(31) Msichana amba-ye Juma a-li-*(**m**)-kutana jana.
1.girl *amba*-1.REL Juma SM.3SG-PST-1.OM-meet yesterday
'The girl that Juma meet yesterday.'

(Henderson 2006: 58)

(32) n-álì-**mú**-món-á Chìsángá
1SG.SM-PST-1.OM-see-FV 1.Chisanga
'I saw Chisanga'

(Marten et al. 2007: 261)

(33) a. ìcí-pùnà ícò ùmù-ánàkáshì á-mwèènè
7-chair REL.7 1-girl SM1-see.PERF
'The chair which the girl saw'

b. *ìcí-pùnà ícò ùmù-ánàkáshì á-**ci**-mwèènè
7-chair REL.7 1-girl SM1-7.OM-see.PERF
'The chair which the girl saw'

(Marten et al. 2007: 275)

I will argue that the contrast in agreement patterns observed between Swahili and Bemba is due to the same underlying variation as in Turkish and Uyghur. In Swahili, vP is a phase (28), consequently, objects undergoing Ā-movement have Spec, vP as an intermediate landing site, which in turn triggers agreement. But in Bemba vP is not a phase, a higher middle-field phrase is (29), consequently, objects undergoing Ā-movement do not have Spec, vP as an intermediate landing site, which prevents agreement under Ā-movement. In this respect, I will argue, the agreement split between Swahili and Bemba with Ā-extracted objects is the morphological parallel to the interpretive split between Turkish and Uyghur's scrambled DOM objects, where a difference in the middle-field phase boundary affects the movement path of objects, which in turn produces surface variation. In the case of Bantu, this surface variation concerns agreement morphology; in the case of Turkic, this surface variation concerns the interpretation of scrambled DOM objects.

One particular case study that will be closely investigated concerns variation in verb-stranding VP-ellipsis (VSVE) patterns. Both Turkish and Uyghur permit VSVE, where predicate internal elements are elided but the main verb is pronounced. Importantly, while Uyghur VSVE allows for mismatches between the antecedent and stranded verb, as in (34), Turkish does not and strict identity is imposed, as in (35) vs. (36).

(34) Zemire dukan-din bir alma **al**-di, lëkin Ayghül Δ **oghril**-di.
Zemire store-ABL one apple buy-PST.3SG but Ayghül steal-PST.3SG
'Zemire bought an apple from the store, but Ayghül stole an apple from the store.'

(35) *Ben yemek güzel **çık**-ar san-dım ama (o) (sadece) Δ
I food good turn.out-PRS.3SG think-PST.3SG but 3SG only
görün-müş.
appear-EVID.
'I thought the food would be tasty but it only appeared tasty.' (adapted from Us 2025: 7)

(36) Filiz sorun-u hızla çöz-dü, ama Ali Δ çöz-me-di.
Filiz problem-ACC quickly solve-PST.3SG, but Ali solve-NEG-PST.3SG
'Filiz solved the problem quickly, but Ali didn't solve the problem quickly. (Us 2025: 4)

I will show that the above contrast between Uyghur VSVE (34) and Turkish VSVE (35, 36) can be traced to the same underlying factor as with the previous contrasts, namely, the phasal status of vP. I show this difference in the phasal status of vP between Turkish and Uyghur, which will be shown to play a crucial role in determining the phasal status of the VSVE target, has significant consequences regarding whether verbal identity is enforced in VSVE contexts. Furthermore, I show that this point of phasal variation in VSVE contexts is not limited to Turkish and Uyghur VSVE. Through examining a typologically diverse range of languages, including, Uzbek, European Portuguese, Greek, Swahili, Japanese, Hindi-Urdu, Russian, Bosnian/Croatian/Serbian, and Korean, I show that VSVE languages quite generally pattern together in this respect, that is, whether the VSVE target is a phase or not. Further, I show that VSVE languages also differ regarding whether Ā-extraction out of the ellipsis target is possible. Given these two dimensions of variation among VSVE languages, namely, whether mismatches are possible between the antecedent and stranded verb and whether Ā-extraction out of the VSVE target is possible, I establish the following novel typological generalization, as in (37).

(37) **Extraction-Verbal Identity Generalization**: Verbal identity violations are only

possible in a VSVE context, if Ā-extraction out of the VSVE target is possible.

I observe that in VSVE languages where Ā-extraction out of the VSVE is impossible, verbal identity between the stranded and antecedent verbs is required. But in languages where verbal mismatches are possible, Ā-extraction out of the VSVE target is possible. I argue that what underlies the generalization in (37) is the phasal status of the VSVE target, which affects whether syntactic movement out of the VSVE is possible. Assuming with Bošković (2014) that ellipsis is phase constrained in that ellipsis can target either a phase complement or a full phase, I argue that VSVE can target either the complement of the middle-field phase or the full phase. In languages where VSVE targets a phase complement, both Ā-movement and verbal mismatches are possible, but in languages where VSVE targets a full phase, both Ā-movement and verbal mismatches are impossible. I furthermore argue that the phasal status of the VSVE target regulates the mechanism which facilitates verb-stranding. In languages where VSVE targets a phase complement, V-stranding is the result of syntactic V-to-T movement, which I will show allows for verbal mismatches. In languages where VSVE target a full phase, verb-stranding is the result of V undergoing PF movement out of the VSVE as a last resort PF operation to support an affixal head (that otherwise would lack a host). I will show that due to V movement occurring in PF in these languages, verbal mismatches are impossible.

I also examine the issue of PF movement, and PF repair operations, from another perspective through examining the rarely noted *adverb shift* phenomenon in English (Bošković 2004b; Fox and Pesetsky 2003; Lasnik 2003/1995; Oku 1996). As illustrated in (38), in English VP-ellipsis contexts, an adverb, which otherwise must surface "low" below an auxiliary (as in (39a) vs. (39b), can surface exceptionally high in a pre-auxiliary position.

(38) John will partially lose his mind and Bill **completely** did Δ. (Lasnik 2003/1995)

(39) a. John will completely lose his mind.

b. * John completely will lose his mind.

Based on a range of novel observations regarding adverb shift, I argue that in adverb shift contexts, e.g. (38), the adverb is base-generated within the VP-ellipsis target and undergoes PF movement to its surface position. Importantly, I argue that this PF movement operation occurs in VP-ellipsis contexts as a last resort PF repair operation to avoid a PF ill-formed output (which would occur if adverb shift did not occur). In this respect, adverb shift and PF V movement in VSVE contexts are PF operations that occur for the same reason, namely, to resolve specific PF-related issues.

The overarching goal of this thesis is to present a sustained argument for an approach to the middle-field phase, as initially proposed in Bošković 2014, where cross-linguistic variation in clausal structural can result in a difference in middle-field phase boundaries. I show that this proposal provides the theoretical underpinnings for a unified account of a range of otherwise seemingly unrelated phenomena across a typologically diverse set of languages. Additionally, this thesis provides further evidence for a contextual approach to phases over a rigid approach. I show that a single point of variation, that is, which phrase is the middle-field phase, produces a cluster of surface effects across multiple, independent empirical domains. On a rigid approach to phases, each of these cases would be treated as an unrelated point of variation, which would require an independent explanation. On the contextual approach argued for in this thesis, each case of variation can be traced to the same underlying source: the position of the middle-field phase.

Additionally, I develop a number of proposals and discussed a number of issues, many of which relate to the approach to cross-linguistic variation in the middle-field phase discussed above. These include: a new account of specificity-based differential object mark-

ing, a new typological generalization that correlates Ā-extraction with verbal identity violations in VSVE contexts (i.e. (37), which is deducted in the thesis), a range of diagnostics that can detect whether vP is a phase in a given language, a proposal regarding the conditions for when head-movement may proceed out of an ellipsis target, a proposal for a new case of PF movement (which involves a PF repair operation and has consequences for the locality of PF movement), an account of which operations can underlie affixation between an affixal head and its verbal host and when such operations are triggered (e.g. *do*-support, syntactic head-movement, PF head-movement, affixation under adjacency), and a novel account of the Sluicing-COMP generalization.

1.1 Outline of the thesis

The dissertation is structured as follows. In Chapter 2, the empirical starting point is differential object marking patterns in Turkish and Uyghur. Turkish exhibits a typologically typical differential object marking pattern, where objects high in specificity must be marked with accusative case and dislocated objects are also accusative-marked and specific. However, I observe a novel pattern in Uyghur. In Uyghur, objects that are specific must be marked (like in Turkish), but dislocated objects, although they must be marked as well, are not obligatorily specific. I show that on the standard approach to differential object marking, where differential object marking correlates with structural height (i.e. VP-externality; as in Diesing 1992), the Uyghur pattern is predicted to be impossible. In light of this, I develop a new account of differential object marking, where specificity effects are not a reflex of structural height but rather whether the object has moved to a particular structural position. Further, I argue that the contrasts observed between Turkish and Uyghur differential object marking are the result of whether the marked object has moved to this specificity-

inducing position, which I argue is Spec, vP. I argue that in Turkish, vP is phase, and thus all moving objects must pass through this position when moving to a higher position, hence are forced to be specific. But in Uyghur vP is not a phase, rather the middle-field phase is a higher projection, thus moving objects can skip vP when moving to a higher position and no specificity effect is induced.

Further, this chapter investigates several additional phenomena where Turkish and Uyghur show variation, namely, scopal possibilities of quantificational elements, case-marking on objects in impersonal constructions, and the possibility of long-distance scrambling. For each phenomenon, I argue that the variation observed between Turkish and Uyghur can be traced to the difference in the middle-field phase position discussed above.

Finally, I turn to a different contrast observed in languages from an unrelated family: object agreement patterns in Bantu. In Swahili, object agreement is present when the object is *in situ* or when it has undergone $\bar{A}$-movement. But in Bemba and Manyika, the pattern is different. In these languages, while the verb surfaces with object agreement morphology when the object is *in situ*, this agreement morphology is absent when the object has undergone $\bar{A}$-extraction. I argue that this contrast can be traced to the same point of variation as in Turkish and Uyghur, namely, whether vP is a phase or not.

In Chapter 3, I investigate variation in verb-stranding VP-ellipsis (VSVE) in Turkish and Uyghur. Both languages allow for VSVE constructions, which are constructions where in the ellipsis clause all predicate-internal arguments and adjuncts are elided but the verb is pronounced-i.e. stranded. While both languages allow this construction, they differ regarding the identity conditions imposed on the stranded verb. In Turkish, the stranded verb must be lexically identical to the verb in the antecedent, but in Uyghur the stranded verb can be distinct. I also observe Turkish and Uyghur VSVE constructions differ along another dimension: whether $\bar{A}$-extraction out of the ellipsis target is possible. In Turkish,

such extraction is impossible; in Uyghur it is permitted. I show that in both languages VSVE targets the same phrase; vP. However, the crucial difference is that in Turkish vP is a phase, but in Uyghur vP isn't a phase, it is the complement of a higher phrase which is the phase. I argue that this difference in the phasal status of the vP-ellipsis target is the key factor in explaining these points of variation between Turkish and Uyghur's VSVE constructions. Building on a proposal in Bošković 2014, I argue that since Turkish VSVE involves a full phase ellipsis target, Ā-extraction out of the VSVE target is quite generally impossible. Conversely, since Uyghur VSVE targets a phase complement, Ā-extraction out of the VSVE can proceed. Regarding the verbal identity split, I argue that since Uyghur VSVE targets a phase complement, V can undergo syntactic head-movement out of the VSVE target, which I argue is what facilitates verbal identity violations. But in Turkish VSVE, which involves full phase ellipsis, I argue that V cannot undergo syntactic head-movement out of the VSVE target (instead V must undergo movement in PF), which is what underlies verbal identity being imposed in Turkish VSVE.

Chapter 4 extends the results of Chapter 3 to a typological setting. In this chapter, I examine verb-stranding VP-ellipsis in Japanese, Hindi-Urdu, European Portuguese, Greek, Swahili, Korean, Russian, Uzbek, and Bosnian/Croatian/Serbian, (along with Turkish and Uyghur). I show that cross-linguistically, languages which permit mismatches between the stranded and antecedent verbs also allow Ā-extraction out of the ellipsis target (as in Uyghur), while languages which require strict identity between the verbs also disallow Ā-extraction out of the ellipsis target (as in Turkish). I argue that these splits are due to the same underlying factor as with the splits in Turkish and Uyghur discussed in Chapter 3, namely, the phasal status of the ellipsis target. I argue that in languages where the ellipsis target is a full phase, Ā-extraction and head-movement out of the VSVE target are impossible (which for the latter forces verbal identity). But in languages where the

ellipsis target is a phase complement, Ā-extraction and head-movement out of the VSVE target can proceed (which for the latter facilitates verbal identity violations). Moreover, I argue that in the languages where head-movement cannot proceed out of the ellipsis target, those languages recourse to PF movement of the verb to support an affixal head outside the ellipsis target. In this chapter, I also discuss verb echo answer constructions and their relation to VSVE construction. I show that, as with VSVE constructions, the phasal status of the ellipsis target in verb echo answers plays a key role in regulating the possibility of syntactic head-movement and Ā-movement out of the ellipsis target. I also, within the context of VSVE constructions, discuss a range of theoretical proposals including: the derivational timing of syntactic head-movement relative to A and Ā-movement, and the nature of PF V movement as a PF repair operation to support an otherwise stranded affix (and its relation to other PF repair operations, e.g. *do*-support).

Chapter 5 investigates the under discussed *adverb shift* phenomenon in English. Adverb shift is a phenomenon where in English VP-ellipsis contexts, a "low" adverb (e.g. a manner adverb) can surface exceptionally high above the auxiliary. For example, *Martha will slowly eat the pizza but Bill quickly will* (cf. **Bill quickly will eat the pizza*). While previous works suggest that adverb shift is due to exceptionally high base-generation of the adverb (Bošković 2004b; Lasnik 2003/1995), I show that this is not the case. Using novel data, I show that adverb shift involves movement of the adverb from within the ellipsis target to its surface position. Additionally, I show that the movement involved in adverb shift occurs in PF. I argue that adverb shift occurs in order to resolve a PF ill-formed structure that arises, in certain contexts, when an adverb is elided. In order to resolve this PF issue, adverb shift is triggered. I also provide an account of the impossibility of adverb shift in sluicing contexts and why only adverbs may undergo this "shift" operation; that is, why there is no parallel "DP/PP-shift" operation.

Chapter 6 concludes. Additionally, I discuss some issues that were left open in the preceding chapters, the main issue being the identity of the additional FP that is present in Uyghur but not Turkish, as well as the more general structure of the clausal spine in these languages. I also discuss the relationship between cross-linguistic variation in VSVE and variation in clausal structure. I explore the possibility that for the VSVE languages discussed in the Chapter 4, whether a VSVE language has full phase or phase complement VSVE may, in fact, correlate with the location of the middle-field phase (as was argued to be the case with Turkish and Uyghur VSVE). I also discuss the nature of PF movement as a last resort operation.

Chapter 2

Scrambling and Differential Object Marking in Turkish and Uyghur

Many languages display a pattern where there is a correlation between an object's interpretation and its structural height.[1]. The typical case is that objects which are interpreted as specific/definite must move from a VP-internal position to a position outside of the VP. Under standard analyses of this effect, if an object moves for this reason, further movement operations will not affect the interpretation of the object. Hence, what standard analyses aim to capture is that objects which reside in a position outside of the VP must be interpreted as specific/definite (40).

(40) a. ... [$_{\text{VP}}$ V $\text{DP}_{-\text{SPECIFIC}}$]

b. ... [$_{\text{FP}}$ $\text{DP}_{+\text{SPECIFIC}}$ F [$_{\text{VP}}$ V ~~DP~~]]

In this chapter, I argue that this is not the right approach and that simple VP-externality is not a reliable guide to whether an object receives a specific/definite interpretation, even

[1]This chapter is based on Jenkins 2025. "Scrambling, specificity effects, and phasal variation in Turkish and Uyghur." *Linguistic Inquiry.*

in languages where there is a correlation between syntactic height of the object and specific/definite interpretation. To show that derivational height and interpretation do not always correlate, I compare the differential object marking (DOM) patterns of two closely related languages: Turkish and Uyghur. As with many languages, both instantiate a DOM system where objects that are high in specificity are marked with accusative. Thus, in the general case, objects with a specific interpretation have a morphological reflex. Although the two languages' DOM patterns are highly similar in many respects, Uyghur's pattern has one novel property which distinguishes it from Turkish regarding the correlation between syntactic height and specificity. For Turkish (as with many languages), when an object surfaces in a VP-external position it must receive a specific interpretation. I show that in Uyghur, this is not always the case, i.e. the correlation between syntactic height with respect to the VP and interpretation breaks down systematically in a well-defined case.

In light of this contrast between Turkish and Uyghur, I will argue that specificity-related DOM effects are not strictly correlated with the object being external to the VP, as claimed by previous analyses. Instead, I offer an alternative picture that does not assume such a correlation always holds. I will argue that the specificity effects observed in Turkish and Uyghur depend on whether DOM objects move to a particular, VP-external position in the structure. Hence, in the general case, I will argue that it is not the object's height relative to the VP which correlates with specificity, but rather whether the object is located in a particular structural position. I show that an analysis that captures this effect (rather than relying simply on VP-externality) predicts both Turkish and Uyghur's DOM patterns. Further, I show that this point of variation regarding the structural positions that Turkish and Uyghur's object occupy is not local to Turkic. I show that the same abstract pattern is observed in an unrelated language family, Bantu, where the relevant reflex is morphological rather than interpretative, as with Turkish and Uyghur's DOM objects.

More generally, I show that this difference in structural positions between Turkish and Uyghur's DOM objects relates to a architectural difference between the two languages, namely, the location of the middle-field phase. Specifically, I argue that the Uyghur clausal spine involves a more articulated middle-field than Turkish's, where an additional functional layer projects in the Uyghur middle-field. Given a contextual approach to phases as articulated in Bošković 2014 and in Chapter 1, I argue that this structural difference between Turkish and Uyghur's middle-field results in a difference in phase boundaries. Consequently, due to this phasal difference, I show there is a difference in structural position that DOM objects move to in Turkish and Uyghur.

This chapter is structured as follows. In §2.1 I present an outline of Turkish and Uyghur's DOM systems. In §2.1.3 I present the novel contrast between Turkish and Uyghur. Specifically, while in Turkish, marked objects must always receive a specific interpretation regardless of the object's position in the clause, in Uyghur the situation is different. In some positions in the clause, marked objects can only receive a specific interpretation, but in other positions this specific interpretation is no longer forced. §2.2 considers existing analyses of DOM and shows that the standard picture cannot capture both the Turkish and Uyghur DOM patterns. I also present an alternative analysis: I argue that the specificity effect observed in Turkish and Uyghur's DOM is due to whether or not the object DP has moved to a particular position. Further, I argue that the contrast observed between Turkish and Uyghur in this chapter is due a difference in phasal boundaries which affects the movement paths available to object DPs in these languages. In §2.3 I provide additional evidence for this difference in phasal boundaries between Turkish and Uyghur by examining a number of contrasts between the two languages that can all be traced back this difference. §2.4 situates the phasal variation observed between Turkish and Uyghur within a larger pattern of typological variation through a parallelism with another phenomenon,

namely, agreement. I show that variation in object agreement patterns among Bantu languages, abstractly, tracks the same kind of variation exhibited by Turkish and Uyghur's DOM pattern. Further, I argue that both types of variation are due to the same underlying structural point of variation: the location of the middle-field phase.

2.1 DOM in Turkish and Uyghur

In this section I outline the DOM patterns of Turkish and Uyghur. I highlight that in both languages, objects which surface with DOM morphology are higher in the structure than bare objects. I show that while Turkish and Uyghur pattern in a very similar fashion with respect to their DOM systems, these languages diverge in an important way. Specifically I show that while in Turkish all objects which have evacuated the VP must surface with DOM morphology and uniformly have a specific interpretation, which is not the case in Uyghur. For Uyghur, while DOM objects have an obligatorily specific interpretation in a clause-medial position, this is not the case when they move to a higher position.

2.1.1 DOM and specificity

Turkish and Uyghur instantiate a typologically common DOM system where specific direct objects must surface with dedicated morphology. In both languages, specific objects surface with accusative case while non-specific objects lack it.

Shown below is the Turkish pattern where the unmarked object is non-specific (41a,42a) and the object marked with accusative (*-(y)I*) must be interpreted as specific (41b, 42b)).[2,3]

[2]Unless cited from another source, all Turkish and Uyghur data was elicited from native speakers.
[3]See Dede 1986; Diesing 1992; Enç 1991; Erguvanlı 1984; Kornfilt 1997; Öztürk 2005, *i.a.*

(41) a. Ali kitap oku-du.
Ali book read-PST.3SG
'Ali read a book/books.'

b. Ali kitab-**ı** oku-du.
Ali book-ACC read-PST.3SG
'Ali read the book.'

(42) a. (ben) doktor arı-yor-um.
1SG doctor look.for-PROG-1SG
'I am looking for a doctor/doctors.'

b. (ben) doktor-**u** arı-yor-um.
1SG doctor-ACC look.for-PROG-1SG
'I am looking for the doctor.'

The same pattern is observed for Uyghur (Asarina 2011; Major 2021; Tömür 2003). Objects that are non-specific lack accusative case (43a,44a), while specific objects are marked with accusative (*-ni*), as in (43b,44b).

(43) a. Mehmet mashin xala-y-du.
Mehmet car want-NPST-3SG
'Mehmet wants a car/cars.'

b. Mehmet mashina-**ni** xala-y-du.
Mehmet car-ACC want-NPST-3SG
'Mehmet wants the car.'

(44) a. (men) doktor izde-wat-i-men.
1SG doctor look.for-PROG-NPST-1SG
'I am looking for a doctor/doctors.'

b. (men) doktor-**ni** izde-wat-i-men.
1SG doctor-ACC look.for-PROG-NPST-1SG
'I am looking for the doctor.'

2.1.2 Height of marked and unmarked objects

Previous works have observed for a number of DOM languages that marked objects are structurally higher than unmarked objects.[4] This has been long observed to be the case for Turkish, where accusative objects occupy a position outside VP; unmarked objects meanwhile remain VP-internal (Diesing 1992; Kelepir 2001; Kennelly 1994; Kornfilt 2020; Öztürk 2005; Zidani-Eroğlu 1997b, *i.a.*). This difference in height between marked and unmarked objects holds in Uyghur as well (Major 2021).

As (45) shows, in Turkish marked objects must precede low, manner-adverbs such as *hızlı* ('quickly'), while the unmarked object must follow them.

(45) a. Ali (*hızlı) kitab-**ı** (hızlı) oku-du.
Ali (quickly) book-ACC (quickly) read-PST.3SG
'Ali read the book quickly.'

b. Ali (hızlı) kitap (*hızlı) oku-du.
Ali (quickly) book (quickly) read-PST.3SG
'Ali read a book/books quickly.'

In Uyghur, the same facts obtain. Accusative objects must precede the manner adverb (46a) and bare objects must follow it (46b).

(46) a. Mehmet (*tëz) kitab-**ni** (tëz) oqu-di.
Mehmet (quickly) book-ACC (quickly) read-PST.3SG
'Mehmet read the book quickly.'

b. Mehmet (tëz) kitap (*tëz) oqu-di.
Mehmet (quickly) book (quickly) read-PST.3SG
'Mehmet read a book/books quickly.'

Assuming manner-adverbs adjoin to the VP, ACC-DPs in Turkish and Uyghur must be higher in the clause (i.e. VP-external) than unmarked DPs, which remain in their base,

[4] This is not universal with respect to DOM; see Kalin and Weisser 2019.

VP-internal position.

Further evidence comes from the default order of internal arguments in ditransitives. In both languages, the default order of DO and IO depends on whether the direct object bears accusative. In Turkish (47), if the DO bears accusative, then the default order is DO>IO (47a). But if the DO is unmarked, then default order is reversed as IO>DO (47b).

(47) a. Ali kitab-**ı** Hasan-a ver-di.
Ali book-ACC Hasan-DAT give-PST.3SG
'Ali gave the book to Hasan.'

(Kornfilt 2003: 140)

b. Ali Hasan-a kitap ver-di.
Ali Hasan-DAT book give-PST.3SG
'Ali gave a book/books to Hasan.'

For Uyghur the same alternation occurs. Marked DOs display the DO>IO order (48a); unmarked DOs displays the IO>DO order (48b).

(48) a. Mehmet xet-**ni** Aliyë-gë yaz-i-du.
Mehmet letter-ACC Aliye-DAT write-NPST-3SG
'Mehmet will write the letter to Aliyë.'

b. Mehmet Aliyë-gë xet yaz-i-du.
Mehmet Aliye-DAT letter write-NPST-3SG
'Mehmet will write a letter/letters to Aliyë.'

Assuming that in both Turkish and Uyghur, IOs are generated at least as high as Spec, VP, those alternations further indicate that accusative objects are higher in the structure, presumably in a position above Spec, VP, than unmarked objects.[5]

Another argument that accusative objects are higher in the structure than unmarked objects comes from scope possibilities relative to negation. In Turkish, unmarked object must

[5] Alternatively, IOs could be generated in an ApplP above VP. In either case the above point would remain.

scope under negation; a wide-scope reading is impossible (49a). Conversely, direct objects marked with accusative most naturally receive a wide-scope interpretation and (without special context) resist a narrow-scope interpretation (49b) (Kelepir 2001).

(49) a. Ali kitap oku-ma-dı.
Ali book read-NEG-3SG
'Ali didn't read any book/books.' (NEG>*book*, **book*>NEG)

b. Ali kitab-**ı** oku-ma-dı.
Ali book-ACC read-NEG-PST.3SG
'Ali didn't read the book.' (*book*>NEG, ?NEG>*book*)

The same facts are observed in Uyghur. Bare objects must take narrow-scope relative to negation (50a); accusative objects can scope outside of negation (50b).

(50) a. Mehmet kitap oqu-ma-di.
Mehmet book read-NEG-PST.3SG
'Mehmet didn't read any book/books.' (NEG>*book*, **book*>NEG)

b. Mehmet kitab-**ni** oqu-ma-di.
Mehmet book-ACC read-NEG-PST.3SG
'Mehmet didn't read the book.'(*book*>NEG, ?NEG>*book*)

Assuming scopal relations reflect a c-command relation between the object DP and Neg, where the DP must c-command Neg to take wide-scope and that Neg is merged above VP, the scope facts for both Uyghur and Turkish further indicate that accusative objects are higher in the structure than their unmarked counterparts.

To summarize, both Turkish and Uyghur instantiate a DOM pattern where objects marked with accusative receive a specific interpretation while unmarked objects do not. Further, DOM objects in both languages are structurally higher than their unmarked counterparts.

2.1.3 DOM and scrambling

Turkish and Uyghur allow for a relatively free ordering of nominals in the clause (for Turkish, see Erguvanlı 1984; Kornfilt 1997, 2003; Şener 2010; von Heusinger and Kornfilt 2005, *i.a*, and for Uyghur, see Hahn 2015; Major 2021, *i.a.*). In Turkish, the object can be dislocated from its clause-medial position and scrambled over the subject, as in (51). When scrambled, the object must be accusative marked and receives a specific interpretation in this position (Erguvanlı 1984; von Heusinger and Kornfilt 2005).

(51) doktor$_i$-**u** ben t_i arı-yor-um.
doctor-ACC 1SG look.for-PROG-1SG
'I am looking for the doctor.'

The pattern from (51), where dislocated objects must surface with DOM morphology and have their canonical DOM interpretation, is commonly attested cross-linguistically. As shown for Spanish in (52a), human objects like the one in (52a) that surface with the dative preposition *a* must receive a specific interpretation (López 2012; Rodríguez-Mondoñedo 2007; Torrego 1998, *i.a.*).[6] This also holds when the DP moves to a left-periphery position (52b) (Laca 1987; Leonetti 2004, *i.a.*).

(52) a. Habian incluido **a** dos catedráticos en la lista.
'They included the two professors in the list.'

b. **A** dos catedráticos, los habian incluido en la lista.
'The two professors, they included in the list.'
(Leonetti 2004: 86)

The fact that Turkish (and Spanish) show this kind of uniformity in interpretation regarding

[6]Torrego (1998) also shows that like Turkish and Uyghur's accusative marked objects, *a*-marked objects are higher in the structure, i.e. VP-external, than unmarked objects.

dislocated objects seems unsurprising. Intuitively, if a nominal has a certain interpretation in one position, i.e. specific, then movement to an even higher position should not affect its interpretation.

Surprisingly, Uyghur departs from this common pattern. In Uyghur, as in Turkish, objects which have been fronted to a clause-initial position must be marked with accusative. But, unlike in Turkish, fronted objects lose their obligatory specific interpretation, as in (53).[7]

(53) Doktor$_i$-**ni** men t_i izde-wat-i-men.
doctor-ACC 1SG look.for-PROG-NPST-1SG
'I am looking for the doctor/a doctor.'

Interestingly, the same contrast between Turkish and Uyghur that is found with specificity effects occurs with object *wh*-phrases regarding the notion of d-linking, which is often related to notions like topicality/specificity/definiteness (Boeckx and Grohmann 2004; Comorovski 1996; Jaeger 2004; in fact Grohmann (2006) places fronted d-linked *wh*-phrases in Spec, TopP). In Turkish, *in situ wh*-objects can be optionally marked with accusative, as in (54). When the *wh*-phrase is marked with accusative it must receive a d-linked interpretation. Further, when the *wh*-phrase is fronted (as in (55)), it must be accusative and receives a d-linked interpretation (Şener 2010).

[7]The loss of an obligatory specific interpretation when the ACC-marked direct object is dislocated to a clause-initial position is especially stark with arguments of verbs of creation, e.g. *build, give birth*. As shown in (i) below, ACC-objects generally resist being arguments of verbs of creation due to the existence presupposition marked objects generally carry (see Kelepir 2001 for discussion of this effect in Turkish). But as shown in (ii), in Uyghur, scrambling the marked object ameliorates the inflecity felt when the marked object is clause-medial due to no longer requiring a specific interpretation from this clause-initial position.

i. #Adil mashina-**ni** yasa-wat-i-du.
Adil car-ACC build-PROG-NPST-3SG
'Adil is building the car.'

ii. Mashina$_i$-**ni** Adil t_i yasa-wat-i-du.
car-ACC Adil build-PROG-NPST-3SG
'Adil is building a car/cars.'

(54) a. Ali ne gör-dü?
Ali what see-PST.3SG
'What did Ali see?'

b. Ali ne-**yi** gör-dü?
Ali what-ACC see-PST.3SG
'What among these things did Ali see?'

(55) Ne$_i$-*(**yi**) Ali t_i gör-dü?
what-ACC Ali see-PST.3SG
'What among these things did Ali see?'

Uyghur patterns with Turkish regarding *in situ wh*-phrases. As shown in (56), the *wh*-object can be optionally marked with accusative; when so marked it must receive a d-linked interpretation. Importantly, unlike Turkish when the *wh*-phrase is fronted, while it must be accusative the d-linked interpretation is not forced (57).

(56) a. Mehmet neme ye-di?
Mehmet what eat-PST.3SG
'What did Mehmet eat?'

b. Mehmet neme-**ni** ye-di?
Mehmet what-ACC eat-PST.3SG
'What among these things did Mehmet eat?'

(57) Neme$_i$-*(**ni**) Mehmet t_i ye-di?
what-ACC Mehmet eat-PST.3SG
'What (among these things) did Mehmet eat?'

This is the same kind of a contrast between Turkish and Uyghur as the one observed above regarding (51) and (53).[8]

The pattern Uyghur instantiates is highly unexpected. In Uyghur, the interpretation of DOM objects appears to be conditioned by whether or not the object is the target of further movement operations. As in Turkish, when the object is bare, it cannot move from

[8]As noted in fn. 13, the pattern observed in Uyghur (56,57) closely parallels Icelandic *wh*-objects under object shift, which is also related to notions like specificity and definiteness.

its verb adjacent position and cannot be interpreted as specific (42a,44a). When Uyghur direct objects are marked they must appear higher in the structure than their unmarked counterparts. In contrast to Turkish, however, their interpretation in this case is not uniform. When objects are located in a clause-medial VP-external position they must be interpreted as specific (44b); when they move to a higher position they lose this obligatory specific interpretation (53).

In this respect Uyghur's DOM pattern differs sharply with Turkish's. In particular, it differs from it regarding whether or not further movement can have an effect on the object's interpretation. In Turkish, DOM objects receive the same interpretation regardless of whether they have undergone additional movement, i.e. got fronted clause-initially. In Uyghur, this is not the case. When the DOM object is located in a clause medial VP-external position, it must be interpreted as specific, but when it undergoes further movement it loses this obligatory interpretation.

2.2 Analysis

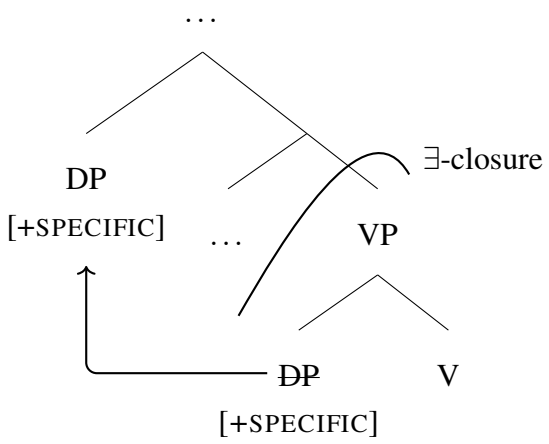
The previous section outlined the DOM patterns instantiated in Turkish and Uyghur. In Turkish, marked object DPs move to a clause-medial VP-external position and are interpreted as specific. When object DPs move from this position to an even higher one, the object maintains this specific interpretation. In Uyghur, marked objects must also move to a clause-medial VP-external position and must receive a specific interpretation in this position. But when the object DP moves from this position to an even higher one, a specific interpretation is no longer forced. In §2.2.1, I consider existing approaches to DOM and show that they fail to capture the Uyghur pattern. In §2.2.2 I present a new analysis which captures both the Uyghur and the Turkish pattern.

2.2.1 Existing Analysis

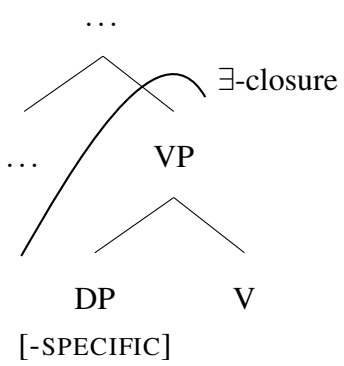
On a number of approaches, specificity-related DOM has been understood in terms of a [+SPECIFIC] feature triggering movement of the DP outside of the VP to a higher position (Bhatt and Anagnostopoulou 1996; Diesing 1992; Diesing and Jelinek 1995; Kelepir 2001, *i.a.*). The essential idea on these approaches is that the split between DOM and non-DOM objects is due to the presence or absence of a [+SPECIFIC] feature on the DP, which correlates with whether the DP must raise outside of the VP.

One standard implementation of these approaches is to posit an LF interpretation rule which requires [+SPECIFIC] DPs to raise outside of the VP (Bhatt and Anagnostopoulou 1996; Diesing 1992, 1996; Diesing and Jelinek 1995). Here, DPs that are VP-internal are subject to an existential-closure operation at LF and thus DPs with a [+SPECIFIC] feature must raise to avoid being bound by an ∃ quantifier which would cause an LF interpretation crash (as in (58)). Conversely, DPs which are [-SPECIFIC] must remain VP-internal in order to be existentially bound (as in (59)).

(58)



(59)



Further, on such approaches the presence of overt case morphology on the raised DPs can be taken to be a reflex of Case licesning from a higher head, e.g. v (where such licensing crucially requires movement, see below), or a reflex of the DP being in a local enough relationship with a higher DP as in a dependent case approach (Baker 2015; Baker and Vinokurova 2010; Marantz 1991).

More generally, on such approaches, where DPs with a [+SPECIFIC] feature must raise outside the VP and DPs which lack this feature must remain VP-internal, the following effect in (60) is predicted to hold for object DPs:[9]

(60) If object DP c-commands VP, then DP is [+SPECIFIC].

This indeed holds for Turkish. As shown above, Turkish accusative objects must receive a specific interpretation regardless of their surface position; whether clause-medial (41b) or clause-initial (51).

(41b) Ali kitab-ı oku-du.
Ali book-ACC read-PST.3SG

[9] An alternative approach to specificity-based DOM, which also has (60) as its effect, is to directly tie the presence of a [+SPECIFIC] feature with the presence of a [uCase] feature (Ormazabal and Romero 2013a; Rodríguez-Mondoñedo 2007; Torrego 1998, *i.a.*). On this approach, movement outside of the VP is forced by the DP's Case licensing needs (which, in turn, correlate with bearing a [+SPECIFIC] feature). Since only [+SPECIFIC] DPs require Case licensing, only [+SPECIFIC] DPs are predicted to raise outside the VP, thus deriving the effect in (60). For an alternative approach regarding the relationship between DOM morphology and licensing of the object DP, see López 2012.

'Ali read the book.'

(51) doktor$_i$-**u** ben t_i arı-yor-um.
doctor-ACC 1SG look.for-PROG-1SG
'I am looking for the doctor.'

This type of account predicts the Turkish pattern in a straightforward fashion. Since DPs which are [+SPECIFIC] must raise outside the VP to avoid an LF-interpretation crash (and thus are accessible for receiving ACC-Case, which is assumed to require movement) and DPs which are [-SPECIFIC] must remain VP-internal in order to be existentially bound (and are inaccessible for receiving ACC-Case), only DPs which receive a specific interpretation and surface with accusative case can appear outside of the V-adjacent position. Thus, an analysis which has (60) as its effect predicts Turkish's DOM pattern since here the DOM object's interpretation and morphology correlates with their structural height.

The Uyghur facts, however, are not predicted to be possible on such an analysis, which has (60) as its effect. The Uyghur DOM pattern regarding dislocated objects, in fact, presents a clear exception to the predicted effect described in (60). As previously shown, in Uyghur clause-medial DOM objects obligatorily receive a specific interpretation; repeated in (43b).

(43b) Mehmet mashina-**ni** xala-y-du.
Mehmet car-ACC want-NPST-3SG
'Mehmet wants the car.'

However, as shown in (53) and repeated below, when the object is dislocated to a clause-initial position, a specific interpretation is no longer forced.

(53) Doktor$_i$-**ni** men t_i izde-wat-i-men.
doctor-ACC 1SG look.for-PROG-NPST-1SG
'I am looking for a/ the doctor.'

The loss of an obligatory specific interpretation upon further movement to the clause-initial position, as in (53), is not predicted on this analysis. Here, non-specific objects must remain VP-internal in order to be bound by existential closure and be interpretable at LF, c.f. (59). Thus, on this analysis, only DPs which are specific raise outside of the VP, with a specific interpretation being enforced by this movement outside of the VP. The non-specific interpretations available for the DPs in (53) are thus predicted to be impossible.

To summarize, the crucial point of failure for this type of analysis is that whether an object has or lacks an obligatory specific interpretation is correlated with the relative height of the object with respect to VP, more precisely, whether the object DP is VP-external or not. On this type of account where relative height correlates with specificity, if a DP is VP-external then the only possible derivation is the one where the DP bears a [+SPECIFIC] feature. Whether that DP has undergone further movement to an even higher clause-initial position is irrelevant. What the Uyghur data show is that it is not relative height with respect to the VP which correlates with specificity. Thus, from a theoretical standpoint this means that any account which analyzes specificity effects in terms of relative derivational height with respect to VP will not be able to capture Uyghur's DOM pattern.

2.2.2 New Analysis

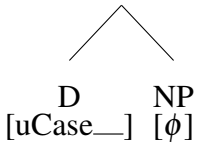
The previous section showed that Uyghur's DOM pattern does not obey (60), which means that any analysis that forces VP-external object DPs to receive a specific interpretation cannot account for Uyghur's DOM pattern. In light of this problem for the previous approach, I propose a new analysis which does not make a connection between VP-externality and a DP bearing a [+SPECIFIC] feature. Instead, I will argue that the correct analysis of Turkish and Uyghur's DOM pattern is the one which has the following effect:

(61) If DP moves to Spec, vP, then DP is [+SPECIFIC].

As previously shown, an analysis which has (60) as its effect, while being able to capture the Turkish pattern, cannot account for the Uyghur pattern. I will argue that an analysis which has (61) as its effect can capture both the Turkish and the Uyghur pattern. The key to the correlation between specificity and derivational height is not VP-externality of the object DP but whether or not the DP has moved to a particular position at any point over the course of the derivation.

In order to implement this for Turkish and Uyghur, I adopt the proposal argued for in Danon 2006; Massam 2001, among others, that nominals can enter the structure as either DPs or NPs.

(62) a.



b.



If the nominal projects a DP, as in (62a), then it carries a [uCase] feature which must be licensed by a higher head, e.g. v. Conversely, if the nominal does not project DP and merges as an NP, as in (62b), then a [uCase] feature is not present and the nominal does not require licensing from a higher head.[10]

[10]Interestingly, this difference between Turkish/Uyghur DOM and unmarked objects, where the former requires Case but the latter do not, parallels Spanish DOM patterns. For Spanish, Ormazabal and Romero (2013b) argue that the relevant difference between DOM and unmarked objects is that the former require Case but the latter do not. One important difference between the Spanish and Turkish/Uyghur cases, however, is that while in Turkish/Uyghur the presence of a [uCase] (and, thus, DOM) correlates with the projection of

With respect to objects which do not surface with case morphology, I adopt the standard assumption that they merge as NPs, as in (62b), and pseudo-incorporate with V. Previous works have observed that Turkish's caseless objects display the hallmarks of pseudo-incorporation (Kornfilt 2003; Öztürk 2005, *i.a.*). In particular, Turkish's caseless objects are immobile and must remain V-adjacent (63) and also receive a 'number neutral' interpretation (64).

(63) (*kitap) Ali (*kitap) dün kitap oku-du.
Ali yesterday book read-PST.3SG
'Ali read a book/books yesterday.'

(64) Adam oğlan-a taş at-tı.
man boy-DAT stone throw-PST.3SG
'The man threw a stone/stones at the boy.'

I show that the same facts are observed with Uyghur's bare objects in (65) and (66).

(65) (*xet) Mehmet (*xet) ete xet yez-i-du.
Mehmet tomorrow letter write-NPST-3SG
'Mehmet will write a letter/letters tomorrow.'

(66) Adem oghl-ga tash tashla-di.
man boy-DAT stone throw-PST.3SG
'The man threw a stone/stones at the boy.'

Given that Uyghur's bare objects pattern identical with Turkish's in this respect then it appears that Uyghur also allows for pseudo-incorporation. Here, I simply assume the standard approach to pseudo-incorporation (Massam 2001; Sağ 2019, *i.a.*), more precisely, pseudo-incorporated objects are generated as NPs and thus do not require Case licesning, remain VP-internal, and due to LF requirements cannot carry a [+SPECIFIC] feature.

a DP layer (and the lack of [uCase] with the absence of DP layer), in Spanish both DOM and unmarked objects seem to project a DP layer (Ormazabal and Romero 2013b). Thus, the relevant difference between Spanish and Turkish/Uyghur may be whether D obligatorily bears [uCase] (as in Turkish/Uyghur) or not (as in Spanish).

The second element of the present analysis concerns the effect described in (61). As shown in the previous section, an analysis which assumes that a DP's height relative to the VP, i.e. (60), is the key to understanding the specificity effects cannot account for the full range of relevant facts. Instead, I propose that the the relevant condition for determining whether the object DP must be interpreted as specific is whether it has moved to a particular structural position, as stated in (61), repeated below in (67).

(67) If DP moves to Spec, vP, then DP is [+SPECIFIC]

Thus, on the present proposal it is not relative height but a specific structural position of the object DP which determines whether a specific interpretation is forced.[11] The present analysis is neutral as to what underlying mechanism imposes this restriction on DPs moving to Spec, vP as described in (67). However, it should be noted that previous work has given compelling evidence that functional heads such as v can impose semantically-based restrictions as to which DPs can merge to their specifier. Thus, Wiltschko and Ritter (2015) and Adger and Harbour (2007) argue that in Blackfoot and Kiowa, respectively, only DPs which bear a [+ANIMATE] feature can merge in Spec, vP. From this perspective, (67) can be regarded as a restriction of the same kind but with respect to DPs with a [+SPECIFIC] feature instead (see also Berent 1980; Browne 1970; Rudin 1997 on the relationship be-

[11] It is worth noting that there is an interesting connection here between the restriction in (67) and the approach to DOM in general proposed by Daniel (2025). On Daniel's (2025) approach, DOM involves an object DP raising to Spec, vP in order to receive ACC-Case and to value its DOM-related feature (e.g. [+SPECIFIC]), which requires the DP to be located in Spec, vP. An important consequence is that in languages with specificity-based DOM, only [+SPECIFIC] DPs will raise to Spec, vP. There may be a connection between Daniel's (2025) general approach to DOM and the restriction in (67), which requires, for specificity-based DOM languages, all DPs located in Spec, vP to be interpreted as [+SPECIFIC].

tween animacy and specificity).[12,13] At any rate, the crucial point is that it is movement of the object DP to a particular position, Spec, vP (not simply movement of the object DP outside of VP), which correlates with a specific interpretation.[14]

[12] An interesting question arises as to why the Spec, vP position correlates with specificity for DPs located there. A way to approach the issue may be to treat specificity as an LF effect that emerges due to vP's predicate status (rather than a property encoded as a syntactically active feature). On this approach, the restriction on Spec, vP may, in fact, be an LF effect that is connected to vP's predicate status (see also fn. 13). There may even be a connection with QR, which also has been argued to target the edge of vP due to vP's predicate status.

[13] Another possibility is that it is the structural position itself, Spec, vP, which imposes a specific interpretation on the DP (rather than only DPs with a [+SPECIFIC] feature being able to move to Spec, vP). In other words (and this is what is important for present purposes), it is by occupying a particular position that specificity effects are induced. Such an effect can also be observed with Icelandic *wh*-objects under object shift. In Icelandic multiple *wh*-questions, the *wh*-object can surface either in its base, VP-internal position (ia) or VP-externally in the object shift position (ib), as indicated by the position of the *wh*-phrase with respect to negation. Interestingly, when the *wh*-object surfaces in the object shift position (as in (ib)) it must receive a d-linked interpretation in this position (see Diesing (1996) for discussion of the semantic effects of object shift). Further, under regular *wh*-object movement to Spec, CP, as in (ii), d-linked interpretation is not forced.

i. a. Hver les ekki hvað?
Who reads not what
'Who doesn't read what?'

b. Hver les hvað ekki?
Who reads what not
'Who doesn't read what (among these books)?'

ii. Hvað las Maria?
What read Maria
'What did Maria read?'

What the above facts indicate is that whether or not a d-linked interpretation is forced is a reflex of whether or not the DP moves to the object shift position in the derivation. If the DP does not as in (ia) and (ii), then a d-linked interpretation is not forced. But if the DP does move to this position, as in (ib), then a d-linked interpretation is forced. In this respect, Icelandic and Uyghur are parallels. The parallelism between Icelandic and Uyghur is even more obvious with Uyghur's *wh*-objects (as discussed in §2.1.3); Uyghur's ACC-marked *wh*-phrases must be interpreted as d-linked in clause-medial position. But when fronted further, the ACC-marked *wh*-phrase lose the obligatory d-linked interpretation. Given the parallelism, this may suggest that Uyghur's ACC-objects derive their specific/d-linked interpretations through movement to a particular position, as is standardly assumed to be the case with Icelandic.

[14] In both Turkish and Uyghur, there is no specificity requirement on DPs which are merged as external arguments (EAs). This can be interpreted as indicating that the EA is merged in a projection above vP (see e.g. Pylkkänen 2008), where no such requirement is imposed. Alternatively, multiple specifiers may matter here, with the specificity requirement imposed only on the innermost Spec. In this case, the EA is merged in Spec, vP and the DO moves to Spec, vP, tucking in a lower Spec, vP (Richards 1997). Since it is not located in the innermost Spec the specificity requirement is not imposed on the EA (there are other ways to implement this intuition, e.g. by appealing to Bošković (2016a) approach to multiple edges).

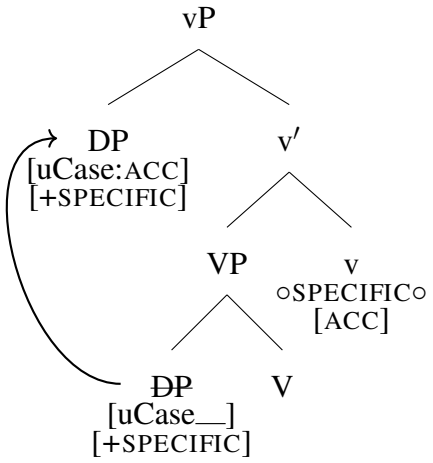
Consider now the following sentences from Turkish (41b) and Uyghur (43b). In both, the objects surface in the clause-medial position with accusative and must be specific.

(41b) Ali kitab-**ı** oku-du.
Ali book-ACC read-PST.3SG
'Ali read the book.'

(43b) Mehmet mashina-**ni** xala-y-du.
Mehmet car-ACC want-NPST-3SG
'Mehmet wants the car.'

On the present analysis, (41b,43b) are analyzed as in (68). The object is generated inside the VP as a DP with an [uCase] feature, which requires licensing from a higher head, i.e. v. Here, the DP moves to Spec, vP and receives ACC. While in principle, the DP can either have or lack a [+SPECIFIC] feature, if it lacks it then the derivation where the DP moves to Spec, vP will crash because only DPs with a [+SPECIFIC] feature can move to Spec, vP, as discussed above.

(68)



Under this analysis, when the accusative object surfaces in a clause-medial position it must be interpreted as specific since it must raise to Spec, vP to be licensed but in order to move to this position it must have a [+SPECIFIC] feature due to the restriction imposed on DPs

moving to Spec, vP.[15]

Consider now the contrast between Turkish and Uyghur's fronted accusative objects in §2.1.3. In both, objects can be fronted to a clause-initial position. When fronted, objects must surface with accusative. In Turkish, fronted objects maintain their specific only interpretation (51). But in Uyghur, when an accusative object is fronted, a specific only interpretation is not forced (53).

(51) doktor$_i$-**u** ben t_i arı-yor-um.
doctor-ACC 1SG look.for-PROG-1SG
'I am looking for the doctor.'

(53) Doktor$_i$-**ni** men t_i izde-wat-i-men.
doctor-ACC 1SG look.for-PROG-NPST-1SG
'I am looking for the/a doctor.'

I argue that this contrast between Turkish and Uyghur's dislocated objects is due to whether (or not) the moving DP must pass through Spec, vP. In Turkish, the object must pass through this position but in Uyghur it doesn't. If the object DP passes through Spec, vP, then it is subject to the constraint described by (67) and must bear a [+SPECIFIC] feature. But if it does not, then there is no specificity requirement imposed on the moving DP since it does not have Spec, vP as an intermediate landing site. I argue that what determines whether DPs must pass through this position is the location of phase heads in the clause. Specifically, in Turkish v is a phase head; in Uyghur it is not. Independent evidence for this difference in phase head positions will be provided in §2.3, however, at present I will adopt it as a working hypothesis.

It is standardly assumed that phrases undergoing movement are subject to locality conditions where movement must take place in successive steps. Specifically, an XP under-

[15]Note that I keep the assumption of the standard analysis that the relevant Case licensing requires movement. This issue is discussed in more detail below.

going movement must transit through the phase edge when moving to a higher position in the structure due to the Phase Impenetrability Condition (PIC), which states that upon completion of a phase YP (i.e. after operations within YP are complete), only the phase edge, i.e. Spec, YP and Y are accessible to later syntactic operations.[16]

(69) In a phase α where H^0 is a phase head, the domain of H^0 is not accessible to operations outside of α, only H^0 and its edge (= Spec, HP). (Chomsky 2000)

Thus, if an XP undergoes movement to Spec, ZP, and Y is an intervening phase head between XP and Spec, ZP, Spec, YP, which is the phase edge, must be an intermediate landing site for XP, as illustrated in (70).

(70) ✗
[ZP XP [… [Z′ Z [**YPphase** ~~XP~~ [Y′ Y […~~XP~~]]]]]]
✓ ✓

As to which phrases count as phases, Chomsky (2000, 2001) proposes a rigid approach to phases where certain phrases, namely vP and CP, always count as phases. However, as noted in Chapter 1, a number of authors have proposed various contextual approaches where which phrases count as phases depends on the syntactic context in which they appear (see Bobaljik and Wurmbrand 2005; Bošković 2005, 2012, 2013, 2014, 2021; den Dikken

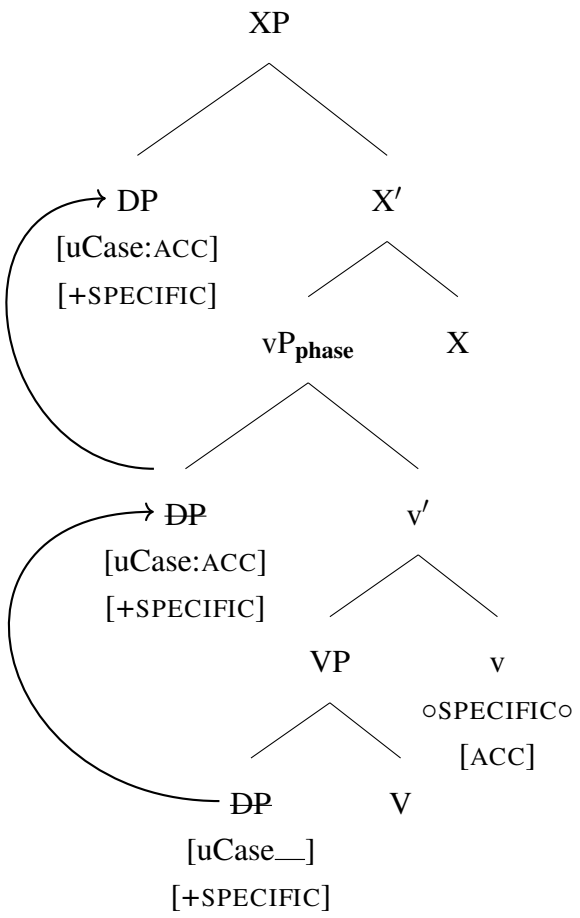
[16]The analysis in this chapter adopts the "strong" PIC (69) (Chomsky 2000). However, given discussion in later chapters, it may be case that the correct statement of the PIC is in its "weak" form (i.) (Chomsky 2001), which states that when a phase is a complete, upon the merger of the next higher phase head, only the phase edge and the head of the lower phase are accessible to futher syntactic operations. However, since nothing essentially turns on this difference in the present discussion, I will adopt the "strong" version (69) in this chapter for expository ease.

i. In a phase α, where H^0 is a phase head, the domain of H^0 is not accessible to operations at the next highest phase, only H^0 and its edge (= Spec, HP). (Chomsky 2001)

2007; Gallego and Uriagereka 2007; Takahashi 2011; Todorović 2016; Wurmbrand 2013, 2017, among others, for various approaches along these lines). I adopt the version of the contextual approach proposed in Bošković 2012, 2013, 2014 where the highest element in the extended domain of a lexical head, e.g. V, delimits the phasal domain. On this approach, vP does not have to be a phase, it is only a phase when it is is the highest phrase projected in the verbal domain. If additional elements are projected above vP in this domain, vP no longer functions as a phase and the phasal domain is extended higher up.

Returning now to the contrast between Turkish (51) and Uyghur's (53) dislocated objects, consider first the Turkish case, where all dislocated objects must surface with overt case morphology and must receive a specific interpretation. If v is a phase head in Turkish, then when the DP moves to a higher position, as is the case for objects dislocated clause-initially, then the DP must have Spec, vP as an intermediate landing site. But given the restriction on v that only DPs with a [+SPECIFIC] feature can move to Spec, vP, i.e. (67), this means that only DPs with a [+SPECIFIC] feature can move to a position above Spec, vP because only those DPs can have Spec, vP as an intermediate landing site. The relevant derivation is given below in (71).

(71)



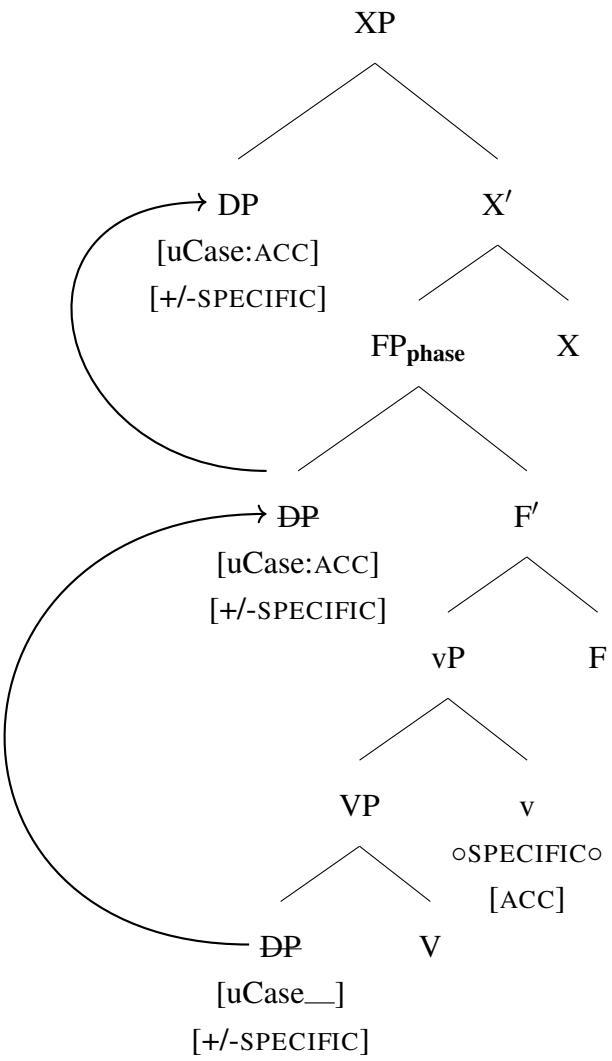
Consider now Uyghur, where dislocated objects surface with accusative case as well but do not have an obligatory specific interpretation. I suggest that in Uyghur v is not a phase head. Instead, in Uyghur a higher functional head, F, above v serves as the phase head (see §2.3 for independent evidence to this effect). Hence, the phase boundary is above vP and is FP.[17] Since the phase boundary is not vP in Uyghur, moving DPs do not have Spec, vP as

[17]The present analysis is neutral regarding the identity of F^0. I tentatively suggest that the issue may be related to a difference between Uyghur and Turkish's aspectual field. As shown by Sugar (2019), the Uyghur aspectual field includes both a high and low, i.e. 'outer' and 'inner', aspectual head (see e.g. Travis 2010). Meanwhile, Turkish appears to lack a position associated with a low or 'inner' aspectual head (but does instantiate a position associated with a high or 'outer' aspectual head; see Fenger 2020; Kelepir 2001; Kornfilt 1996; Zanon 2014 for discussion of the Turkish aspectual field). I tentatively suggest that the presence of this lower aspectual head in Uyghur is related to the difference in phasal boundaries between the two languages, more precisely, that the presence of the lower aspectual head correlates with the phase boundary in Uyghur

an intermediate landing site when moving to a higher position, i.e. clause-initially. Instead, the moving DP has Spec, FP as an intermediate landing site because this is the phase edge. But unlike v, there are no restrictions on DPs merging to Spec, FP with respect to whether or not the DP bears a [+SPECIFIC] feature. Thus, objects moving to a clause-initial position in Uyghur, as in (53), are not forced to have a [+SPECIFIC] feature since those DPs are not forced to have Spec, vP as an intermediate landing site when moving to an even higher position. The Uyghur derivation is given in (72).

being above vP. This is a speculative suggestion that obviously requires much more work (especially in the contextual phasehood approach, where particular projections do not rigidly correspond to phasal or non-phasal projections, with the broader syntactic context mattering). I only note here that it has been argued by a number of authors (e.g. Bošković 2014; Harwood 2015; Todorović 2016; Wurmbrand 2013, 2017) that aspect affects middle-field phase boundaries. For additional discussion on the identity of F in Uyghur and its relation to a low AspP, see Chapter 6 (§6.3.1).

(72)



Note that in the above derivation since the DP does not pass through Spec, vP it does not receive Case in this position. Instead, I suggest that when the object DP undergoes movement to the phase edge, Spec, FP in this case, the DP moves directly to this position and receives Case there. This effect with respect to the DP receiving Case from Spec, FP can be captured on an approach to Case licensing proposed in Bošković 2007 (see also Bošković 2026 for a more recent implementation). On this approach, Case assignment is implemented in terms of a DP's [uCase] feature being valued *via* downward-probing to the

Case-licensing head, e.g. v. Subsequently, this probe-goal relationship is established when the DP c-commands the licensing head.[18]

In the typical case, this means that the DP raises to the Spec of the licensing head, e.g. Spec, vP, in order to receive Case. However, in instances where the DP must move to a position above the Spec of the licensing head, e.g. movement to Spec, FP, the DP moves directly to this position, where it c-commands the licensing head, and is then Case-licensed while in this position in the same manner.[19] Thus, this approach to Case licensing is distinct from 'traditional' Spec-Head approaches to Case assignment, where a DP receives Case, and, thus, is licensed only when the DP moves to the Spec of the licensing head, e.g. Spec, vP. Further, in §2.2.4 I argue that this effect where the DP moves directly to the phase edge, e.g. Spec, FP, and receives Case in this position is due to a more general effect where DPs undergoing movement to a phase edge position do not move to intermediate positions along their movement path, even if such movement is typically otherwise required, e.g. for Case licensing. Thus, such an approach to Case licensing is independently necessary in order to capture these facts, discussed below. At any rate, for present purposes, the key point is that the DP moves directly to Spec, FP and does not have Spec, vP as an intermediate landing site, thus the DP is not forced to have a [+SPECIFIC] feature.

To summarize, the difference in interpretation found between Turkish and Uyghur's scrambled objects is explained in terms of a difference in the position of the clause-medial

[18] See Rodríguez-Mondoñedo 2007 for an implementation and independent evidence for this approach with respect to DOM. Villa-García 2015 provides further independent evidence for this approach to Case with regards to Spanish. He observes that DPs which are clearly base-generated in the left-periphery receive Case from a lower functional head, where the DP can only probe downwards to receive Case.

[19] An alternative approach to Case licensing would be one where the object DP receives ACC-Case *in situ* *via* Agree with v's ϕ-probe, with raising of the object DP triggered by an [EPP] feature (cf. Chomsky 2001). Such an approach, however, would have to posit that in the case of Uyghur the [EPP] feature can appear either on v or F depending on whether the object DP is undergoing scrambling or not. This is because (as shown above) all ACC-DPs must raise out of the VP but only DPs which bear a [+SPECIFIC] feature can raise to Spec, vP (ACC-DPs which are [-SPECIFIC] must raise directly to Spec, FP). See Bošković 2024b for an implementation of the EPP which would actually allow the needed variation.

phase (as noted above, independent evidence for this difference will be given in §2.3). In Turkish, v is the phase head and thus all object movement must pass through Spec, vP as an intermediate position when moving higher in the clause. Due to the restriction v imposes on the DPs which merge to its Spec, all DPs, whether clause-medial or fronted to a higher position, must have a [+SPECIFIC] feature. In Uyghur, because v is not a phase head, when a DP moves to a position above the vP the DP is not forced to move to Spec, vP. Thus, in this case no restriction on whether the DP is [+SPECIFIC] is imposed.[20]

2.2.3 Non-specificity in clause medial positions

The present analysis can also explain a novel interpretative contrast observed between Turkish and Uyghur with respect to scrambled objects in certain clause-medial positions. In Turkish, as shown in (73a,73b), the object can either follow or precede the temporal adverb *dün* 'yesterday'. In both positions the object must be interpreted as specific and marked with accusative.

(73) a. Ali dün kitab-ı oku-du.
Ali yesterday book-ACC book-PST.3SG
'Ali read the book yesterday.'

b. Ali kitab$_i$-ı dün t_i oku-du.
Ali book-ACC yesterday book-PST.3SG
'Ali read the book yesterday.'

Interestingly, in Uyghur, the obligatory specific interpretation is only enforced when the

[20]There is a question regarding whether v's specificity restriction for DPs in Spec, vP, which holds in Turkish/Uyghur, also holds in other languages. I suggest that v can vary cross-linguistically regarding: (i) whether v imposes any such interpretative feature-based restriction on object DPs moving to Spec, vP and, (ii) what feature is required for objects DPs moving to Spec, vP (for languages that impose such restrictions). It is well-known that languages differ on what features are required for DOM, e.g. animacy (Aissen 2003; Bossong 1991). These differences can then be accommodated in terms of what feature v requires DOM objects to have to move to Spec, vP, e.g. in Turkish and Uyghur v requires [+SPECIFIC] DPs, but in other languages v may require, e.g., [+ANIMATE] DPs when they move to Spec, vP.

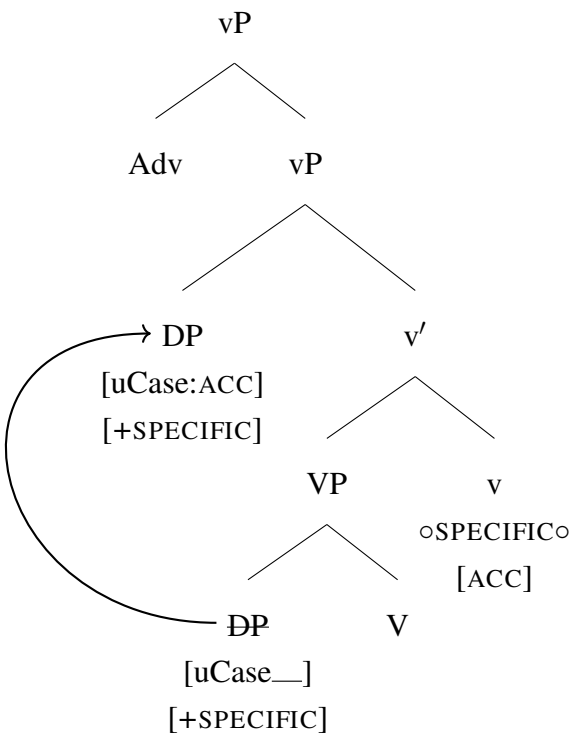
object follows the adverb as in (74a). When the object precedes the adverb this requirement of a specific only interpretation is no longer enforced (74b).

(74) a. Mehmet ete xet-**ni** yaz-i-du.
Mehmet tomorrow letter-ACC write-NPST-3SG
'Mehmet will write the letter tomorrow.'

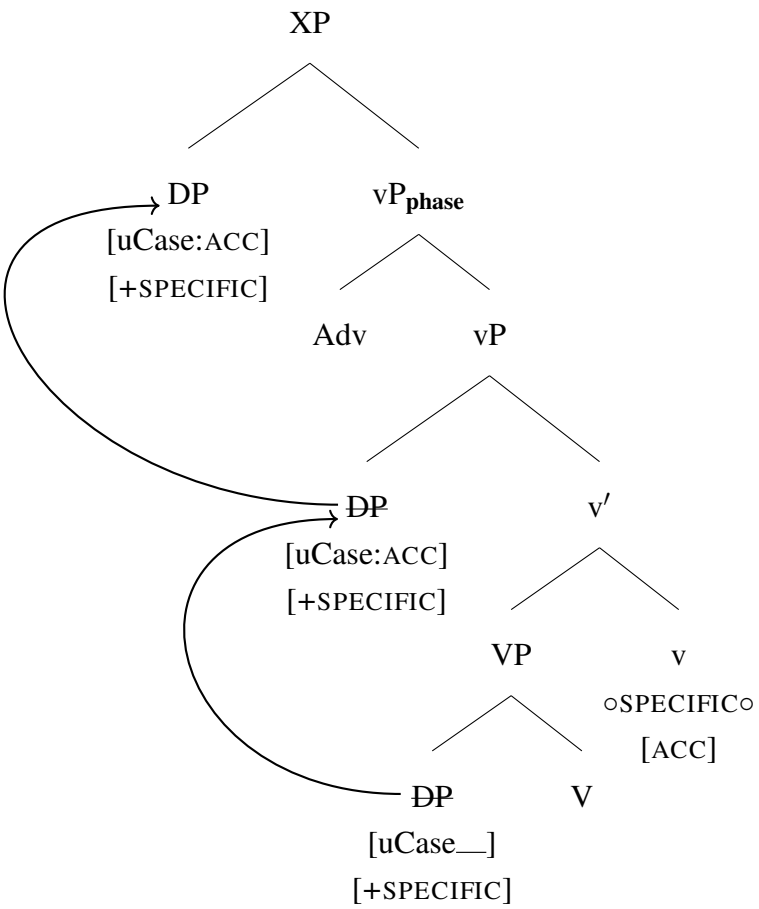
b. Mehmet xet$_i$-**ni** ete t_i yaz-i-du.
Mehmet letter-ACC tomorrow write-NPST-3SG
'Mehmet will write the/ a letter tomorrow.'

The present analysis can account for this contrast between Turkish and Uyghur. Consider first the Turkish cases in (73a,73b), where the marked object is interpreted as specific when it both follows and precedes the adverb (which I assume is vP-adjoined). For (73a), the DP raises to Spec, vP to be Case licensed and the adverb adjoins to vP. Since the DP moves to Spec, vP, it must bear a [+SPECIFIC] feature. The relevant derivation is below in (75). In (73b), the DP must move to Spec, vP as an intermediate landing site since this is the phase edge in Turkish and thus the DP must have a [+SPECIFIC] feature (the adverb adjoins to vP here as well). The DP then scrambles from Spec, vP to a higher position above the adverb (as in (76)). Thus, a specific interpretation is forced for the object DPs in both (73a,73b).

(75)


vP
Adv
vP
DP
[uCase:ACC]
[+SPECIFIC]
v′
VP
v
○SPECIFIC○
[ACC]
DP
V
[uCase__]
[+SPECIFIC]

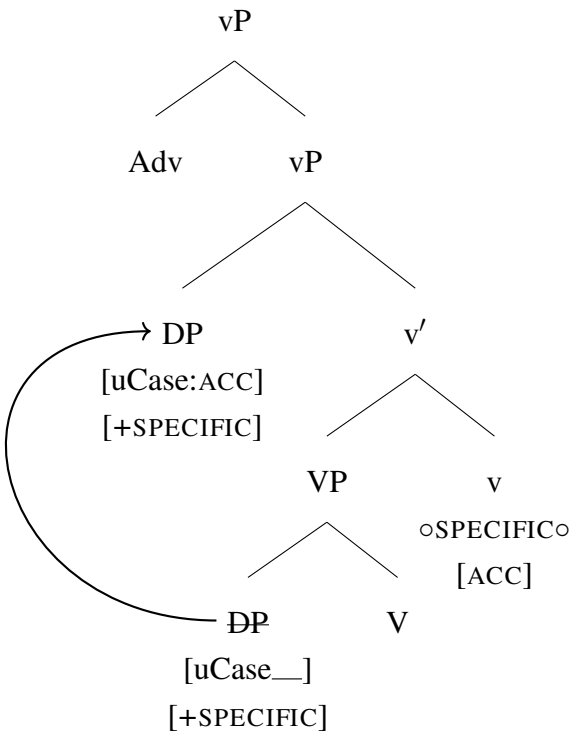
(76)



Consider now the Uyghur case. When the object follows the adverb (74a), it must be interpreted as specific. But when the object DP precedes the adverb (74b), it is ambiguous between a specific and non-specific interpretation. In (74a), where the object DP must be specific, it moves to Spec, vP, as discussed above, and the adverb adjoins to the vP (as in (77)). Since only DPs with a [+SPECIFIC] feature can move to this position, when the object follows the adverb only a specific interpretation is available, as expected. In (74b), however, the DP does not move to Spec, vP since it is undergoing scrambling to a position higher in the clause above the vP. Here the adverb adjoins to the vP and the object DP moves past Spec, vP to Spec, FP as its intermediate landing site. Since the DP does not move to Spec, vP for reasons discussed above the DP does not need to have a [+SPECIFIC]

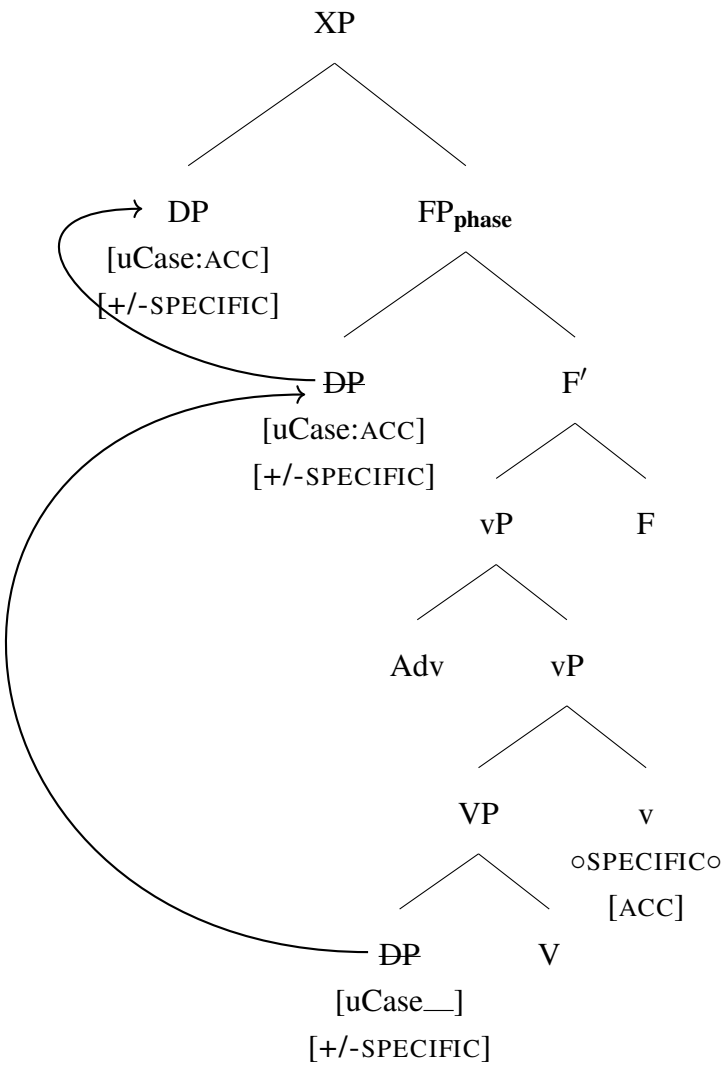
feature. From Spec, FP, it can scramble to its final landing site higher in the clause (as in (78)).[21]

(77)



[21] An alternative derivation for (74b) is that the relevant landing site is Spec, FP without moving again to a higher position. Note that there is no difference between this derivation and the one described above in terms of interpretative effects of the moving DP.

(78)



2.2.4 Movement to the edge

On the present analysis of Uyghur, when an object DP's final landing site is above the clause-medial phasal domain, e.g. Spec, CP, the DP moves directly from its base position to the phase edge, i.e. Spec, FP, without having Spec, vP as an intermediate landing site. Given that the DP does not move to Spec, vP before moving to Spec, FP, an issue arises as to where the DP is licensed for Case on such derivations. In the previous section, I suggested

that in such cases, the DP receives Case in Spec, FP (rather than the usual Spec, vP). In this section, I show this is an instance of a more general effect where DPs moving to a phase edge position (in a given domain) do not move to intermediate positions, even if movement to such positions is otherwise required. Instead, the DP moves directly to the phase edge and receives Case in that position. Hence, in the case of Uyghur's dislocated object DPs, they move directly to the phase edge, Spec, FP, and receive ACC in this position.

Bošković (2016b, 2021, 2024a, 2026) observes this effect in the C/T domain, which in fact directly parallels Uyghur's F/v domain. Here, while typically subject DPs must raise to Spec, TP to receive NOM, if the DP undergoes movement to the phase edge, Spec, CP, it must move directly to Spec, CP without moving to Spec, TP. This effect is readily observed in English short subject questions, as in (79).

(79) Who left?

First, there is clear evidence that *wh*-subjects occupy Spec, CP as their final landing site. One piece of evidence for this comes from 'aggressively non-d-linked' *the hell* modification (Ginzburg and Sag 2000; Pesetsky and Torrego 2001, *i.a.*). It has been observed that *wh*-objects can only take *the hell* modification when they have been fronted to Spec, CP; they cannot take it *in situ*. This contrast can be seen in (80a,80b). Grammaticality of (80c) indicates that the *wh*-phrase in (80c) has undergone *wh*-movement.

(80) a. What the hell did you buy?

b. * Who bought what the hell?

c. Who the hell bought a car?

Furthermore, as a number of authors have shown, movement to Spec, TP cannot feed movement to Spec, CP (Bošković 2016b; McCloskey 2000; Messick 2020). Consider

the following examples from West Ulster English, which allows for quantifier float under *wh*-movement (81a).

(81) a. What did he say (all) that he wanted (all)?

b. Who was arrested all in Duke Street?

c. * They were arrested all last night.

(McCloskey 2000: 61, 72, 76)

In addition to Q-float under A-movement found in Standard English, West Ulster English can float a quantifier under *wh*-movement, as shown by (81a), where the *wh*-phrase has undergone movement to the matrix Spec, CP and first floated *all* is stranded in the intermediate landing site of the embedded Spec, CP (sentence-final floating is also possible). Further, McCloskey (2000) observes that, with *wh*-movement, the quantifier *all* can be floated post-verbally in passives (81b). However, as in Standard English, quantifier float is still not possible in (81c). Thus, (81c) indicates that *all* cannot be floated post-verbally here under movement to Spec, TP. However, since (81b) is acceptable, this indicates that the *wh*-element is not passing through Spec, TP. If it were the case, then *all* would be floated under movement to Spec, TP, which (81c) shows is not possible. Based on this contrast, McCloskey (2000) concludes that the *wh*-subject in (81b) moves to Spec, CP without passing through Spec, TP.

Further evidence for the absence of Spec, TP to Spec, CP movement is observed in a number of languages with respect to agreement morphology, e.g. Kinande. As shown in (82a), typically an agreement prefix is present on the verb which is controlled by (i.e. agreed with) the subject. However, in the case of a *wh*-subject the usual agreement prefix is absent and an anti-agreement prefix must surface on the verb, as in (82b), cf. (82c).

(82) a. Kambale **a.**langira Marya.
Kambale AGR.saw Mary
'Kambale saw Mary.'

b. Iyondi yo **u.**langira Marya?
who C ANTI-AGR.saw Mary
'Who saw Mary?'

c. *Iyondi yo **a.**langira Marya? (Schneider-Zioga 2007: 404)
who C AGR.saw Mary

This alternation in agreement can be regarded as a morphological reflex of whether the subject DP is located in Spec, TP (Bošković 2016b). In (82a), the subject DP raises to Spec, TP (which is standardly assumed to be required for NOM-Case licensing in Kinande, which disallows post-verbal subjects), and thus agreement morphology is present. For the *wh*-subject in (82b), the DP has not moved to Spec, TP, hence, the anti-agreement marker is realized. Note further that agreement with the *wh*-subject is impossible here (82c), indicating that the DP cannot move to Spec, TP in this case. Thus, the Kinande facts further indicate that, as a general point, DP movement from Spec, TP to Spec, CP is not possible— even if movement to Spec, TP is otherwise required.

The above data show that DPs undergoing movement to a phase edge position, e.g. Spec, CP, cannot have intermediate licensing positions, e.g. Spec, TP, along their movement path. Instead, the DP moves directly to the phase edge, Spec, CP (after which it receives Case under Bošković's 2007 approach to Case licensing adopted here; as discussed in §3.2). In the case of English (and Kinande), subject DPs typically must move to Spec, TP. But when the subject undergoes *wh*-movement to Spec, CP, the subject DP does not have Spec, TP as an intermediate landing site and moves directly to Spec, CP.

In this respect, object movement in Uyghur's F/v domain parallels subject movement in the C/T domain. As was shown for the C/T domain, when a DP undergoes movement to a phase edge position it must move directly to that position, even if movement to a non-phasal

intermediate position would otherwise be required. In Uyghur, the object DP typically raises to Spec, vP in order to receive ACC. But when the object undergoes movement to the phase edge, Spec, FP, it does not have Spec, vP as an intermediate landing site, it moves directly to Spec, FP, receiving ACC this position. Thus, both cases discussed in this section are instances of a more general constraint that DPs moving to a phase edge position, i.e. Spec, CP/Spec, FP, must move directly to these phase edge positions without stopping by in non-phase edge positions right below, Spec, TP/Spec, vP, although they otherwise do move to these positions.[22]

2.2.5 Summary

To summarize, this is what has been established so far. First, it was demonstrated that existing analyses of DOM cannot account for Uyghur's pattern. The critical issue was that on standard accounts, a specific only interpretation of a DP and its height relative to the VP were tightly correlated with one another with a prediction that if a DP has moved outside of the VP, then it must be [+SPECIFIC]. Uyghur's dislocated object facts, however, presented a clear counter-example to this. For Uyghur, when an object DP appears in one position,

[22]This parallel between the C/T and F/v domain regarding DP licensing may be explained in terms of Feature Inheritance as proposed in Chomsky 2008. On this proposal [uϕ] features (and [EPP] or 'edge features') originate on phase heads and are inherited by the head selected by the phase head. I suggest that feature inheritance fails to occur if the relevant DP undergoes movement to the phase edge. In this case, [uϕ] probes and licenses the DP from the phase head and triggers raising to its Spec due to the [EPP]. On this proposal, subject *wh*-movement to Spec, CP (skipping Spec, TP) is explained in terms of T failing to inherit [uϕ] (and [EPP]) from C (since movement to the phasal edge is independently required). This proposal can be directly extended to the F/v domain in Uyghur. Here, [uϕ] and [EPP] would originate on the phase head F. If the DP need not undergo movement to the phase edge, i.e. Spec, FP, then [uϕ] and [EPP] are inherited by v which probes and licenses the DP (and triggers raising to Spec, vP). However, if the DP must move to the phase edge, Spec, FP, then feature inheritance fails and [uϕ] probes and licenses the DP from F (and triggers raising to Spec, FP due to [EPP]). This account can derive the correct pattern for Uyghur's ACC-object DPs since it is only those ACC-object DPs which undergo scrambling that must move directly to Spec, FP. Given the discussion here, they move directly to Spec, FP due to F failing to pass its features to v. Further, this account can uniformly explain the observation that in both the C/T and F/v domains the DP does not move to Spec, TP/Spec, vP when it moves to the phase edge, i.e. Spec, CP/Spec, FP.

Spec, vP, it must receive a specific only interpretation (as was the case in Turkish). But when that DP moves to an even higher position, above vP, it loses the obligatory specific interpretation. This contrasted with Turkish, where objects marked with accusative case receive a uniform specific only interpretation regardless of what position they appear in. In other words, for Turkish, regardless of whether the DP is located in Spec, vP or in an even higher position, it must always bear a [+SPECIFIC] feature.

I argued that this contrast between Turkish and Uyghur's dislocated objects shows that the connection between a DP's derivational height and its interpretation should not simply be VP-externality. Instead, the correlation is whether the DP has moved to a particular structural position: Spec, vP. Finally, I showed that the contrast observed between Turkish and Uyghur's scrambled objects can be explained in terms of a more general point of variation between Turkish and Uyghur, i.e. whether v is a phase head or not (independent evidence for this is presented in §4). In Turkish, v is a phase head and thus, all object DPs must have Spec, vP as either a final or intermediate landing site when evacuating the VP. In Uyghur, v is not a phase. Rather, a higher functional projection in the extended verbal domain is. As a result, in Uyghur when a DP moves to a left-periphery position (as is the case with the dislocated objects), it does not have to pass through Spec, vP as an intermediate landing site, hence it does not require a [+SPECIFIC] feature when moving to a position above vP.

2.3 Further Evidence for Phase Variation

The previous section established two points with respect to Turkish and Uyghur. First, there is a difference in which head counts as a phase head in the clausal middle-field. In Turkish v is a phase head; in Uyghur it is not. On the present proposal, there is additional functional

material in the Uyghur verbal domain which extends the phase boundary above vP. Second, this difference in phase boundaries plays a key role with respect to DP movement from inside the VP to higher positions. In Turkish, when a DP moves to a position above vP, it must have Spec, vP as an intermediate landing site due to the PIC. However, in Uyghur, the intermediate landing site is not Spec, vP; it is a position above it.

In this section, I show how this difference in phase positions between Turkish and Uyghur accounts for several additional contrasts between the two languages with respect to movement. Specifically, QR possibilities are discussed in §2.3.1, variation in impersonal constructions in §(2.3.2), and long-distance scrambling in §2.3.3.

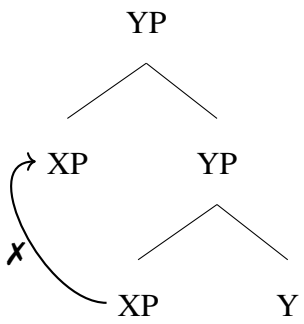
2.3.1 Scope Facts

As shown below in (83), Turkish accusative objects, when associated with the focus marker *sadece* must take wide-scope over an ability modal (*-(y)Abil-*).

(83) Ali sadece sağ göz-ü-nü aç-abil-ir.
Ali only right eye-3POSS-ACC open-ABIL-AOR.3SG
'It is only his right eye that Ali can open.' (Only DP > Can; *Can > Only DP)

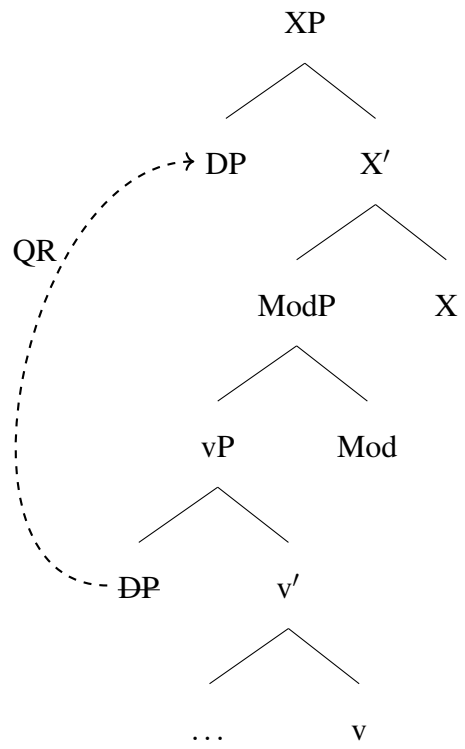
The wide-scope only interpretation can be easily explained as being due to the anti-locality constraint on movement, that is, the well-established observation that phrasal movement cannot proceed in too short of steps (Abels 2003; Bošković 1994, 1997, 2016b; Erlewine 2020; Grohmann 2000, among many others). On the approach to anti-locality proposed in Bošković 1997, a moving XP must cross at least one phrase, as schematized in (84).

(84)



Consider now (83). As previously discussed, the object DP must move to Spec, vP. Further, it is standardly assumed that focused DPs, like quantificational phrases generally, undergo QR in LF. Thus, the object DP in (83), which has overtly moved to Spec, vP, will QR from this position at LF. Crucially, anti-locality considerations will force the DP to adjoin to a position above vP. Given anti-locality, the object DP cannot adjoin to Spec, vP for QR so it must adjoin either to ModP or a position above it, as in (85). Therefore, the object DP is forced to scope over Mod.

(85)



Uyghur presents an interesting contrast with Turkish when considering the scope possibilities of similar constructions. In (86), the focused object DP can be interpreted as taking either wide or narrow scope relative to the ability modal *-(y)ala*.

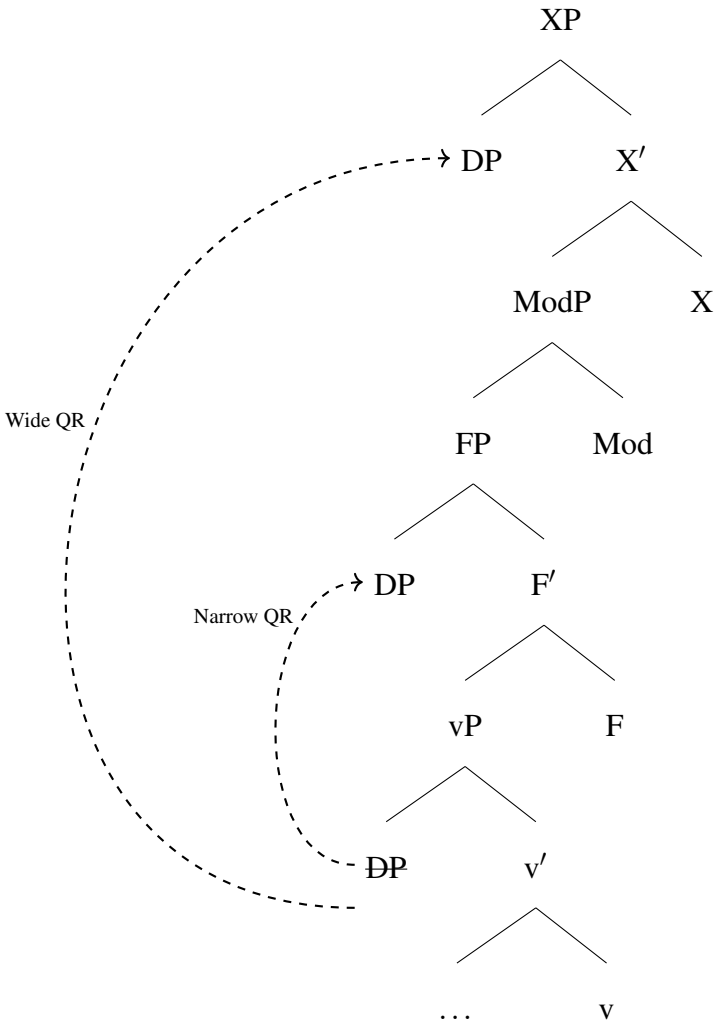
(86) Aliyë (peqet) öz-ning ong köz-i-ni-la ach-ala-y-du.
Aliyë only SELF-GEN right eye-3POSS-ACC-FOC open-ABIL-NPST-3SG
'It is only her right eye that Aliyë can open/ Aliyë can open only her right eye.'

(Only DP > Can; Can > Only DP)

The possibility of both wide and narrow scope interpretation of the object DP can be accounted for under the proposal in the previous section. Recall that the key contrast between Turkish and Uyghur is that in the latter there is an additional functional projection above vP, i.e. FP. Now consider how this additional projection bears on the anti-locality constraint. As is the case with Turkish, the focused object DP raises to Spec, vP in overt syntax in

order to be licensed. Then in LF, the DP undergoes QR to a higher position (as is the case in Turkish). But because there is an additional functional layer FP in Uyghur, as in (87), the DP is free to QR to Spec, FP below ModP or to a higher position above ModP, resulting in scopal ambiguity.

(87)



Sugar (2019) shows that this kind of scopal ambiguity is not always present in Uyghur. As shown in (88), Sugar (2019) observes that when the conative aspectual auxiliary *baq* is present the focused DP must take wide-scope over the auxiliary, generating the interpretation: *'I only tried to drink tea.'* (cf. the narrow-scope interpretation: *'I tried to only drink*

tea'; see Sugar (2019) for further discussion of the relevant interpretations).

(88) Men peqet chay-ni-la ich-ip baq-di-m.
1SG only tea-ACC-FOC drink-IP ASP.AUX-PST-1SG
'I only tried to drink tea.' (Only DP > Aux; *Aux > Only DP)

(Sugar 2019: 220)

The obligatory wide-scope interpretation of the DP in this case, I argue, is due to the aspectual head which hosts the auxiliary merging into the structure below FP, in particular it merges with vP. Evidence for Asp merging in this position comes from the ordering of the aspectual and passive morphemes. As shown in (89a), when the auxiliary is present in a passive, the passive morpheme *-il* must attach to the auxiliary; it cannot attach to the lower main verb. This indicates that the aspectual auxiliary is lower than the head which hosts the passive (cf. (89b)).

(89) a. Chay ich-ip baq-il-di.
tea drink-IP ASP.AUX-PASS-PST.3SG
'The tea was attempted to be drank (by someone).'

b. *Chay ich-il-ip baq-di.
tea drink-PASS-IP ASP.AUX-PST.3SG
'The tea was attempted to be drank (by someone).'

Importantly, when both the ability modal and passive morpheme surface, as in (90a), the passive must attach below the ability modal; the ability modal cannot attach below the passive (90b). This indicates that Mod must attach to a projection above the passive morpheme hosting head (see Sugar (2019) for further discussion of the merge positions of Uyghur's aspectual heads).

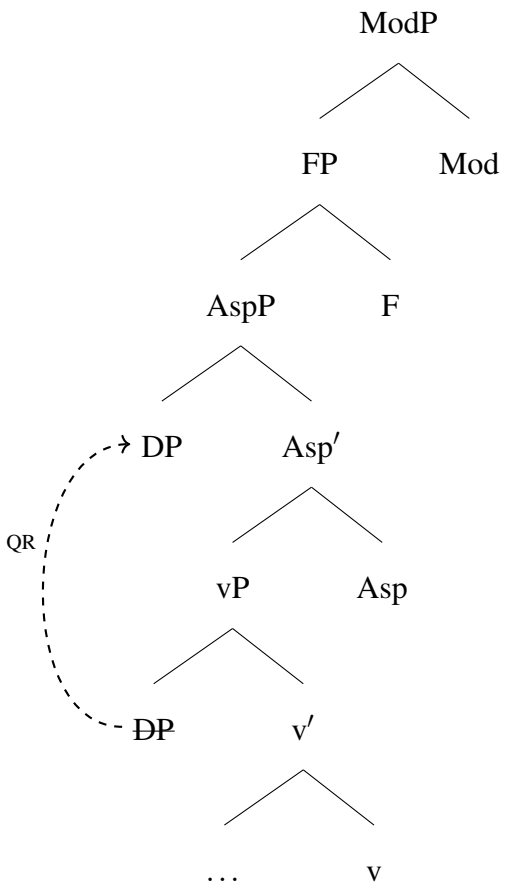
(90) a. Chay ich-il-ala-y-du.
tea drink-PASS-ABIL.MOD-NPST-3SG
'The tea was able to be drank (by someone).'

b. *Chay ich-ala-il-y-du.
tea drink-ABIL.MOD-PASS-NPST-3SG
'The tea was able to be drank (by someone).'

Therefore, given that the passive must attach above the auxiliary (89a) but below the modal (90a) this indicates that the auxiliary must merge below the modal. Further, given that the passive morpheme must follow Asp, I argue that Asp merges low in the structure, i.e. it merges with vP.

Consider now how the merge position of Asp bears on the scope possibility of the DP in (88) given the present account. Here, the object DP overtly raises to Spec, vP and then must covertly QR to a higher position. In this case, however, Asp merges below FP with vP (as in (91)). Thus, when the DP QRs, it must, due to anti-locality, adjoin at least as high as AspP. As a result, the wide-scope interpretation of the object DP relative to Asp is forced.

(91)



To conclude, the fact that Uyghur allows for scopal ambiguities with focused objects relative to an ability modal while Turkish does not provides further evidence that there is a difference in phase boundaries between the two languages. In Turkish, v is a phase head, which ends up forcing a wide-scope interpretation for focused objects. But in Uyghur, focused objects do admit of scopal ambiguities with an ability modal. This contrast with Turkish was explained by v not being a phase head in Uyghur, with an additional function projection above vP, FP, serving as a QR site for the object. If the relevant scopal head merges above FP, as is the case with Mod, this allows scope possibilities for the DP that would otherwise be unavailable. In the previous section, this difference accounted for the interpretive contrasts with scrambled objects between Turkish and Uyghur, here it accounts

for differences in scope possibilities of focused objects.

2.3.2 Impersonal constructions

A further contrast between Turkish and Uyghur concerns a contrast regarding ACC-case morphology on objects in impersonal constructions. In both Turkish and Uyghur, verbs may be marked with a 'passive' suffix, *-Il/(I)n* and *-il/in* respectively, which is a syncretic morpheme marking both passives and impersonals (for Turkish: Göksel and Kerslake 2004; Legate et al. 2020; for Uyghur: Abdurusul and Lianhua 2018). In Turkish passives (92), the verb is marked with the suffix *-Il/(I)n* and the logical subject is demoted. Further, the logical object is promoted to grammatical subject and cannot surface with ACC-case and must be unmarked (Babby 1981; Knecht 1985; Legate et al. 2020, *i.a.*). As (93) shows, Uyghur passives exhibit the same pattern where the verb is marked with *-il/in*, the logical subject is absent, and the logical object is unmarked.

(92) Kitab-(*ı) hızlı oku-**n**-du.
book-ACC quickly read-PASS-PST.3SG
'The book was read quickly.' (Legate et al. 2020:772)

(93) Polu-(*ni) ye-**yil**-di
pilaf-ACC eat-PASS-PST.3SG
'The pilaf was eaten.'

In Turkish impersonals, a pattern similar to the passive emerges. As shown in (94a), the verb is marked with the suffix *-Il/(I)n-*, and the subject is absent. Further, the object cannot bear ACC-case (as with the passive), as (94b) shows.

(94) a. Hızlı kitap oku-**n**-ur.
quickly book read-IMPRS-AOR
'One does book-reading quickly.'

b. *Bu kitab-ı hızlı oku-**n**-ur.
this book-ACC quickly read-IMPRS-AOR
'One reads this book quickly.' (Legate et al. 2020;775,790)

In Uyghur, impersonal constructions pattern similarly to Turkish but with a key difference. As shown in (95), in impersonals the verb is marked with the morpheme *-il/in* (as with the passive) and the subject is absent (as with Turkish). But in Uyghur the object must be marked with ACC-case, as in (95) (cf. (94b)) (Johanson 1998).

(95) Polu-*(ni) ye-**yil**-i-du.
pilaf-ACC eat-IMPRS-NPST-3SG
'One eats the pilaf.'

Although contrasting with respect to the presence/absence of ACC-case, impersonal constructions in Turkish and Uyghur appear to be otherwise highly similar. Importantly, in both Turkish and Uyghur, diagnostics indicate that impersonal constructions involve the projection of a covert impersonal pronoun as logical subject, which distinguishes them from passive constructions that involve genuine argument demotion of the logical subject.

In Turkish (96a) and Uyghur (97a), intransitive predicates resists passivization. Intransitive predicates, however, may participate in impersonals, as in (96b) and (97b), respectively.

(96) a. *Bu göl-de insan-lar tarafından boğul-un-ur.
this lake-LOC person-PL by drown-PASS-AOR
'It can be drowned in this lake by people.'

b. Bu göl-de boğul-un-ur.
this lake-LOC drown-IMPRS-AOR
'One can drown in this lake.' (Özsoy 2009:263)

(97) a. *Muz-da adem-ler täripidin chüsh-il-di.
ice-LOC person-PL by fall-PASS-PST.3SG
'It was fallen on the ice by people.'

b. Muz-da chüsh-il-i-du.
ice-LOC fall-IMPRS-NPST-3SG
'One falls on ice.'

The above split (96a,96b) is expected if passivization requires the demotion of a logical subject and promotion of logical object to grammatical subject, while impersonals involve the projection of a covert impersonal subject. If passivization requires a logical subject to be demoted (and logical object to be promoted), then predicates which lack both cannot passivize, i.e. intransitives (96a,97a) (Perlmutter and Postal 1977; Postal 1986, *i.a.*). Conversely, if impersonals do not involve logical subject demotion and object promotion but the projection of a covert impersonal subject, such constructions are expected to be possible with intransitive predicates, i.e. (96b,97b).

Additional diagnostics further indicate that both Turkish and Uyghur impersonal constructions involve the projection of a covert impersonal subject (while passives do not). In Turkish, while passive constructions allow for agent reintroduction *via* by-phrases (98a); impersonals uniformly resist by-phrase agent reintroduction (98b) (Legate et al. 2020; Özsoy 2009). The same facts are observed in Uyghur, as shown in (99a,99b).

(98) a. Kitap Ali tarafından hızlı oku-**n**-du.
book Ali by quickly read-PASS-3SG
'The book was read quickly by Ali'

b. *Ali tarafından hızlı kitap oku-**n**-du.
Ali by quickly book read-IMPRS-AOR
'Book-reading was done quickly by Ali.' (Legate et al. 2020:772,773)

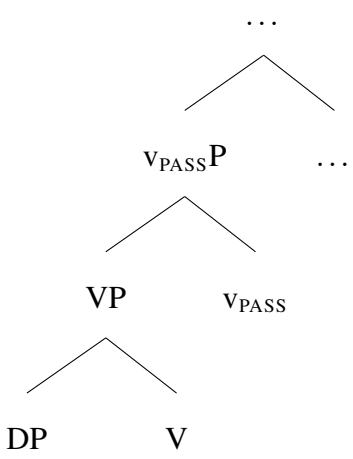
(99) a. Xet Adil täripidin yëz-il-di.
letter Adil by write-PASS-PST.3SG
'The letter was written by Adil'

b. *Xet-ni Adil täripidin yëz-il-di.
letter-ACC Adil by write-IMPRS-PST.3SG
'The letter was written by Adil'

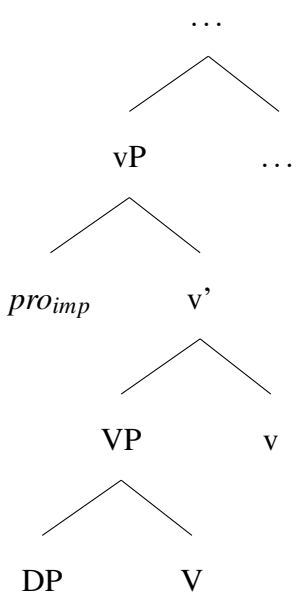
Thus, I take the impossibility of agent reintroduction *via* by-phrases in both Turkish and Uyghur impersonals (98b,99b) (but not passives (98a,99a)) as further indicating the presence of a covert logical subject in impersonals for both Turkish and Uyghur.

In light of the above observations, I conclude that both Turkish and Uyghur passives ((92),(93)) and impersonals ((94a),(95)) instantiate the configurations sketched in (100) and (101), respectively. Turkish and Uyghur passives (100) involve genuine logical subject demotion (and promotion of the logical object to grammatical subject). Turkish and Uyghur impersonals (101) involve the projection of a null impersonal pronoun (pro_{imp}) as logical subject (Legate et al. 2020; McCloskey 2007).

(100)

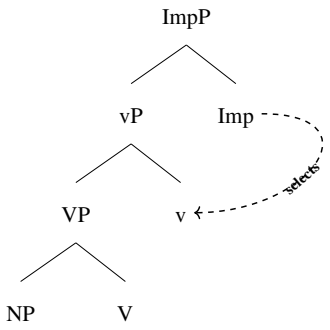


(101)



Now consider the contrast observed regarding ACC-case morphology in impersonals. In Turkish impersonals, objects cannot surface with ACC-case but in in Uyghur impersonals they must. I propose that impersonal constructions involve the projection of an ImpP and that the impersonal morpheme is hosted by Imp^0. Importantly, Imp^0 selects for a complement that lacks an ACC-assigning feature (cf. Legate et al. 2020). Hence, in the case of the Turkish impersonal, Imp^0 selects for vP, as in (102). Since, v cannot merge with an [ACC] feature, the object will not receive [ACC], and, thus, must be unmarked.

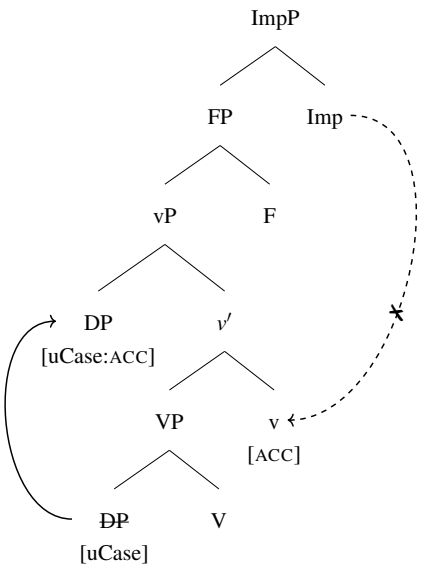
(102)



In Uyghur, I propose that Imp^0 selects for a complement which does not carry an [ACC]-

assigning feature as well. However, as discussed in the previous section, in Uyghur vP is not the highest phrase in the verbal domain, FP is. Thus, when Imp^0 selects for a complement the does not assign ACC, the phrase is FP (not vP). Since the complement of Imp^0 is not vP (as in Turkish), in Uyghur impersonal constructions v may merge into the structure with an [ACC] feature and, thus, is able to value the object DP's [uCase] feature, as illustrated in (103).

(103)



Thus, due to the presence of this additional functional layer, FP, ACC-marking of the object is possible in Uyghur impersonals. Conversely, due to the absence of this functional layer in Turkish, ACC-marking is impossible in impersonals.[23]

2.3.3 Long distance scrambling

A further contrast between Turkish and Uyghur concerns the possibility of object scrambling out of embedded clauses. In constructions where the subject of the embedded clause

[23]Regarding the absence of ACC-case in both Turkish and Uyghur passives, i.e. (92,93), I suggest that v_{PASS} lacks an ACC-assigning feature as well. In such derivations, the logical object receives [NOM] after raising to Spec, TP.

is marked with accusative, long-distance scrambling of the embedded object is disallowed in Turkish. But in Uyghur this kind long-distance object scrambling is generally possible. I will show below that this contrast provides further evidence for a phasal difference between Turkish and Uyghur, as argued for in this chapter. In particular, I will show that v being a phase head in Turkish blocks long-distance object scrambling over accusative subjects. But since v is not a phase head in Uyghur, this kind of movement is possible.

In Turkish and Uyghur, subjects of embedded finite clauses can optionally surface with accusative (the other option being the unmarked nominative), as in (104) and (105), respectively.

(104) a. Pelin [Ali Timbuktu-ya git-ti diye] bil-iyor-muş.
Pelin Ali Timbuktu-DAT go-PST.3SG C know-PROG-EVID.PST.3SG
'Pelin thought that Ali went to Timbuktu.'

b. Pelin [Ali-**yi** Timbuktu-ya git-ti diye] bil-iyor-muş.
Pelin Ali-ACC Timbuktu-DAT go-PST.3SG C know-PROG-EVID.PST.3SG
'Pelin thought that Ali went to Timbuktu.'

(adapted from Şener 2008: 7)

(105) a. Adil [Mehmet ket-ti dep] bil-i-du.
Adil Mehmet leave-PST.3SG C know-NPST-3SG
'Adil knows that Mehmet left.'

b. Adil [Mehmet-**ni** ket-ti dep] bil-i-du.
Adil Mehmet-ACC leave-PST.3SG C know-NPST-3SG
'Adil knows that Mehmet left.'

Further, in both languages accusative subjects can precede matrix-level adverbs, indicating movement to the matrix clause, as in (106a) and (107a). Nominative subjects, as in (106b) and (107b), are immobile in this respect.

(106) a. Ali Can$_i$-**ı** ahmakça [t_i sınıf-ı geç-ti diye]
Ali Can-ACC foolishly class-ACC pass-PST.3SG C

düşun-üyor.
think-PRS.PROG.3SG
'Ali foolishly thinks that Can passed the class.'

b. *Ali Can$_i$ ahmakça [t_i sınıf-ı geç-ti diye] düşun-üyor.
Ali Can foolishly class-ACC pass-PST.3SG C think-PRS.PROG.3SG
'Ali foolishly thinks that Can passed the class.'

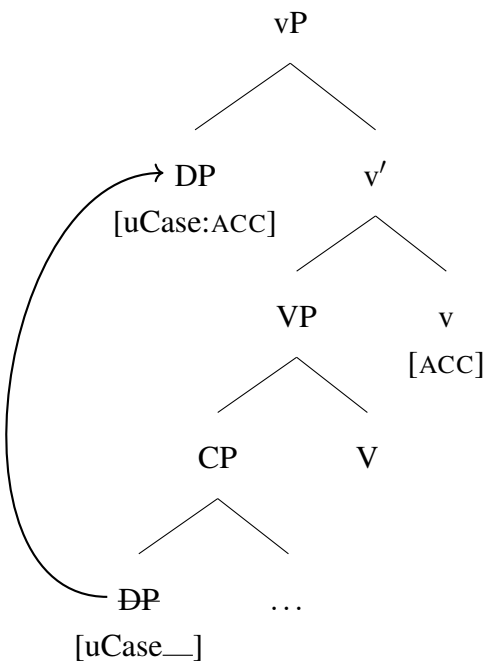
(107) a. Adil Mehmet$_i$-**ni** da'im [t_i göshnaan et-i dep]
Adil Mehmet$_i$-ACC frequently göshnaan make-PST.3SG C
oyla-y-du. 'Adil frequently thinks that Mehmet made göshnaan.'
think-NPST-3SG

b. *Adil Mehmet$_i$ da'im [t_i göshnaan et-i dep] oyla-y-du.
Adil Mehmet frequently göshnaan make-PST.3SG C think-NPST-3SG
'Adil frequently thinks that Mehmet made göshnaan.'

It is typically assumed that constructions like (106a)/ (107a), where the embedded subject is marked accusative, involve raising-to-object (Knecht 1985; Kornfilt 1977; Kuno 1976; Major 2021; Tanaka 2002; Zidani-Eroğlu 1997a). Here, the DP has moved from the embedded CP to a matrix position, i.e. Spec, vP, in order to be licensed by the matrix v (as shown in (108)), which accounts for both movement into the matrix clause and accusative case morphology.[24]

[24]Note that Major's (2021) analysis of Uyghur's raising-to-object constructions treats *dep* as a verbal element which heads a vP/VP layer below the matrix VP and selects for CP (with a null C; the ACC-object still raises to Spec, vP). Regarding the discussion below, nothing would essentially change if this analysis instead of (108) is adopted for Uyghur.

(108)



For several languages with such constructions, accusative subjects block scrambling of other elements from the embedded clause. For example, this is the case in Japanese. As in Turkish and Uyghur, Japanese allows for embedded subjects to be accusative marked (109b):[25]

(109) a. Taroo-wa [Hanako-ga tesai da to] omotteiru.
Taroo-TOP [Hanako-NOM genius COP C] think.PROG
'Taroo thinks Hanako is a genius.'

b. Taroo-wa [Hanako-**o** tesai da to] omotteiru.
Taroo-TOP [Hanako-ACC genius COP C] think.PROG
'Taroo thinks Hanako is a genius.'

Interestingly, when the subject is marked with accusative, it blocks the object from scrambling out of the embedded clause (110a) (Kaneko 1988; Kishimoto 2021). Nominative subjects, on the other hand, allow such scrambling (110b).

[25]Note that this NOM/ACC alternation observed in Japanese with embedded subjects is distinct from the NOM/ACC alternation observed on direct objects, where the latter is a clause-internal phenomena. For discussion see: Kuno 1973, *i.a.*.

(110) a. *Gengogaku$_i$-ni John-ga [Mary-**o** t_i kuwashii to] omotteiru.
linguistics-DAT John-NOM Mary-ACC familiar C] think.PROG
'With linguistics, John thinks that Mary is familiar.'

b. Gengogaku$_i$-ni John-ga [Mary-**ga** t_i kuwashii to] omotteiru.
linguistics-DAT John-NOM Mary-NOM familiar C] think.PROG
'With linguistics, John thinks that Mary is familiar.'

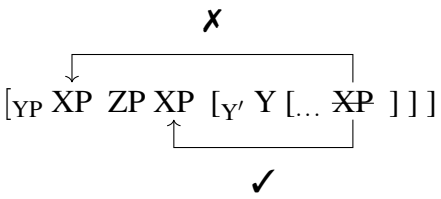
Turkish patterns with Japanese regarding this blocking effect (Aygen 2002; Zidani-Eroğlu 1997a). When the embedded subject is accusative it blocks the object from scrambling out of the embedded clause (111a). When the embedded subject is nominative, the object can scramble out (111b).[26]

(111) a. *Oya$_i$-ya Ali Ayşe-yi t_i yardım et-ti san-ıyor.
Oya-DAT Ali Ayşe-ACC help do-PST.3SG believe-PRES.PROG.3SG
'Ali believes Ayşe to have helped Oya.'

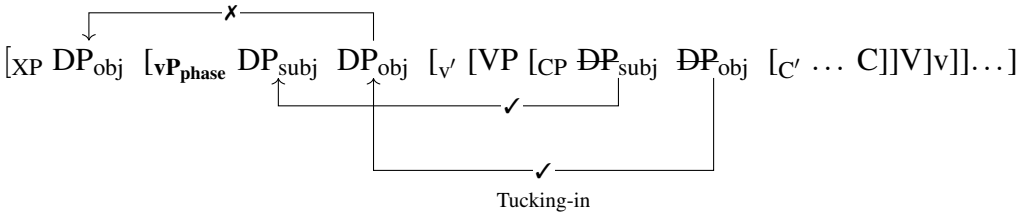
b. Oya$_i$-ya Ali Ayşe t_i yardım et-ti san-ıyor.
Oya-DAT Ali Ayşe help do-PST.3SG believe-PRES.PROG.3SG
'Ali believes Ayşe to have helped Oya.'

Yoo (2018) gives an account of this blocking effect based on Richards' (1997) tucking-in effect that can be straightforwardly applied to Turkish (and Japanese). Richards (1997) shows that quite generally when a new specifier is created for a head where a specifier is already present, the new specifier must be created below or 'tuck in' below the existing one, as in (112).

[26]Note that many native Turkish speakers observe a contrast between cases of long-distance scrambling an oblique object over an accusative subject (as in (111a)) with cases of long-distance scrambling an accusative object over an accusative subject, where speakers judge the former cases as less degraded than the latter cases (although both are still more degraded than the grammatical cases where the object long-distance scrambles over a nominative subject, as in (111b)). This may indicate that performance factors play a role regarding the ungrammaticality of long-distance scrambling over accusative subjects. Importantly, for the present point, the crucial observation is that long-distance scrambling over an accusative subject in general is more degraded than over a nominative subject, thus, suggesting that formal syntax plays a role as well along with performance factors.

(112) 

Assuming that Turkish accusative subjects are instances of raising-to-object, i.e. (108), the embedded subject DP moves to the matrix Spec, vP. When the embedded object DP scrambles out of the embedded clause to the left-periphery of the matrix clause, it must have the matrix Spec, vP as an intermediate landing site due to the PIC. However, because the Spec of the matrix v is already occupied by the raised DP, the scrambling embedded object DP must tuck-in below the raised DP when creating a Spec. Further, Bošković (2016a) shows that quite generally in multiple Spec configurations, only the outermost Spec counts as the phase edge with respect to the PIC.[27] Because the scrambling object DP must tuck-in below the raised DP, it is not at the edge of the vP phase and movement to a higher position is thus blocked due to the PIC. This effect is illustrated for the Japanese (110a) and Turkish (111a) examples in (113):

(113) 

[27]Note that, as shown in Bošković 2016a, this outermost edge effect only applies to multiple Spec configurations where the highest Spec is occupied by a DP which heads a chain. In other words, the effect is neutralized if the highest Spec is occupied by a lower copy, i.e. trace, in a chain (on a par with relativized minimality effects). In the present case, this means that the matrix subject DP, which is presumably generated in the matrix Spec, vP, does not count as an edge position with respect to the outermost edge effect.

Conversely, when the embedded subject DP is nominative, as in (110b) and (111b) for Japanese and Turkish respectively, it is located in the embedded Spec, TP and does not raise to the matrix Spec, vP. Thus, no blocking effect is induced because the embedded object DP is not required to have the embedded Spec, TP as an intermediate landing site when moving to the matrix clause since this is not a phase edge position. Further, when the embedded object DP moves to the matrix Spec, vP, it is no longer blocked for further movement since there is no DP in Spec, vP forcing the scrambling object to tuck-in below (cf. (113)). (114) gives the relevant derivation:

(114) $[_{XP}DP_{obj}\ [_{\mathbf{vP_{phase}}}\ \text{~~DP~~}_{obj}\ [_{v'}[_{VP}[_{CP}\ \text{~~DP~~}_{obj}\ [_{C'}[_{TP}DP_{subj}[_{T'}[_{vP}\ \text{~~DP~~}_{obj}\ \ldots]T]]C]]V]v]]\ldots]$

The present analysis of the interpretative difference between Uyghur and Turkish's accusative objects, discussed above, makes an interesting prediction regarding the possibility of long-distance scrambling. As discussed in the previous section, in Uyghur vP is not a phase. Instead, the phase boundary is a higher functional projection FP. Since vP is not a phase in Uyghur, moving DPs are not required to have Spec, vP as an intermediate landing site when moving to a position higher in the clause. Thus, since the phase edge is Spec, FP, if a DP is located in the matrix Spec, vP, this should not induce a blocking effect for other DPs moving above the matrix vP, as discussed above with respect to Turkish and Japanese. Since vP is not a phase in Uyghur, there is no forced tucking-in at the vP phase edge that created a problem in Turkish and Japanese. Hence, in Uyghur (unlike Japanese and Turkish) accusative subjects should not induce a blocking effect with regards

to objects scrambling out the embedded CP. The surprising prediction, that in contrast to Turkish, Uyghur's accusative subject will not block object scrambling is, in fact, borne out in (115b) (see also Major (2014)).

(115) a. Adil Mehmet-ni Aliyë-gë yerdem ber-di dep angli-di.
Adil Mehmet-ACC Aliyë-DAT help give-PST.3SG C hear-PST.3SG
'Adil heard that Mehmet helped Aliyë.'

b. Aliyë$_i$-gë Adil Mehmet-ni t_i yerdem ber-di dep angli-di.

The possibility of long-distance scrambling in Uyghur (but not Turkish) is thus predicted under the hypothesis that vP is not a phase in Uyghur. Since it is not, the moving object DP need not move to Spec, vP, which created a problem in Turkish. Conversely, since vP is a phase in Turkish and, therefore, Spec, vP is the phase edge, accusative subjects in matrix Spec, vP induce a blocking effect for object scrambling.

2.3.4 Summary

To summarize, I have shown that four otherwise unrelated contrasts between Turkish and Uyghur can be given a uniform account with the hypothesis that there is a difference in phase boundaries in the middle-field between the two languages. In §2.2.2, the interpretive contrasts concerning specificity between Turkish and Uyghur's dislocated objects were explained in these terms. Namely, because in Turkish but not Uyghur, dislocated object DPs must have Spec, vP as an intermediate landing site. In this section three further contrasts were discussed: scope possibilities, verb-stranding ellipsis, and long-distance scrambling. For all three phenomena, the contrasts between Turkish and Uyghur were explained in the same terms as with the dislocated objects: location of phase heads. In Turkish v is a phase

head; in Uyghur it is not. This proposed difference in phase boundaries thus provides a uniform account of four distinct differences between Turkish and Uyghur.

2.4 Phasal variation beyond Turkic

One of the key claims so far has been that several contrasts between Turkish and Uyghur can be explained in terms of a single point of cross-linguistic variation: whether or not vP is a phase. Given that this kind of phasal variation is present between Turkish and Uyghur, we may expect other languages to exhibit phenomena that can be traced to this point of variation as well. In this section I argue that this is indeed the case, for three languages unrelated to Turkic: Swahili, Bemba, and Manyika.

Swahili presents a case where DPs undergoing movement to a higher position must pass through Spec, vP as an intermediate landing site. Here, objects that are high in animacy must agree with the verb which surfaces with an agreement marker controlled by the object (Henderson 2006; Riedel 2009). As shown in (116a,116b), the verb surfaces with a marker agreeing in noun class with the object.

(116) a. Ni-li-*(**mw**)-ona mtoto.
SM.1SG-PST-2.OM-see 1.child
'I saw a/the child'

(Riedel 2009: 68)

b. Juma a-li-*(**wa**)-kutana walimu
Juma SM.3SG-PST-2.OM-meet 2.teachers.
'Juma met the teachers'

(Henderson 2006: 61)

Further, when the animate object undergoes movement to a position higher in the clause, e.g. object relativization, object agreement is required on the verb as well, as in (117a,117b)

(Henderson 2006; Riedel 2009).

(117) a. Msichana amba-ye Juma a-li-*(**m**)-kutana jana.
1.girl *amba*-1.REL Juma SM.3SG-PST-1.OM-meet yesterday
'The girl that Juma meet yesterday.'

b. watoto amba-o Juma a-li-*(**wa-**)-ona.
2.children *amba*-2.REL Juma SM.3SG-PST-2.OM-see
'The children that Juma saw.'

(Henderson 2006: 58, 192)

As argued in Woolford 1999, 2001, the presence of object agreement with animates, as in (116a,116b), indicates that the DP raises out of the VP to a higher licensing position, i.e. the presence of object agreement is a reflex of the DP moving to Spec, vP. Further, when the object DP undergoes relativization, as in (117a,117b), the object agreement marker remains. Given that object agreement is also a requirement for animate DPs that undergo movement to a position higher in the clause, i.e. Spec, CP, we may regard this as evidence that in Swahili vP is a phase and, thus, a moving object DP must have Spec, vP as an intermediate landing site due to the PIC. As a result of this intermediate movement step, a morphological reflex, i.e. object agreement, is present.

The key point for our purposes is that Swahili parallels Turkish regarding phase boundaries. In both cases, vP is a phase and therefore all elements must have Spec, vP as an intermediate landing site when moving to a higher position. In Swahili this has a morphological reflex in agreement. In Turkish, it is with the moving object's obligatory specific interpretation.

Consider now Bemba, which exhibits an object agreement pattern which stands in sharp contrast to the related language Swahili. As shown in (118), the verb surfaces with an agreement marker which is controlled by the object. However, when the object undergoes movement to a position higher in the clause, as in the case of object-relatives (119a), the

verb cannot agree with the object, cf. (119b) (Marten et al. 2007; Zeller 2014).

(118) n-álì-mú-món-á Chìsángá
1SG.SM-PST-1.OM-see-FV 1.Chisanga
'I saw Chisanga'

(Marten et al. 2007: 261)

(119) a. ìcí-pùnà ícò ùmù-ánàkáshì á-mwèènè
7-chair REL.7 1-girl SM1-see.PERF
'The chair which the girl saw'

b. *ìcí-pùnà ícò ùmù-ánàkáshì á-**ci**-mwèènè
7-chair REL.7 1-girl SM1-7.OM-see.PERF
'The chair which the girl saw'

(Marten et al. 2007: 275)

Manyika exhibits the same pattern as Bemba. When the object surfaces in its canonical position, the verb agrees with the object as in (120). But when the object undergoes movement to a higher position in the cluase, as in (121), agreement is blocked.

(120) Ndi-cha-**u-**bika mu-ti mangwani.
1SG.S-FUT-3.OM-cook 3-tree tomorrow
'I will cook the tree tomorrow.'

(121) Nda-ka-on [ndiro iyo mu-kadzi a-ka-**(*i)**-gura.]
1SG.S-PST-see 9.plate 9.C 1-woman 1.S-PST-9.OM-break
'I saw the plate that the woman broke.'

(Bax and Diercks 2012: 187)

I suggest that the above facts indicate that in transitive constructions, like (118) and (120), the DO raises to Spec, vP. Then, the presence of agreement morphology is a reflex of the DO being in Spec, vP. However, when the DO undergoes Ā-movement, as with object-relatives in (119a) and (121), the DP does not pass through Spec, vP, hence there is no morphological reflex—i.e. there is no object agreement.[28] I suggest that this indicates that

[28]See also Bošković 2008a, 2016b for a similar analysis of Kinande's object-agreement patterns, which

in Bemba and Manyika, like in Uyghur, v is not a phase head and therefore when a DP is moving to a position above the vP, the DP does not have Spec, vP as an intermediate landing site. In this respect, Bemba and Manyika's agreement facts parallel Uyghur's facts regarding the interpretation of moving objects. In both, when an object moves to Spec, vP there is a reflex present. For Uyghur it is an obligatory specific interpretation of the DP and for Bemba and Manyika it is object agreement. But in both cases, when the object moves to a position above vP the object does not move to Spec, vP and the reflexes are absent. In Uyghur it is the loss of the object's obligatory specific interpretation; in Bemba and Manyika it is the absence of object agreement.

It should be noted that Icelandic object shift may provide another parallel with Uyghur and Bemba/ Manyika, given the data regarding d-linked interpretation of *wh*-phrases discussed in fn. 13. As discussed there, the d-linked interpretation of a *wh*-phrase that is forced under object shift is not forced under further movement, indicating that the *wh*-phrase does not pass through the position that is associated with object shift in Icelandic under *wh*-movement. In fact, as observed in §2.1.3 exactly the same pattern is found with respect to accusative marked *wh*-objects in Uyghur.

As shown, the contrast observed between Swahili and Bemba/ Manyika's object agreement can be regarded as a morphological parallel to the contrast observed between the interpretative possibilities of Turkish and Uyghur's dislocated objects. In both cases, when an object moves to Spec, vP there is a reflex, either morphological or semantic. For Turkish and Swahili this reflex is present even when the object's final landing site is higher than Spec, vP, indicating that objects must have Spec, vP as an intermediate landing site when undergoing overt movement above vP. In Uyghur, Bemba, and Manyika this is not the case.

parallel Bemba and Manyika's in several important respects regarding obligatory object agreement-drop under Ā-movement (see also Schneider-Zioga 1995 regarding Kinande).

Here, when the objects undergo overt movement higher in the clause, i.e. above vP, this reflex is absent. As we have seen, this can be captured if in Turkish and Swahili v is a phase head; in Uyghur, Bemba, and Manyika it is not. It is worth emphasizing here that Swahili, Bemba, and Manyika are related languages, just like Turkish and Uyghur, what we then have here are sets of related languages showing the same variation, regarding phasal boundaries, that only differs in its morphological/semantic reflex.

2.5 Conclusion

This chapter has established a new DOM paradigm through the comparison of DOM in Turkish and Uyghur. Based on this I have argued for several related points. First, I have argued that the standard assumption that specificity and VP-externality always correlate with one another is incorrect. While Turkish patterns in this way, I showed that Uyghur presents a clear counter-example to this assumption. In Uyghur, when DOM objects surface in their clause-medial, VP-external position, they must be specific. But upon further movement to an even higher position, they lose this obligatory specific interpretation. Thus, I conclude that a DP's height relative to the VP, i.e. VP-externality, is not a reliable guide to determining whether an object DP must receive a specific interpretation.

Second, I presented an analysis of specificity effects which captures both the Turkish and Uyghur patterns. On the standard approach, movement of the object DP outside of the VP is forced only when the DP bears a [+SPECIFIC] feature. This idea can be implemented in a number of ways. However, the crucial point is that on such accounts if a DP is VP-external then it must receive a specific interpretation, which I have shown is problematic. In view of this problem for the standard approach, I suggested that what forces a DP to receive an obligatory specific interpretation is whether or not it occupies a particular position, i.e.

Spec, vP. I argued that this account of specificity effects combined with variation in a language's phase position explains the differences between Turkish and Uyghur's DOM patterns. In Turkish, vP is a phase but in Uyghur it is not. As a result, in Turkish all objects which move outside of the VP must have Spec, vP as either a final or intermediate landing site. Hence, they are always specific. But since in Uyghur the phase boundary is higher than Spec, vP, this is not the case. Instead, if an object moves above the phase, then it does not have Spec, vP as an intermediate landing site, and thus, no specificity effect is induced.

Third, I showed how this point of variation between Turkish and Uyghur, i.e. whether or not vP (or a higher phrase in the middle-field) is a phase, can explain several additional contrasts observed between the two languages regarding scope effects, impersonal constructions, and the possibility of long-distance scrambling of objects. Thus, this proposed difference in phase boundaries provides a uniform account of four otherwise unrelated differences between Turkish and Uyghur.

Finally, I showed that this point of variation between Turkish and Uyghur's phase positions is observed cross-linguistically. Here I compared Swahili, Bemba, and Manyika's object agreement patterns. I argued that in Swahili successive-cyclic movement proceeds in the same way as in Turkish. Since vP is a phase in both languages, when a DP moves from within the VP to a position above vP, the DP must have Spec, vP as an intermediate landing site. This was reflected in Turkish with specificity effects and in Swahili with the presence of object agreement. Conversely, in Bemba and Manyika it was shown that an object DP does not have Spec, vP as an intermediate landing site when moving to a higher position. I argued that this is because, as with Uyghur, vP is not a phase and thus when the DP moves to higher position, it is not required to have Spec, vP as an intermediate landing site. This was reflected in Uyghur with the absence of obligatory specific interpretations for scrambled objects and in Bemba and Manyika with the absence of object agreement

under object relativization. Thus, the phasal variation observed in Turkish and Uyghur is an instance of a more general cross-linguistic point of variation.

Taken together, the contrasts examined in this chapter between Turkish and Uyghur (and between Swahili, Bemba, and Manyika) can all be traced to a single underlying architectural difference: the location of the middle-field phase. In Turkish (and in Swahili), vP is the middle-field phase; in Uyghur (and in Bemba and Manyika), a higher phrase, FP, projects in the clausal spine and serves as the phase instead. Crucially, this phasal difference can itself be traced to whether vP is the highest phrase in the extended projection of V, or whether a higher phrase is. As discussed in Chapter 1, the guiding hypothesis of the thesis is that, on the contextual approach to phases adopted here, variation in phase domains tracks variation in clause structure, as stated in (122) below.

(122) Languages that systematically differ in terms of phase domains, systematically differ in terms of clause structure (i.e. what XPs project in the clausal spine).

By adopting the hypothesis in (122), and the associated contextual approach to phases articulated in Bošković 2014, these otherwise disparate contrasts, which are drawn from several distinct phenomena across distinct languages, receive a uniform explanation. In the next chapter, I provide further evidence to this effect from another case of Turkish/Uyghur variation: verb-stranding VP-ellipsis, where the same difference in the location of the middle-field phase again produces a cluster of effects.

Chapter 3

Verb-stranding VP-ellipsis in Turkic

3.1 Introduction

In the previous chapter, I observed several contrasts across a range of phenomena in two closely related languages: Uyghur and Turkish. I argued that although these contrasts may on the surface appear unrelated, in each case the points of surface variation can be traced to a single underlying point of variation between Uyghur and Turkish. I argued that this point of variation is whether vP serves as a phase in the language, as in Turkish, or not, with another projection in the middle field functioning as the phase, as in Uyghur.

In this chapter, I turn to another phenomenon where Uyghur and Turkish display a significant contrast: Verb-stranding VP-ellipsis (VSVE). As illustrated below in (123) and (124), both Uyghur and Turkish allow for VSVE type constructions, where predicate-internal elements are elided but the main verb is pronounced.

(123) Men Ayghül-ga sowghat-ni ettigen-de ber-dim, anam=mu
1SG Ayghül-DAT gift-ACC morning-LOC give-PST.1SG mother.1POSS=also

Δ ber-di.
give-PST.3SG
'I gave Ayghül a gift in the morning, my mother gave Ayghül a gift in the morning too.'

(124) Filiz sorun-u hızla çöz-dü, ama Ali Δ çöz-me-di.
Filiz problem-ACC quickly solve-PST.3SG, but Ali solve-NEG-PST.3SG
'Filiz solved the problem quickly, but Ali didn't solve the problem quickly. (Us 2025: 4)

While both Uyghur (123) and Turkish (124) allow for VSVE, they differ regarding the identity conditions that are imposed on the stranded verb in VSVE contexts. In Uyghur, the stranded verb can be distinct from its antecedent, as in (125). But in Turkish, as (126) shows, strict lexical identity between the stranded verb and the verb in the antecedent clause is required (cf. (124)).[1]

(125) Zemire dukan-din bir alma **al**-di, lëkin Ayghül Δ **oghril**-di.
Zemire store-ABL one apple buy-PST.3SG but Ayghül steal-PST.3SG
'Zemire bought an apple from the store, but Ayghül stole an apple from the store.'

(126) *Ben yemek güzel **çık**-ar san-dım ama (o) (sadece) Δ
I food good turn.out-PRS.3SG think-PST.3SG but 3SG only
görün-müş.
appear-EVID.
'I thought the food would be tasty but it only appeared tasty.' (adapted from Us 2025: 7)

In this chapter, I argue that the contrast between Uyghur (125) and Turkish (126) regarding verbal identity under VSVE can be traced to a difference in the phasal status of

[1]Note that in this chapter (and throughout the thesis), grammaticality judgments for VSVE constructions are relative to the target interpretation (as indicated in the translation line of the example). For example, (126) is marked with "*" indicating that the target interpretation is not possible (e.g. for (126) the target interpretation would be one where the ellipsis clause means: *it (the food) only appeared tasty*). This clarification is crucial since many sentences discusssed may be acceptable under another interpretation.

the VSVE target. I argue that in both Uyghur and Turkish, VSVE involves a vP-ellipsis target. However, I show that Turkish and Uyghur differ regarding the phasal status of the vP-ellipsis target. I furthermore show that in Turkish, Ā-extraction is not possible out of the vP-ellipsis target; in Uyghur Ā-extraction out of the vP-ellipsis target is possible. Following Bošković 2014, I argue that this split correlates with a difference in the phasal status of the ellipsis target. Further, I argue that this difference in the phasal status of the ellipsis target makes a crucial difference regarding whether verbal mismatches are possible under VSVE. Concretely, I argue that due to Turkish VSVE involving elision of a full phase, syntactic movement of V out of the VSVE target is not possible. Consequently, the V must undergo movement in PF, which imposes strict identity conditions on the stranded verb. Conversely, in Uyghur since VSVE target is a phase complement, syntactic V movement out of the VSVE target is possible, and, thus identity violations are allowed. In this respect, I show that with respect to another phenomenon, which otherwise appears to be unrelated to the phenomena discussed in Chapter 2, Uyghur and Turkish display a key contrast that can be traced to this difference in whether vP is a phase.

This chapter is structured as follows. In §3.2 I lay out the empirical landscape regarding Uyghur and Turkish VSVE. Specifically, I show that VSVE in both languages involves elision of a vP and cannot be analyzed in terms of either null object *pro* or argument ellipsis. In §3.3, I show that Uyghur and Turkish VSVE differ regarding the phasal status of the VSVE target. In particular, I show that while Uyghur VSVE permits Ā-extraction out of the VSVE target, Turkish VSVE does not. Moreover, I show that this difference in phrasal extraction possibilities correlates with the phasal status of the vP-ellipsis target. In §3.4, I develop an analysis of these differences regarding Ā-extraction and the verbal identity condition in terms of the phasal status of the vP-ellipsis target. §3.5 concludes.

3.2 VSVE in Uyghur and Turkish

As noted above, Uyghur and Turkish permit Verb-stranding VP-ellipsis (VSVE), where the predicate phrase and predicate-internal elements are elided (i.e. internal arguments and adjuncts), but the main verb is pronounced. This construction was illustrated in (123,124) and repeated below. As shown, in both cases the predicate-internal elements (i.e. objects and adjuncts) are not pronounced in the second clause but the main verbs *berdi* and *çözmedi*, respectively, are pronounced.

(123) Men Ayghül-ga sowghat-ni ettigen-de ber-dim, anam=mu
1SG Ayghül-DAT gift-ACC morning-LOC give-PST.1SG mother.1POSS=also
Δ ber-di.
give-PST.3SG
'I gave Ayghül a gift in the morning, my mother gave Ayghül a gift in the morning too.'

(124) Filiz sorun-u hızla çöz-dü, ama Ali Δ çöz-me-di.
Filiz problem-ACC quickly solve-PST.3SG, but Ali solve-NEG-PST.3SG
'Filiz solved the problem quickly, but Ali didn't solve the problem quickly. (Us 2025: 4)

As discussed in a number of previous studies (e.g. in Goldberg 2005; Gribanova 2013b; Landau 2018, 2020a, 2023b; Oku 1998b; Park 1997; Simpson 2023), VSVE can produce surface strings that are superficially similar to the output of other processes, namely, null argument *pro* (127) or (multiple) argument ellipsis (128).

(127) [… [$_{vP}$ [$_{VP}$ *pro* V] v] …]

(128) [… [$_{vP}$ [$_{VP}$ [$_{DP}$ Δ] V] v] …]

Further, as shown below in (129) for Uyghur and (130) for Turkish, both languages allow for object gaps. As illustrated below in (129) and (130), the direct object is null and the

indirect object is overt, thus indicating that both Uyghur and Turkish independently permit null object arguments. Therefore, it is crucial to distinguish VSVE from these other processes.

(129) Zemire bezi kitap-lar Ayghül-ga ber-di-mu? Yaq, Nilufar *e*
Zemire some book-PL Ayghül-DAT give-PST.3SG-Q no Nilufar
Ayghül-ga ber-di.
Ayghül-DAT give-PST.3SG
'Did Zemire give Ayghül some books? No, Nilufar gave Ayghül some books.'

(130) Ahmet kitab-ı masa-ya koymuş, Hasan da *e* masaya koymuş.
Ahmet book-ACC table-DAT put Hasan too table-DAT put.
'Ahmet put the book on the table, Hasan put the book on the table too.' (İnce 2004: 6)

A feature that distinguishes VSVE from cases of null object *pro* is that ellipsis can support strict and sloppy interpretations of elided arguments, which is not possible with a *pro* argument (Goldberg 2005; Oku 1998b; Otani and Whitman 1991; Saito 2007; Sakamoto 2020; Şener and Takahashi 2010; Takahashi 2008). To illustrate, compare the following examples from English and Japanese. As shown with English VP-ellipsis in (131a), the elided pronoun *his* can be interpreted as meaning either *John's* or *Bill's* (where the former interpretation is the strict one and the latter is the sloppy one). In contrast, when the pronoun is overt, as in (131b), the pronoun can only be interpret as *John's*, that is, only a strict interpretation is possible (Sag 1976). The same effect can be observed with ellipsis in Japanese. With the antecedent in (132a), object in the gap in (132b) can be interpreted as either *Taro's car* or *Ziro's car* (where the former is the strict interpretation and the latter is the sloppy interpretation). In contrast, when the object is replaced by an overt pronoun, as in (132c), only the strict interpretation is possible—i.e. the *Taro's car* interpretation.

(131) a. John$_i$ scratched his$_i$ arm and Bill$_j$ did ~~scratched his$_{i/j}$ arm~~ too.

b. John$_i$ scratched his$_i$ arm and Bill$_j$ scratched his$_{i/*j}$ arm too.

(132) a. Taroo-wa [$_{DP}$ zibun-no kuruma]-o kaizoosi-ta.
Taro-TOP self-GEN car-ACC modify-PST
'Taro$_i$ modified self's$_i$ car.'

b. Ziroo-mo Δ arat-ta.
Ziro-also modify-PST
'Ziro$_j$ also modified self's$_{i/j}$ car.'

c. Ziroo-mo sore-o arat-ta.
Ziro-ALSO it-ACC modify-PST
'Ziro$_j$ also modified it$_{i/*j}$.' (Sakamoto 2020: 16)

Assuming that null *pro* is the covert counterpart of an overt pronoun, then if an object gap is due to a *pro*, only a strict interpretation should be possible (paralleling the pronouns in (131b) and (132c)). But if an object gap is due to ellipsis, then both a strict and sloppy interpretation of the elided pronoun should be possible, as in (131a) and (132b).

The availability of both strict and sloppy interpretations can be observed with Uyghur VSVE, as shown in (133a). In (133a), the null DP can receive both a strict and sloppy interpretation (i.e. *Ayghül's bag* or *Zemire's bag*) indicating that the DP is elided, rather than being a *pro* argument (which should only support a strict interpretation; compare with (133b)).

(133) a. Ayghül somki-si-ni qachila-y-du, lëkin Zemire Δ
Ayghül bag-3POSS-ACC pack-PRS-3SG but Zemire
qachila-ma-y-du.
pack-NEG-NPST-3SG
'Ayghül$_i$ packs her$_i$ bag, but Zemire$_j$ won't pack her$_{i/j}$ bag..'

b. Ayghül somki-si-ni qachila-y-du, lëkin Zemire uni
Ayghül bag-3POSS-ACC pack-PRS-3SG but Zemire 3SG.ACC
qachila-ma-y-du.
pack-NEG-NPST-3SG
'Ayghül$_i$ packs her$_i$ bag, but Zemire$_j$ won't pack it$_{i/*j}$'

Similarly for Turkish VSVE, in (134b) the null DP can also receive both strict and sloppy interpretations. This indicates the DP is elided and not a *pro*.

(134) a. Can anne-si-ni eleştir-di.
John mother-3SG.POSS-ACC criticize-PST.3SG
'John criticized his mother.'

b. Mete-yse Δ öv-dü.
Mete-however praise-PST.3SG
'Mete, however, praised John's/Mete's mother.' (Şener and Takahashi 2010: 87)

Additionally, Şener and Takahashi (2010) and Takahashi (2008) show that while pronominal objects can only receive an E-type reading when anteceded by a quantificational object, elided objects can additionally have a quantificational interpretation. To illustrate, with (135a) as the antecedent, the elided phrase *twelve books* in (135b) can have both an E-type reading (i.e. *the twelve books that Martha read*) or a quantificational interpretation (i.e. *twelve books in general*). In contrast, the pronoun *them* in (135c) can only have the E-type reading, i.e. *the twelve books that Martha read*.

(135) a. Martha read twelve books$_i$...

b. and Peter did ~~read twelve books$_{i/j}$~~ too.

c. and Peter read them$_{i/*j}$ too.

The same pattern is observed in Japanese. With (136a) as the antecedent, the elided object in (136b) can receive both an E-type and quantification interpretation. In contrast, the overt pronoun in (136c) can only receive an E-type interpretation.

(136) a. Taroo-wa [$_{DP}$ san-dai-no kuruma]-o aratta.
Taro-TOP three-CL-GEN car-ACC washed
'Taro washed three car$_i$.'

b. Ziroo-mo Δ aratta.
Ziro-also washed.
Ziro also washed three cars$_{i/j}$.

c. Ziro-mo sorera-o aratta.
Ziro-also they-ACC washed
'Ziro also washed them$_{i/*j}$.' (Sakamoto 2020 : 106)

In Uyghur VSVE environments, the same pattern is observed. As (137) shows, the null object can receive both an E-type and quantificational interpretation, thus indicating that the argument is elided (and not *pro*).

(137) Men on ikki kitap oqu-dim. Zemire=mu Δ oqu-di.
1SG twelve book read-PST.1SG Zemire=also read-PST.3SG
'I read twelve books$_i$. Zemire read twelve books$_{i/j}$ too.'

The same facts are observed in Turkish VSVE, as (138b) shows. Here, elided objects allow for both E-type and quantificational interpretations when anteceded by a quantificational object.

(138) a. Can üç hırsız yakala-dı.
John three burglar catch-PST.3SG
'John caught three burglars$_i$.'

b. Filiz-se Δ sorgula-dı.
Phylis-however interrogated-PST.3SG
Phylis however interrogated three buglars$_{i/j}$. (Şener and Takahashi 2010: 88)

Given that under VSVE, null DPs can admit of both strict/sloppy and E-type/quantificational interpretations, this indicates that such constructions involve ellipsis and cannot be analyzed in terms of object *pro*, i.e. (127).

Cases of VSVE in Uyghur and Turkish can also be distinguished from cases of (multiple) argument ellipsis, i.e. (128), which is a process that elides arguments (Goldberg 2005;

Landau 2018, 2020b, 2023a; Oku 1998a; Park 1997; Saito 2007, among others). A standard diagnostic to distinguish between cases of VSVE and argument ellipsis is whether the ellipsis site can admit of an 'adjunct-inclusive' interpretation (Goldberg 2005; Oku 1998b; Park 1997). The logic of this diagnostic is that given that argument ellipsis can only target arguments and not non-argument adjuncts, if the ellipsis clause allows for an adjunct-inclusive interpretation, then the ellipsis target must be large enough to include both the arguments and the adjoined phrase, i.e. at least as large the vP/VP. To illustrate this diagnostic, in Uyghur adverbs (139a) and secondary predicates (139b) cannot be independently elided. As (139a) and (139b) illustrate in the translations, the second clauses with missing adverbs/secondary predicates do not allow an interpretation that includes these elements, thus indicating that these elements cannot be independently elided.

(139) a. Zemire Ayghül-ga da'im alma ber-di. Nilufar=mu Ayghül-ga alma ber-di.
Zemire Ayghül-DAT often apple give-PST.3SG Nilufar=also Ayghül-DAT apple give-PST.3SG
'Zemire often gave apples to Ayghül. Nilufar (*often) gave apples to Ayghül too.'

b. Zemire ma yataquy-ni qizil boyal-di, Ayghül a yataquy-ni boyal-di.
Zemire this room-ACC red paint-PST.3SG Ayghül that room-ACC paint-PST.3SG
'Zemire painted this room red and Ayghül painted that room (*red).'

Similarly, in Turkish adverbs (140a) and secondary predicates (140b) cannot be independently elided either.

(140) a. Filiz sorun-u hızla çöz-dü, ama Ali sorun-u çöz-me-di.
Filiz problem-ACC quickly solve-PST.3SG, but Ali problem-ACC solve-NEG-PST.3SG
'Filiz solved the problem quickly, but Ali didn't solve the problem (*quickly).'

b. Ali Mehmet-i üzgün gör-dü. Elif de Cansu-yu gör-dü.
Ali Mehmet-ACC sad see-PST.3SG. Elif too Cansu-ACC see-PST.3SG
'Ali saw Mehmet sad, Elif saw Cansu (*sad) too.' (Us 2025: 5)

However, in Uyghur and Turkish VSVE contexts, elided adjuncts can be recovered. As shown in (141a) and (141b) for Uyghur, the ellipsis clause allows for an adjunct-inclusive interpretation.

(141) a. Zemire Ayghül-ga da'im alma ber-di. Nilufar=mu Δ
Zemire Ayghül-DAT often apple give-PST.3SG Nilufar=also
ber-di.
give-PST.3SG
'Zemire often gave apples to Ayghül. Nilufar often gave apples to Ayghül too.'

b. Zemire yataquy-i-ni qizil boyal-di lëkin Ayghül Δ
Zemire room-3POSS-ACC red paint-PST-3SG but Ayghül
boyal-ma-di.
paint-NEG-PST.3SG
'Zemire painted her room red, but Ayghül didn't paint her room red.'

Similarly for Turkish, the ellipsis clause also admits of an adjunct-inclusive interpretation as in (142a,142b).[2]

(142) a. Filiz sorun-u hızla çöz-dü, ama Ali Δ çöz-me-di.
Filiz problem-ACC quickly solve-PST.3SG, but Ali solve-NEG-PST.3SG
'Filiz solved the problem quickly, but Ali didn't solve the problem quickly. (Us 2025: 4)

b. Yağmur bana mutlu görün-dü, ama Hasan-a Δ
Yağmur 1SG.DAT happy seem-PST.3SG but Hasan-DAT
görün-me-di.
seem-NEG-PST.3SG
Yağmur seemed happy to me, but to Hasan she didn't seem happy.' (adapted

[2]Note that it has been reported that some Turkish speakers do not permit an adjunct-inclusive interpretation of the ellipsis clause, and, thus, have been argued to not permit VSVE (but do allow for argument ellipsis; Şener and Takahashi 2010). In this chapter, I set those speakers aside, my focus being only on those speakers for whom VSVE is an option. See Jenkins 2025 for additional discussion of those VSVE-barring Turkish speakers.

from Us 2025: 5)

That the adjuncts can be recovered in VSVE environments in both Uyghur and Turkish, but cannot be independently elided, indicates that VSVE is an ellipsis process distinct from (multiple) argument ellipsis, i.e. (128). Moreover, it indicates that VSVE involves targeting a phrase large enough to include both internal arguments and adjuncts, i.e. as least the vP/VP.

Further, it is important to highlight that the observation that the ellipsis clauses in (141a, 141b) and (142a,142b) admit of an adjunct-inclusive interpretation cannot be explained in terms of either 'adjunct plus argument ellipsis' (Landau 2020a; Oku 2016) or other, pragmatic factors (Landau 2018, 2020a, 2023b). Fujiwara (2025b) shows that such factors can be controlled for by testing whether (or not) the elided predicate phrase, which includes the adjunct, can be directly denied in a discourse or targeted by a propositional anaphor. It is well-known that while semantically represented content, which in turn must be syntactically present, can be directly denied or targeted by a propositional anaphor in a discourse, pragmatic content cannot be (for discussion see Koev 2018; Snider 2017; Tonhauser 2012). To illustrate, in the dialogue in (143), Bill replies to Peter's question with the answer in (143b). Crucially, the felicity of (143b) depends on the pragmatic inference that *Martha wasn't the designated driver* given that *Martha drank a bottle of wine*, which is not semantically encoded in Bill's response in (143b). Consequently, since this information is not semantically represented, it cannot be directly denied or targeted with the anaphor *that*, hence, the infelicity of Ernie's response in (143c) (compare with the dialogue in (144), where the proposition *Martha was the designated driver* is semantically represented in (144b)).

(143) *Context: Peter, Bill, and Ernie are trying to figure out who drove everyone home*

from the party last night.

a. Peter: Who was the designated driver last night? Wasn't it Martha?

b. Bill: Well, I saw Martha drink an entire bottle of wine.

c. Ernie: # I don't believe *that* (= Martha wasn't the designated driver)! I swore I saw her volunteering to drive.

(144) a. Peter: Who was the designated driver last night? Wasn't it Martha?

b. Bill: Yes, Martha was the designated driver.

c. Ernie: I don't believe *that* (= Martha was the designated driver)! I saw her drinking wine all night.

Fujiwara (2025b) argues that if VSVE involves elision of a predicate phrase, including the adjunct, then direct denial of the adjunct-inclusive interpretation should be possible and also targetable by an anaphor due to the adjunct being syntactically, and, thus, semantically present. As shown below, this is the case for Uyghur and Turkish VSVE. For Uyghur, in (145a), where the direct object is present but not the adjunct, the only available interpretation is that *Ayghül painted the room (some color or another)*. Crucially, the adjunct-inclusive interpretation is not available, i.e. *Ayghül painted the room red*. Moreover, the response in (145b) is infelicitous. In contrast, in the VSVE construction in (146a), where an adjunct-inclusive interpretation of the ellipsis clause is available, the response in (146b) is felicitous and can be construed as directly disputing whether Ayghül painted the room red or not. Further, the predicate phrase (including the secondary predicate) is targetable by the anaphor *bu* indicating that the secondary predicate must be syntactically present in the ellipsis site in (146a).

(145) a. Zemire ma yataquy-ni qizil boyal-di, Ayghül a yataquy-ni
Zemire this room-ACC red paint-PST.3SG Ayghül that room-ACC

boyal-di.
paint-PST.3SG
'Zemire painted this room red and Ayghül painted that room.'

b. #Bu yalran. Ayghül yataquy-ni yeshil boyal-di.
that false Ayghül room-ACC green paint-PST.3SG
'That's (=Ayghül painted that room red) not true. Ayghül painted the room green.'

(146) a. Zemire yataquy-i-ni qizil boyal-di lëkin Ayghül Δ
Zemire room-3POSS-ACC red paint-PST.3SG but Ayghül
boyal-ma-di.
paint-NEG-PST.3SG
'Zemire painted her room red, but Ayghül didn't paint her room red.'

b. Bu yalran. Ayghül=mu yataquy-ni qizil boyal-di.
that false Ayghül=also room-ACC red paint-PST.3SG
'That's (=Ayghül didn't paint her room red) not true. Ayghül painted the room red too.'

The same facts are observed in Turkish VSVE. In (147a), when the direct object is present but the adjunct is missing in the second clause, an adjunct-inclusive interpretation is not possible for the second clause in (147a). Moreover, the response in (147b) is infelicitous. But in VSVE contexts, as in (148a), an adjunct-inclusive interpretation is possible. Moreover, the predicate phrase, including the adjunct, is targetable by the propositional anaphor in (148b), indicating that the predicate phrase (including the adjunct) must be syntactically present.

(147) a. Mehmet bu oda-yi hızlıca boya-di, Ali su oda-yi
Mehmet this room-ACC quickly paint-PST.3SG, Ali that room-ACC
boya-di.
paint-PST.3SG
'Mehmet painted this room quickly and Ali painted that room.'

b. #Bu yalan. Ali oda-ya yavaşça boya-di.
that false Ali room-ACC slowly paint-PST.3SG

'That's (= Ali painted that room red) not true. Ali painted the room slowly.'

(148) a. Mehmet oda-si-ni hızlıca boya-di, ama Ali Δ
Mehmet room-3POSS-ACC quickly paint-PST.3SG but Ali
boya-ma-di.
paint-NEG-PST.3SG
'Mehmet painted his room red, but Ali didn't paint his room quickly.'

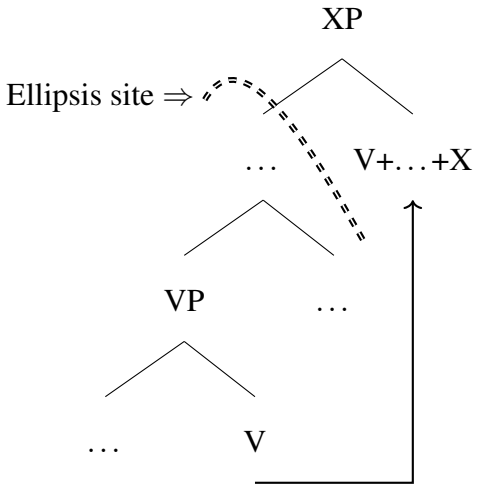
b. Bu yalan. Ali (de) oda-si-ni hızlıca boya-di.
that false Ali too room-3POSS-ACC quickly paint-PST.3SG
'That's (= Ali didn't paint his room quickly) not true. Ali painted his room quickly too.'

That an adjunct-inclusive interpretation of the ellipsis clauses in (146a) and (148a) can be directly denied and targeted by a propositional anaphor confirms that the relevant process in Uyghur and Turkish VSVE involves elision of the predicate phrase and cannot be due to pragmatic factors (*contra* Landau 2018, 2020a, 2023b). Further, that there is a felicity contrast between the responses in (145b) and (146b) for Uyghur, and (147b) and (148b) for Turkish, indicates that in both languages VSVE cannot be due to argument plus adjunct ellipsis and further confirms that adjuncts cannot be independently elided (*contra* Landau 2020a; Oku 2016). If adjuncts could be independently elided, then an adjunct construal of the second clauses in (145a,147a) should be available and, crucially, it should be felicitous to directly deny such a construal (contrary to fact, cf. (145b) and (147b)). Thus, given that elements such as adverbs and secondary predicates cannot be independently elided but can be elided in VSVE contexts indicates that the VSVE phenomenon is distinct from both cases of object *pro* and (multiple) argument ellipsis constructions.

3.2.1 Uyghur and Turkish VSVE involves predicate ellipsis

As the previous section showed, Uyghur and Turkish VSVE cannot be analyzed in terms of either null argument *pro* or (multiple) argument ellipsis. Rather, Uyghur and Turkish VSVE involves elision of a constituent that is large enough to include both internal arguments and adjuncts. In this respect, Uyghur and Turkish VSVE patterns with features observed with respect to the VSVE phenomenon cross-linguistically. Previous works (e.g. in Doron 1999; Goldberg 2005; Gribanova 2013b; Lipták 2012; Merchant 2018; Otani and Whitman 1991; see also Huang 1987, 1988, 1991) have proposed that VSVE involves two components. Namely, elision of a phrase that, minimally, includes VP with displacement of V outside of the ellipsis target. This process is sketched below in (149). As (149) illustrates, V moves to a functional projection, XP, outside of the ellipsis target, which elides elements within the VP, i.e. adjuncts and internal arguments.

(149)



As for which phrase VSVE targets in Uyghur and Turkish, there is strong evidence that shows that VSVE targets vP in both languages. As shown below, in both Uyghur (150) and Turkish (151), agent-oriented adverbs such as *qesten* and *kasten* ('intentionally') can be elided under VSVE.

(150) Zemire Ayghül-ni qesten qorq-ut-ti, Nilufar=mu Δ
Zemire Ayghül-ACC intentionally fear-CAUS-PST.3SG Nilufar=also
qorq-ut-ti.
fear-CAUS-PST.3SG
'Zemire intentionally frightened Ayghül, Nilufar intentionally frightened Ayghül too.'

(151) Mehmet Ali-yi kasten kork-ut-tu, Can (da) Δ
Mehmet Ali-ACC intentionally fear-CAUS-PST.3SG Can too
kork-ut-tu.
fear-CAUS-PST.3SG
'Mehmet intentionally frightened Ali and Can intentionally frightened Ali too.'

Assuming that agent-oriented adverbs adjoin to a position above VP, i.e. vP (Cinque 1999, *i.a.*), the possibility of eliding such elements under VSVE indicates that VSVE targets the vP for ellipsis, so that vP-adjoining elements are included in the ellipsis site.

That the vP is the ellipsis target in Uyghur and Turkish VSVE is further confirmed by the impossibility of voice mismatches under VSVE. As shown in (152) and (153), both Uyghur and Turkish allow VSVE when both verbs are passivized.

(152) Manta Nilufar täripidin tëz ye-yil-di, lëkin polu Δ
Manta Nilufar by quickly eat-PASS-PST.3SG but pilaf
ye-yil-ma-di.
eat-PASS-NEG-PST.3SG
'The manta was quickly eaten by Nilufar but the pilaf wasn't quickly eaten by Nilufar.'

(153) Yumurta-lar Ali tarafindan hızlıca ye-n-di, ama ekmet Δ
egg-PL Ali by quickly eat-PASS-PST.3SG but bread
ye-n-me-di.
eat-PASS-NEG-PST.3SG
'The eggs were eaten quickly by Ali but the bread wasn't eaten quickly by Ali.'

However, in both Uyghur and Turkish, VSVE is impossible when the antecedent and stranded verbs mismatch in voice morphology, i.e. an active antecedent and passive

stranded verb (or *vice versa*), as shown in (154a,154b) and (155a,155b).

(154) a. *Nilufar tëz manta ye-di, lëkin polu Δ ye-yil-ma-di
Nilufar quickly manta eat-PST.3SG, but pilaf eat-PASS-NEG-PST.3SG
'Nilufar quickly ate manta but, the pilaf wasn't quickly eaten.

b. *Manta (Nilufar täripidin) tëz ye-yil-di, lëkin Zemire Δ
Manta Nilufar by quickly eat-PASS-PST.3SG but Zemire
ye-ma-di.
eat-NEG-PST.3SG
'The manta was quickly eaten (by Nilufar) but Zemire didn't eat the manta quickly.'

(155) a. *Ali yumurta-lar-i hızlıca ye-di, ama ekmet Δ
Ali egg-PL-ACC quickly eat-PST.3SG but bread
ye-n-me-di.
eat-PASS-NEG-PST.3SG
'Ali ate the eggs quickly but the bread wasn't quickly eaten by Ali.'

b. *Yumurta-lar (Ali tarafindan) hızlıca ye-n-di, ama Mehmet Δ
egg-PL Ali by quickly eat-PASS-PST.3SG but Mehmet
ye-me-di.
eat-NEG-PST.3SG
'The eggs were quickly eaten (by Ali), but Mehmet didn't eat the eggs quickly.'

Chung (2013) and Merchant (2008, 2013) show that quite generally ellipsis that targets a phrase at least as large as vP must have identical argument structure to the antecedent phrase. For example, English VP-ellipsis tolerates an active antecedent with a passive ellipsis target (156a) but sluicing (which elides an entire TP) doesn't (156b).

(156) a. The janitor must remove the trash whenever it is apparent that it should be.

b. * Someone murdered Joe, but we don't know who by.

(Merchant (2013): 78,81)

Given this, I interpret the impossibility of voice mismatches in Uyghur and Turkish VSVE as indicating that VSVE targets vP, and, therefore requires the antecedent and ellipsis vPs

to have identical argument structures. For example, in (154a) and (155a), the antecedent vPs project with a v_{ACT}, which selects for a DP in Spec, vP (i.e. an AGENT). Conversely, the vPs targeted for ellipsis are headed by a v_{PASS}, which does not select for an AGENT DP in Spec, vP. Thus, due to these argument structure mismatches, where an AGENT projects in the antecedent vP but not the elided vP, vP-ellipsis is not possible with mismatching voices.[3]

3.2.2 Verbal identity and head-movement

As was shown at the beginning of this chapter, while both Uyghur and Turkish permit VSVE, they differ regarding whether the stranded verb must be lexically identical to the verb in the antecedent clause. As illustrated below, while Uyghur permits verbal mismatches of this type (125), Turkish disallows such mismatches (126) and requires strict identity between the antecedent and stranded verb (cf. (124)).

(125) Zemire dukan-din bir alma **al**-di, lëkin Ayghül Δ **oghril**-di.
Zemire store-ABL one apple buy-PST.3SG but Ayghül steal-PST.3SG
Zemire bought an apple from the store, but Ayghül stole an apple from the store.'

(126) *Ben yemek güzel **çık**-ar san-dım ama (o) (sadece) Δ
I food good turn.out-PRS.3SG think-PST.3SG but 3SG only
görün-müş.
appear-EVID.
'I thought the food would be tasty but it only appeared tasty.' (adapted from Us

[3]Note that Merchant (2013) analyzes the argument structure condition in terms of structural identity with respect to the voice-specifying head. That is, ellipsis licensing requires the antecedent and elided voice-specifying head to match in terms of [ACT] and [PASS] (see also Rudin 2019.). Alternatively, the argument structure condition can been understood in terms of a general identity condition requiring the antecedent and elided predicates to have identical argument structures, e.g. a transitive antecedent with a ditransitive ellipsis clause is ruled out, as in (i.) (see Chung 2013 for discussion).

i. *It's known that they sent a silly message, but its unclear who ~~they sent a silly message~~. (Chung 2013: 3)

2025: 7)

(124) Filiz sorun-u hızla **çöz**-dü, ama Ali Δ **çöz**-me-di.
Filiz problem-ACC quickly solve-PST.3SG, but Ali solve-NEG-PST.3SG
'Filiz solved the problem quickly, but Ali didn't solve the problem quickly. (Us 2025: 4)

That Uyghur and Turkish VSVE differ regarding the identity conditions imposed on the stranded verb can be stated in terms of whether (or not) the Verbal Identity Requirement (VIR) holds for the language (see Fenger 2020; Goldberg 2005; Gribanova 2013b, 2020; Lipták 2012; McCloskey 2017; Schoorlemmer and Temmerman 2012, among others):

(157) **Verbal Identity Requirement**: In VSVE contexts, the antecedent and stranded main verb must be identical in root and derivational morphology.
(adapted from Goldberg 2005: 171)

In this respect, that Turkish and Uyghur VSVE differ in terms of whether the VIR holds (or not), indicates that Turkish and Uyghur VSVE are instances of a more general point of typological variation for VSVE languages (which will be discussed in the next chapter). For present purposes, however, the key point is that a number of previous works have proposed that the underlying mechanism responsible for whether the VIR holds is the type of head-dependency involved in V-stranding (Gribanova 2020; McCloskey 2017). It is well-known that ellipsis, quite generally, requires identity between the elided and antecedent phrases (Chung et al. 1995; Merchant 2001; Sag 1976, among others) and that movement of an element outside the ellipsis target can neutralize what otherwise would be an identity failure (Merchant 2001, among others). To illustrate, compare topicalization out of an VP-ellipsis target in (158a) with (158b). In (158a), the object *pizza* is distinct from the object *ice cream* in the antecedent. However, the object has undergone topicalization movement out of the

VP (leaving a trace inside the VP) and VP-ellipsis is possible. But in (158b), where there is no topicalization movement, the VP-internal object must be identical to the object in the antecedent, as evidenced by the observation that the only possible interpretation of the ellipsis is one that involves the object *ice cream*.

(158) a. Martha loves to eat ice cream, but pizza$_i$ she doesn't ~~love to eat t$_i$~~.

b. Martha loves to eat ice cream, but Peter doesn't ~~love to eat ice cream/*pizza~~.

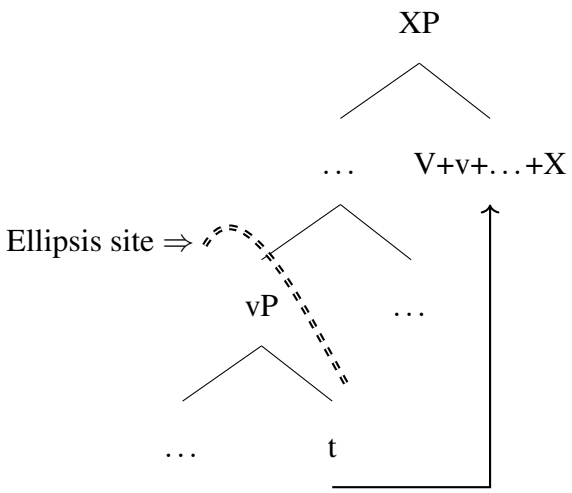
That syntactic movement, as in (158a), can resolve what otherwise would be an identity failure under ellipsis, can be understood in terms of the lexical identity condition in (159) (see Chung 2006 and Merchant 2010 for further discussion of this condition):[4]

(159) Any non-trace morpheme *m* that occurs in an elided phrase must have an equivalent overt correlate *m'* in the elided phrase's antecedent.
(Merchant 2010: 55)

With respect to VSVE, it has been proposed that in the cases where the VIR does not hold, i.e. in Uyghur VSVE (125), the V has undergone syntactic head-movement from within the vP-ellipsis target to a higher functional projection, as in (160) (Merchant 2018).

[4]This is not to suggest that the syntactic identity condition in (159) is the only identity condition that is operative in ellipsis licensing, there are additional identity requirements as well (see, e.g., Merchant 2001, 2010). For present purposes, however, I will limit discussion to the syntactic identity condition in (159).

(160)



Since in these cases the verb has undergone syntactic head-movement, the movement leaves a trace within the VP-ellipsis target, as in (160). Thus, since traces do not induce identity violations, per (159), the VP can be elided with a stranded verb that is distinct from the verb in the antecedent.

In VSVE languages where the VIR does hold, i.e. in Turkish VSVE (126,124), the verb is displaced outside the ellipsis target as well. However, in such languages, it has been proposed that the type of head-dependency involved in verb displacement is PF movement— not syntactic head-movement (Gribanova 2020; McCloskey 2017; Portelance 2020; Schoorlemmer and Temmerman 2012). In such languages, V remains inside the vP-ellipsis target in the syntax and only undergoes movement in PF to a higher head outside the ellipsis target, as in (161). Crucially, syntactic identity, i.e. (159), for ellipsis is calculated before PF movement. Thus, in such languages, the VIR will be enforced since when syntactic identity is calculated, V is within the vP-ellipsis target in the syntax, which enforces identity between the Vs in the antecedent and ellipsis clauses. Only after syntactic identity is calculated, does V undergo PF movement outside of the ellipsis target. As illustrated in (162), in the Turkish example in (124) (repeated below), the verb *çöz* is within the

VP-ellipsis target in the syntax and the Neg affix *-mA* and past tense affix *-di* are outside the vP. Subsequently, when syntactic identity is calculated the verb must be identical to the verb in the antecedent. In PF, the verb *çöz* then undergoes PF movement out of the ellipsis target to the Neg affix *-mA* and T affix *-di*.[5]

(161) a. Syntax: $[_{XP}\ [_{\ldots}\ \ldots\ [_{vP_{\text{ellip. target}}}\ \ldots\ V\ v]\ \ldots\ ]\ X\ ]$

b. PF: [[… [… V v] …] X] → [~~[… […] …]~~ V+v+…+X]

(124) Filiz sorun-u hızla çöz-dü, ama Ali Δ çöz-me-di.
Filiz problem-ACC quickly solve-PST.3SG, but Ali solve-NEG-PST.3SG
'Filiz solved the problem quickly, but Ali didn't solve the problem quickly. (Us 2025: 4)

(162) a. Syntax: $[_{TP}\ [_{NegP}\ \ldots\ [_{vP_{\text{ellip. target}}}\ \ldots\ V_{\textit{çöz}}\text{+v}]\ \text{Neg}_{\textit{-me}}\ ]\ T_{\textit{-di}}]$

b. PF: [[… [… *çöz*] *-me*] *-di*] → [~~[…]~~ *çöz*+*-me*+*-di*]

As for the trigger of PF V-movement in VIR-obeying VSVE languages, McCloskey 2017 and Gribanova 2020 propose that V undergoes movement in PF to provide PF-support for an inflectional element that is outside the ellipsis site. For example, to provide PF-support for an affixal tense morpheme in T. In the illustrative Turkish case above in (162), the verb *çöz* undergoes PF movement to provide PF-support for the negative affix *-mA* and past tense affix *-di*.

Thus, the key difference between VSVE languages where the VIR is imposed and languages where it is not is the type of head-dependency that underlies V displacement,

[5]Note that an alternative analysis of the VIR effect has been proposed, where the VIR is due to independent prosodic factors, namely, that in languages where the VIR holds, the stranded verb undergoes syntactic V-movement out of the ellipsis target but cannot bear a pitch accent (i.e. contrastive focus), thus, ruling out verbal mismatches under VSVE (see Merchant 2018 for discussion). However, Gribanova 2020 and Portelance 2020 show that this restriction cannot generalize to all VIR-obeying VSVE languages since there are cases of VSVE where pitch accent can be placed on a stranded verb which is nevertheless VIR-obeying. Thus, the underlying cause of the VIR cannot simply be due to an independent prosodic requirement on verbs in VIR-languages.

namely, whether V displacement involves syntactic head-movement or PF movement. In Uyghur VSVE, V undergoes syntactic head movement out of the vP-ellipsis target and VIR violations are possible; in Turkish VSVE V does not undergo syntactic movement but rather PF movement out of the vP-ellipsis target. Since in Turkish VSVE V does not undergo syntactic movement out of the vP-ellipsis target, the VIR holds and mismatches are impossible.

3.3 Extraction out of VSVE

While Uyghur and Turkish VSVE differ in terms of the VIR, there is another key difference between the two languages' VSVE constructions that was previously not observed, namely, whether Ā-extraction out the VSVE target is possible. In Uyghur, extraction out of the VSVE target is possible, but in Turkish it is not.

It is well-known that there is variation regarding whether Ā-extraction out of ellipsis targets is possible (Aelbrecht 2010; Baltin 2012; Bošković 2014; Merchant 2010; Schuyler 2001; van Craenenbroeck 2010, among others). For example, English VP-ellipsis can often license Ā-extraction out of the ellipsis target, as illustrated below with topicalization (163a) and *wh*-movement (163b,163c). In (163a) and (163b,163c), the VPs are the ellipsis targets and the VP-internal objects have undergone movement outside of the VP.

(163) a. Martha reads books, but, magazines$_i$ she doesn't [$_{VP}$ Δ].

b. Which books$_i$ did Martha read t$_i$ and which magazines$_j$ did Peter [$_{VP}$ Δ]?

c. Although, we don't know what$_i$ John read t$_i$, we do know what$_j$ Fred did [$_{VP}$ Δ].

(adapted from Baltin 2012: 387)

In contrast, there are cases where extraction out of the ellipsis target is barred. For example, Japanese clausal (argument) ellipsis quite generally disallows extraction out of CP-ellipsis target. As illustrated below, while scrambling out of a non-elided CP is possible (164a), scrambling out of an elided CP is impossible (164b).

(164) a. Sono hon-o$_i$ Hanako-ga [$_{CP}$ Taroo-ga t_i katta to] omotteiru
that book-ACC Hanako-NOM Taroo-NOM bought C thinks
(koto)
fact
'That book, Hanako thinks that Taro bought.'

(Saito 1992: 70)

b. *Sono hon-o$_i$ Taroo-wa [$_{CP}$ Hanako-ga t_i katta to] itta ga,
that book-ACC Taroo-TOP Hanako-NOM bought C said though
zassi-o$_j$ Ziroo-wa [$_{CP}$ Δ] itta.
magazine-ACC Ziroo-TOP said
'That book, Taro said that Hanako bought and, that magazine, Ziroo said Hanako bought.'

(Saito 2007: 211)

Interestingly, Uyghur and Turkish differ regarding whether Ā-extraction out of VSVE targets is possible. As shown below in (165) and (166), Uyghur VSVE freely allows extraction out of VSVE targets.

(165) Aygül kiyim-ni asta-asta yu-di, lëkin chapan-ni$_i$, u Δ
Ayghül dress-ACC slowly wash-PST.3SG, but jacket-ACC 3SG
yu-ma-di.
wash-NEG-PST.3SG
'Ayghül washed the dress slowly, but as for the jacket, she didn't wash slowly.'

(166) Kitap-ni$_i$, Zemire t_i Ayghül-ga ettigen-de ber-di, lëkin alma-ni$_j$,
book-ACC Zemire Ayghül-DAT morning-LOC give-PST.3SG but apple-ACC
u Δ ber-mi-di.
3SG give-NEG-PST.3SG
'The book, Zemire gave to Ayghül in the morning, but the apple, she didn't give to

Ayghül in the morning.'

In contrast, Turkish VSVE uniformly disallows Ā-extraction out of the VSVE target, as illustrated in (167) and (168). As shown, unlike Uyghur VSVE, scrambling out of the VSVE site is uniformly not permitted (cf. (165,166)).

(167) *Mehmet gomleg-i yavas-(ca) yika-di, ama ceketi$_i$-i (ise), o Δ
Mehemet shirt-ACC slowly wash-PST.3SG but jacket-ACC TOP, 3SG
yika-ma-di.
wash-NEG-PST.3SG
'Mehmet washed the shirt slowly but as for the jacket, he didn't wash slowly.'

(168) *Kitab$_i$-i, Mehmet Ali-ye okul-da t_i ver-di, ama dergi$_j$-yi
book-ACC Mehmet Ali-DAT school-LOC give-PST.3SG but magazine-ACC
(ise), o Δ ver-me-di.
TOP 3SG give-NEG-PST.3SG
'The book$_i$, Mehmet gave t_i to Ali at school, but as for the magazine, he didn't give to Ali at school.'

To summarize, in the preceding sections I have shown that while Uyghur and Turkish VSVE share certain features, there are also key differences between VSVE in the two languages. In both languages, VSVE involves vP-ellipsis plus displacement of the V outside of the ellipsis target. In Uyghur VSVE, this displacement is due to syntactic V movement; in Turkish, this V displacement occurs in PF. Due to this difference, while Uyghur does not obey the VIR, Turkish VSVE does and requires strict identity between the antecedent and the stranded verb. Finally, as was just shown, there is another key difference between VSVE in the two languages: while Uyghur permits Ā-extraction out of the VSVE target, Turkish VSVE does not.

3.4 Analysis

In the previous sections, it was shown that Uyghur and Turkish VSVE, while similar in certain respects, differ in two key ways, namely, whether the VIR holds and whether Ā-extraction out of the VSVE target is permitted. In this section, I show that both points of variation are regulated by the same underlying factor: the phasal status of the vP. In Chapter 2, I showed that while in Turkish vP is a phase, in Uyghur it is not, rather a higher phrase in the middle field serves as the phase. In this section, I argue that this difference in the phasal status of vP has implications for VSVE. While VSVE in both languages involves vP-ellipsis, in Turkish vP-ellipsis is phasal ellipsis but in Uyghur vP-ellipsis does not involve ellipsis of a phase. I argue that this difference in vP's phasal status is the underlying factor that regulates both the VIR and Ā-extraction possibilities.

3.4.1 Blocking extraction

Previous works have proposed that ellipsis is phase constrained; that is, ellipsis can target either phase complements (Gengel 2013; Holmberg 2001; van Craenenbroeck 2010) or full phases (Bošković 2014; Lewis 2024). Crucially, Bošković (2014) argues that phases and phase complements are both possible ellipsis targets. That ellipsis can target phase complements can be shown with sluicing (169a) and possessor-stranding ellipsis (169b) in English. Assuming that CP and DP are phases and that sluicing involves elision of the TP complement and possessor-stranding ellipsis involves elision of the NP complement, then both cases are instances of elision of phase complements.

(169) a. Martha loves someone but I don't know [$_{CP}$ who [$_{TP}$ Δ]].

b. I read Pynchon's novel and you read [$_{DP}$ DeLillo's [$_{NP}$ Δ]].

Cases of full phase ellipsis are observed with Japanese argument ellipsis, as shown in (170) for a clausal argument and (171) for a nominal argument, respectively. Assuming that CP and DP are phases in Japanese, that these phrases can be targeted for ellipsis indicates that full phase ellipsis is also an option, as argued in Bošković 2014.

(170) Hanako-wa [$_{CP}$ zibun-no teian-ga saiyoosareru to] omotteiru ga,
Hanako-TOP self-GEN proposal-NOM accepted.be that think though
Taroo-wa Δ omotte inai.
Taro-TOP think not
'Hanako$_i$ thinks that her$_i$ proposal will be accepted, but Taro$_j$ does not think that her$_i$/his$_j$ proposal will be accepted.'

(Saito 2007: 203)

(171) Hanako-wa zibun-no koppu-o mitte kita; Taroo-mo [$_{DP}$ Δ] motte kita.
Hanako-TOP self-GEN glass-ACC brought Taroo-also brought
'Hanako$_i$ brought her$_i$ glass Taro$_j$ also brought her$_i$/his$_j$ glass'

(Saito 2007: 205)

Additionally, Bošković (2014) shows that phase complement and phasal ellipsis behave differently regarding Ā-extraction. Bošković (2014) argues that while Ā-extraction is possible out of phase complement ellipsis targets, it is not out of a full phase ellipsis target (see also Lewis 2024 for additional evidence). To illustrate, sluicing (e.g. (169a)) involves elision of a TP, i.e. the complement of the CP phase, plus *wh*-movement to Spec, CP, which means that sluicing, an instance of phase complement ellipsis, allows Ā-movement out of the ellipsis target. Conversely, as was shown and repeated below in (164b), Japanese clausal ellipsis involves elision of a full CP phase and Ā-extraction out the ellipsis target is impossible:

(172) *Sono hon-o$_i$ Taroo-wa [$_{CP}$ Hanako-ga t$_i$ katta to] itta ga,
that book-ACC Taroo-TOP Hanako-NOM bought C said though

zassi-o$_j$ Ziroo-wa [$_{CP}$ Δ] itta.
magazine-ACC Ziroo-TOP said
'That book, Taro said that Hanako bought and, that magazine, Ziroo said Hanako bought.'

(Saito 2007: 211)

A similar split regarding extraction out of a phasal versus phase complement ellipsis target is observed in the nominal domain. As illustrated below in (173), in possessor-stranding ellipsis the NP phase complement is the ellipsis target and extraction of the PP is possible.[6]

(173) ? [$_{PP}$ About the Roman Empire]$_i$ you told me to read [$_{DP}$ a historian's [$_{NP}$ research t_i]], but [$_{PP}$ about the Great Depression]$_j$, you told me to read [$_{DP}$ an economist's [$_{NP}$ Δ]].

Turkish NP-ellipsis can also allow for extraction out of the NP-ellipsis target, in certain contexts. As noted by Bošković and Şener (2014) and illustrated in (174), Turkish typically does not permit possessor-stranding ellipsis.

(174) *[Auster-ın kitab-ı-nı] oku-dum, ama [Pamuk-un Δ] oku-ma-dım.
Auster-GEN book-3POSS-ACC read-PST.1SG but Pamuk-GEN read-NEG-PST.1SG
'I read Auster's book but I didn't read Pamuk's.' (Bošković and Şener 2014: 18)

But when the nominal phrase involves a numeral-classifier, possessor-stranding NP-ellipsis is possible, as shown in (175).

(175) ?Pelin [Chomsky-nin üç tane kitab-ı-nı] oku-muş, ama
Pelin Chomsky-GEN three CL book-3.POSS-ACC read-EVID.PST but

[6]Note, the acceptability of extraction out of possessor-stranding contexts, as in (173), is conditioned by the usual restriction against extraction out of definite DPs, which is an independent effect (Diesing 1992).

[Foucault-nun iki tane Δ] oku-muç.
Foucault-GEN two CL read-EVID.PST
'Pelin read three books of Chomsky's but she read two books of Foucault's.'

(adapted from Bošković and Şener 2014: 19)

Bošković and Şener (2014) propose that the impossibility of bare possessor-stranding ellipsis, as in (174), is due to the possessor in this case being located inside the NP (with Turkish, an article-less language, lacking a DP layer) and, thus, cannot survive NP-ellipsis. However, in the presence of the classifier, which projects a ClP above the NP, the possessor raises from inside the NP-ellipsis target to Spec, ClP and, thus, escapes elision. Assuming that ClP is the highest projection in the nominal domain in (175) and delimits a phase (see discussion in Chapter 2; also see Bošković 2014 for discussion on this point), then (175) involves phase complement NP-ellipsis and allows for extraction of the possessor phrase.

In cases of full argument ellipsis, the situation is different. Takahashi and Funakoshi 2013 show that extraction of a *wh*-PP complement from inside a nominal is possible in non-ellipsis contexts, e.g. in the response in (176c) . However, this type of extraction is not possible out of an argument ellipsis target, as shown in (176d) (Sakamoto 2020).

(176) a. A^1: Dare-kara$_i$-no Taroo-ga [t_i tegami]-o sute-ta no?
who-from-GEN Taroo-NOM letter-ACC discard-PST Q
'From who$_i$, Taro discarded [a letter t_i]?'

b. B: Bill-da yo.
Bill-PRES SFP
'Bill.'

c. A^2: Zyaa, dare-kara$_i$-no Ziroo-wa [$_{DP}$ t_i tegami]-o sute-ta no?
then who-from-GEN Ziro-TOP letter-ACC discard-PST Q
'Then, from whom$_i$ did Ziro discard a letter?'

d. A^3: *Zyaa, dare-kara$_i$-no Ziroo-wa [$_{DP}$ Δ] sute-ta no?
then who-from-GEN Ziro-TOP discard-PST Q
'Then, from whom$_i$ did Ziro discard?'

(Sakamoto 2020: 74)

Thus, as shown, there is a tight correlation between phase/phase complement ellipsis and whether extraction is possible.

Interestingly, predicate ellipsis contexts display the same kind of variability regarding extraction. Sometimes Ā-extraction is possible and in other cases it is not. As shown below, in typical VP-ellipsis contexts *wh*-extraction is possible:

(177) Which girls$_i$ did Martha invite t_i to the party and which boys$_j$ didn't she Δ?

The possibility of extraction in (177) is expected given that it involves a VP-ellipsis target (i.e. the complement of the vP phase in English), as is standardly assumed. However, there are also predicate ellipsis contexts that do not allow extraction. As shown in (178a), in contexts where predicate ellipsis occurs in a passive existential construction, extraction is not possible out of the ellipsis target.

(178) a. * I don't know what$_i$ there were so many getting worked up about yesterday, but I do know what$_j$ there were Δ last week.

b. I don't know what$_i$ there were so many people getting worked up about t_i.

(Harwood 2015: 535)

Harwood (2015) observes that in passive existentials, subjects cannot survive ellipsis quite generally, as in (179).

(179) John said there were several people arrested last night, and indeed there were (*several people) Δ.

(Harwood 2015: 535)

Assuming that in such constructions, the subject is in Spec, vP (Chomsky 2001; Harwood 2015), the impossibility of subjects surviving ellipsis indicates that vP is the ellipsis target.

Thus, given the impossibility of extraction in (178a), this indicates that predicate ellipsis can also involve targeting the vP phase and when ellipsis targets the vP phase extraction is not possible. More generally, what the above data indicate is that predicate ellipsis can target both the VP phase complement and the full vP phase.

Additional evidence indicating that predicate ellipsis can target both phase complements and full phases comes from Ā-extraction contrasts observed in English AUXP-ellipsis. As shown below, predicate ellipsis in English can target both a phrase headed by *been* (i.e. *been*P; (180a)) or a lower projection, e.g. the VP in (180b).

(180) a. Jane must have been hassled by the police, and Sue must have [$_{\textit{been}\text{P}}$ Δ] too.

b. Jane must have been hassled by the police, and Sue must have been [$_{\text{VP}}$ Δ] too.
(Bošković 2014: 62)

Bošković (2014) observes that while Ā-extraction can proceed out of the ellipsis target in (181), such extraction is considerably more degraded when *been*P is the ellipsis target, as in (182).

(181) a. ? You wonder by whom$_i$ Betsy must have been being hassled t$_i$, and I wonder by whom$_j$ Jane must have been Δ.

b. ? You wonder on which table$_i$ your book must have been put t$_i$, and I wonder on which table$_j$ my CD must have been Δ.
(Bošković 2014: 64)

(182) a. ?* You wonder by whom$_i$ Betsy must have been being hassled t$_i$, and I wonder by whom$_j$ Jane must have Δ.

b. ?* You wonder on which table$_i$ your book must have been put t$_i$, and I wonder on which table$_j$ my CD must have Δ.

(Bošković 2014: 63)

Bošković (2014) shows that the key difference between the *been*P ellipsis cases in (182) and the cases in (181) is that in English, the *been*P is a phase and, thus *been*P-ellipsis involves full phase ellipsis (see discussion in Bošković 2014 for further elaboration on this point). In contrast, the cases in (181) involve elision of the complement of the *been*P phase. The key point is that with respect to predicate ellipsis in English, there is a tight relationship between whether the ellipsis target is a phase/phase complement and whether Ā-extraction is possible.

To summarize, given the above data and discussion regarding the connection between extraction and the phasal status of the ellipsis target, there is considerable evidence that the following holds (as proposed in Bošković 2014):

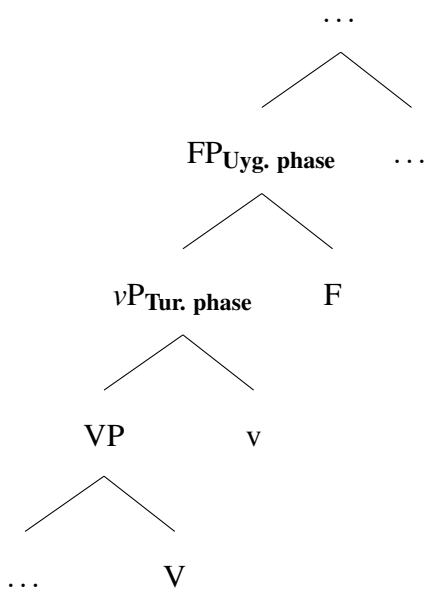
(183) If the XP-ellipsis target is a phase, then Ā-extraction out of XP is not possible.

3.4.1.1 Blocking extraction out of VSVE targets

Returning now to Uyghur and Turkish VSVE, consider the data regarding the possibility of Ā-extraction out of VSVE targets. In Uyghur VSVE such extraction is possible, but in Turkish VSVE such extraction is impossible. Additionally, as was shown in the previous section, in both languages VSVE involves vP-ellipsis. Now consider these observations in light of the architecture proposed in Chapter 2 for Turkish and Uyghur's middle-field.[7] As sketched in (184) below, in Turkish vP delimits a phase but in Uyghur vP is not a phase, rather a higher projection immediately above vP is the phase (which makes vP a phase complement in Uyghur).

[7] See also Chapter 6 (§6.3.1) for further discussion regarding the structure of Turkish and Uyghur's clausal spine and, in particular, the nature of FP in Uyghur.

(184)

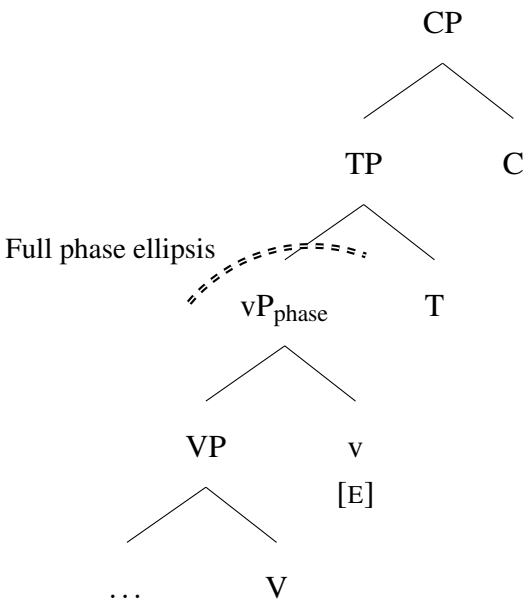


Given this phasal difference, i.e. whether or not vP is a phase, I propose that the difference regarding Ā-extraction out of the VSVE target in Uyghur and Turkish is due to whether, for that language, the vP-ellipsis target is a phase (as in Turkish) or a phase complement (as in Uyghur).

Consider first Turkish, where vP is a phase. Following Bošković 2014 (and his deduction of the generalization in (183)), I adopt the proposal that ellipsis involves an [E]-feature bearing phase head. Additionally, upon merger of the next higher phase head, either the full [E]-bearing phase or its complement is marked for ellipsis—i.e. marked for zero realization in PF, and the ellipsis domain is frozen for further syntactic operations (see also Aelbrecht 2010; Heck and Muller 2003; Holmberg 2001; Müller 2011 regarding ellipsis' syntactic freezing effect). In the case of Turkish VSVE, I propose that v is the [E]-bearing phase head and the full vP phase is marked for ellipsis upon merger of C, as in (185).[8]

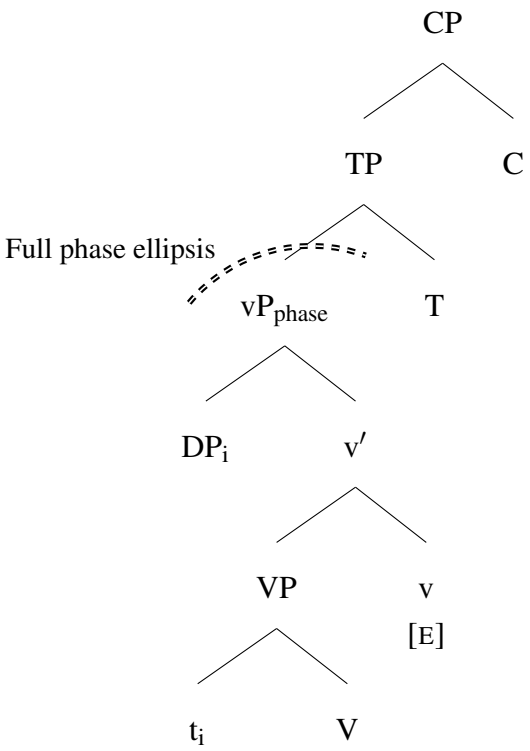
[8]Note, on the present account of Turkish VSVE, which targets a vP phase, the fact that Turkish permits VSVE with a passive antecedent and stranded verb (as (153) showed in §3.2.1) is evidence that vP is always a phase in Turkish (which is what the contextual approach to phases adopted here predicts, given that the highest phrase in the extended domain of V is always a phase).

(185)



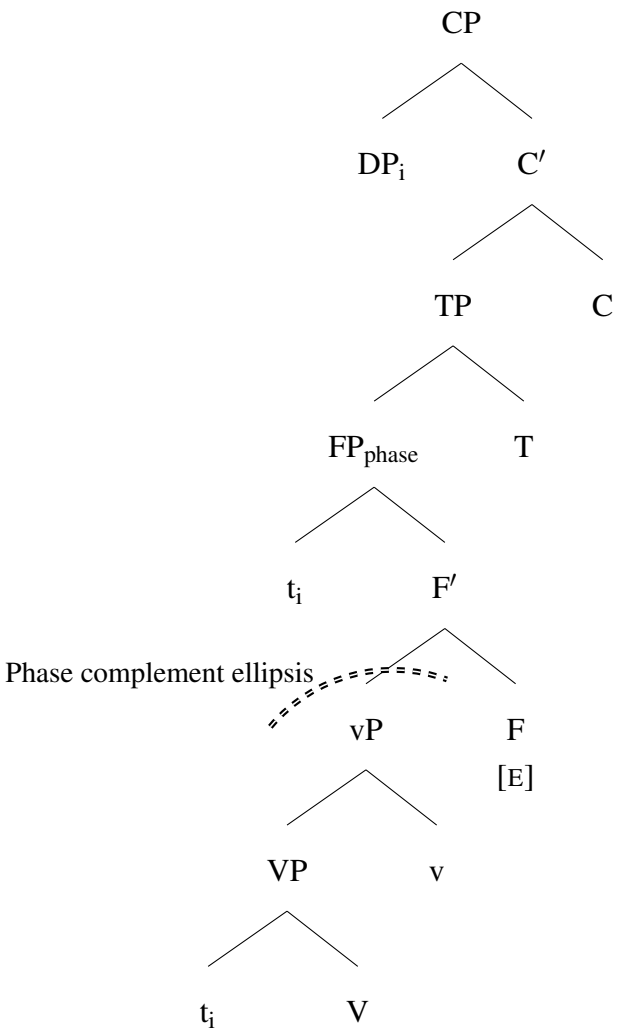
Now consider the blocking effect observed with Ā-extraction out of the Turkish VSVE ellipsis target, i.e. phasal vP-ellipsis, as sketched in (186). Upon the merger of the phase head v with VP, the DP undergoing Ā-movement to Spec, CP, moves to the phase edge as an intermediate landing site—i.e. Spec, vP. Upon the merger of C, the full vP phase is marked for ellipsis, which includes the DP in Spec, vP, freezing vP-internal elements for further operations. Thus, the DP in Spec, vP is trapped and cannot undergo further movement to Spec, CP.

(186)



Consider now Uyghur VSVE, where vP is not a phase but rather, FP is. As proposed in Chapter 2, in Uyghur a functional head F merges with vP and FP serves as the phase (i.e. (184)). Subsequently, in the case of Uyghur VSVE, F is the [E]-bearing phase head and the vP phase complement is the ellipsis target. Thus, in the case of Ā-movement in VSVE contexts, upon merger of F with vP, the DP undergoing Ā-movement to Spec, CP, moves to the phase edge, Spec, FP, as an intermediate landing site. In this case, the phase edge is outside the vP-ellipsis target. Thus, upon merger of C, when the phase complement vP is marked for ellipsis, the moving DP is outside of the ellipsis domain and can move to Spec, CP. This derivation is sketched below in (187).

(187)



Thus, due to this difference regarding the position of the middle field phase, there is a corresponding difference in whether VSVE involves full phase vP-ellipsis or whether it is phase complement vP-ellipsis. In Turkish VSVE, the vP is a phase and is the ellipsis target, thus, Ā-extraction is blocked. But in Uyghur VSVE, since FP is a phase, the vP-ellipsis target is a phase complement and, thus, Ā-extraction is permitted.

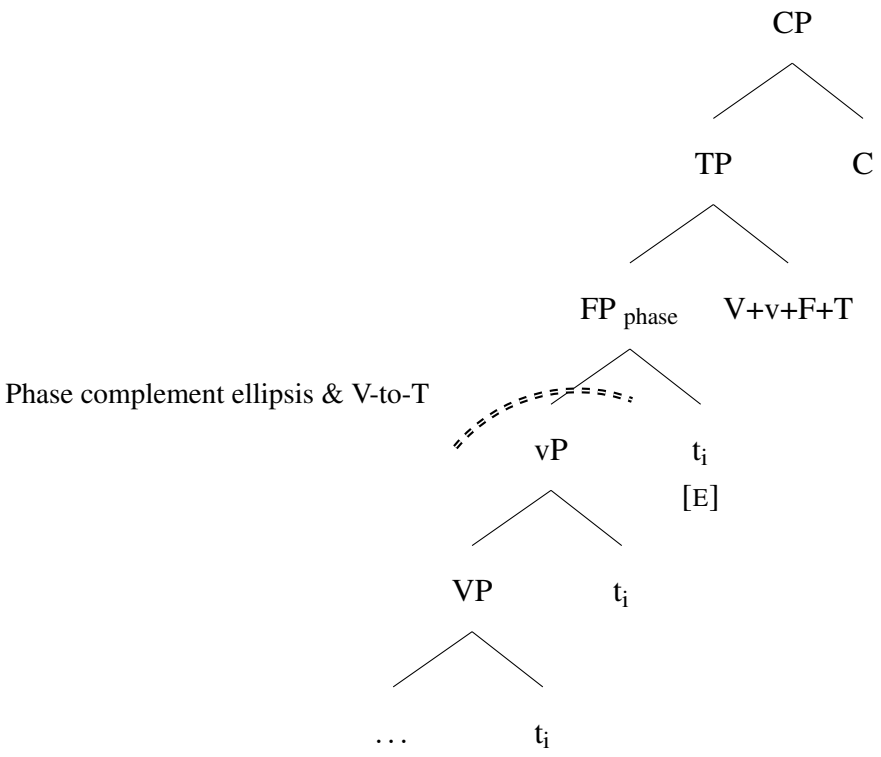
3.4.2 Deriving the VIR effects

In the preceding sections, it was shown that Uyghur and Turkish VSVE exhibit another key difference, namely, whether the VIR holds (157). In Uyghur VSVE, V undergoes syntactic V-to-T movement out of the ellipsis target and verbal mismatches are possible. But in Turkish VSVE, V does not undergo syntactic movement out of the ellipsis target (it only undergoes movement in PF) and verbal mismatches are impossible. I propose that this split regarding whether syntactic V-movement occurs under VSVE is due to the same type of blocking effect observed in the case of phrasal movement.

Consider first VIR-violating Uyghur VSVE, which involve elision of the vP phase complement. In this context, an [E]-bearing F merges with vP and V undergoes syntactic V-to-F movement. Upon merger of C, the vP phase complement is marked for ellipsis. Since V is outside of the vP, it is not elided and can raise further to T, as in (188). Moreover, since V has undergone syntactic movement, thus, leaving a trace inside the ellipsis target, the VIR is not in effect and verbal mismatches are possible.[9]

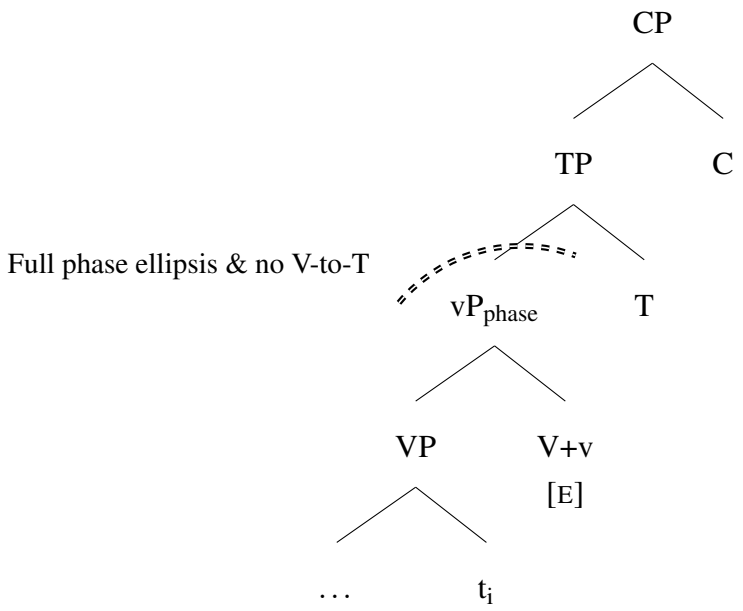
[9]Note that the present analysis assumes that syntactic head-movement only occurs upon the merger of a phase head, e.g. V+v-to-T occurs in the CP-cycle. This assumption is discussed in §4.3.1 of Chapter 4 in detail and evidence is provided that shows that syntactic head-movement quite generally only occurs upon merger of the next phase head. The reader is also referred to Chapter 4 (§4.3.1) for discussion of A-movement out of ellipsis targets.

(188)



Compare this with VIR-obeying Turkish VSVE, which involves elision of the vP phase. Here, v merges with VP and V undergoes syntactic movement to v. Later, when C merges to the structure, the vP phase is marked for ellipsis. Crucially, since V is within the vP-ellipsis target, as (189a) sketches, when syntactic identity is calculated for ellipsis (i.e. (159)), the V must be lexically identical to the V in the antecedent (otherwise there would be a syntactic identity violation). Now, the inflectional T still requires a verbal host. I propose that in PF, the v+V head undergoes PF movement in order to support the inflectional T, as in (189b). However since V is located within the vP-ellipsis target when identity is calculated (and only undergoing PF movement after that) the VIR holds and verbal mismatches are not possible in Turkish VSVE.

(189) a.



b. PF: [. . . ~~[. . . V+v]~~ . . . T] → [. . . ~~[. . .]~~ . . . V+v+T]

On the present proposal, the split between Uyghur and Turkish VSVE regarding Ā-extraction out of the ellipsis target and the VIR are both explained in terms of the phasal status of the vP-ellipsis target. In Turkish VSVE, the vP-ellipsis target is a phase. Due to the phasal status of the vP-ellipsis target, both Ā-movement and syntactic V-to-T movement are impossible, which in the latter case results in VIR effects. Conversely, Uyghur VSVE involves vP-ellipsis as well, but in Uyghur vP is not a phase, instead it is the complement of the FP phase. Thus, in Uyghur VSVE, the Ā-extracting phrase moves to Spec, FP and V undergoes syntactic V-to-F, which is outside of the vP-ellipsis target. Due to both elements being outside of the vP-ellipsis target, when the vP is elided, such elements can undergo further syntactic movement. Additionally, since V has undergone syntactic head-movement out of vP, the VIR is not imposed. The key point is that both points of variation between Turkish and Uyghur are explicable in the same terms, namely, the phasal status of the vP-ellipsis target. In Turkish, vP is a phase, and VSVE involves full phase vP-ellipsis.

But in Uyghur vP is not a phase, FP is the phase and VSVE involves elision of the vP phase complement. Due to this difference in vP's phasal status, both the possibility of Ā-extraction and whether the VIR holds (or not) are explained in terms of the same underlying factor.

3.4.3 Extension: Uzbek VSVE

Gribanova (2020) observes that the related Turkic language Uzbek also permits VSVE. Moreover, she observes that Uzbek VSVE is a VIR-obeying languages. As shown below, while VSVE with matching antecedent and stranded verbs is possible, as in (190), verbal mismatches are disallowed, as in (191a,191b).

(190) Zamira devor-ni qizil-ga bo'ya-di va Nilufar ham Δ bo'ya-di.
Zamira wall-ACC red-DAT paint-PST.3SG and Nilufar also paint-PST.3SG
'Zamira painted the wall red and Nilufar painted the wall red too.'

(191) a. *Zamira Oygulg-a olma **ber**-di lekin Nilufar Δ **sot**-di.
Zamira Oyghul-DAT apple give-PST.3SG but Nilufar sell-PST.3SG
'Zamira gave an apple to Oyghul but Nilufar sold an apple to Oyghul.'

b. *Men [Farhod sabzi-ni xomligicha **ye**-di deb] o'yla-dim,
1SG Farhod carrot-ACC raw eat-PST.3SG C think-PST.1SG
lekin siz [*pro* Δ **g'aji**-di deb] ayt-dingiz.
but 2SG chew.PST-3SG C say-PST.2SG
'I thought that Farhod ate the carrot raw, but you said he chewed the carrot raw.' (Gribanova 2020: 29)

As with Uyghur and Turkish, Uzbek VSVE cannot be analyzed in terms of null argument *pro*, given that Uzbek VSVE allows for strict and sloppy interpretations of elided objects, as in (192).

(192) Farhod uy-i-ni tozala-y-di lekin Temur Δ tozala-ma-y-di.
Farhod house-3POSS-ACC clean-PRES-3SG but Temur clean-NEG-PRS-3SG
Farhod$_i$ cleans his$_i$ house but Temur$_j$ won't clean his$_{i/j}$ house.'

Additionally, as with Uyghur and Turkish VSVE, Uzbek VSVE cannot be analyzed in terms of (multiple) argument ellipsis. As shown below in (193), in Uzbek secondary predicates cannot be independently elided. But under VSVE, such elements can be elided along with internal arguments, as in (194).

(193) Farhod Zamira-ni xafalaligida ko'r-di va Hasan Nigora-ni
Farhod Zamira-ACC sad see-PST.3SG and Hasan Nigora-ACC
ko'r-di.
see-PST.3SG
'Farhod saw Zamira sad and Hasan saw Nigora (*sad).' (Gribanova 2020: 24)

(194) Men [Farhod sabzi-ni xomligicha ye-ma-di deb] o'yla-dinm,
1SG Farhod carrot-ACC raw eat-NEG-PST.3SG C think-PST.1SG
lekin siz [*pro* ye-di deb] ayt-dingiz.
but 2SG eat-PST.3SG C say-PST.2SG
'I thought that Farhod didn't eat the carrot raw, but you said he ate the carrot raw.'
Gribanova 2020: 25)

As for which phrase Uzbek VSVE targets, evidence from the impossibility of voice mismatches under VSVE indicates that Uzbek VSVE involves vP-ellipsis. As shown, while Uzbek VSVE allows for VSVE when both verbs are passives, as in (195), VSVE with mismatching voice morphology is not possible, as in (195b).

(195) a. Manti tez-tez ye-il-di, lekin palov Δ yey-il-ma-di.
Manta quickly eat-PASS-PST.3SG but pilaf eat-PASS-NEG-PST.3SG
'The manta was quickly eaten but the pilaf wasn't quickly eaten.'

b. *Zamira tez-tez manti ye-di, lekin palov Δ yey-il-ma-di.
Zamira quickly manta eat-PST.3SG, but pilaf eat-PASS-NEG-PST.3SG
'Zamira quickly ate manta, but pilaf wasn't eaten quickly.'

Importantly, like Turkish VSVE but unlike Uyghur VSVE, in Uzbek VSVE Ā-extraction out of the VSVE target is not possible, as shown in (196).

(196) *Nilufar tez-tez pol-ni yuv-a-di lekin deraza-lar-ni$_i$, u Δ
Nilufar quickly floor-ACC wash-PRES-3SG but window-PL-ACC, 3SG
yuva-ma-y-di.
wash-NEG-PRES-3SG.
'Nilufar quickly washes the floors but as for the windows, she won't wash quickly.'

To summarize, Uzbek VSVE patterns with Turkish VSVE with respect to obeying the VIR and disallowing Ā-extraction out of the ellipsis target. Moreover, as with both Turkish and Uyghur VSVE, Uzbek VSVE involves elision of a vP. Given these facts, I suggest that Uzbek VSVE, like Turkish VSVE, involves elision of phasal vP. Due to this, in Uzbek VSVE, the VIR is obeyed and Ā-extraction is not possible.

3.5 Conclusion

To conclude, in this chapter I have examined another phenomenon where Turkish and Uyghur display systematic variation, namely, VSVE. I showed that while Uyghur and Turkish VSVE patterns share certain similarities, they differ in two crucial ways. First, while Uyghur VSVE does not require identity between the stranded and antecedent verbs, Turkish VSVE does. Second, in Uyghur, Ā-extraction out of the VSVE site is permitted, but in Turkish such extraction out of the VSVE site is quite generally not possible.

In this chapter, I showed that these two points of variation can be traced to a single underlying factor, namely, the phasal status of the vP-ellipsis target. In Turkish the vP-ellipsis target is a phase, but in Uyghur the vP-ellipsis target is not. Rather, in Uyghur the vP-ellipsis target is a phase complement. I argued that because of this difference there is systematic variation regarding the possibilities of both phrasal and syntactic head-movement

out of the VSVE target.

In the previous chapter, I examined a range of contrasts between Turkish and Uyghur, across highly diverse phenomena. This included: interpretation of DOM objects, scope effects, case-marking in impersonal constructions and long-distance object scrambling. For all of these phenomena, I showed that that variation observed can be traced to a difference in the location of the middle-field phase. In Turkish, vP is the phase, but in Uyghur, another phrase, FP, projects above vP and serves as the middle-field phase. In this chapter, I have added another phenomena, verb-stranding VP-ellipsis, where contrasts exhibited between Turkish and Uyghur disuccsed in this chapter can be explained in the same phasal terms, namely, the location of the middle-field phase.

In the next chapter, I will turn to examining VSVE in a typological setting. Specifically, I examine VSVE patterns across a typologically diverse set of languages and show that the type of variation exhibited in Turkish and Uyghur VSVE is not localized to these two languages. Rather, both Uyghur and Turkish's VSVE patterns are instance of a more general point of typological variation among VSVE languages. Further, I show that this general point of typological variation can be explained in the same phasal terms that accounted for Turkish and Uyghur's VSVE patterns; that is, whether VSVE involves elision of a phase complement or a full phase.

Chapter 4

Typological variation in verb-stranding VP-ellipsis

In the previous chapter, I examined VSVE in two closely related languages; Uyghur and Turkish. I showed that while Uyghur and Turkish VSVE are similar in a number of respects, there are two crucial contrasts between VSVE in the two languages. These contrasts were: (i) whether Ā-extraction out of the VSVE target is possible, (ii) whether the VIR is imposed on the stranded verb; that is, whether the stranded and the antecedent verb must be lexically identical. I showed that regarding (i) and (ii), Uyghur VSVE allows for Ā-extraction out of the VSVE target and allows for VIR violations; Turkish VSVE disallows Ā-extraction from the VSVE target and imposes the VIR. I argued that these two points of variation, i.e. (i) and (ii), follow from a single underlying point of variation: whether VSVE targets a phase or not.

In this chapter, I will expand the empirical landscape and turn to VSVE in other, typologically unrelated, languages. I will show that the split observed between Uyghur and Turkish VSVE regarding Ā-extraction and the VIR is not merely a local point of variation

between two closely related languages, but rather is an instance of a more general typological split among VSVE languages. Specifically, I will show that the following typological generalization in (197) holds for VSVE languages:

(197) **Extraction-VIR Generalization**: VIR violations are only possible in a VSVE context, if $\bar{A}$-extraction out of the VSVE target is possible.

Further, I will show that what underlies the generalization in (197) is the same factor that underlies the split between Uyghur and Turkish VSVE, namely, whether VSVE targets a full phase or a phase complement. I argue that in VSVE languages that impose the VIR and where $\bar{A}$-extraction is blocked, the VSVE target is a full phase. But in VSVE languages where the VIR is not in effect and $\bar{A}$-extraction is possible, the VSVE target is a phase complement. Due to this cross-linguistic difference in the phasal status of the VSVE target, the split regarding both $\bar{A}$-extraction and the VIR is explained in the same phasal terms as it was regarding Uyghur and Turkish VSVE, discussed in Chapter 3.

The chapter is structured as follows. In §4.1, I outline the cross-linguistic landscape regarding the VSVE phenomenon and the split between VSVE languages that are VIR-obeying and those that are not. In §4.2, I discuss the second type of variation among VSVE languages regarding $\bar{A}$-extraction. Here, I show that, quite generally, whether $\bar{A}$-extraction out of VSVE is possible correlates with the identity conditions on the stranded verb. In §4.3, I discuss how this correlation follows from the phasal status of the VSVE target. §4.4 turns to another ellipsis construction related to VSVE: verb echo answers. First, I observe several key differences between VSVE and verb echo answer constructions cross-linguistically. Subsequently, I show that the these key differences can be explained in the same phasal terms as with VSVE. §4.6 concludes.

4.1 The verb stranding VP-ellipsis phenomenon

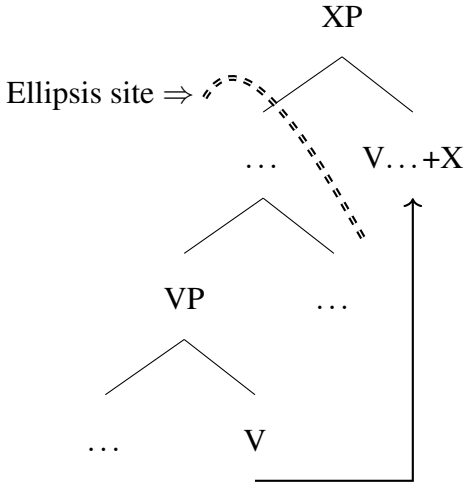
4.1.1 Re-capping VSVE basics

In the previous chapter, I outlined the basic contours of the VSVE phenomenon, namely, VSVE is a phenomenon where the predicate phrase and predicate-internal elements are elided, but the main verb is pronounced, e.g. as illustrated in (198) with Uyghur VSVE.

(198) Men Ayghül-ga sowghat-ni ettigen-de ber-dim, anam=mu
1SG Ayghül-DAT gift-ACC morning-LOC give-PST.1SG mother.1POSS=also
Δ ber-di. I gave Ayghül a gift in the morning, my mother gave Ayghül a
give-PST.3SG
gift in the morning too.'

In the previous chapter, it was also shown that VSVE constructions involve elision of a phrase at least as large as VP, plus displacement of the main V outside of the ellipsis target (either due to syntactic V-to-X movement, or due to PF movement), as in (199).

(199)



In this respect, VSVE is a phenomenon distinct from other processes, i.e. null argument *pro* (200) or (multiple) argument ellipsis (201), which can produce similar surface strings.

(200) [… [$_{vP}$ [$_{VP}$ *pro* V] v] …]

(201) [… [$_{vP}$ [$_{VP}$ [$_{DP}$ Δ] V] v] …]

In the previous chapter, I showed that Uyghur and Turkish VSVE can be distinguished from both null argument *pro* (200) and (multiple) argument ellipsis (201) using a diagnostic developed in Fujiwara 2025b. This diagnostic exploited the observation that while VSVE contexts can support elision of adjuncts, argument ellipsis cannot (Goldberg 2005; Oku 1998b; Park 1997). Thus, if a VSVE construction permits an 'adjunct-inclusive' interpretation of the ellipsis clause and the elided adjunct can be targeted by propositional anaphor in a discourse, then the construction in question is a genuine case of VSVE.

To illustrate, consider again the VSVE data from Uyghur. In (202a), the second clause is missing the adjunct *qizil* ('red') and an adjunct-inclusive interpretation of that clause is not possible. Moreover, as (202b) shows, the propositional anaphor *bu* cannot be interpreted to mean *Ayghül painted the room red*, hence, the infelicity of (202b) as a response to (202a). Given these facts, this indicates that the adjunct cannot be independently elided in (202a).

(202) a. Zemire ma yataquy-ni qizil boyal-di, Ayghül a yataquy-ni
Zemire this room-ACC red paint-PST.3SG Ayghül that room-ACC
boyal-di.
paint-PST.3SG
'Zemire painted this room red and Ayghül painted that room (*red).'

b. #Bu yalran. Ayghül yataquy-ni yeshil boyal-di.
that false Ayghül room-ACC green paint-PST.3SG
'That's (=Ayghül painted that room red) not true. Ayghül painted the room green.'

In contrast, in VSVE contexts (as in (203a), an adjunct-inclusive interpretation is possible. Moreover, as (203b) shows, the anaphor *bu* can be interpreted to mean *Ayghül didn't paint her room red*, thus, indicating that the adjunct is syntactically present in the ellipsis clause in (203a).

(203) a. Zemire yataquy-i-ni qizil boyal-di lëkin Ayghül Δ
Zemire room-3POSS-ACC red paint-PST.3SG but Ayghül
boyal-ma-di.
paint-NEG-PST.3SG
'Zemire painted her room red, but Ayghül didn't paint her room red.'

b. Bu yalran. Ayghül=mu yataquy-ni qizil boyal-di.
that false Ayghül=also room-ACC red paint-PST.3SG
'That's (=Ayghül didn't paint her room red) not true. Ayghül painted her room red too.'

4.1.2 VSVE cross-linguistically

Cross-linguistically, VSVE has been attested in a range of languages, many of which are typologically unrelated. As was shown in the previous chapter, Uyghur, Turkish, and Uzbek are such languages (as was shown in (203a) for Uyghur, and in (204a) and (205) below for Turkish and Uzbek, respectively).

(204) a. Mehmet oda-si-ni hızlıca boya-di, ama Ali Δ
Mehmet room-3POSS-ACC quickly paint-PST.3SG but Ali
boya-ma-di.
paint-NEG-PST.3SG
'Mehmet painted his room red, but Ali didn't paint (his room quickly).'

b. Bu yalan. Ali (de) oda-si-ni hızlıca boya-di.
that false Ali too room-3POSS-ACC quickly paint-PST.3SG
'That's (= Ali didn't paint his room quickly) not true. Ali painted his room quickly too.'

(205) Zamira devor-ni qizil-ga bo'ya-di va Nilufar ham Δ bo'ya-di.
Zamira wall-ACC red-DAT paint-PST.3SG and Nilufar also paint-PST.3SG
'Zamira painted the wall red and Nilufar painted (the wall red) too.'

Further languages where VSVE has been attested include: Hindi-Urdu (Manetta 2019; Simpson 2023), European Portuguese (Cyrino and Matos 2002, 2005; Martins 2016;

Santos 2009), Greek (Merchant 2018), Japanese (Fenger 2020; Fujiwara 2017, 2022, 2025a,b; Funakoshi 2012, 2014, 2016), Bosnian/ Serbian/ Croatian (BCS) (Bošković 2018; Stjepanović 1999; Todorović 2016), Swahili (Ngonyani 1996, 1998), Russian (Gribanova 2013a,b, 2017), and Korean (Hildebrandt 2021).[1]

As shown below in (206a), in Hindi-Urdu, manner adverb adjuncts cannot be independently elided (Manetta 2019). But in VSVE contexts, as in (207a), an adjunct-inclusive interpretation of the ellipsis clause is available, thus indicating that the predicate phrase is the ellipsis target (where internal arguments and adjuncts are elided). Moreover, as the continuation in (207b) indicates, this material can be directly denied and referred to by a propositional anaphor, thus indicating that the adverb is syntactically present in the ellipsis site (cf. (206b)).

(206) a. Ram-ne Chomsky-ka naya lekh dhyaan-se paRh-a magar
Ram-ERG Chomsky-GEN new writing carefully read-PFV.M.SG but
Raj-ne nahiiN naya lekh paRh-a.
Raj-ERG NEG new writing read-PFV.M.SG
Ram read the new paper by Chomsky carefully, but Raj did not read the new paper (*carefully). (Manetta 2019: 925)

b. #aisa nahiiN hai. Raj bahut dhyaan-se Chomsky-ke arguments
this NEG AUX.PRS Raj very carefully Chomsky-GEN arguments
paRh rahaa thaa.
read PROG.M AUX.PST.M.
'This is not true. Raj was reading Chomsky's arguments very carefully.'

(207) a. Ram-ne Chomsky-ka naya lekh dhyaan-se paRh-a magar
Ram-ERG Chomsky-GEN new writing carefully read-PFV.M.SG but
Raj-ne Δ nahiiN paRh-a.
Raj-ERG NEG read-PFV.M.SG
Ram read the new paper by Chomsky carefully, but Raj did not read the new

[1]There are additional VSVE languages which will be put aside in this study due to the inability to independently verify all the additional data and tests that will be discussed in this chapter for these languages.

paper by Chomsky carefully. (Manetta 2019: 924)

b. aisa nahiiN hai. Raj bahut dhyaan-se Chomsky-ke arguments
this NEG AUX.PRS Raj very carefully Chomsky-GEN arguments
paRh rahaa thaa.
read PROG.M AUX.PST.M.
'This is not true. Raj was reading Chomsky's arguments very carefully.'

The same contrast is observed in European Portuguese. As shown below, (208a) cannot be felicitously responded to with (208b), thus, indicating that the manner adverb adjunct cannot be independently elided. But under VSVE, as in (209a), not only is an adjunct interpretation available but (209b) is a felicitous response, thus further confirming that (209a) is an instance of VSVE.

(208) a. A Raquel não limpou o carro cuidadosamente. Mas a Ana
the Raquel NEG cleaned the car carefully but the Ana
limpou o carro.
cleaned the car
'Raquel didn't clean the car carefully but Ana cleaned the car.'

b. #Eu não acredito nisso, a Ana é muito relaxada quando ela limpa,
I NEG believe in.this the Ana is very relaxed when she cleans
havia migalhas de pão espalhadas no assento do carro.
had crumbs of bread scattered on.the seat of.the car
'I don't believe this, Ana is very sloppy when she cleans, there were crumbs all over the car seat.'

(209) a. A Raquel não limpou o carro cuidadosamente. Mas a Ana
the Raquel NEG cleaned the car carefully but the Ana
limpou Δ.
cleaned
'Raquel didn't clean the car carefully but Ana cleaned the car carefully.'

b. Eu não acredito nisso, a Ana é muito relaxada quando ela limpa,
I NEG believe in.this the Ana is very relaxed when she cleans
havia migalhas de pão espalhadas no assento do carro.
had crumbs of bread scattered on.the seat of.the car
'I don't believe this, Ana is very sloppy when she cleans, there were crumbs all

over the car seat.'

Greek also displays the relevant contrast indicating that VSVE is an operative process (see Merchant 2018 for additional evidence that Greek instantiates VSVE). As shown in (210a), the adjunct cannot be independently elided, as the infelicity of the continuation in (210b) indicates. However, in VSVE contexts, an adjunct-inclusive interpretation of the gap is possible (211a) and can be felicitously responded to with (211b).

(210) a. O Petros den diavase prosektika kanena vivlio tou Chomsky, alla o
the Petros NEG read carefully any book of Chomsky but the
Kostas diavase ena vivlio tou Chomsky.
Kostas read a book of Chomsky.
'Petros didn't carefully read a book by Chomsky, but Kostas read a book by Chomsky.'

b. #Den to pistevo afto. O Kostas den diavase prosektika kanena vivlio
NEG it believe that the Kostas NEG read carefully any book
tou Chomsky.
of Chomsky
'I don't believe that. Kostas didn't carefully read a book by Chomsky.'

(211) a. O Petros den diavase prosektika kanena vivlio tou Chomsky, alla o
the Petros NEG read carefully any book of Chomsky but the
Kostas diavase Δ.
Kostas read
'Petros didn't carefully read a book by Chomsky, but Kostas carefully read a book by Chomsky.'

b. Den to pistevo afto. O Kostas den diavase prosektika kanena vivlio
NEG it believe that the Kostas NEG read carefully any book
tou Chomsky.
of Chomsky
'I don't believe that. Kostas didn't carefully read a book by Chomsky.'

Japanese can also be shown to instantiate VSVE. Fujiwara (2025b) shows that adjuncts cannot be independently elided due to the inability of propositional anaphors to target po-

tential missing adjuncts, as (212a,212b) shows. However, in VSVE contexts, as in (213a), (213b) is a felicitous response, thus, indicating the presence of an elided adjunct, which means the entire VP is elided. Fujiwara (2025; 2025, p.c.) argues that neither the adjunct ellipsis nor pragmatic inference proposals can account for the contrast in (212a) and (213a), where (212b) is not a felicitous response but (213b) is felicitous. The issue is that if an adjunct-inclusive interpretation were due to adjunct ellipsis, then an adjunct inclusive interpretation in (212a) should be available and the missing adjunct should be targetable by the propositional anaphor in (212b) (contrary to fact). Conversely, if an adjunct-inclusive interpretation were due to a pragmatic inference, then the missing adjunct in (213a) should not be targetable by the propositional anaphor in (213b). Thus, due to this contrast, Fujiwara (2025a,b) concludes there is strong evidence that (213a) is due to VSVE.[2]

(212) a. John-wa teineini kotti-no kuruma-o arat-ta yo. Bill-wa atti-no
John-TOP carefully this-GEN car-ACC wash-PST SFP Bill-TOP that-GEN
kuruma-o arat-ta yo.
car-ACC wash-PST SFP
'John washed this car carefully. Bill washed that car.'

b. #Sore-wa uso da ne. Datte Bill-wa teinei zyanakatta kara.
that-TOP lie COP SFP because Bill-TOP careful was.not because
'That's a lie. Because Bill wasn't careful.' (Fujiwara 2025a)

(213) a. John-wa teineini kuruma-o arat-ta yo. Bill-mo Δ arat-ta yo.
John-TOP carefully car-ACC wash-PST SFP Bill-also wash-PST SFP
'John washed a car carefully. Bill also washed a car carefully.'

[2]It is worth noting that some previous works have claimed that Japanese does not have VSVE in addition to null argument *pro* constructions (as discussed in Hoji 1998) or argument ellipsis (as discussed in Goldberg 2005; Maeda 2019; Oku 1998a,b; Saito 2007; Sakamoto 2020; Şener and Takahashi 2010; Takahashi 2008, 2014, *i.a.*). In particular, there are works that argue that Japanese lacks VSVE and that cases like (213a) are instances of argument ellipsis, where the adjunct-inclusive interpretation is due to either the adjunct being independently elided (Kobayashi 2020; Landau 2020a; Oku 2016; Tanabe and Kobayashi 2023) or a pragmatic inference (Landau 2023b). However, given the above data it is clear that VSVE is an option in Japanese.

b. Sore-wa uso da ne. Datte Bill-wa teinei zyanakatta kara.
that-TOP lie COP SFP because Bill-TOP careful was.not because
'That's a lie. Because Bill wasn't careful.' (Fujiwara 2025a)

VSVE has also been attested in BCS (Stjepanović 1999; Todorović 2016). As shown below, that BCS instantiates VSVE is confirmed by the observation that while an adjunct-inclusive interpretation is unavailable in (214a); such an interpretation is available in (215a). Moreover, that (215a) can be felicitously replied to with (215b) further confirms that the relevant process is VSVE (cf. (214b)).

(214) a. Marko ne piše rad pažljivo, a Marija piše rad.
Marko not writes paper carefully but Marija writes paper
'Marko isn't writing a paper carefully but Maria is writing a paper.'

b. #To ti ne vjerujem. Marija piše rad nemarno.
that you not believe Marija writes paper carelessly
'I don't believe you. Maria is writing a paper carelessly.'

(215) a. Marko ne piše rad pažljivo, a Marija piše Δ.
Marko not writes paper carefully, but Marija writes
'Marko isn't writing the paper carefully, but Maria is writing a paper carefully.'

(Stjepanović 1999: 43)

b. To ti ne vjerujem. Marija piše rad nemarno.
that you not believe Marija writes paper carelessly
'I don't believe you. Maria is writing a paper carelessly.'

Swahili also allows for VSVE. As shown below, while adjuncts cannot be independently elided, as (216a) and (216b) show, in VSVE contexts, such elements can be elided, as in (217a). Additionally, that the VSVE construction in (217a) admits of an adjunct-inclusive interpretation and can be replied to with (217b) indicates that the underlying process involved in (217a) is VSVE.

(216) a. Mw-alimu a-li-nunu-a ki-tabu ch-a Chomsky ili
1-teacher 1.SM-PST-buy-FV 7-book 7-a Chomsky in.order
a-jifunz-e isimu, na wa-nafunzi wa-li-nunu-a ki-tabu
1SM-learn-SUBJ 9.linguistics, and 2-student 2.SM-PST-buy-FV 7-book
ch-a Chomsky pia.
7-a Chomsky too
'The teacher bought Chomsky's book in order to learn linguistics and the students bought Chomsky's book too.'

b. #Hapana, hiyo si kweli. Wa-nafunzi wa-li-nunu-a ki-tabu ch-a
no that is.not true 2-student 2.SM-PST-buy-FV 7-book 7-a
Chomsky ili wa-som-e m-ambo ya siasa.
Chomsky in.order 2.SM-study-SUBJ 6-matters of 9.government
'No, that isn't true. The students bought Chomsky's book to study politics.'

(217) a. Mw-alimu a-li-nunu-a ki-tabu ch-a Chomsky ili
1-teacher 1.SM-PST-buy-FV 7-book 7-a Chomsky in.order
a-jifunz-e isimu, na wa-nafunzi wa-li-nunu-a Δ pia.
1SM-learn-SUBJ 9.linguistics, and 2-student 2.SM-PST-buy-FV too
'The teacher bought Chomsky's book to study linguistics, and the students bought Chomsky's book to study linguistics too.

b. Hapana, hiyo si kweli. Wa-nafunzi wa-li-nunu-a ki-tabu ch-a
no that is.not true 2-student 2.SM-PST-buy-FV 7-book 7-a
Chomsky ili wa-som-e m-ambo ya siasa.
Chomsky in.order 2.SM-study-SUBJ 6-matters of 9.government
'No, that isn't true. The students bought Chomsky's book to study politics.'

As shown below, Russian also exhibits VSVE (Gribanova 2013a,b, 2017) . While adjuncts cannot be independently elided (218a), an adjunct inclusive interpretation is available in (219a), which can be directly disputed, as in (219b), thus, indicating VSVE.

(218) a. Ivan ne prigotovil tort tochno sleduya retseptu, a Piter prigotovil
Ivan NEG prepared cake exactly following recipe but Peter prepared
tort.
cake
'Ivan didn't prepare a cake exactly following the recipe, but Peter prepared a

cake.'

b. #Eto nepravda. Piter redko sleduyet retseptu.
that not.true Peter rarely follows recipe
'That's not true. Peter rarely follows the recipe.'

(219) a. Ivan ne prigotovil tort tochno sleduya retseptu, a Piter prigotovil
Ivan NEG prepared cake exactly following recipe but Peter prepared
Δ.

'Ivan didn't prepare a cake exactly following the recipe but Peter prepared a cake exactly following the recipe.'

b. Eto nepravda. Piter redko sleduyet retseptu.
that not.true Peter rarely follows recipe
'That's not true. Peter rarely follows the recipe.'

Korean also exhibits VSVE. As in other VSVE languages, while adjuncts cannot be independently elided, as in (220a), an adjunct-inclusive interpretation is available in VSVE contexts (221a). Moreover, in VSVE contexts the adjunct-inclusive interpretation can be directly disputed in a discourse, as shown in (221b), which indicates VSVE (cf. (220b)).[3]

(220) a. Minswu-nun tangkun-ul ppalli thongccaylo samkhy-ess-ko, Swuni-to
Minswu-TOP carrot-ACC quickly whole devour-PST-CONJ Swuni-too
tangkun-ul samkhy-ess-eyo.
carrot-ACC devour-PST-DECL.POL
'Minswu quickly devoured a carrot whole and Swuni devoured a carrot too.'

[3]Note that as with Japanese (see fn. 2) there is some debate regarding whether Korean has VSVE or only has argument ellipsis and/or object *pro* (see Goldberg 2005; Lee 2016; Park 1997 for discussion). However, as with Japanese VSVE, Korean VSVE constructions clearly pass Fujiwara's (2025) direct denial test, thus indicating VSVE is a possibility for Korean. See Hildebrandt 2021 for additional discussion regarding whether there's speaker variation for Korean VSVE. More generally, it is also worth noting that among some of the other languages discussed in this chapter, there is some debate regarding whether that language admits of VSVE, since some speakers have been reported as rejecting adjunct-inclusive interpretations in putative VSVE construction (Bailyn 2017; Goldberg 2005; Landau 2020a, 2021, 2023b). However, as with Japanese and Korean, as the above data using Fujiwara's (2025) direct denial test clearly show, there are speakers for all these languages who do allow VSVE.

b. #Kuleci anh-ayo. Swuni-nun chenchenhi tangkun-ul ilpu-man
that NEG-DECL Swuni-TOP slowly carrot-ACC part-only
mek-ess-eyo.
eat-PST-DECL.POL
'That's not true. Swuni slowly ate only part of the carrot.'

(221) a. Minswu-nun tangkun-ul ppalli thongccaylo samkhy-ess-ko, Swuni-to
Minswu-TOP carrot-ACC quickly whole devour-PST-CONJ Swuni-too
Δ samkhy-ess-eyo.
devour-PST-DECL.POL
'Minswu quickly devoured the carrot whole and Swuni devoured the carrot whole quickly too.' (Hildebrandt 2021: 5)

b. Kuleci anh-ayo. Swuni-nun tangkun-ul ppalli mek-ci
that NEG-DECL Swuni-TOP carrot-ACC quickly eat-CI
anh-ass-eyo, chenchenhi mek-ess-eyo.
NEG-PST-DECL.POL slowly eat-PST-DECL.POL.
'That's not true. Swuni did not eat the carrot quickly, she ate it slowly.'

As the above cases show, in VSVE contexts, the ellipsis clauses admit of an interpretation that is inclusive of both internal argument and adjuncts, thus, indicating that the ellipsis target is vP/VP despite the main verb being pronounced.

While all of the above languages have been observed to exhibit VSVE, among them there is a typological split. As discussed in the previous chapter, it has been observed that in VSVE languages there is variation regarding whether the stranded verb must be lexically identical to the verb in the antecedent clause. In Turkish (222), Uzbek (223) (Gribanova 2020), Hindi-Urdu (224) (Manetta 2019; Simpson et al. 2013), Japanese (225) (Fenger 2020; Funakoshi 2014, 2016), Russian (226) (Gribanova 2013b), BCS (227), and Korean (228), the stranded verb must be lexically identical to the verb in the antecedent. As shown in the examples below, when the stranded verb is distinct from the lexical verb, an adjunct-inclusive interpretation of the ellipsis clause is not possible. Given the unavailability of an adjunct-inclusive interpretation, this indicates that the underlying process cannot involve

predicate ellipsis, i.e. ellipsis that targets at least the VP and involves elision of the both the internal argument(s) and adjuncts. If the constructions below involved predicate ellipsis, then an adjunct-inclusive interpretation of the ellipsis clause should be possible (contrary to fact).[4]

(222) *Ben yemek güzel **çık-ar** san-dım ama (sadece) Δ
I food good turn.out-PRS.3SG think-PST.3SG but only
görün-müş.
appear-EVID.
'I thought the food would be tasty but it only appeared tasty.' (Us 2025: 7)

(223) *Men [Farhod sabzi-ni xomligicha **ye**-di deb] o'yla-dim, lekin
1SG Farhod carrot-ACC raw eat-PST.3SG C think-PST.1SG but
siz [*pro* Δ **g'aji**-di deb] ayt-dingiz.
2SG chew.PST-3SG C say-PST.2SG
'I thought that Farhod ate the carrot raw, but you said he chewed the carrot raw.

[4]It should be noted that for certain VSVE languages an additional diagnostic may be available which indicates whether (or not) verbal identity is imposed in VSVE, namely, whether verbal mismatches are possible inside of an island. This diagnostic exploits the fact that in some languages, e.g. Hindi-Urdu, null object *pro* is not available inside of islands, while VSVE is (Manetta 2019). As a result, the only process which can derive the surface string in (ib.) is VSVE (and not *pro*-drop). However, as shown in (iib.) when the verb inside the island is distinct from the antecedent, an overt object pronoun is required and VSVE is not possible, thus, indicating the Hindi-Urdu enforces verbal identity for VSVE.

i. a. Meena-ne nayii gaaRii aaj kharid-ii thii.
Meena-ERG new.F car.F today buy-PFV.F AUX.F
'Meena bought a new car today.'

b. kyaa aap yeh baat jaan-te haiN ki Manu-ne bhi Δ kharidii thii?
Q 2PL that fact know-HAB.PL AUX that Manu-ERG also buy-PFV.F AUX.F
'Did you know the fact that Manu also bought a new car today?' (Manetta 2019: 927)

ii. a. Sita-ne ghar-ko beech-a. Aap jaan-te haiN yeh baat ki Ram-ne
Sita-ERG house-ACC sell-PFV.M 2PL know-HAB.PL AUX.PL the fact that Ram-ERG
?*(us-ko) bhi banaay-aa thaa?
3SG-ACC also build-PFV.M AUX.M
'Sita sold the house. Did you know that Ram also built it?' (Manetta 2019: 934)

While this diagnostic is applicable in some VSVE languages, e.g. Hindi-Urdu, it is not applicable for all VSVE languages due to many languages being able to license object *pro* inside of islands (e.g. Landau (2020a) shows that in some contexts European Portuguese may allow for *pro* inside of islands; see also Raposo 1986). Given that lack of universal applicability of this island test for verbal identity, I set it aside in the present study.

(Gribanova 2020: 29)

(224) *Ram-ne match shuru hone-se pehle kursii **uthaa**-yii lekin
Ram-ERG match start become.INF-ABL before chair.F lift-PFV.F.SG but
Raj-ne Δ **giraa**-yii.
Raj-ERG drop-PFV.F.SG
'Ram lifted a chair before the match started, but Raj dropped the chair before the match started.'

(225) *Taro-wa (itumo) kurezittokaado-de hon-o **ka**-u kedo, Hanako-wa
Taro-TOP (always) credit.card-with book-ACC buy-PRES but Hanako-TOP
Δ **koonyuusi**-na-i.
purchase-NEG-PRES
'Taro (always) buys a book with a credit card, but Hanako (always) does not purchase a book with a credit card.'

(Funakoshi 2014: 329)

(226) a. Nepravitel'stvennye organizacii dolžny byli **razdavat'**
nongovernmental organizations supposed.PL were.PL out-give.2IMPF.INF
butylki vody bežencam na Gaiti.
bottles.ACC water.GEN refugees.DAT on Haiti.
'NGOs were supposed to be giving out bottled water to refugees in Haiti.'

b. #Nas očen' volnujut sluxi čto oni **prodavali** Δ.
us.ACC very worry.3PL rumors that they.NOM through-give.2IMPF.PL
'The rumors that they were selling bottled water to refugees in Haiti really worry us.' (Gribanova 2013b: 124)

(227) *Ivan **piše** rad pažljivo, a njegov asistent **kopira** Δ.
Ivan writes paper carefully, and his assistant copies
'Ivan is writing a paper carefully and his assistant is copying it carefully.'

(228) *Minse-nun achim-ey caki-uy emma-lul wihay kwail-ul **sa**-ss-ciman,
Minse-TOP morning-LOC self-GEN mother-ACC for fruit-ACC buy-PST-but
Yenghi-nun Δ **hwumchi**-ess-ta.
Yenghi-TOP stole-PST-DECL.POL
'Minseo bought fruit for her mother in the morning, but Yenghi stole fruit for her mother in the morning.'

In contrast to the above languages, in some VSVE languages the stranded verb can be lexically distinct from the main verb of the antecedent clause. In the previous chapter, this was shown to be the case for Uyghur VSVE. As shown in (229,230), the main verbs in the antecedent clauses are *berdi* and *aldi* but the stranded verbs are *ewetti* and *oghrildi*, respectively. Moreover, the gaps in the ellipsis clauses admit of adjunct-inclusive interpretations.

(229) Zemire Ayghül-ga sowghat-ni ettigen-de **ber**-di, lëkin Nilufar Δ
Zemire Ayghül-DAT gift-ACC morning-LOC give-PST.3SG but Nilufar
ewet-ti.
send-PST.3SG
'Zemire gave Ayghül a gift in the morning, but Nilufar sent Ayghül a gift in the morning.'

(230) Zemire dukan-din bir alma **al**-di, lëkin Ayghül Δ **oghril**-di.
Zemire store-ABL one apple buy-PST.3SG but Ayghül steal-PST.3SG
'Zemire bought an apple from the store, but Ayghül stole an apple from the store.'

Santos (2009) shows that European Portuguese also permits verbal mismatches in VSVE contexts. As shown in (231,232), the verbs in the antecedents and ellipsis clauses are distinct. Moreover, as noted by Santos (2009), the gap in the ellipsis clause in (231) admits of an adjunct-inclusive interpretation, thus, indicating elision of the vP/VP.

(231) O João **vendeu** livros á Teresa ontem e a Ana **ofereceu** Δ.
the João sold books to.the Teresa yesterday and the Ana offered
'João sold books to Teresa yesterday and Ana offered books to Teresa yesterday.'

(adapted from Santos 2009: 57)

(232) Os dossiers têm de ser **organizados** pela Ana mas, os dossiers dos
the files must be organized by.the Ana but the files of.the
impostos, ela não **quer** Δ.
taxes she NEG wants
Lit. 'The files must be organized by Ana, but those files concerning taxes, she doesn't want to organize.' (Santos 2009: 103)

Greek also allows for verbal mismatches in VSVE contexts (Merchant 2018). As (233,234) illustrate, the ellipsis clause admits of an interpretation that includes the PP-adjuncts indicative of VSVE.

(233) O Petros dhen **vrike** kanena vivlio sti vivliothiki, ute o Kostas
the Petros not found no book in.the library neither the Kostas
exase Δ.
lost
'Petros didn't find any book in the library, neither did Kostas lose any book in the library.

(234) O Kostas **agorase** ena santouits apo tin kafeteria, alla o Petros **eklepse**
the Kostas bought a sandwich from the cafeteria, but the Petros stole
Δ.

'Kostas bought a sandwich from the cafeteria, but Petros stole a sandwich from the cafeteria.'

Finally, Swahili allows for verbal mismatches in VSVE contexts, as in (235,236). As illustrated in (235), the stranded verb is distinct from the antecedent verb and an adjunct-inclusive interpretation of the gap is available (i.e. the clausal-adjunct), indicating VSVE is the operative process.

(235) Peter a-na-**pend**-a kahawa kabla ya kw-enda kazi-ni, lakini
Peter 1.SM-PRES-like-FV 9.coffee before of to-go 9.work-LOC but
Maria a-na-**chuki**-a Δ.
Maria 1.SM-PRES-hate-FV
'Peter loves coffee before going to work, but Mary hates coffee before going to work.'

(236) a. m-kurugenzi a-li-**omb**-a wazee wa-tembele-e ki-wanda ch-ote
1-director 1.SM-PST-ask-FV them 2.SM-visit-SUBJ 7-factory 7-all
'The director told them to visit the entire factory.'

b. lakini meneja a-li-**amuru** Δ.
but 1.manager 1.SM-PST-command
'but the manager commanded them to visit the entire factory.'

(Ngonyani 1996: 76)

In this respect, Uyghur, European Portuguese, Greek and Swahili VSVE crucially differ from Turkish, Uzbek, Hindi-Urdu, Japanese, Russian, BCS, and Korean VSVE. In the former languages verbal mismatches are possible in VSVE contexts; in the latter languages they are impossible.

As previously discussed, this difference as to whether or not the stranded and antecedent verbs must match can be stated in terms of whether the VIR holds for that language (see Fenger 2020; Goldberg 2005; Gribanova 2013b, 2020; Lipták 2012; McCloskey 2017; Schoorlemmer and Temmerman 2012, among others):

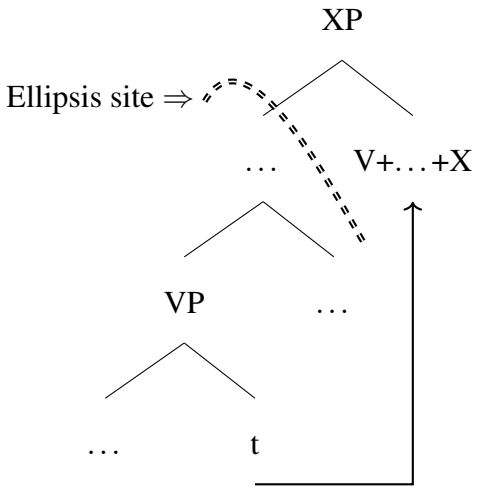
(237) **Verbal Identity Requirement**: In VSVE contexts, the antecedent and stranded main verb must be identical in root and derivational morphology.
(adapted from Goldberg 2005: 171)

Thus, given (237), Turkish (222), Uzbek (223), Hindi-Urdu (224), Japanese (225), Russian (226), BCS (227), and Korean (228) are VIR-obeying VSVE languages; Uyghur (229,230), European Portuguese (231,232), Greek (233,234), and Swahili (235,236) are not VIR-obeying VSVE languages.

As for the underlying mechanism behind the VIR, in the previous chapter, I argued that this split behind whether the VIR holds or not, is determined by whether (or not) V undergoes syntactic head-movement out of the VSVE target. If V undergoes syntactic head-movement out of the VSVE target, then it will leave a trace within the VP (as in (238)). Since traces do not induce identity violations (per the syntactic identity condition

in (258)), the VP can be elided even in cases where there is non-identity between the antecedent and stranded V.

(238)



(258) Any non-trace morpheme *m* that occurs in an elided phrase must have an equivalent overt correlate m' in the elided phrase's antecedent.
(Merchant 2010: 55)

But in VSVE contexts where V does not undergo syntactic head-movement out of the ellipsis target, and only undergoes movement in PF (as in (239)), the VIR holds and verbal mismatches are not possible. In such cases, V does not undergo syntactic V-to-X movement but remains within the VP. Subsequently, when the VP is targeted for ellipsis, V is within the ellipsis target when identity is calculated. Thus, given the syntactic identity condition in (258), V must be lexically identical to the V in the antecedent. Only after identity is calculated does V undergo PF movement out of the ellipsis target.

(239) a. **Syntax:** $[_{XP}\ [_{\ldots_{\text{ellip. tgt.}}}\ \ldots\ [_{VP}\ \ldots\ V\ ]\ \ldots\ ]\ X\ ]$

b. **PF:** [[. . . [V] . . .] X] → [~~[. . . [. . .]]~~ V+. . .+X]

The key point is that, among VSVE languages, whether the VIR holds (or not) is due to the type of head-dependency involved in V-stranding. In languages where the VIR does not

hold, V-stranding involves syntactic V-to-X movement outside of the ellipsis target. But in languages where the VIR holds, V does not undergo syntactic V-to-X movement. Instead, it undergoes movement in PF (after syntactic identity is calculated) Due to this difference in the head-dependency involved in V-stranding, there is a difference in VIR effects.

4.2 Extraction from ellipsis

I will now turn to the second point of variation that was observed in the previous chapter: whether Ā-extraction is possible out of the VSVE target. As was shown in the previous chapter, Uyghur, and Turkish (and Ubzek) VSVE differ as to whether Ā-extraction out of the VSVE target is permitted or not. In Uyghur VSVE, Ā-extraction is permitted, as in (240a,240b). But in Turkish VSVE, such extraction is not possible, as in (241a,241b). As with Turkish VSVE, Uzbek VSVE was shown to not permit Ā-extraction out of the VSVE target either, as (242) shows.

(240) a. Aygül kiyim-ni asta-asta yu-di, lëkin chapan-ni$_i$, u Δ
Ayghül dress-ACC slowly wash-PST.3SG, but jacket-ACC 3SG
yu-ma-di.
wash-NEG-PST3SG
'Ayghül washed the dress slowly, but as for the jacket, she didn't wash slowly.

b. Kitap-ni$_i$, Zemire t_i Ayghül-ga ettigen-de ber-di, lëkin
book-ACC Zemire Ayghül-DAT morning-LOC give-PST.3SG but
alma-ni$_j$, u Δ ber-mi-di.
apple-ACC 3SG give--NEG-PST.3SG
'The book, Zemire gave to Ayghül in the morning, but the apple, she didn't give to Ayghül in the morning.

(241) a. *Mehmet gomleg-i yavas-(ca) yika-di, ama ceketi$_i$-i (ise), o
Mehemet shirt-ACC slowly wash-PST.3SG but jacket-ACC TOP, 3SG

Δ yika-ma-di.
wash-NEG-PST.3SG
'Mehmet washed the shirt slowly but as for the jacket, he didn't wash slowly.

b. *Kitab$_i$-i, Mehmet Ali-ye okul-da t_i ver-di, ama
book-ACC Mehmet Ali-DAT school-LOC give-PST.3SG but
dergi$_j$-yi (ise), o Δ ver-me-di.
magazine-ACC TOP 3SG give-NEG-PST.3SG
'The book$_i$, Mehmet gave to Ali at school, but as for the magazine, he didn't give to Ali at school.

(242) *Nilufar tez-tez pol-ni yuv-a-di lekin deraza-lar-ni$_i$, u Δ
Nilufar quickly floor-ACC wash-PRES-3SG but window-PL-ACC, 3SG
yuva-ma-y-di.
wash-NEG-PRES-3SG.
'Nilufar quickly washes the floors but as for the windows, she won't wash quickly.'

Among the languages under discussion in the present chapter, there is variation regarding the possibility of Ā-extraction as well.

In European Portuguese, elements can be freely extracted from the VSVE target (see Santos 2009 for additional discussion). As shown below, both *wh*-extraction (243a) and topicalization movement (243b) out of the VSVE target are possible.

(243) a. Eu entregui o teste aos alunos de segundo ano na segunda,
I gave the exam to.the students of second year on.the Monday
e a quem$_i$ é que tu enregaste Δ?
and to whom is that you gave
'I gave the exam to second years students on Monday, and who did you give the exam to?'

(Santos 2009: 45)

b. À escola$_i$, ele leva sempre os filhos t_i e á natação$_j$
to-the school he takes always the kids and to-the swimming
também leva Δ.
also takes
'To school, he always drives his kids, and to swimming, he does too.'

(adapted from Martins 2016)

In Greek, extraction out of VSVE targets is also quite generally permitted (see Merchant 2018 for extensive discussion). As shown below, Greek VSVE allows for *wh*-extraction (244a) and topicalization (244b) out of VSVE targets.

(244) a. Me pjon$_i$ ithele i Maria na milisi t$_i$, ke me pjon$_j$ ithele
with whom wanted the Maria SUBJ speaks and with whom wanted
i Ana Δ?
the Ana
'With whom did Maria want to speak, and with whom did Anna want to speak?'

(Merchant 2018: 249)

b. Theno na miliso ja to proto thema. Ja to deftero$_i$, dhe
want.1S SUBJ SPEAK.1S about the first topics about the second not
thelo Δ.
want.1S
'I want to speak about the first topic. About the second, I don't want to speak.'

(Merchant 2018: 259)

Finally, Swahili VSVE also allows for the same types of extraction as in the other VIR-violating VSVE languages. As shown in (245), topicalization out of the VSVE target is possible and (246) shows that *wh*-extraction is possible as well.

(245) Nyama$_i$, a-li-pik-a vizuri t$_i$, lakini mboga$_j$
9.meat 1SM-PST-cook-FV well but 9.vegetables
ha-ku-pik-a Δ.
NEG.1SM-NEG.PST-cook-FV
'The meat she cooked well, but the vegetables she didn't cook well.

(246) a. a-li-sem-a kwamba a-ta-ib-a barua
1.SA-PST-say-FV that 1.SM-FUT-steal-FV 9.letter
'She said she will steal the letter.'

b. na ni-na-ju-a kwa nini a-ta-ib-a Δ.
and I-PRT-know-FV for what 1.SM-FUT-steal-FV

'and I know why she will'

(Ngonyani 1996: 83)

Now compare with Hindi-Urdu (247), Japanese (248), Russian (249), BCS (250), and Korean (251), which are all VIR-obeying languages (224-227). As shown below, in all of these languages Ā-extraction out of the VSVE target is impossible:[5]

(247) *gaarii$_i$ Ram-ne dhyaan-se t_i dho-ii lekin khirkiyaa$_j$ us-ne Δ
car.F Ram-ERG carefully wash-PFV.F but window.F.PL he-ERG
nahiiN dho-iiN.
NEG wash-PFV.F.PL
'The car, Ram washed carefully, but the windows, he didn't carefully wash.'

(248) *Bill-wa kuruma-o teinei aratta kedo, baiku$_i$-o kare-wa Δ
Bill-TOP car-ACC carefully wash.PST but bike-ACC 3SG-TOP
arawanakatta.
wash.NEG.PST
'Bill washed the car carefully, but, as for the motorbike, he didn't wash carefully.'

(249) *Tort$_i$, Marta ne prigotovila t_i tochno sleduja receptu, a pirog$_j$, Petja
cake Martha NEG prepared exactly following recipe but pie Peter
prigotovil Δ.
prepared
'The cake, Martha didn't prepare exactly following the recipe, but the pie, Peter prepared exactly following the recipe.'

(250) *Šta$_i$ Marko piše t_i pažljivo, a šta$_j$ njegov asistent piše Δ?
what Marko writes carefully and what his assistant writes
'What does Marko write carefully and what does his assistant write carefully?'

(251) *Kheyk$_i$-ul, Cheli-ka lesiphi-ey ttalase t_i cwunpihay-ss-ciman,
cake-ACC Cheli-NOM recipe-LOC according.to prepare-PST-but
ppang$_j$-ul, Yenghi-ka Δ cwunpiha-ci-anh-ass-eyo.
bread-ACC Yenghi-NOM prepare--CI-NEG-PST-DECL.POL.
'The cake, Cheli prepared according to the recipe, but the bread, Yenghi didn't

[5]As discussed in fn. 1 of Chapter 3, the "*" marking indicates that these sentences in (247)-(251) are ungrammatical relative to the target interpretation indicated in the translations.

prepare according to the recipe.'

Given the above facts, there is a striking correlation between VSVE languages where the VIR, i.e. (237), holds and whether XPs can be Ā-extracted out of the VSVE target. In all the VIR-obeying languages, Ā-extraction out of the VSVE target is impossible and in all the VIR-violating languages Ā-extraction out of the VSVE target is possible. Thus, given this correlation, I propose the following generalization:

(252) **Extraction-VIR Generalization**: VIR violations are only possible in a VSVE context, if Ā-extraction out of the VSVE target is possible.

Given the above cases, it is clear that whether the VIR holds for a VSVE construction and whether whether Ā-extraction is possible are not independent points of variation. Rather, what the above cases show is that these points of variation are tightly correlated. Moreover, it is clear that this correlation between whether the VIR holds and whether Ā-extraction is possible, is a general correlation across VSVE languages and is not narrow point of variation between Turkish (and Uzbek) and Uyghur. In brief, what the above cases show is that (252) is a generalization that holds for VSVE languages quite generally.

4.3 Explaining the correlation

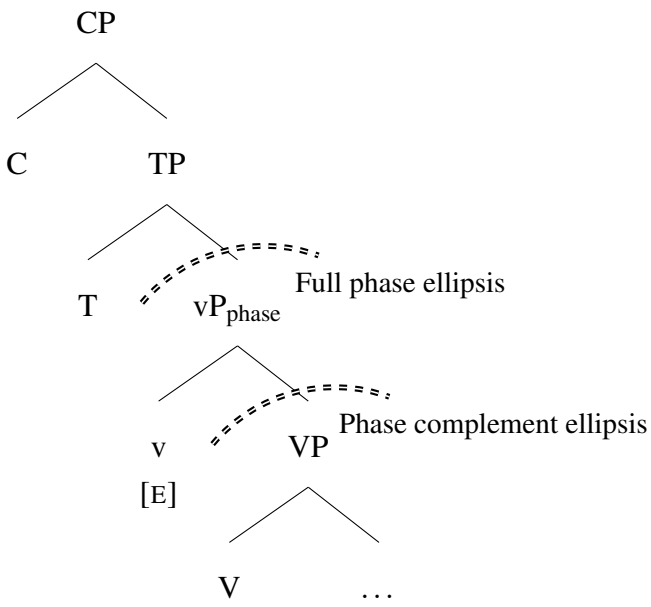
Given that (252) holds cross-linguistically (and is not localized to Turkish and Uyghur VSVE), this indicates a genuine typological split between VSVE languages. I propose that what underlies this typological split is the same underlying point of variation proposed in the prior chapter for Uyghur and Turkish VSVE, namely, whether the ellipsis target is a full phase or phase complement. In this section, I show that the same underlying factor, i.e. the phasal status of the VSVE target, that regulated both Ā-extraction and VIR effects in

Uyghur and Turkish VSVE is what explains the cross-linguistic generalization in (252). In other words, the proposed analysis of the Uyghur and Turkish contrasts in question can be quite generally extended to deduce the generalization in (252).

As discussed in the prior chapter, I adopt the proposal in Bošković 2014 that ellipsis involves an [E]-feature bearing phase head and that upon the merger of the next higher phase head, either the complement of the [E]-bearing phase head or full phase is marked for ellipsis (253), with ellipsis-marking having a freezing effect for movement. In the previous chapter, I argued that in Turkish VSVE, the phase head v bears [E] and the vP phase is marked for ellipsis, while in Uyghur a higher functional head F bears [E] and the vP phase complement is marked for ellipsis. For the latter case, this was motivated by the considerable evidence that in Uyghur vP is not a phase, but rather a phrase immediate above vP, FP, serves as the phase. In this chapter, however, I will adopt a simplifying assumption (strictly for ease of exposition) and assume that v is uniformly a phase head cross-linguistically and bears [E] in VSVE contexts Thus, in VSVE contexts, upon merger of C, either the VP, which is the the complement of the $v_{[E]}$ phase head, or full vP phase is marked for ellipsis, as in (253).[6]

[6]In Chapter 6 (§6.3.2), I explore the possibility that VSVE quite generally targets vP across VSVE languages and the key point of cross-linguistic variation is whether vP is a phase (as in Turkish) or a phase complement (as in Uyghur). See Chapter 6 for relevant discussion.

(253)



The reason for adopting this simplifying assumption is that in the present chapter many languages are being considered, which may vary in terms of what phrases are projected in the middle-field. However, for present purposes, the key point is not the specific identity of [E]-bearing phase head, but whether VSVE involves full phase or phase complement ellipsis. Thus, I will assume for expository purposes that v is uniformly the [E]-bearing phase head cross-linguistically.

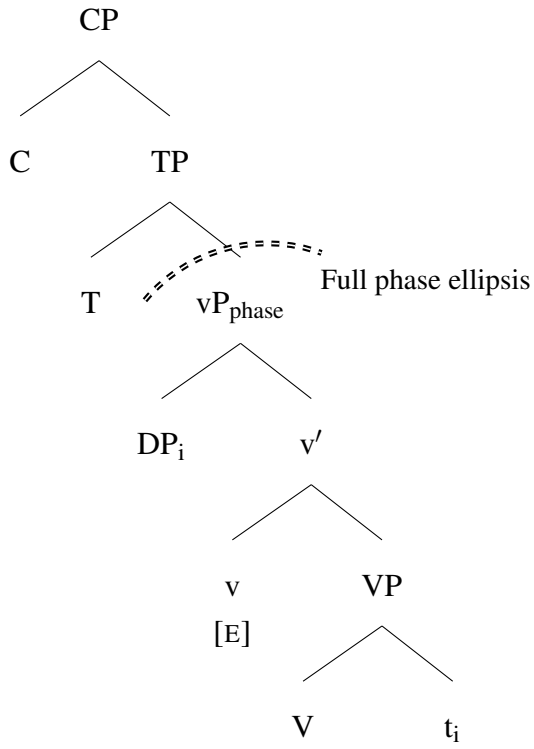
Consider now the observation that in VIR-obeying languages Ā-extraction out of the VSVE target is not possible in light of the generalization made in Bošković 2014 and discussed in the prior chapter:

(254) If the XP-ellipsis target is a phase, then Ā-extraction out of XP is not possible.

Given (254), in VSVE languages where Ā-extraction out of the VSVE target is not possible, VSVE uniformly target the full phase. As discussed in the previous chapter regarding Turkish VSVE, when VSVE involves full phase ellipsis, the element undergoing Ā-extraction

is blocked from escaping the phase due to the moving DP being elided before it can undergo further movement to a higher position. Concretely, as (255) sketches, the DP moves to the phase edge, Spec, vP, as an intermediate landing site (due to the PIC). Later, upon merger of C, the entire vP phase is marked for ellipsis and is frozen for further syntactic operations. The DP in Spec, vP, is then inaccessible to further movement operations, i.e. it is trapped. Thus, Ā-movement from within the vP is not possible when VSVE involves full phase ellipsis.

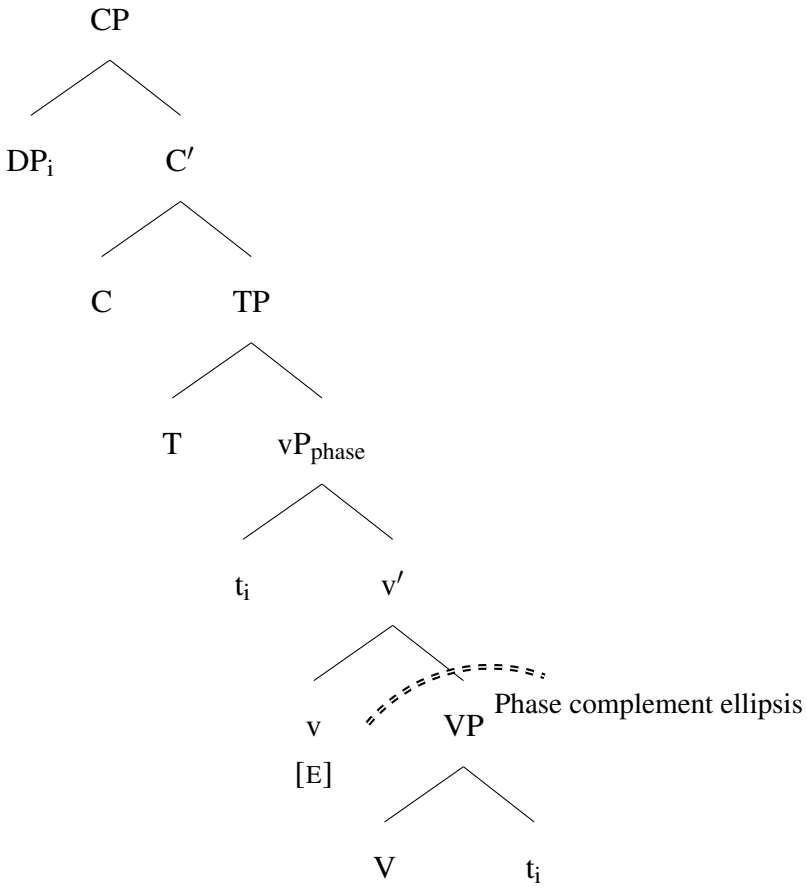
(255)



Conversely, in VSVE language that involve phase complement ellipsis, Ā-extraction can proceed. In the case of phase complement VSVE, the extracted DP moves to Spec, vP as an intermediate landing site (due to the PIC). Later, upon merger of C, the VP phase complement is marked for ellipsis. Crucially, however, in phase complement VSVE contexts, the phase complement is elided (i.e. VP) and not the full vP phase. Thus, since the DP is

outside of the phase complement ellipsis domain, it can then move to a higher position—i.e. its landing site, as in (256).

(256)

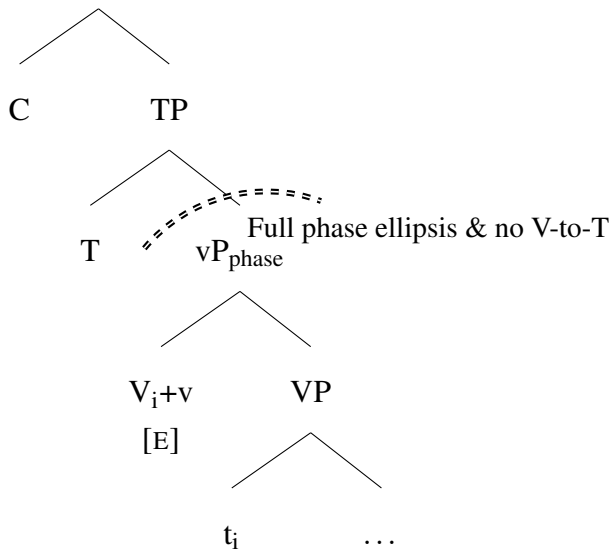


Thus, among VSVE languages, whether Ā-extraction is possible out of the VSVE target (or not) is due to the phasal status of the VSVE target. When VSVE involves phase complement ellipsis, Ā-extraction is possible; when VSVE involves full phase ellipsis, Ā-extraction is not.

Now consider how this difference in the phasal status of the VSVE target affects whether syntactic V-movement out of the VSVE target is possible, which in turn affects whether VIR violations are possible. In VIR-obeying languages, the [E]-bearing phase head v merges with the VP, and V moves to v. Upon merger of C, the full vP is marked

for ellipsis, which includes the v+V head, as in (257a). Since V is within the vP-ellipsis domain when syntactic identity is calculated, it is subject to the syntactic identity condition in (258). Therefore, V must be lexically identical to the V in the antecedent clause. After syntactic identity is calculated, V undergoes PF movement to the inflectional T to provide PF support (i.e. to provide a verbal host for T) (257b). The crucial point is that since V is within the ellipsis domain when syntactic identity is calulcated, V must be identical to its antecedent— i.e. the VIR holds for the stranded V.

(257) a.



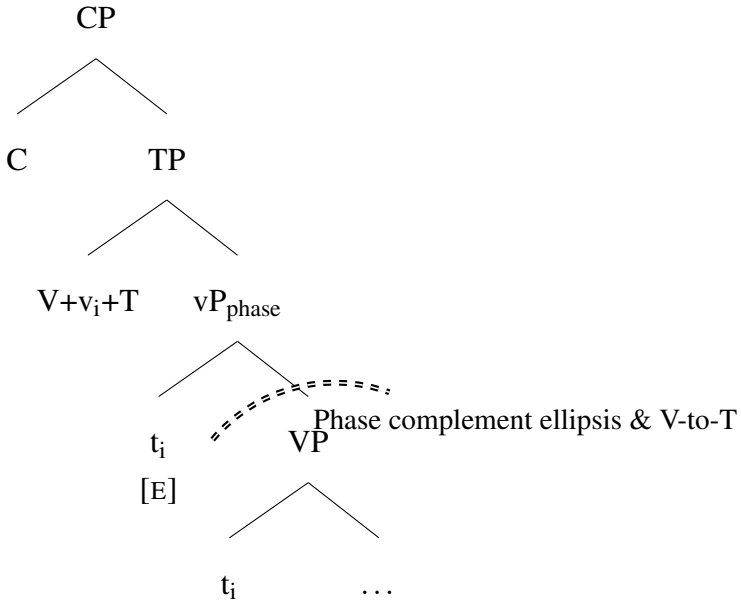
b. PF: [. . . ~~[. . . V+v]~~ . . . T] → [. . . ~~[. . .]~~ . . . V+v+T]

(258) Any non-trace morpheme *m* that occurs in an elided phrase must have an equivalent overt correlate m' in the elided phrase's antecedent.
(Merchant 2010: 55)

Conversely, in VIR-violating languages, an [E]-bearing v merges with the VP and V moves to v. But in this case, after C merges, the VP phase complement is marked for ellipsis. Since the v+V head is outside of the ellipsis domain (and thus not subject to ellipsis' syn-

tactic identity condition), it can undergo further syntactic head-movement to T, as in (259). Additionally, since only a trace of V is inside the ellipsis site, VIR-violations are possible (cf. (258)).

(259)



Thus, among VSVE languages, whether syntactic V-movement and, consequently, VIR violations are possible is due to the phasal status of the VSVE target. In languages where VSVE targets a phase complement, syntactic V movement out of the ellipsis target and, thus, VIR violations are possible. In languages where VSVE targets a full phase, syntactic V movement out the ellipsis target is not possible, and, thus, VIR violations are not tolerated.

4.3.1 Movement operations and VSVE

On the present analysis, in VSVE languages that involve phasal vP-ellipsis, both Ā-extraction and syntactic head-movement out of the vP are impossible in phasal VSVE contexts. Such movement is not possible because of the ordering of syntactic operations in

such contexts, namely, in phasal vP-ellipsis contexts, the full vP is marked for ellipsis before the Ā-moving DP and V can undergo further syntactic movement, thus trapping such elements inside the vP phase. Although Ā and head movement are both affected by the phasal status of the VSVE target in this way, this is not the case for A-movement out of the VSVE, which is insensitive to the phasal status of the VSVE target. As illustrated below with European Portuguese (260) and Korean VSVE (261), A-movement from within the vP is uniformly permitted regardless of whether the VSVE target is the VP phase complement (as in European Portuguese) or the full vP phase (as in Korean).

(260) A Raquel não limpou o carro cuidadosamente. Mas $[_{TP}$ $[_{DP}$ a Ana$]_i$
the Raquel NEG cleaned the car carefully but the Ana
limpou $[_{vP_{phase}}$ t_i ~~$[_{VP}$ o carro cuidadosamente]]~~].
cleaned
'Raquel didn't clean the car carefully but Ana cleaned the car carefully.'

(261) Minswu-nun tangkun-ul ppalli thongccaylo samkhy-ess-ko, $[_{TP}$ $[_{DP}$
Minswu-TOP carrot-ACC quickly whole devour-PST-CONJ
Swuni-to$]_i$ ~~$[_{vP_{phase}}$ t_i tangkun-ul ppalli thongccaylo$]$~~ samkhy-ess-eyo].
Swuni-too devour-PST-DECL.POL
'Minswu quickly devoured the carrot whole and Swuni devoured the carrot whole quickly too.' (adapted from Hildebrandt 2021: 5)

As (260) and (261) illustrate, in both European Portuguese and Korean VSVE, the subject DP has undergone A-movement from Spec, vP to Spec, TP (for expository purposes, I have omitted other movement dependencies in (260) and (261)). For European Portuguese, this type of A-movement can be straightforwardly accounted for, namely, since the DP is base-generated in Spec, vP, which is outside of the phase complement VP-ellipsis target, the DP, can raise to Spec, TP as is typically the case. However, for Korean, the DP is base-generated in Spec, vP, which is within the phasal vP-ellipsis target. Subsequently, a question arises: why are Ā-movement and syntactic head-movement out of the vP disallowed in phasal

VSVE ellipsis contexts, but A-movement out of the vP is permitted?[7]

I propose that A-movement is systematically possible out of vP-ellipsis targets, as in Korean (261) and in phasal VSVE contexts in general, because of the derivational timing of A-movement relative to Ā and head-movement, and ellipsis. As discussed in the previous sections, following Bošković (2014), I assumed that ellipsis occurs upon the merger of the next higher phase head, i.e. C, which triggers ellipsis of either the complement of the [E]-marked phase head, i.e. VP, or the full vP phase. In the case of full phase vP-ellipsis, since ellipsis occurs upon the merger of C, prior to other syntactic operations, elements within the vP phase are trapped and cannot move out. Concretely, in the case of Ā-movement, the vP-internal DP is elided before it can undergo movement to Spec, CP.

While Ā-movement is sensitive to this kind of freezing effect that phasal ellipsis induces, A-movement is apparently not. Bošković (2014) proposes that the reason A-movement can proceed out of the phasal ellipsis target is due to the timing of A-movement relative to when vP-ellipsis is triggered. Concretely, in the case of A-movement to Spec, TP, this movement is triggered upon the merger of T. Upon T's merger, the DP raises to Spec, TP. Importantly, since this operation occurs derivationally prior to the phase head C merging to TP (which triggers ellipsis), elision of the phasal vP has not occurred yet and, thus no freezing of vP-internal elements, as sketched below in (262):[8]

[7]The question of A-movement out of the ellipsis target, in fact, arises for phase complement VSVE as well (e.g. European Portuguese VSVE), namely, in cases of phase complement VSVE with a passivized verb and with unaccusatives. In these cases, the DP is base-generated VP-internally, and thus has undergone movement out of the VSVE target, which is the VP phase complement. See fn. 8 for discussion of this point.

[8]Note this account would also apply to cases of A-movement out of ellipsis targets in unaccaustive and passive contexts, where the A-moving element is base-generated in a position lower than the phase edge, i.e. Spec, vP. In such cases, upon merger of v, the moving DP first moves from its VP-internal base-position to Spec, vP. Then upon merger of T, the DP moves to Spec, TP, as in (i.):

i. a. $[_{vP}\ DP_i\ v_{[E]}\ [_{VP}\ V\ t_i\ ]]$
   b. $[_{TP}\ DP_i\ T\ [_{vP}\ t_i\ v_{[E]}\ [_{VP}\ V\ t_i\ ]]]$
   c. $[_{CP}\ C\ [_{TP}\ DP_i\ T\ v_{[_{vP}\ t_i\ [E]}\ \sout{[_{VP}\ V\ t_i\ ]}]]]$

(262) a. [$_{TP}$ T [$_{vP}$ DP v$_{[E]}$ [$_{VP}$ V . . .]]] T merges to vP & TP projects

b. [$_{TP}$ DP$_i$ T [$_{vP}$ t$_i$ v$_{[E]}$ [$_{VP}$ V . . .]]] DP moves from Spec, vP to Spec, TP

c. [$_{CP}$ C [$_{TP}$ DP$_i$ T ~~[$_{vP}$ t$_i$ v$_{[E]}$ [$_{VP}$ V . . .]]~~]] C merges to TP, CP projects, & ellipsis of vP phase triggered.

Compare with Ā-movement, which is not possible in phasal VSVE contexts. As discussed in the previous section, upon merger of v, the Ā-moving DP moves to Spec, vP as an intermediate position. Later, upon the merger of C, ellipsis is triggered and the full vP phase is elided. Thus, in full phase VSVE contexts, the DP is trapped in Spec, vP and cannot undergo further movement to Spec, CP (which is the target landing site). As sketched in the simplified derivation below in (263).

(263) a. [$_{vP}$ DP$_i$ v$_{[E]}$ [$_{VP}$ V t$_i$]] Ā-moving DP moves to Spec, vP

b. [$_{CP}$ C [$_{TP}$ ~~[$_{vP}$ DP$_i$ v$_{[E]}$ [$_{VP}$ V t$_i$]]~~] C merges to TP & elides vP

c. *[$_{CP}$ DP$_i$ C [$_{TP}$ ~~[$_{vP}$ t$_i$ v$_{[E]}$ [$_{VP}$ V t$_i$]]~~] DP cannot raise to Spec, CP

Thus, key difference between A-movement and Ā-movement in phasal VSVE contexts is the timing of the movement relative to ellipsis. For A-movement, it occurs prior to the merger of C, and thus prior to elision of the vP. But for Ā-movement, it occurs after the merger of C. Since ellipsis occurs immediately upon the merger of C, Ā-movement out of the vP is not possible here.

Consider now head-movement, which like Ā-movement, cannot take place from a phasal vP-ellipsis target. I will now show that this effect follows from two independently motivated assumptions: (i) head-movement is an adjunction operation (Baker 1988; Chomsky 1986; Travis 1984, among many others); (ii) adjunction occurs late.

Lebeaux (1988, 1991) proposes that adjunction can be acyclic, i.e. late, and can occur after movement operations. As shown below, in both (264a) and (264b) an R-expression is

c-commanded by a co-indexed pronoun and a Condition C violation is induced. In (264a), the R-expression is *John* in the PP-argument *of John's office*; in (264b), the R-expression *John* is in the PP-adjunct *near John's office*.

(264) a. * He_i resented the inspection of John_i's office.

b. * He_i resented the inspection near John_i's office.

(Zyman 2022: 85)

When a phrase containing an R-expression undergoes Ā-movement, as in (265a), the Condition C effect is retained. However, when the R-expression occurs in an adjunct to the *wh*-phrase, which is the relative clause here, the Condition C violation disappears, as in (265b).

(265) a. ?* Which inspection of John_i's office did he_i resent?

b. What argument that John_i made did he_i believe?

(Zyman 2022: 85)

Lebeaux (1988, 1991) argues that the above facts indicate that adjuncts (unlike arguments) can be merged late in the derivation. Specifically, in (265b), the adjunct to the *wh*-phrase adjoins after the *wh*-phrase undergoes Ā-movement. Since the adjunct only adjoins to the *wh*-phrase after it has undergone Ā-movement (and thus there is no lower copy adjoined to the *wh*-phrase in its base-position), at no point in the derivation is the R-expression c-commanded by the pronoun and, thus there is no Condition C violation.

While the above facts show that adjuncts can be merged late, after movement operations, Stepanov (2001a,b) shows that there is strong evidence indicating that adjuncts must be merged after such operations. Stepanov (2001a,b) observes that Condition A effects are

observed in cases where a reciprocal occurs in an adjunct of a *wh*-phrase and c-commands its antecedent from this position, as shown in (266a,267a) (cf. (266b,267b)).

(266) a. ?* What evidence that each other$_i$'s friends brought up at court did the lawyers$_i$ refuse to talk about?

b. The lawyers$_i$ refused to talk about the evidence that each other$_i$'s friends brought up at court.

(267) a. ?* Which proofs that demonstrated that pictures of each other$_i$ had been forged did they$_i$ read?

b. They$_i$ read proofs that demonstrated that pictures of each other$_i$ had been forged.

(Stepanov 2001b: 100)

In (266a) and (267a) the reciprocals *each other* are inside the relative clauses (which are adjuncts here). Assuming that Condition A requires the reciprocals to be c-commanded by their antecedent at some point in the derivation, the fact that (266a,267a) are ungrammatical, in contrast to (266b,267b), indicates that at no point in the derivation were the reciprocals c-commanded by their antecedents. Thus, Stepanov (2001a,b) concludes that the only possible point in which the reciprocal-containing phrases can adjoin to the *wh*-items is after the *wh*-phrases undergo Ā-movement, that is, adjunction must be be late.[9]

As for how late in the derivation must adjunction occur, Zyman (2022) argues that after the completion of a phase, that is, after operations within the phase are complete, then adjunction within the phase may occur (see also Abe 2018; Kim 2020). Zyman (2022) observes that *exactly* can be adjoined to *what* when it is *in situ*, as in (268a,268b), but

[9]In Stepanov 2001a,b, the ban on extraction out of adjuncts is, in fact, deduced in this way, namely, they are merged too late to be extracted from.

cannot be in stranded post-verbally when the associate *what* undergoes *wh*-movement, as in (269a,269b). Crucially, *exactly* can be stranded pre-verbally when *what* undergoes *wh*-movement, as in (270a,270b).

(268) a. Who put what exactly on the table with great care?

b. Who gave what exactly to the president to annoy you?

(Zyman 2022: 90)

(269) a. ?* What did Muriel put exactly on the table with great care?

b. ?* What did Harvey give exactly to the president to annoy you?

(Zyman 2022: 90)

(270) a. What did she exactly send?

b. What did they exactly change in the newest update?

(Zyman 2022: 100)

Zyman (2022) argues that the above contrasts follow if *exactly* must adjoin to the *wh*-item late, immediately after the completion of the vP phase. In (268a,268b), the *wh*-items are *in situ* and, thus upon completion of the vP phase, *exactly* late adjoins to the *wh*-items (which are in their base-position). In (269a,269b), where the *wh*-items have fronted, upon completion of vP, the *wh*-items have moved from VP to their intermediate landing sites, Spec, vP. Subsequently, when adjunction occurs, there is no element within the VP for *exactly* to adjoin to, thus blocking post-verbal *exactly* stranding, as in (271) (Zyman (2022) assumes that adjunction cannot apply to a lower copy). In the cases of pre-verbal *exactly* stranding in (270a,270b), the *wh*-items have Spec, vP as an intermediate landing site as well. Upon the completion of the vP phase, the *wh*-items are located in Spec, vP and *exactly* adjoins to the *wh*-items in Spec, vP. Later, when CP projects, the *wh*-items will move to Spec, CP and strand *exactly* in Spec, vP, as sketched in (272).

(271) a. $[_{\text{vPphase}}$ *wh*-XP_i v $[_{\text{VP}}$ V $t_i]]$

b. *$[_{\text{vPphase}}$ *wh*-XP_i v $[_{\text{VP}}$ V $[t_i$ exactly$]]]$

(272) a. $[_{\text{vPphase}}$ *wh*-XP_i v $[_{\text{VP}}$ V $t_i]]$

b. $[_{\text{vPphase}}$ $[$*wh*-XP_i exactly$]$ v $[_{\text{VP}}$ V $t_i]]$

c. $[_{\text{CP}}$ *wh*-XP_i C $[_{\ldots}$ … $[_{\text{vPphase}}$ $[t_i$ exactly$]$ v $[_{\text{VP}}$ V $t_i]]]]$

The key point (and what is relevant for present purposes) is that adjunction occurs upon the completion of the phase, that is, after other, e.g. movement, operations are complete. For example, adjunction to an element within the vP phase only occurs upon the completion of vP (after movement operations within vP are complete).

Returning to head-movement, given that it is an adjunction operation and adjunction must occur late—i.e. upon the completion of a phase, it follows that head-movement must occur late, after other operations within the phase are complete. I argue that this "lateness" property of head-movement is what accounts for why head-movement can proceed out of phase complement VSVE targets but cannot proceed out of full phase VSVE targets.

Consider first phase complement VSVE, where the ellipsis target is the complement of the vP phase and head-movement out of the ellipsis target is possible. Upon the completion of the vP phase, V moves and head-adjoins to v. Then T merges to vP, projecting TP. Subsequently, the subject DP in Spec, vP raises to Spec, TP. Finally, upon the merger of C, ellipsis is triggered and phase complement VP is elided. After operations within the CP-phase are complete, and since v+V is outside of the ellipsis target, it can further raise and adjoin to T. The relevant derivation is sketched below in (273).

(273) a. $[_{\text{vP}_{\text{phase}}}$ DP $[_{\text{v'}}$ $\text{v}_{[\text{E}]}$ $[_{\text{VP}}$ V …$]]]$

b. $[_{\text{vP}_{\text{phase}}}$ DP $[_{\text{v'}}$ $\text{v}_{[\text{E}]}$+V_i $[_{\text{VP}}$ t_i …$]]]$

c. $[_{TP}\ DP_j\ T\ [_{vP_{phase}}\ t_j\ [_{v'}\ v_{[E]}+V_i\ [_{VP}\ t_i\ \ldots]]]]$

d. $[_{CP}\ C\ [_{TP}\ DP_j\ T\ [_{vP_{phase}}\ t_j\ [_{v'}\ v_E+V_i\ \sout{[_{VP}\ t_i\ \ldots]}]]]]$

e. $[_{CP}\ C\ [_{TP}\ DP_j\ T+v+V_i\ [_{vP_{phase}}\ t_j\ [_{v'}\ t_i\ \sout{[_{VP}\ t_i\ \ldots]}]]]]$

Consider now full phase VSVE, where the vP phase is the ellipsis target and head-movement out of vP is impossible. Upon the completion of the vP phase, V moves and head-adjoins to v. Then T merges to vP, projecting TP. Subsequently, the subject DP in Spec, vP raises to Spec, TP. In this case, upon the merger of C, ellipsis of the full vP phase is triggered. Crucially, the full vP phase to be elided includes v+V. Since v+V is elided, it cannot undergo further movement (i.e. head-adjunction to T) and is trapped. The relevant derivation is sketched below in (274).

(274) a. $[_{vP_{phase}}\ DP\ [_{v'}\ v_{[E]}\ [_{VP}\ V\ \ldots]]]$

b. $[_{vP_{phase}}\ DP\ [_{v'}\ v_{[E]}+V_i\ [_{VP}\ t_i\ \ldots]]]$

c. $[_{TP}\ DP_j\ T\ [_{vP_{phase}}\ t_j\ [_{v'}\ v_{[E]}+V_i\ [_{VP}\ t_i\ \ldots]]]]$

d. $[_{CP}\ C\ [_{TP}\ DP_j\ T\ \sout{[_{vP_{phase}}\ t_j\ [_{v'}\ v_{[E]}+V_i\ [_{VP}\ t_i\ \ldots]]]}]$

The key point is that since head-movement is an adjunction operation and since adjunction operations must occur late, after other operations, namely, upon the completion of the phase, in VSVE contexts, V-to-T movement can occur only after C triggers ellipsis. In the case of phase complement VSVE, after the VP is elided, V is outside the ellipsis target and can undergo movement to T. But in the case of full phase VSVE, the vP phase that is elided includes V, and thus V-to-T is impossible.

There is an alternative explanation for why A-movement is not subject to the kind of freezing effect that phasal ellipsis induces which relies on Chomsky's (2008) C-T Association proposal. Chomsky (2008) proposes that C carries T's A-movement triggering

features, e.g. [EPP], and upon merging with TP, C automatically transfers these features to T. I propose that A-movement then occurs immediately, as a component of the C-T Association process, before any other operations occur, i.e. part of C-T Association is that any movements that are induced by the features transferred from C to T are immediately triggered. Concretely, upon the merger of C with TP, C-T Association occurs, involving feature transmission to T and A-movement to Spec, TP. The relevant derivation is sketched below in (275).

(275) a. $[_{TP}\ T_{[\emptyset]}\ [_{vP}\ DP\ [_{VP}\ V\ \ldots\ ]]]$

b. $[_{CP}\ C [_{TP}\ DP_i\ T_{\sout{[EPP]}}\ [_{vP}\ t_i\ [_{VP}\ V\ \ldots\ ]]]]$

On this proposal, the key claim is that A-movement does not proceed after C-T Association has occurred. Rather, A-movement occurs as a component of C-T Association, which occurs as soon as C merges with TP, before any other operations are triggered.

Consider now phasal VSVE contexts, where A-movement out of the VSVE target is possible. Upon completion of the vP phase, the subject DP is located in Spec, vP. Upon merger of C, C-T Association occurs and the DP raises to Spec, TP. After C-T Association, further operations can proceed and C triggers ellipsis of the vP phase, as in (276).

(276) a. $[_{TP}\ T_{[\emptyset]}\ [_{vP_{[E]}}\ DP\ [_{VP}\ V\ \ldots\ ]]]$

b. $[_{CP}\ C\ [_{TP}\ DP_i\ T_{\sout{[EPP]}}\ [_{vP}\ v_{[E]}\ t_i\ [_{VP}\ V\ \ldots\ ]]]]$

c. $[_{CP}\ C\ [_{TP}\ DP_i\ T_{\sout{[EPP]}}\ \sout{[_{vP}\ v_{[E]}\ t_i\ [_{VP}\ V\ \ldots\ ]]}]]$

Compare this with Ā-movement in phasal VSVE, which is impossible. Since Ā-movement is not part of C-T Association, i.e. it is triggered by features remaining on C after C-T Association, it occurs later in the derivation. In phasal VSVE contexts, the Ā-moving element raises to Spec, vP, upon merger of v. Later, after the merger of C with TP and

C-T Association (which is automatic), C triggers ellipsis on vP. Since the DP is within the vP-ellipsis target, it cannot raise to Spec, CP and is trapped.

Consider now head-movement, which like $\bar{A}$-movement is impossible in phasal VSVE contexts. I assume that non-phase heads do not trigger movement prior to associating with a phase head. Hence, while V-to-T is not driven by a property of C, it does not take place until C merges with TP and C-T Association happens. As discussed above, after C-T Association occurs, C triggers ellipsis of vP, prior to other operations. Thus, in full phase VSVE contexts, V-to-T cannot happen.

On the C-T Association explanation, the key difference between A-movement and, $\bar{A}$-movement and head-movement, is the timing of such operations relative to ellipsis. In the case of A-movement, it occurs as part of C-T Association, which is an automatic process that precedes any other operation, including ellipsis. In the case of $\bar{A}$-movement and head-movement, it occurs after C triggers ellipsis, which makes these movements impossible in phasal ellipsis contexts.

To summarize, in this section I have given two proposals for why A-movement out of the VSVE target is insensitive to the phasal status of the VSVE target, but $\bar{A}$ and head-movement are. On the first proposal, A-movement occurs before C merges, which triggers ellipsis of the vP/VP. Thus, A-movement is possible out of phasal VSVE targets. In the case of $\bar{A}$-movement, since it occurs after C triggers ellipsis, it is impossible out of a vP ellipsis target. For head-movement, since it is an adjunction operation, it must occur late, upon the completion of the phase. In phasal VSVE contexts, this means V-to-T can only occur after the completion of the CP phase, which means after vP has been elided (and therefore is blocked). On the second, alternative proposal, A-movement occurs as part of C-T Association, and therefore occurs prior to ellipsis. However, since $\bar{A}$-movement and head-movement occur after C-T Association and, crucially, after C triggers ellipsis of the

vP phase, they are blocked in phasal VSVE contexts.

4.3.2 Interim Conclusion

Zooming out, in this section I have shown that the underlying factor which regulates both Ā-extraction possibilities and VIR effects in Turkish and Uyghur VSVE is not merely a local factor that would apply to only these two languages. Rather, the differences in Turkish and Uyghur VSVE are instances of a more general, cross-linguistic, split among VSVE languages: whether VSVE involves elision of a phase or phase complement. I argued that in VSVE languages where Ā-extraction out of the VSVE target and VIR violations are not possible, VSVE involves elision of a full phase. Due to VSVE involving full phase ellipsis, both Ā-extraction and syntactic V-movement out of the ellipsis target are blocked, which for the latter type of movement results in the VIR holding. In VSVE languages where Ā-extraction and VIR violations are allowed, I argued that VSVE involves phase complement ellipsis. Due to VSVE involving phase complement ellipsis, both Ā-extraction and syntactic V-movement out of the VSVE target are allowed, which in the latter case facilitates VIR violations. In this respect, the differences observed between Turkish and Uyghur VSVE are instances of a more general point of variation among VSVE languages.[10]

[10]It would be useful to compare the current approach with Landau's (2018; 2020; 2021; 2023) approach, where all cases of VSVE are, in fact, cases of (multiple) argument ellipsis (or object *pro*), i.e. where there is no VSVE at all. On Landau's approach, it is highly unexpected that Ā-extraction is blocked in VIR-obeying VSVE contexts, given that on Landau's approach, there is no phasal vP-ellipsis target to block extraction (on Landau's approach, argument(s) are elided, the vP/VP is not), thus Ā-extraction should, in principle, be possible in VIR-obeying VSVE contexts by simply not eliding the extracted argument. More generally, the generalization that Ā-extraction possibilities in VSVE contexts correlate with whether the VIR is obeyed or not (i.e. (252)) is unexpected on Landau's account. On Landau's account, since all cases of VSVE are uniformly the result of argument ellipsis (or object *pro*), VIR effects must be explained in terms of a mechanism independent of argument ellipsis (or object *pro*). Since argument deletion and the VIR would be due to distinct processes on Landau's account, it is hard to see how the VIR and the impossibility Ā-extraction could be correlated (in contrast to the present account, where whether the VIR holds and whether Ā-extraction is possible straightforwardly follows from a single underlying process— i.e. whether the VSVE target is a phase or phase complement).

4.4 Verb echo answers

In the previous section, I showed that VIR violations track VSVE involving elision of a phase complement. In light of this observation, a natural extension is to examine another phenomenon related to VSVE: Verb Echo Answers (VEAs). A number of the languages discussed, in addition to allowing VSVE, allow VEAs (Holmberg 2015). As illustrated below in (277b) with Turkish, VEAs can be characterized as a construction that occurs in a polar question response context. In this context, the VEA response consists of a verb plus a polar particle (which is optional in some languages' VEA constructions) and the VEA is interpreted as a response to the polar question. As illustrated with Turkish VEA below in (277b), the response consists of the verb *geldi* and (optionally) the affirmative polar particle *evet*.

(277) a. Q: Birisi dün okul-a gel-di mi?
someone yesterday school-DAT come-PST.3SG Q
'Did someone come to school yesterday?'

b. A: (Evet,) gel-di.
yes come-PST.3SG
'(Yes,) someone came to school yesterday.' (adapted from Us 2025)

Along with Turkish (277b) (Us 2025), Japanese (278b) (Sato and Hayashi 2018; Sato and Maeda 2021), Hindi-Urdu (279b) (Dash 2020), Korean (280b) (Hildebrandt 2021), Russian (281b) (Gribanova 2017), and BCS (282b) all allow VEA constructions.

(278) a. Moo tuki-masi-ta-ka?
already arrive-POL-PAST-Q
'Did you arrive already?'

b. Tuki-masi-ta-yo.
arrive-POL-PAST-PRT
Intended: 'I arrived already.'

(Sato and Maeda 2021: 361)

(279) a. (kyaa) raaghav-ne phirse kitaab paDhii?
Q Raghav-ERG again book read.PERF.3.F.SG
'Did Raghav read the book again?'

b. haaN paDhii.
yes read.PERF.3.F.SG
'Yes. Raghav read the book again.'

(adapted from Dash 2020: 7)

(280) a. Q: Minswu-ka cha-lul kkaykkusha-key takk-ass-eyo?
Minsu-NOM car-ACC clean-RES wipe-PST-Q.POL
'Did Minsu wipe the car clean?'

b. A: Yey, takk-ass-eyo.
yes wipe-PST-DECL.POL
'Yes, Minsu wiped the car clean.' (Hildebrandt 2021)

(281) a. Q: Evgenija otpravila posylku v Moskvu?
Evegenija send.PST.3SG.F package.ACC to Moscow.ACC
'Did Eugenia send the package to Moscow?'

b. A: (Da,) otpravila.
yes send.PST.3SG.F
'Yes, she sent the package to Moscow' (adapted from Gribanova 2017: 1080)

(282) a. Q: Da li Marija peče tortu prateći recept?
Q Marija bake.PRS.3SG cake following recipe
'Is Marija baking the cake according to the recipe?'

b. A: Da, peče.
yes bake.PRS.3SG
'Yes, she's baking the cake following the recipe.'

Importantly, VEAs have been argued to involve phrasal ellipsis. As (277b)-(282b) illustrate, the VEAs all involve an adjunct interpretation, indicating that VEAs involve elision of a phrase that contains these adjuncts (and is not due to *pro* arguments or argument ellipsis; see Dash 2020; Gribanova 2017; Holmberg 2015; Sato and Hayashi 2018; Sato and

Maeda 2021).

Although the VEA construction bears a similarity to VSVE, a key difference between the two constructions concerns the availability of overt subjects. As shown below in (283c)-(288c), overt subjects are not possible in VEA contexts.

(283) a. Q: Birisi dün okul-a gel-di mi?
someone yesterday school-DAT come-PST.3SG Q
'Did someone come to school yesterday?'

b. A: Gel-di.
come-PST.3SG
'Someone came to school yesterday.'

c. A': *Birisi gel-di.
someone come-PST.3SG
'Someone came to school yesterday.' (Us 2025)

(284) a. Q: Dareka-ga kinoo kokode tabako-o sui-mashi-ta-ka?
someone-NOM yesterday here cigarette-ACC smoke-POL-PAST-Q
'Did anyone smoke a cigarette here yesterday?'

b. A: Sui-mashi-ta-yo. Tabun Fujita-san-desu-ne.
smoke-POL-PAST-PRT probably Fujita-TIT-COP.POL-PRT
'Yes. Someone smoked a cigarette yesterday. Probably it was Fujita.'

(Sato and Hayashi 2018: 76)

c. A': *Dareka-ga sui-mashi-ta-yo. Tabun Fujita-san-desu-ne.
someone-NOM smoke-POL-PAST-PRT probably Fujita-TIT-COP.POL-PRT
Intended 'Yes. Someone smoked a cigarette yesterday. Probably it was Fujita.'

(285) a. Q: (kyaa) kisi-ne aasani-se kaam kaiyaa?
Q someone-ERG easily-WITH work do.PERF.M
'Did someone do the work easily?'

b. A: Haan, kaiyaa.
yes do.PERF.M
'Yes. Someone did the work easily.'

c. A': *Haan, kisi-ne kaiyaa.
yes someone-ERG do.PERF.M
'Yes, someone did the work easily.'

(286) a. Q: Nwugwunga-ga sayngsen-ul ppalli kkulhi-ess-eyo?
someone-NOM fish-ACC quickly boil-PST-Q.POL
'Did someone boil fish quickly?'

b. A: Ney, kkulhi-ess-eyo.
yes boil-PST-DECL.POL
'Yes, someone boiled fish quickly.'

c. A': *Ney, Nwugwunga-ga kkulhi-ess-eyo.
yes someone-NOM boil-PST-DECL.POL
'Yes, someone boiled fish quickly.'

(287) a. Q: Kto-nibud' bystro svaril jajca?
someone quickly boiled eggs
'Did someone boil the eggs quickly?'

b. A: (Da), svaril.
yes boiled
'Yes, someone boiled the eggs quickly.'

c. A: ??(Da), kto-nibud' svaril.
yes someone boiled
'Yes, someone boiled the eggs quickly.'

(288) a. Q: Da li neko brzo popravlja bicikl?
Q someone quickly fix.PRS.3SG bike
'Is someone fixing the bike quickly?'

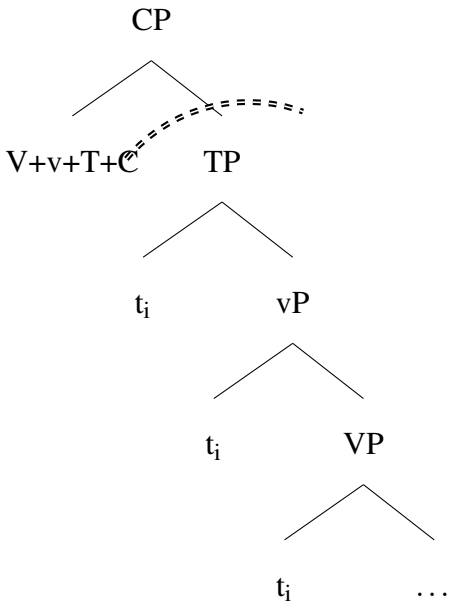
b. A: Da, popravlja.
yes fix.PRS.3SG
'Yes someone is fixing the bike quickly.'

c. A': *Da, neko popravlja.
yes someone fix.PRS.3SG
'Yes someone is fixing the bike quickly.'

The observation that VEAs disallows overt subjects has been interpreted as indicating that the VEA construction involves TP-ellipsis, which includes the subject in Spec, TP (Dash

2020; Gribanova 2017; Holmberg 2015; Sato and Hayashi 2018; Sato and Maeda 2021).[11] On this proposal, V undergoes movement above TP to C and the TP is elided, as in (289) below:[12]

(289)



Interestingly, VEAs differ from VSVE in another respect regarding the VIR. As was shown in section 4.1, Turkish, Japanese, Hindi-Urdu, Korean, Russian, and BCS are all VIR-obeying VSVE languages, where the stranded verb must be lexically identical to the verb in the antecedent. However, in VEA contexts, the verb in the response can be distinct from the verb in the antecedent question, as in (290)-(295).[13]

[11] Additional evidence that we are dealing with TP-ellipsis is that TP-adjoined adverbs, e.g. *yesterday*, can be eldided, as illustrated with Turkish (283b) and Japanese (284b) (and also is the case for the other above languages).

[12] In some accounts of VEA constructions, e.g., Gribanova 2017; Martins 1994, 2006, 2016, V undergoes movement to a polarity-related head, e.g. Pol or Σ, which projects a PolP/ΣP above TP (and is the phrase where the polarity particle is located).

[13] Note that Gribanova (2017) reports that in Russian, VEA mismatches between the verb in the question and answer, as in (294), are unacceptable unless there is another verb in the answer that the mismatching verb contrasts with, as in (ib.).

i. a. Q: Paša **našel** knigu v biblioteke, i žurnal v stolovoj?
Pasha find.PST.SG.M book.ACC in library.PREP and magazine in cafeteria.PREP

(290) a. Q: Ali yemeği sıcakken **ye**-di mi?
Ali food while.warm eat Q
'Did Ali eat the food while it was warm?'

b. A: Yok, **dök**-tü.
no spill-PST.3SG
'No, Ali spilled food while it was warm.' (Us 2025: 8)

(291) a. Q: Gozira-ga issyunnoutini biru-o **humitsubusi**-ta-no?
Godzilla-NOM in.an.instant building-ACC trample-PST-Q
'Did Godzilla trample down the building in an instant?'

b. A: (Iya,) **moyasi**-ta-yo.
no burn-PST-PRT
'Godzilla burned down the building in an instant.'

(Tanabe and Kobayashi 2023: 469)

(292) a. Q: Kyaa Mary-ne asaanii-se rotii **banayii**?
Q Mary-ERG easily-with bread.F cook.PERF.F
'Did Mary make bread easily?'

b. A: Nahi, **belii**.
no rolled.PERF.F
'No, she rolled it easily.'

(293) a. Q: Pwumo-nim-kkey senmwu-lul cosimsulepkey **tuly**-ess-e?
parents-HOM-DAT present-ACC carefully give.HON-PST-DECL
'Did you carefully give.HON the presents to your parents?'

b. A: Ung, **cw**-ess-e.
yes give-PST-DECL
'Yes, gave carefully to my parents.' (Hildebrandt 2021: 9)

'Did Pasha find a book in the library and a magazine in the cafeteria?'

b. A: Net, ne **našel**, a **poterjal**.
no NEG find.PST.SG.M but lose.PST.SG.M
'No, he didn't find (...), he lost (...).' (Gribanova 2017: 1104)

However, the Russian speakers I have consulted accept the answer in (294) as long as there is focal stress placed on the verb (and do not require a preceding contrasting verb in the answer itself). Given these reported judgements, I suggest that prosody likely plays a role in the acceptability of such answers in Russian.

(294) a. Q: Paša **našel** knigu v biblioteke, i žurnal v stolovoj?
Pasha found book in library and magazine in cafeteria
'Did Pasha find a book in the library and a magazine in the cafeteria?'

b. A: Net, **poterjal**.
no lost
'No, he lost a book in the library and a magazine in the cafeteria.'

(295) a. Q: Da li Marko **popravlja** bicikl za majku?
Q Marko fix.PRS.3SG bike for mother
'Is Marko fixing the bike for his mother?'

b. A: Ne, **pere**.
no wash.PRS.3SG
'No, he's washing the bike for his mother.'

I argue that the reason why VEAs permit verbal mismatches, even in languages that obey the VIR for VSVE, is because VEAs involve TP-ellipsis; that is, ellipsis of the complement of the CP phase. Given the account of ellipsis developed in section 4.3 (and in the previous chapter), I propose that VEAs involve the merger of an [E]-feature bearing phase head C with TP. Upon merger of the C phase head with TP, V undergoes syntactic head-movement to C, which is outside of the phase complement TP-ellipsis target. Upon completion of CP-level operations, C marks TP for ellipsis.[14]

On the present proposal, VEAs involve ellipsis of the TP-phase complement. Due to VEAs involving phase complement ellipsis, verbal mismatches are possible even in languages where verbal mismatches are not permitted in VSVE contexts. Consider now the generalization in (252) (repeated below), which correlated VIR violations with Ā-extraction in VSVE contexts.

[14]Unlike cases of ellipsis that involve an [E]-feature bearing v, where ellipsis is triggered upon merger of the next higher phase head (i.e. C), in cases of ellipsis which involve an [E]-feature bearing matrix C there is no higher phase head merged that would trigger ellipsis. Instead, in such cases, I propose that ellipsis occurs upon completion of all other matrix CP-level operations (see Chomsky 2001 for related discussion regarding the triggering of Spell-out at the matrix CP level). Hence, in the case of VEAs, TP-ellipsis occurs after all matrix CP-level operations (e.g. syntactic V-to-C) have been completed.

(252) **Extraction-VIR Generalization**: VIR violations are only possible in a VSVE context, if Ā-extraction out of the VSVE target is possible.

As discussed in the previous sections, the key factor underlying (252) was the phasal status of the ellipsis target. When the VSVE target is a phase neither VIR violations nor Ā-extraction are possible, but when the VSVE is not a phase VIR violations and Ā-extraction are possible. Consider now VEA contexts, which involve phase complement TP-ellipsis and permit VIR violations. Interestingly, as with VIR-violating VSVE, VEA constructions also permit Ā-extraction out of the ellipsis target. As shown below, this is indeed the case for: Turkish (296b), Japanese (297b), Hindi-Urdu (298b) Korean (299b), Russian (300b) and BCS (301b). In VEA contexts, elements from within the TP-ellipsis target can be extracted.

(296) a. Q: Ali bir saatliğine kitap-ni oku-du mu?
Ali one hour book-ACC read-PST.3SG Q
'Did Ali read a book for an hour?'

b. A: Hayır, ama çizgi roman$_i$-ı Δ oku-du.
no but comic book$_i$-ACC read-PST.3SG
'No, but the comic book, he read for an hour.'

(297) a. Q: Gozira-ga issyunnoutini biru-o humitsubusi-ta-no?
Godzilla-NOM in.an.instant building-ACC trample-PST-Q
'Did Godzilla trample down the building in an instant?'

b. A: ?Iya Kuruma$_i$-o, Δ humitsubusi-ta-yo.
no car-ACC trample-PST-PRT
'No, the car he did in an instant.'

(298) a. Q: Kyaa Mary-ne asaanii-se car dhoyii?
Q Mary-ERG easily-with car.F wash.PERF.F.SG
'Did Mary wash the car easily?'

b. A: Nahi, par motorcycle.$_i$ Δ dhoyii.
no but motorcycle.F wash.PERF.F.SG
'No, but the motorcycle she did wash easily.'

(299) a. Q: Yenghi-ga lesiphi-ey ttalase kheyk-ul kwuw-ess-eyo?
Yenghi-NOM recipe-LOC according.to cake-ACC bake-PST-Q.POL
'Did Yenghi bake the cake according to the recipe?'

b. A: ?Aniyo, ppang$_i$-ul Δ kwuw-ess-eyo.
no bread-ACC bake-PST-DECL.POL
'No, but the bread, she baked according to the recipe.'

(300) a. Q: Masha otpravila posylku mame posle raboty?
Masha sent parcel mom.DAT after work.GEN
'Did Masha send a parcel to mom after work?'

b. A: ?Net, pis'mo$_i$ otpravila Δ.
no letter sent
'No, a letter, she sent to mom after work.'

(301) a. Q: Da li Petar čita knjigu dok čeka autobus?
Q Peter read.PRS.3SG book while wait.PRS.3SG bus
'Is Peter reading a book while waiting for the bus?'

b. Ne, ali časopis$_i$, čita Δ.
no but magazine read.PRS.3SG
'No, but a magazine, he is reading while waiting for the bus.'

That VEAs, unlike VSVE, permit both Ā-extraction and verbal mismatches in languages like Turkish, Japanese, Hindi, Korean, Russian, and BCS provides further evidence for this chapter's account of the generalization in (252).

(252) **Extraction-VIR Generalization**: VIR violations are only possible in a VSVE context, if Ā-extraction out of the VSVE target is possible.

As was shown in the previous section, in these languages Ā-extraction is systematically impossible in VSVE contexts. Further, VIR violations are systematically disallowed under

VSVE. In contrast, the languages which allow Ā-extraction in VSVE contexts, e.g. Uyghur and Greek, systematically allow VIR violations in VSVE contexts. In the previous section, I showed that the key difference between the VSVE languages which disallowed VIR violations and Ā-extraction and the VSVE languages which permitted VIR violations and Ā-extraction is the phasal status of the VSVE target. In VEA contexts, Turkish, Japanese, Hindi, Korean, and Russia, all permit verbal mismatches between the verb in the question and the verb in the VEA. Further, in VEA contexts, Ā-extraction is permitted for those languages. Importantly, VEAs involve elision of the phase complement TP. Given that the VIR and Ā-extraction possibilities track with the phasal status of the ellipsis target in this way, the generalization in (252) can be subsumed by the more expansive generalization below:

(302) **Extraction-VIR-Phase Generalization:** If an ellipsis context allows VIR violations and Ā-extraction out of the ellipsis target, then the ellipsis target is a phase complement.

As was shown in the previous section, what underlies (252) is the phasal status of the ellipsis target, namely, only in VSVE contexts that involve a phase complement ellipsis target are both VIR violations and Ā-extraction possible. Consequently, (302) also holds for VSVE contexts. In this section, I showed that (302) holds in VEA contexts. In VEA contexts, both VIR violations and Ā-extraction are possible and the ellipsis target is a TP, which is a phase complement. Thus, I conclude that, quite generally, VIR violations and Ā-extraction out of the ellipsis target are correlated, and they furthermore track with the ellipsis target being a phase complement.

4.5 Extension: PF V-movement and *do*-support

On the present analysis, VSVE is the result of vP/VP-ellipsis plus displacement of V out of the ellipsis target. Regarding V-displacement, I have argued that this may occur as either syntactic V-to-X movement or as PF movement. In the latter case, this operation occurs in contexts where a full vP phase is elided. In such contexts, syntactic V-to-X movement out of the vP-ellipsis target is not possible. Subsequently, in order for the affixal head, e.g. T, to have a host, V undergoes PF movement to provide PF support. In this way, PF V movement is a type of last resort, PF repair that occurs in ellipsis contexts to ensure a well-formed PF output.

PF V movement, however, is not the only PF repair strategy available across languages in contexts where affixation to the verb is otherwise blocked. To illustrate, consider English VP-ellipsis, as in (304) below: *Martha devoured a pizza after the meeting, and Peter did* Δ *too*. In English, affixation is achieved through PF merger under adjacency, which was first proposed in the form of the affix-hopping analysis of English inflection in Chomsky 1957 (see also Bobaljik 1994, 1995; Bošković 2004b, 2008b; Halle and Marantz 1993; Lasnik 1995, among others). As illustrated in (303), the affixal T is realized in PF as *-ed* and V is realized as *laugh*, since the affixal T, i.e. *-ed* and the V host, i.e. *laugh* are adjacent, PF merger may proceed outputting: *laugh-ed*.

(303) $[_{TP}$ Martha $[_{T'}$ -ed $[_{VP}$ laugh$]]] \rightarrow_{\text{PF merger}}$ [Martha [laugh-ed]]

However, English VP-ellipsis is a bleeding context for affixation between T and lexical V, i.e. PF merger does not occur under VP-ellipsis. In such contexts, the stranded affixal T is not rescued with PF V movement to T. Rather, *do*-support occurs and a dummy *do* auxiliary is inserted to host the affixal T, as in (304) ((Bobaljik 1994, 1995; Chomsky 1957; Lasnik

1995)).

(304) Martha devoured a pizza after the meeting, and [$_{TP}$ Peter [$_{T'}$ *did* [$_{VP}$ Δ too]]].

Do-support in English is not limited to only VP-ellipsis contexts. Quite generally, *do*-support occurs whenever affixation between an affixal head and the lexical V is blocked. For example, when Neg projects between T and the lexical V, as in (305). In this case, affixation between *-ed* (which is the realization of T here) and *cook* is not possible, as (306a) shows. Instead, a dummy auxiliary *do* is inserted to host *-ed* and the lexical V surfaces uninflected, as in (306b).

(305) [$_{TP}$ Peter [$_{T'}$ -ed [$_{NegP}$ not [$_{vP/VP}$ cook the pizza]]]].

(306) a. * Peter not cook-ed the pizza.

b. Peter *did* not cook the pizza.

Greek exhibits another option to resolve cases where affixation to the verb is not possible. As (307a) illustrates, when the verb surfaces in the imperative form, it cannot occur with negation (cf. 307b). Instead, a surrogate imperative form is used, where the verb surfaces in the subjunctive in negative imperative contexts, as in (308).

(307) a. *Den/ni diavase!
NEG read.IMP
'Don't read!'

b. Diavase!
read.IMP
'Read!'

(308) Na mi diavazis!
SBJ NEG read.SBJ
'Don't read!' (Bošković 2008b: 286)

Miyoshi (2002) proposes that in Greek imperatives there is an affixal head that projects above the verb, as in (309a) (see also Bošković (2008b), who further develops this proposal). In contexts where the affixal head is adjacent to V, affixation is possible and the verb surfaces in its imperative form, as in (309b). But in cases where negation precedes the V, since the affixal head and V are not adjacent, affixation is not possible, as in (309c). Instead, an alternative verbal form must be deployed in negative imperatives, namely, the subjunctive, which does not involve affixation with a head above Neg (in this case either the affixal head is not present or it is hosted by the subjunctive marker *na*, which is above Neg).

(309) a. [Impv_{Aff} [V]]

b. [[V+Impv_{Aff}]]

c. *[[Neg [V+Impv_{Aff}]]]

In this respect, Greek surrogate imperatives and English *do*-support contexts are parallels. In both contexts affixation between an affixal head and V is not possible. In English, a dummy *do* is deployed to support the affix; in Greek, an alternative verbal form, which does not involve affixation with an element above Neg, is deployed.

What the above cases illustrate is that languages can deploy different repair strategies in contexts where affixation is otherwise blocked. In English, a dummy *do* is inserted to support an affix when affixation to V is not possible. In Greek, an alternative verb form is used that does not require affixation with the higher head. In languages, where VSVE prevents syntactic V-to-X, PF V movement to the affixal head occurs.[15] Importantly,

[15]It has been proposed that for some languages, V-X affixation proceeds *via* PF V movement in general (even in non-defective contexts) (Harizanov and Gribanova 2019). For such languages (if there are indeed such languages), PF V movement would not be a repair strategy but would be the "default", and, thus in VSVE contexts (if the language permits VSVE) PF V movement proceeds as the default option. However, the key point for the present discussion is that in languages which by default employ syntactic V-to-X movement, if

which repair strategies are available for a language is language-specific. For example, while English uses *do*-support to rescue a stranded affix in VP-ellipsis contexts, as in (310), PF V movement is not an available PF operation in English, as (311) illustrates.

(310) Martha devoured a pizza after the meeting, but Peter *did* not Δ.

(311) * Martha devoured a pizza after the meeting, but Peter *devoured* not Δ.

In Greek, when Neg blocks affixation between the verb and the imperative affix (309c), there is no *do*-support and apparently no PF V movement either. Instead, Greek repairs such contexts using an alternative verbal form, as in (308).

An interesting question arises, however, for languages that could, in principle, have more than one available strategy for resolving contexts with a stranded affix. For example, Danish has V-to-C movement (312), which is observed in V2 clauses where the inflected verb must be the second element in the clause (Platzack 1986; Vikner 1995).

(312) a. Om morgenen **drikker** Peter ofte kaffe.
in the.morning drinks Peter often coffee
'Peter often drinks coffee in the morning' (Vikner 1995)

b. Bilen **vasker** Mona ikke.
car.DEF washes Mona not
'Mona doesn't wash the car.' (Gribanova and Mikkelsen 2018)

c. I gøar **søa** børnene filmen.
yesterday saw the.children the.film
'Yesterday, the children saw the film.' (Vikner 1995: 42)

Importantly, while V moves to T as an intermediate step when moving to C. Danish does not permit V-to-T independently of V-to-C movement (Bobaljik 2002; Bobaljik and Thráinsson 1998; Vikner 1995). In contexts where V-to-C does not occur, e.g. in the embedded clause

VSVE bleeds V-to-X, PF V movement is deployed as the repair operation.

in (313a), V does not raise to T and is vP-internal. In these contexts, V presumably combines with affixal T through PF merger (as in English) (see Bobaljik and Thráinsson 1998 for discussion) (cf. (313b)).

(313) a. Jeg tror ikke at Peter ofte **spiser** tomater.
I NEG think that Peter often eats tomatoes.
'I do not think that Peter often eats tomatoes' (Vikner 1995: 41)

b. *Jeg tror ikke at Peter **spiser** ofte tomater.
I NEG think that Peter eats often tomatoes.
'I do not think that Peter often eats tomatoes' (Vikner 1995: 40)

In addition, Danish also licenses predicate-ellipsis (Gribanova and Mikkelsen 2018; Houser et al. 2006; Sailor 2018). As illustrated below in (314), the material below the auxiliary *har* is elided.

(314) a. Mona og Jasper har vasket bilen, eller rettere Mona har Δ.
Mona and Jasper have washed car.DEF or rather Mona has
'Mona and Jasper have washed the car, or rather Mona has washed the car.'

b. Jeg har vasket bil, selvom Mona ikke har Δ.
I have washed car even.though Mona not has
'I have washed the car even though Mona hasn't washed the car.

c. Jeg ved ikke hvad for en hund SUSAN har valgt, men jeg ved hvad for en MARIE har Δ.
I know not what for a dog Susan has chosen but I know what for one Marie has
'I don't know what kind of dog SUSAN has chosen, but I know what kind of dog MARIE has chosen. (Gribanova and Mikkelsen 2018: 106).

In ellipsis contexts, when there is not an auxiliary that can host tense inflection in the remnant, e.g., as with *har* in (314) above, a dummy auxiliary *gøre* surfaces, which hosts tense inflection, as in (315).

(315) a. Mona og Jasper vaskede bilen, eller rettere Mona **gjorde** Δ
Mona and Jasper wash.PST car.DEF or rather Mona did
'Mona and Jasper washed the car or rather Mona did wash the car.'

b. Jeg vasker bil, selv hvis Mona ikke **gør** Δ.
I wash car even if Mona not does
'I was my car even if Mona doesn't wash her car.' (Gribanova and Mikkelsen 2018: 109)

Further, Gribanova and Mikkelsen (2018) and Houser et al. (2006) show that *gøre* quite generally patterns like dummy *do* in English. It surfaces in ellipsis contexts, when there is no suitable host for an affixal T in the remnant, as was shown in (315). *Gøre* also surfaces in VP-topicalization contexts (316), as with *do* in English VP-topicalization (317).

(316) Jasper lovede at vaske bilen og [$_{VP}$ vaske bilen] **gjorde** han
Jasper promise.PST to wash car.DEF and wash car.DEF did he
(søa sandelig).
so truly
Jasper promised to wash the car and wash the car, he did indeed. (Houser et al. 2006: 1)

(317) Martha said she would cook the pizza, and cook the pizza, she **did**.

Given the above facts, Danish appears to have at least three ways to provide PF support for an affixal T. In V2 contexts, V raises to T as part of V-to-C movement (312), in non-V2 contexts, T combines with V through PF merger (as in English) (313). In ellipsis (and VP-topicalization) contexts, affixal T is supported through *gøre*-support (as with English *do*-support).

Interestingly, while *gøre*-support is an available operation in ellipsis contexts, VSVE is not possible. As shown below in (318), V cannot surface in the ellipsis remnant.

(318) a. *Mona og Jasper vaskede bilen, eller rettere Mona vaskede Δ
Mona and Jasper washed car.DEF or rather Mona washed
'Mona and Jasper washed the car or rather Mona did wash the car.

b. *Jeg vasker bil, selv hvis Mona ikke vasker Δ.
I wash car even if Mona not washes
'I wash the car even if Mona doesn't wash the car. (Gribanova and Mikkelsen 2018: 110)

Gribanova and Mikkelsen (2018) and Sailor (2018) propose that the absence of V-raising in ellipsis contexts is due to the ellipsis licensing head creating an opaque context for V-to-C. In terms of the present proposal, in Danish predicate ellipsis contexts, the head that triggers ellipsis, i.e. C, is also the head that would trigger V-to-C movement. Further, I suggest that in Danish predicate ellipsis, the ellipsis target is the vP phase. Consequently, in predicate ellipsis contexts, where C triggers ellipsis of the vP as soon as C merges with TP, V-to-C movement is blocked and V is trapped inside the vP. As discussed in the previous sections, this blocking effect on syntactic V-movement occurs when the ellipsis target is a full phase. In these contexts, the V is internal to the phasal vP-ellipsis target and, thus is elided before it can move to the higher head (in this case T and then C)

. Regarding Danish predicate ellipsis, there is suggestive evidence that the ellipsis target is vP. As shown in (319), object shift cannot occur in predicate ellipsis contexts.

(319) Peter så mig men Susan gjorde (*mig) ikke Δ.
Peter saw me but Susan did me not
'Peter saw me but Susan didn't. (Sailor 2018: 870)

Assuming that object shift targets Spec, vP (Chomsky 2001, among others), the impossibility of object shift, a case of A-movement, surviving predicate ellipsis suggests that the entire vP is the ellipsis target (which would elide an element in Spec, vP). Thus, given the absence of V-to-X movement and evidence that vP is the ellipsis target, I suggest that Danish predicate ellipsis involves elision of a vP phase, as in (320).

(320) $[_{CP}\ [_{TP}\ T\ \sout{[_{vP_{phase}}\ v_{[E]}\ [_{VP}\ V\ \dots\ ]]}]]$

The above facts, where Danish independently has V-to-T-to-C movement but lacks VSVE, indicate that when a language has dummy *do/gøre* as a PF repair operation for a stranded affixal T, there is a preference for dummy *do/gøre* as the PF repair operation. In English, *do*-support occurs whenever affixation under PF adjacency is impossible; there is no PF V movement here. One potential explanation for English's *do*-support is that because English lacks V-to-T in syntax, it also cannot deploy PF V movement and thus has *do*-support as its only repair option. However, the Danish ellipsis data show that the absence of syntactic V-to-T is not sufficient for explaining when *do*-support occurs (rather than PF V movement). Rather, the Danish data show that if *do/gøre*-support is available as a PF repair option, it is the preferred one. Put differently, as with the VSVE languages discussed in this chapter, Danish has syntactic V-to-T-to-C movement. Additionally, as with the VSVE languages discussed, Danish predicate ellipsis involves elision of the vP phase. However, unlike the phasal ellipsis VSVE languages, PF V movement to T does not occur in Danish vP-ellipsis. Instead, *gøre*-support is triggered to provide PF support to the affixal T. Thus, what the Danish data show is if a language has *do/gøre*-support as a PF repair operation, it is the preferred operation.

4.6 Conclusion

To conclude, in this chapter I have examined VSVE from a cross-linguistic perspective. It was shown that the two areas of variation observed with Uyghur and Turkish VSVE, $\bar{A}$-extraction out of the VSVE target and the VIR, i.e. whether the stranded verb must be lexically identical to the verb in the antecedent, were, in fact, instances of a more general point of variation among VSVE languages. I showed that VSVE languages vary along two lines: verbal identity under VSVE and the possibility of $\bar{A}$-extraction out of the VSVE

target. I showed that if a VSVE language permits VIR-violations, i.e. mismatches between the stranded and lexical verbs, then it also allows Ā-movement out of the ellipsis target. Further, I showed that what underlies this correlation is the phasal status of the ellipsis target, that is, whether VSVE involves full phase vP ellipsis or phase complement VP ellipsis. Additionally, an analysis was proposed that captured this correlation. I also provided further evidence that confirms this connection between verbal identity and Ā-extraction by examining VEAs (verb echo answer constructions). Here it was shown that VEAs quite generally permit verbal mismatches and Ā-extraction, which I argued can be traced to the phasal status of the ellipsis target in VEAs as well. In this chapter, I also showed that A-movement differs from Ā-movement and head-movement, such that while the latter two movement types are systematically not possible out of phasal VSVE targets, A-movement is systematically possible out of phasal VSVE targets, also providing an account for this difference.

More generally, this chapter has argued that whether a VSVE language obeys the VIR is not an arbitrary point of variation. Rather, VIR effects, in fact, correlate with a more general type of variation observed among ellipsis phenomena, that is, whether ellipsis targets a phase or phase complement. In contexts where VSVE targets a full phase, syntactic V-movement out of the vP is impossible and the V can only undergo PF movement, thus, inducing the VIR. But in contexts where VSVE (and VEAs) involves elision of a phase complement, syntactic V-movement can proceed and the VIR may be violated.

Chapter 5

PF movement in English: the case of adverb shift

5.1 Introduction

Previous research has observed that a certain class of adverbs, e.g. manner adverbs, must surface 'low' in the clause in English (e.g. in Alexiadou 1997; Bell 2012; Cinque 1999; Ernst 2001; Jackendoff 1972; Lasnik 2003/1995; Potsdam 1999; Shaer 2003; Travis 1988; Zyman 2012). To illustrate this point, consider the minimal pair in (321a,321b). As shown below, the manner adverb *completely* must surface below the modal auxiliary *will* (i.e. (321a)) and cannot precede it (321b).[1]

[1]There is some speaker variation regarding adverb placement in examples without ellipsis that is independent of this chapter's concerns, namely, some speakers do not report a contrast in acceptability between, e.g. (321a) and (321b), and (321b) and (322) (see, e.g. Ernst 2010 and Waters 2012 regarding speaker variation in adverb placement). Subsequently, it is worth noting this chapter's scope of study. This chapter's focus is on cases where speakers reported that an adverb placement pattern that was unacceptable in non-ellipsis contexts, improves under ellipsis (e.g. speakers who report a contrast between (321b) and (322)). The aim of this chapter is not a study of adverb placement, and speaker variation regarding adverb placement, in general, i.e. in examples not involving ellipsis.

(321) a. John will completely lose his mind.

b. * John completely will lose his mind.

While such adverbs must typically surface low, Lasnik 2003/1995 observes that in VP-ellipsis constructions such adverbs can surface in an exceptionally high clausal position—a phenomenon I term *adverb shift*.[2] As (322) shows, in VP-ellipsis contexts the manner adverb *completely* can surface exceptionally high and precede the auxiliary *did* (cf. (321b)).

(322) John will partially lose his mind and Bill **completely** did Δ. (Lasnik 2003/1995)

That 'low' adverbs, e.g. *completely*, can surface exceptionally high under VP-ellipsis is highly puzzling from a theoretical point of view. Assuming that the surface position of adverbs is a reflex of their licensing position, e.g. 'low' adverbs are licensed by merging to VP (e.g., as in Jackendoff 1972; Potsdam 1999; Sportiche 1988; Travis 1988) and, thus, surface below elements in T (e.g. *will* and *did*), and that ellipsis involves PF-deletion of syntactic structure (e.g., as in Merchant 2001), ellipsis should not have the effect of permitting the adverb to surface in a higher structural position.

The overarching goal of this chapter is to resolve this puzzle regarding adverb shift, that is, to explain what allows 'low' adverbs to surface exceptionally high in the clause under VP-ellipsis. I will first outline the empirical contours of adverb shift phenomenon. Based on this, I show that adverb shift is not due to high base-generation in the relevant contexts, as Lasnik 2003/1995 argues, but involves phrasal movement of a focused adverb out of the VP-ellipsis target. Further, I show that the movement underlying adverb shift is highly restricted and sensitive to the linear order of elements in the remnants. After outlining the core properties of adverb shift, I will develop a proposal that argues that adverb shift is an

[2]To my knowledge, this term was first coined by Fox and Pesetsky (2003), who also noted the above phenomenon. This phenomenon is also noted by Oku (1996) and Bošković (2004b).

instance of PF movement. Specifically, I propose that this operation occurs in PF to resolve contradictory PF requirements placed on the adverb in adverb shift contexts. Further, I show that this adverb shift as PF-repair hypothesis derives the full distribution of adverb shift.

5.2 The *adverb shift* phenomenon

This section concerns the basic empirical contours of the adverb shift pattern, where, based on novel data, I show that adverb shift exhibits three key characteristics. First, adverb shift involves XP-movement of the adverb from VP to a higher projection. Second, I show that the projection that the adverb moves to is not fixed. Rather, I show that the shifted adverb always surfaces preceding the first element adjacent to the ellipsis site. Finally, I show that shifted adverbs are obligatorily focused elements.

5.2.1 Adverb shift is movement

As previously illustrated in (322) and further in (323) below, the adverb shift surface pattern involves a 'low' adverb, e.g. a manner or low frequency adverb, surfacing in an exceptionally high position under VP-ellipsis, where it precedes the auxiliary.

(323) a. A: Did Martha loudly declare her love for the Yankees? B: No, [$_{TP}$ she **quietly** did [$_{VP}$ Δ]].

b. I think that Peter barely understands the lecture but you think that [$_{TP}$ Martha **completely** does [$_{VP}$ Δ]].

c. The dogs were frequently let out for the entire day but [$_{TP}$ the cats **rarely** were [$_{VP}$ Δ]].

Lasnik 2003/1995 suggests that in cases like (322) and (323), VP-ellipsis allows for the adverb to be base-generated exceptionally high above the auxiliary (see also Bošković 2004b for a similar proposal). For example, on this proposal, (323a) has the underlying structure in (324) below, where *quietly* is base-generated above *did* and survives VP-ellipsis.

(324) [$_{TP}$ *she quietly did* [$_{\sout{VP}}$ ~~*declare her love for the Yankees*~~]]

Although this proposal may be able to capture the surface facts in (322) and (323), as I will show below, there is strong evidence that the adverb is not base-generated above the auxiliary in these constructions but, rather, the adverb undergoes movement to its surface position.

Evidence that adverb shift involves movement comes from the observation that shifted adverbs display reconstruction effects, which, in turn, indicate the presence of a lower copy—i.e. the reconstruction site, as the tail of a movement chain (Barss 1986; Chomsky 1993; Hornstein 1984). The first case of reconstruction under adverb shift is observed with a class of adverbs, e.g. *rudely, stupidly,* that are ambiguous between a subject-oriented and manner interpretation (Ernst 2001; Jackendoff 1972). For example, (325a,325b) can have both a subject-oriented interpretation (i.e. *It was rude/stupid of Martha…*) and a manner interpretation (i.e. *Martha asked in a rude/stupid way…*).

(325) a. Martha rudely asked her brother to leave. [✓sub.; ✓man.]

b. Martha stupidly asked a question during Q&A. [✓sub.; ✓man.]

It is standardly thought that this type of ambiguity is a reflex of a difference in merge positions of the adverbs, where a subject-oriented interpretation occurs when the adverb merges in TP (i.e. (326a)) and a manner interpretation when the adverb merges in VP (i.e. (326b)) (Jackendoff 1972; Potsdam 1999; Travis 1988).

(326) a. [$_{TP}$ Martha *rudely/stupidly* T [$_{VP}$ V …]] ⇒ *subject-oriented interpretation*

b. [$_{TP}$ Martha T [$_{VP}$ *rudely/stupidly* V …]] ⇒ *manner interpretation*

While this difference in merge positions is obscured in (325a,325b) due to both configurations generating a string identical output, this correlation between merge position and interpretation can be readily observed in cases when T is realized as an auxiliary. As shown below, when the adverb follows the verb, as in (327a,328a), only a manner interpretation is available. But when the adverb precedes the auxiliary, as in (327b,328b), only a subject-oriented interpretation is available.

(327) a. Martha will [$_{VP}$ ask her brother to leave rudely]. [✗sub.; ✓man.]

b. Martha [$_{TP}$ rudely will ask her brother to leave]. [✓sub.; ✗man.]

(328) a. Martha will [$_{VP}$ ask a question during Q&A stupidly]. [✗sub.; ✓man.]

b. Martha [$_{TP}$ stupidly will ask a question during Q&A]. [✓sub.; ✗man.]

Importantly, under adverb shift, the situation is different. As (329a,329b) show, in adverb shift contexts, the shifted adverb is ambiguous between a subject-oriented and manner interpretation when it precedes the auxiliary (see also Abels 2003 for cases similar to (329)).

(329) a. Jane tactfully asked her brother to leave but Martha **rudely** did Δ. [✓sub.; ✓man.]

b. Jane intelligently asked a question during Q&A but Martha **stupidly** did Δ. [✓sub.; ✓man.]

That the shifted adverbs in (329a,329b) are ambiguous despite preceding the auxiliary in TP, I argue indicates that adverb shift cannot be due to high base-generation but, rather, involves movement. On the high base-generation proposal, the surface positions of the

adverbs in (329a,329b) are due to those adverbs being base-generated above the auxiliary in TP. Assuming that a manner interpretation requires a copy of the adverb in VP (as in (326b)), then on the high-base generation approach, only a subject-oriented interpretation should be possible. However, if adverb shift involves movement, then the facts in (329a,329b) straightforwardly follow. Then, the adverb is base-generated in VP and undergoes movement to a position above the auxiliary, where it is pronounced. Due to a lower copy in VP, the adverb can reconstruct for the manner interpretation.

A similar reconstruction effect can be observed with adverb shift involving aspectual verbs such as *begin*. As shown below in (330a), when *slowly* surfaces post-verbally it can only modify the lexical verb *study* (i.e. *Martha began the process of slowly studying her notes*). But when the adverb surfaces before the aspectual verb *began*, as in (330b), it can only modify the aspectual verb (i.e. *Martha slowly initiated the process of studying her notes (at any speed)*).

(330) a. Martha began to study her notes slowly.

b. Martha slowly began to study her notes.

The difference in interpretation between (330a) and (330b) can also be explained in terms of a difference in the merge position of the adverb, that is, whether the adverb merges to the lower VP and is interpreted as modifying the lexical verb (331a), or merges to the higher VP and is interpreted as modifying the aspectual verb (331b).

(331) a. [$_{TP}$ Martha [$_{VP}$ began to [$_{VP}$ study … *slowly*]]] ⇒ *lexical verb-modifying interpretation*

b. [$_{TP}$ Martha [$_{VP}$ *slowly* began to [$_{VP}$ study …]]] ⇒ *aspectual verb-modifying interpretation*

However, in the adverb shift construction in (332), while the adverb surfaces before the matrix auxiliary in TP, a lexical verb-modifying interpretation of the adverb is possible (in addition to the aspectual verb modifying interpretation).

(332) Jane began to study her notes slowly, while Martha quickly did Δ.

That the shifted adverb in (332) is ambiguous despite surfacing high in the clause, parallels the reconstruction facts discussed above. In (332), the sentence admits of a lexical verb-modifying interpretation. This indicates that the adverb was base-generated in the lower VP and has undergone movement to its surface position.

Further evidence that adverb shift involves movement can be observed in adverb shift contexts involving verbs which require an adverb to surface immediately post-verbally. It has been observed that a certain class of adverbs, e.g. *behave*, *dress*, require a manner adverb to surface post-verbally and disallow the manner adverb in a pre-verbal position, as in (333,334) (Alexiadou 1997; Jackendoff 1972; Levin 1993; McConnell-Ginet 1982).

(333) a. The boys behaved politely.

b. * The boys behaved.

c. * The boys politely behaved.

(334) a. Martha dresses elegantly.

b. * Martha dresses.

c. * Martha elegantly dresses.

It is typically thought that this requirement for a post-verbal adverb is due to such verbs selecting for an adverbial argument, which is base-generated VP-internally (Alexiadou 1997; McConnell-Ginet 1982). However, in adverb shift contexts such adverbs can surface pre-verbally and precede the AUX, as in (335,336) below.

(335) The girls behaved rudely at dinner, while the boys politely did Δ.

(336) Peter dresses shabbily for work, while Ernie elegantly does Δ.

That such adverbs can surface pre-verbally in adverb shift environments— despite involving verbs which select for an adverbial internal argument— I argue is further evidence that adverb shift involves movement and is not simply high base-generation. If adverb shift in (335,336) were simply due to high base-generation above the AUX, then (335,336) should be ungrammatical (on a par with (333c,336)) due to one of V's argument slots failing to be saturated with an argument. That (335,334c) are grammatical indicates that the adverb has undergone movement to its surface position. In these cases, the adverb is base-generated VP-internally, where it can saturate one of V's argument slots, and then undergoes movement to its surface position above the AUX.

Given that adverb shift involves movement of the adverb, an issue emerges regarding the type of movement. One possibility is that adverb shift involves X^0-movement, where the Adv undergoes X^0-movement and head-adjoins to T, as in (337a). An alternative hypothesis is that it involves XP-movement where AdvP moves to TP, as in (337b).

(337) a. $[_{TP} \ldots$ Adv+T $[\sout{_{VP} \text{Adv V} \ldots}]\ ]$

b. $[_{TP} \ldots$ AdvP $[_{TP}$ T $[\sout{_{VP} \text{AdvP V} \ldots}]\ ]\ ]$

I argue that the relevant movement type is XP-movement (337b). Evidence for XP-movement comes from the observation that complex adverbials, e.g. *very carefully/ quickly*, may undergo adverb shift, as in (338a,338b).

(338) a. How will you tell Martha you can't come to her big party? B: I **very carefully** will Δ.

b. Peter very slowly moved the furniture up the stairs, while Martha **very quickly** did Δ.

Similarly, conjoined adverbials may undergo adverb shift, as in (339a,339b).

(339) a. Martha will quickly and roughly chop the onions but Peter **methodically and neatly** will Δ.

b. Martha spoke crudely and loudly at dinner, while Peter **politely and softly** did Δ.

Assuming that complex and conjoined adverbials are phrasal, i.e. AdvPs, and, thus, cannot undergo X^0-adjunction, the observation that AdvPs can undergo adverb shift is strong evidence that the movement involved is XP-movement. Thus, I conclude that adverb shift involves movement of an AdvP from its base VP-internal position, to a higher position above the VP-ellipsis target.

5.2.2 Adverb shift targets the nearest auxiliary

The previous section showed that adverb shift involves movement of the AdvP to a position outside of the VP-ellipsis target. While the previous cases involved the adverb shifting to TP, in this section I will show, based on novel data, that the landing site of adverb shift is not uniformly TP. Instead, I will argue that the landing site of adverb shift is variable and, crucially, is dependent on what material is realized in the remnant. Specifically, I will show that regarding the surface position of shifted adverbs, the generalization in (340) holds:

(340) **Shift position generalization:** A shifted adverb must surface immediately preceding the first pronounced element left-adjacent to Δ (i.e. the ellipsis site).

That (340) holds can be demonstrated in cases of VP-ellipsis with multiple auxiliaries. In constructions with both a main and auxiliary verb(s), ellipsis can target the VP headed by the main verb (as in (341a,342a)) or a higher AuxP headed by an auxiliary verb (as in (341b,342b)) (e.g. Sag 1976).

(341) a. The girls have been loudly playing their clarinets and the boys have [$_{\text{AUXP}}$ been [$_{\text{VP}}$ Δ]] too.

b. The girls have been loudly playing their clarinets and the boys have [$_{\text{AUXP}}$ Δ] too.

(342) a. The professors have been dressing shabbily and the students have [$_{\text{AUXP}}$ been [$_{\text{VP}}$ Δ]] too.

b. The professors have been dressing shabbily and the students have [$_{\text{AUXP}}$ Δ] too.

In cases where VP is the ellipsis target, under adverb shift, the adverb must surface preceding lower auxiliary and cannot precede the higher auxiliary. As shown with VP-ellipsis in (343a,344a), the shifted adverbs can precede *been* but cannot precede *have*. But under AuxP ellipsis, where *been* is elided, as in (343b) and (344b), the shifted adverb can precede *have*.

(343) a. The girls have been quietly playing their clarinets, while [$_{\text{TP}}$ the boys {*__loudly__} have [$_{\text{AUXP}}$ {__loudly__} been [$_{\text{VP}}$ Δ]]].

b. The girls have been quietly playing their clarinets, while [$_{\text{TP}}$ the boys __loudly__ have [$_{\text{AUXP}}$ Δ]].

(344) a. The professors have been dressing shabbily, while [$_{\text{TP}}$ the students {*__elegantly__} have [$_{\text{AUXP}}$ {__elegantly__} been [$_{\text{VP}}$ Δ]]].

b. ? The professors have been dressing shabbily, while [$_{TP}$ the students **elegantly** have [$_{AUXP}$ Δ]].

Assuming that *have* heads TP and *been* heads a lower AuxP, what the above data show is that the landing site of adverb shift is not fixed. Rather, the AdvP moves to the XP headed by the first overt AUX above the elided phrase. In (343a,344a), the first overt AUX heads AuxP and the AdvP moves to AuxP. But in (343b,344b), the lower AuxP is elided and the first overt AUX heads TP. Thus, in (343b,344b) the AdvP moves to TP. Hence, the key observation is that the shifted adverb must surface preceding the first overt element in the VP-ellipsis remnant.

5.2.3 Shifted adverbs are focused

The final characteristic of adverb shift is that shifted adverbs must be focused and, importantly, be realized with focal stress. In this section, I show that shifted adverbs not only can be focused (and, thus, bear focal stress) but that they must be focused.

The first piece of evidence indicating that shifted adverbs are contrastively focused comes from the observation that adverb shift can 'repair' certain VP-ellipsis constructions where the remnant lacks an appropriate contrastively focused element. It is standardly thought that one condition for ellipsis is that there must be an element in the remnant that is contrastively focused and realized with focal stress, which in the typical case results in that element bearing nuclear stress.[3] However, as shown below with sluicing (345a) and VP-ellipsis (345b) constructions, ellipsis is unacceptable when nuclear stress is placed on the focused *the hell*-modified *wh*-item. (cf. (345c) adapted from Chung 2013).

(345) a. * My library card has just been canceled but it's unclear WHY THE HELL Δ.

[3]For discussion of the focus requirement see Rooth 1992; Schwarzschild 1999; Tancredi 1992, among others; for discussion of stress prominence with the focused element in the remnant see Winkler 2011, 2019.

b. * My library card has just been canceled but it's unclear WHY THE HELL it has Δ.

c. My library card has just been canceled but it's unclear WHY Δ.

Güneş and Lipták (2021) show that aggressively non-d linked *wh*-items like *what the hell*, cannot bear nuclear stress, and require an element that follows them in the clause to bear nuclear stress.[4]

Thus, since there is either no further material in the sluicing case (345a) or the remaining material is given and, thus, deaccented in the VP-ellipsis case (345b), the aggressively non-d linked *wh*-items are forced to bear nuclear stress and the sentences are degraded (see also Hartman and Ai 2009 for related discussion). However, adverb shift can repair these types of remnants. As shown in (346a) below, the material following the aggressively non-d linked *wh*-item is given and deaccented and, thus, does not bear nuclear stress, hence the example is degraded (cf. (346b)). But under adverb shift, as in (347), since the shifted adverb is focused, and, thus, bears nuclear stress, and the sentence improves.

(346) a. ?? Someone left the party loudly last night and I want to know WHO THE HELL did Δ.

b. Someone left the party loudly last night and I want to know WHO did Δ.

[4]Güneş and Lipták (2021) show that this prosodic restriction quite generally holds with aggressively non-d linked *wh*-items. As shown in (i.) below the aggressively non-d linked *wh*-items are forced to bear nuclear stress, the remaining material being deaccented (as indicated with italics). Hence, the sentences are unacceptable (cf. (ii.)).

i. a. */? I know that he saw someone, but I don't know WHO THE HELL *he saw*.
b. * Surely, something was stolen, but I don't know WHAT HE HELL *was stolen*.
(Güneş and Lipták 2021: 111)

ii. a. I know that he saw someone, but I don't know WHO *he saw*.
b. Surely, something was stolen, but I don't know WHAT *was stolen*.
(Güneş and Lipták 2021: 111)

(347) I know most people quietly left the party last night, but I want to know who the hell LOUDLY did Δ.

While the previous data show that shifted adverbs can be focused, I will now show that shifted adverbs must be focused. Evidence for focus being obligatory on shifted adverbs can be observed with the felicity of adverb shift in responses to polar questions. As illustrated in (348,349), adverb shift is possible in responses where the shifted adverb contrasts with the adverb in the polar question— i.e. in (348a,349a), where focal stress is placed on the adverb. Additionally, contrastive focus may also be placed on the subject of the response, as in (348b,349b) with focal stress on the subject. Crucially, however, in cases like (348c,349c), where the subject is contrastively focused and bears focal stress, adverb shift is degraded.[5]

(348) Did Martha quickly dice the onion?

a. No, she SLOWLY did Δ.

b. No, PETER did Δ.

c. ?* No, PETER slowly did Δ.

(349) Does Martha frequently bet on football?

a. No, she RARELY does Δ.

b. No, PETER does Δ.

[5]Note that in the examples (348c,349c) the subjects have contrastive focus intonation–i.e. a falling intonation, which is crucially distinct from cases where the subject is a contrastive topic and is realized with a fall-rise intonation (Büring 2003; Jackendoff 1972). In cases where the subject is a contrastive topic and the shifted adverb is contrastively focused, the sentence is considerably less degraded, as in (ia) (↘↗ indicates fall-rise intonation; ↘ indicates a falling intonation):

i Did Martha quickly dice the onion?

a. I don't know about Martha but... PETER↘↗ SLOWLY↘ did Δ.

c. ?* No, PETER rarely does Δ.

A similar effect illustrated in (350a), where the constituent that associates with the focus operator *only* bears focal stress (Jackendoff 1972). In such cases where the focus associate is realized with focal stress, adverb shift is degraded, as (350b) shows (cf. (350c)).

(350) a. A: Did anybody completely understand this talk? B: Only MARTHA did Δ.

b. A: Did anybody completely understand this talk? B: ?*Only MARTHA partially did Δ.

c. A: Did anybody completely understand this talk? B: Martha PARTIALLY did Δ.

Given that adverb shift is uniformly degraded in contexts where another element preceding the shifted adverb is realized with focal stress, I argue that shifted adverbs must be focused elements themselves. It is standardly thought that within a clause there can be at most be one element that is stress prominent, and that elements that are focused are realized as the most stress prominent element in the clause (as in, e.g., Chomsky 1970; Jackendoff 1972; Ladd 1980; Selkirk 1995; Truckenbrodt 1995). Additionally, in cases where a clause contains multiple foci, the rightmost focus must be the stress prominent element (Féry and Samek-Lodovici 2006; Truckenbrodt 1995).[6] Assuming that shifted adverbs must be focused and, thus, must be stress prominent when they are the rightmost focus, the above cases (i.e. (348c,349c,350b)) are straightforwardly explained. In these cases, the clauses contain two foci, the shifted adverb and the subject, and the shifted adverb is the rightmost focus. But the non-rightmost focus is realized as the stress prominent element (rather than the shifted adverb), thus degradation results.[7]

[6]For discussion of canonical cases where a clause contains multiple foci, see Krifka 1992.

[7]Examples in (348c), (349c), and (350b) can be improved by making the adverb, which is the rightmost

Additionally, this effect regarding the shifted adverb and another contrastively focused element in the clause can be observed in cases where the auxiliary in the VP-ellipsis remnant is contrastively focused with the auxiliary in the antecedent clause. In (351b), the adverb *quickly* is contrastively focused and realized as the most stress prominent element in the clause, and adverb shift is severely degraded.

(351) a. Professors can quickly submit their grades but TAs MUST Δ.

b. ?* Professors can slowly submit their grades but TAs QUICKLY must Δ.

Similar to the previously discussed cases, in (351a,351b) the auxiliary *must* is the rightmost contrastively focused element and, thus, should carry main sentential stress (Winkler 2011). In such contexts, when the main stress is placed on the shifted adverb (which is contrastively focused), as in (351b), the sentence is degraded due to the prosodic requirement that the rightmost focused element carries main stress.

5.2.4 Summary

To summarize, there are three properties that characterize adverb shift. First, adverb shift involves XP-movement of an AdvP from its base VP-internal position to a position above the VP-ellipsis target. Second, the landing site of adverb shift is variable. In some contexts, the adverb moves to TP, in other contexts it moves to a lower AuxP. Further, I showed that the relevant generalization regarding the landing site of a shifted adverb is that it moves in front of the first overt element outside the ellipsis site. Finally, I showed that shifted adverbs are obligatorily focused elements and, thus, must be realized as stress prominent in the clause.

foci, the most stress prominent element in the clause (see fn. 5). The key point for the present discussion, however, is that: if stress prominence is placed on the foci to the left of the adverb, then the sentences are degraded (which indicates that the adverbs are focused themselves, per the above discussion).

5.3 Analysis

5.3.1 Previous approaches

While the adverb shift phenomenon has not received a systematic analysis, Lasnik (2003/1995) and Bošković (2004b) have suggested, in regards to Lasnik's (2003/1995) observation of (321a,321b) and (322), that this phenomenon may be related to avoiding a Stranded Affix Filter violation (Lasnik 1981). The essential intuition behind their proposals is that in English, an affixal T must combine with a verbal host through PF merger, which requires adjacency between T and V. Moreover, if the affixal T does not combine with a host, then the affix is stranded—i.e. a Stranded Affix Filter violation. Lasnik (2003/1995) and Bošković (2004b) propose that low adverbs, e.g. *quickly*, disrupt this adjacency relation if they are adjoined to VP, as in (352a) (in contrast to, e.g. Bobaljik 1994, who argues that adverbs/adjuncts are simply ignored for PF merger). Thus, in order to avoid a Stranded Affix Filter violation, in such cases, the adverb is base-generated above the affixal T, thus, allowing for PF merger between T and V, as in (352b).

(352) *John quickly walked*

a. [$_{TP}$ John [$_{T'}$ *-ed* [$_{VP}$ quickly walk]]] $\rightarrow$ $_{PF\ Output}$ *John -ed quickly walk

b. [$_{TP}$ John quickly [$_{T'}$ *-ed* [$_{VP}$ walk]]] $\rightarrow$ $_{PF\ Output}$ John quickly walk-ed

On their proposals, in non-ellipsis constructions, e.g. (352), the adverb is base-generated adjoined to a projection of T, but this high base-generation position is obscured due to PF merger between T and V. However, in VP-ellipsis constructions, as shown in (353a), where T does not undergo PF merger with V, the high, TP base-generation position of the manner adverb is visible. Thus, on Lasnik (2003/1995) and Bošković's (2004) accounts, the adverb

shift pattern in (322) is a particular instance of a more general phenomenon, where manner adverbs quite generally are base-generated above an affixal T.

(353) *Martha slowly walked and John quickly did* Δ

a. $[_{TP}$ John quickly $[_{T'}$ AUX+-*ed* $[_{\sout{VP\ walk}}]]] \rightarrow_{\text{PF Output}}$ John quickly did.

While their proposals can capture the basic facts in (321a,321b) and (322), there are both empirical and theoretical problems with this proposal in light of the complete adverb shift paradigm given in the previous section.

Empirically, these accounts have problems accommodating some of the reconstruction effects discussed in §5.2.1. Thus, as was previously shown, *quickly* in (354) can be interpreted as modifying either the elided aspectual or lexical verbs.

(354) Jane began to study her notes slowly, while Martha quickly did Δ.

On Lasnik (2003/1995) and Bošković's (2004) proposals, since the aspectual verb *begin* undergoes PF merger with an affixal $T_{[PST]}$, *quickly* can be base-generated adjoined to the TP above the aspectual VP. Consequently, in VP-ellipsis contexts, *quickly* will be outside the ellipsis target, resulting in the surface string in (354) with the aspectual verb-modifying interpretation. The problem for their accounts concerns the lexical verb-modifying interpretation of (354). On their accounts, since *study* is uninflected (with the lower T being realized as the non-finite *to*), *quickly* should adjoin to the lexical VP (since there is no PF merger between T and V here, i.e. between *to* and *study*). But if *quickly* adjoins to the lexical VP, then it is within the VP-ellipsis target and will be elided. Consequently, Lasnik (2003/1995) and Bošković's (2004) accounts seem to predict that the only possible interpretation for string in (354) is one where *quickly* modifies the aspectual verb (contrary to fact).

Further, this proposal cannot account for the distribution of shifted adverbs. As shown in (355), manner adverbs must consistently surface following the auxiliary *will* in non-ellipsis contexts.

(355) Peter {* slowly} will {slowly} eat his dinner.

Assuming that *will* is the realization of T in (355) and is not an affixal element, then on their accounts, *slowly* will not be base-generated adjoined to a projection of T and instead to VP, due to the absence of PF merger between T and V that *slowly* would disrupt. But, as shown in (356), *slowly* can precede *will* in VP-ellipsis construction.

(356) Bill will quickly eat his dinner but Peter slowly will Δ.

Assuming that *will* is the realization of T in (356) as well, the contrast between (356) and (355) regarding the possible position of *slowly* is unexpected on their accounts. If *will* does not undergo PF merger with V, then adverb shift should be uniformly unacceptable in (355, 356). However, as shown it is only unacceptable in the non-ellipsis context in (355). Additionally, it is unclear how the account in question can capture the observation that shifted adverbs must surface immediately preceding the first overt element before the ellipsis site; that is, the generalization in (340).

From a theoretical perspective, there is a 'look ahead' problem with respect to PF requirements feeding syntactic operations. On Lasnik (2003/1995) and Bošković's (2004) accounts, the key claim is that the adverb is base-generated in syntax adjoined to a projection higher than in the normal case in order to prevent the adverb from disrupting PF merger between an affixal T and V by being VP-adjoined. If the adverb were base-generated adjoined to VP, then PF merger between affixal T and V would be impossible, and a Stranded Affix Filter violation would be triggered when the structure is sent to PF. Thus, the adverb

is base-generated in the syntax adjoined to a projection of T. However, this explanation essentially depends on a PF requirement (i.e. Stranded Affix Filter) crucially affecting a syntactic mechanism. That is, at the level of syntax, the derivation must 'know' whether there will be a stranded affix in T at PF, if the adverb is base-generated adjoined to VP. Assuming that the syntactic derivation does not have access to this kind of PF information, then the claim that the adverb is base-generated adjoined to a projection of T for this reason is problematic.

5.3.2 New Analysis

In this section, I develop an analysis of adverb shift that captures the facts outlined in the previous section. I propose that adverb shift is a PF movement operation triggered in ellipsis contexts to repair an otherwise a PF ill-formed structure. I then argue that due to being a PF operation, adverb shift is a highly local operation. Subsequently, I argue that that the locality of adverb shift explains the distribution of the surface position of shifted adverbs.

5.3.2.1 Adverb shift is PF movement

The previous section showed that a key feature of adverb shift was that the shifted adverb undergoes movement from the VP to a position outside the ellipsis site. For example, it was shown that in a case like (329b), the adverb *stupidly* undergoes movement from VP to TP, and, thus permits a reconstructed interpretation.

(329b) Jane intelligently asked a question during Q&A while Martha **stupidly** did Δ.
[✓sub.; ✓man.]

In this section, I argue that that while adverb shift involves movement, the relevant move-

ment operation is not syntactic. Rather, I will show that adverb shift movement occurs in PF.

Evidence that the adverb shift operation occurs in PF comes from the observation that adverb shift cannot feed syntactic movement operations. As shown in (357a,358a), in cases of VP-fronting adverb shift is impossible and the adverb must always front with the VP (as in (357b,358b)).

(357) a. * Martha said that Fido would violently attack the intruder and [$_{VP}$ attack the intruder]$_i$ he violently did t_i.

b. Martha said that Fido would violently attack the intruder and [$_{VP}$ violently attack the intruder]$_i$ he did t_i.

(358) a. * Martha hoped that Peter would completely abandon his faith and [$_{VP}$ abandon his faith]$_i$ he completely did t_i.

b. Martha hoped that Peter would completely abandon his faith, and [$_{VP}$ completely abandon his faith]$_i$ he did t_i.

That adverb shift cannot co-occur with VP-fronting follows straightforwardly if adverb shift occurs in PF, after syntactic operations apply. Given that VP-fronting is a syntactic operation, when the structure is sent to PF, the AdvP is in the fronted VP. Thus, since the adverb has already fronted with the VP, it cannot undergo adverb shift to TP (due to the locality of adverb shift discussed below). Conversely, if it were the case that adverb shift was a syntactic operation, then it should be possible for adverb shift to occur prior to VP-fronting, with the VP-remnant fronting (contrary to fact).

Further evidence that adverb shift occurs late, after syntactic operations, comes from the interaction between adverb shift and quantifier float. As (359a,359b) show, quantifier float and adverb shift can co-occur in the same clause. Moreover, as (359b) shows, the adverb

can be shifted to the same projection that the quantifier has been floated in. Crucially, in such cases where the adverb and quantifier are in the same projection, the quantifier must always precede the adverb, as in (359b). If the adverb precedes the quantifier, as in (359c), the result is unacceptable.[8]

(359) a. All the girls have been quickly finishing their assignments, but the boys all have [$_{\text{AUXP}}$ slowly been [$_{\text{VP}}$ Δ]].

b. All the girls have been quickly finishing their assignments, but the boys have [$_{\text{AUXP}}$ all slowly been [$_{\text{VP}}$ Δ]].

c. * All the girls have been quickly finishing their assignments, but the boys have [$_{\text{AUXP}}$ slowly all been [$_{\text{VP}}$Δ]].

That the shifted adverb must always follow the floated quantifier, I interpret as indicating that adverb shift occurs in PF, after syntactic operations, in this case quantifier float, apply. Suppose that adverb shift is a syntactic operation, i.e. XP-adjunction, and that quantifier float involves QP-movement, where the Q is stranded in the Spec of an intermediate XP (Sportiche 1988, among others). Hence, in cases like (359b,359c) the Q is stranded in Spec, AUXP. But if adverb shift involves syntactic XP-adjunction, the AdvP must adjoin to

[8]Interestingly, this surface order restriction on adverbs and floated quantifiers is not universal for all adverb types. As shown below, with epistemic adverbs, e.g. *obviously*, in both VP-ellipsis and non-VP ellipsis contexts both *adverb-all* and *all-adverb* orders are possible (see also Bobaljik 1995 and Bošković 2004a for related discussion):

i. a. ?All the senators have been dealing with the most partisan Congress to date, and the representatives have {all} obviously {all} been Δ too.

b. The representatives have {all} obviously {all} been dealing with the most partisan Congress to date.

It is a standard assumption that, unlike manner adverbs, epistemic adverbs can merge with projections in the clause above the VP (Alexiadou 1997; Cinque 1999; Jackendoff 1972; Travis 1988, *i.a.*). Due to such adverbs having more freedom regarding potential adjunction sites, I suggest that the data in (i.) indicate that adverbs such as *obviously* can adjoin to a projection either above or below the phrase where the quantifier is floated in.

AUXP, above Spec, AUXP, as in (360). On this approach the only derivable order is then: *adverb-quantifier-auxiliary*, which is unacceptable (i.e. (359c)).

(360) *[$_{TP}$ *The boys*$_i$ *have* [$_{AUXP}$ *slowly*$_k$ [$_{AUXP}$ [$_{QP}$ *all* t_i]$_j$ *been* [$_{VP}$ t_j t_k Δ]]]

Alternatively, it may be suggested that XPs can support multiple Specs (as in, e.g., Richards 1997), and that the AdvP undergoes movement to Spec, AUXP. But in this case, both *adverb-quantifier-auxiliary* or *quantifier-adverb-auxiliary* surface orders should be possible, depending on whether AdvP movement precedes quantifier float or vice versa, as in (361a,361b). But as shown above, only the *quantifier-adverb-auxiliary* order, that is (359b), is possible.[9]

(361) a. *[$_{TP}$ *The boys*$_i$ *have* [$_{AUXP}$ *slowly*$_k$ [$_{QP}$ *all* t_i]$_j$ been [$_{VP}$ t_j t_k Δ]]]

b. [$_{TP}$ *The boys*$_i$ *have* [$_{AUXP}$ [$_{QP}$ *all* t_i]$_j$ *slowly*$_k$ been [$_{VP}$ t_j t_k Δ]]]

The key issue here is that if adverb shift is a syntactic operation, it is not possible to both rule in (359b) and rule out (359c) in a principled way (I will show below that the facts under consideration can be easily captured under the PF movement analysis proposed below).

The final piece of evidence indicating that adverb shift occurs in PF comes from the observation that adverb shift is sensitive to the prosodic structure of the ellipsis remnant.

[9]Note that on an adverbial analysis of quantifier float, as in e.g., Bobaljik 1995; Kayne 1975; Williams 1982, among others, this 'free ordering' problem would emerge as well.

Previously, it was shown that the landing site for adverb shift was always preceding the first overt element immediately before the ellipsis site (as in (340)). However, there is one exception to this generalization, which concerns cases of *to*-ellipsis. As shown below, in cases where the complement of infinitival *to* is elided, adverb shift to the embedded TP is unacceptable, as in (362a,363a).

(362) a. * Martha wants to behave rudely at the party, if Bill wants [$_{TP}$ politely to Δ].

b. Martha wants to behave rudely at the party, if Bill wants [$_{TP}$ to Δ].

(363) a. * The boys seem to quickly get frustrated in class while the girls seem [$_{TP}$ slowly to Δ].

b. The boys seem to quickly get frustrated in class and the girls seem [$_{TP}$ to Δ] as well.

Interestingly, however, under *to*-ellipsis, the adverb can shift to preceding the matrix verb, as in (364a,364b).[10]

(364) a. ? Martha wants to behave rudely at the party, if Bill [$_{VP}$ politely wants to Δ].

b. ? The boys seem to quickly get frustrated in class while the girls [$_{VP}$ slowly seem to Δ].

Zwicky (1982) and Zagona (1988) show that in cases of *to*-ellipsis, *to* undergoes prosodic rebracketing with the matrix verb due to *to*'s prosodically deficient status. As sketched below in (365), the output of this rebracketing process is that *to* prosodically incorporates with the matrix verb, e.g. *wants*, as a single prosodic word.

(365) ($_{\omega}$ wants) ($_{\sigma}$ to) Δ ⇒ ($_{\omega}$ ($_{\omega}$ wants) ($_{\sigma}$ to)) Δ

[10]Importantly, in (364a, 364b) the shifted adverb is modifying the embedded predicates; that is, *behave* and *get frustrated*.

Consider now how the rebracketing process may interact with adverb shift if the latter is a PF operation. As previously shown, the landing site of the shifted adverb always (aside from *to*-ellipsis) precedes the first overt element outside of the ellipsis site, which can be restated as in (366):

(366) **Shift Position Generalization (revised):** A shifted adverb must surface immediately preceding the first prosodic word (ω) left-adjacent to Δ.

In cases of ellipsis, where the auxiliary is a non-deficient prosodic word, e.g. *did*, this means that the shifted adverb immediately precedes the auxiliary, as in (367a). But in cases where the auxiliary is the prosodically deficient *to*, the shifted adverb surfaces higher, where it immediately precedes the matrix verb, as in (367b).

(367) a. John partially lost his mind and Bill ($_{\omega}$ completely) ($_{\omega}$ did) Δ.

b. ? Martha wants to behave rudely at the party, if Bill ($_{\omega}$ politely) ($_{\omega}$ ($_{\omega}$ wants) ($_{\sigma}$ to)) Δ.

That adverb shift is sensitive to the prosodic structure of the ellipsis remnant in this way, i.e. (366), strongly indicates that adverb shift is a PF operation. Given that prosodic structuring occurs in PF and that adverb shift is sensitive to prosodic structure, then adverb shift must occur in the derivation once such prosodic structuring has occurred—i.e. in PF.[11,12]

[11] Given that adverb shift must occur once prosodic information is present, there is an interesting issue concerning the derivational timing of when PF-deletion for ellipsis occurs. Given that adverb shift occurs at least concurrent with prosodification and involves PF movement out of the ellipsis target, this suggests that PF-deletion occurs late, in PF, after these operations have occurred. In this respect, the above adverb shift discussion is further evidence supporting the hypothesis that PF-deletion applies in PF after prosodification and is sensitive to prosodic information (see Wu 2022, 2024 and Bennett et al. 2019 for discussion).

[12] Interestingly, in *to*-ellipsis contexts, adverb shift appears to be restricted to only some matrix predicates. For example, in (i.,ii.) adverb shift is not possible with, e.g., *hope to* or *appear to*. It is unclear at present what the reason is for this restriction. One possible explanation is that verbs like *want*, as in (364a), are prototypical 'restructuring' verbs, which may have a prosodic reflex that facilitates adverb shift.

i. *Martha hoped to slowly finish her drink, while Jane quickly hoped to Δ.

Another type of ellipsis context where adverb shift displays the same sensitivity to prosodic structure that was observed with *to*-ellipsis is British English *do*-ellipsis. As shown in (368), British English allows for VP-ellipsis where a non-finite auxiliary *do* surfaces before the ellipsis site (Aelbrecht 2010; Baker 1984; Baltin 2006; Bošković 2014; Haddican 2007; Lewis 2024; Thoms and Sailor 2018, among others).

(368) a. Tom has written a paper and Emma has done Δ too.

b. The students have seemed to enjoy this class and the professors have done Δ too.

(Lewis 2024, 1)

c. A: Do you have a copy of *Aspects* in your office? B: I should do Δ.

(Thoms and Sailor 2018)

As with 'traditional' VP-ellipsis, *do*-ellipsis contexts also allow for adverb shift. However, while in the 'traditional' VP-ellipsis contexts the shifted adverb surfaces before the first AUX adjacent to the ellipsis site, in *do*-ellipsis contexts it cannot, as (369a) illustrates. Instead, the shifted adverb must precede both the non-finite *do* and the higher AUX, as in (369b).

(369) a. * Peter has quickly written a paper while Martha has slowly done Δ.

b. Peter has quickly written a paper, while John slowly has done Δ.

(B. Lewis, p.c.)

In this respect, adverb shift under *do*-ellipsis parallels adverb shift under *to*-ellipsis, where here as well the shifted adverb cannot surface between *to* and the matrix verb but must surface before the matrix verb (as in (362a,363a) vs. (362b,363b), repeated below).

ii. *The boys appeared to have completely finished their homework, while the girls partially appeared to Δ.

(362a) * Martha wants to behave rudely at the party, if Bill wants [$_{TP}$ politely to Δ].

(363a) * The boys seem to quickly get frustrated in class while the girls seem [$_{TP}$ slowly to Δ].

(362b) ? Martha wants to behave rudely at the party, if Bill politely wants [$_{TP}$ to Δ].

(363b) ? The boys seem to quickly get frustrated in class while the girls slowly seem [$_{TP}$ to Δ].

Further, there is another parallel between *do*-ellipsis and *to*-ellipsis. As with infinitival *to*, there is strong evidence that indicates that *do* is prosodically deficient element that must be prosodically supported by a left-adjacent host, i.e. an enclitic (as argued for in Haddican 2007 and Thoms and Sailor 2018). As shown in (370), *do* cannot be stressed.

(370) A: Do you think you'll arrive on time? B: *I might DO Δ./ I MIGHT do Δ.

(Thoms and Sailor 2018)

Additionally, in *do*-ellipsis contexts, *do* quite generally cannot be separated by intervening material from its host (as in (371)) and cannot be hosted by another prosodically deficient element, as illustrated with contracted *will* in (372). These facts support the claim that *do* is a prosodically deficient element.

(371) * I don't know if she'll come, but she should, it seems, do Δ.

(372) * Sarah will arrive on time, and Tom'll do. Δ

(Thoms and Sailor 2018)

Given the above prosodic facts regarding *do*, I argue that in PF *do* undergoes the same type of prosodic rebracketing as in the case of *to*, as sketched in (373) (cf. (365)).

(373) ($_{\omega}$ has) ($_{\sigma}$ done) Δ ⇒ ($_{\omega}$ ($_{\omega}$ has) ($_{\sigma}$ done)) Δ

If *do* undergoes this type of rebracketing and adverb shift targets the first ω adjacent to the ellipsis site (as in (366)), then it straightforwardly follows that adverb shift in *do*-ellipsis contexts must target the higher auxiliary and cannot occur between the *do* and the higher auxiliary. After *do* undergoes rebracketing, the first ω left-adjacent is the higher auxiliary—e.g. *has* in (373), and, therefore, adverb shift targets the position immediately before the higher auxiliary. Thus, the adverb shift facts in *do*-ellipsis contexts are further evidence indicating that the landing site of adverb shift is sensitive to the prosodic structure of the ellipsis remnant.

To summarize, I have argued that adverb shift is a movement operation that occurs late in PF. This was supported by observations that indicate that adverb shift occurs after syntactic operations (e.g. VP-fronting and quantifier float). Further, it was shown with the cases of *to*-ellipsis and *do*-ellipsis that the landing site of adverb shift is sensitive to the prosodic structure of the ellipsis remnant, which further shows that adverb shift occurs in PF once prosodic structuring has occurred.

5.3.2.2 Adverb shift as PF-repair

The previous section argued that adverb shift is a PF operation. In this section, I develop an analysis that explains why such movement occurs. I argue that given that adverb shift is a PF operation, the operation is triggered to resolve a specific PF issue. Specifically, I argue that adverb shift occurs in VP-ellipsis contexts where, if adverb shift did not occur, a PF ill-formed structure would be generated. Thus, to avoid PF ill-formedness, the adverb undergoes PF movement out of the VP-ellipsis domain; that is, adverb shift.

In particular, that adverb shift occurs in contexts if the adverb remained *in situ*, within the ellipsis site, a PF ill-formed structure would be generated. Thus, to avoid this problem, the adverb undergoes PF movement; that is, adverb shift.

Before presenting the analysis, I will outline some background assumptions. First, I adopt the assumption that English predicate ellipsis targets either the VP or the AUXP (in the case of AUXP-ellipsis), which triggers PF-deletion of elements within VP/AUXP, as sketched below in (374).[13]

(374) a. **Syntax:** [$_{XP}$ X [$_{VP/AUXP=\text{ ellipsis tgt.}}$ … V […]]]

b. **PF:** X ~~… V …~~

The second assumption is that focused elements are marked with a [FOC] feature in the syntax, which induces a focus interpretation at LF and, crucially, is realized as focal stress at PF (Chomsky 1970; Jackendoff 1972; Selkirk 1995, among others).[14] With respect to the PF-realization of [FOC]-marked elements, I assume the following holds:

(375) **Realize Focus:** If an XP is [FOC]-marked, then the XP must be PF-realized with focal stress.

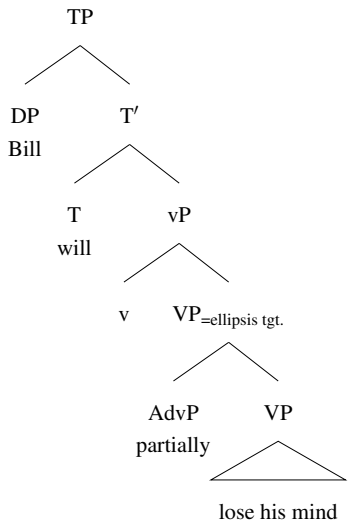
With these assumptions in place, consider the basic case of VP-ellipsis without adverb shift in (376). As in (376a), the AdvP is base-generated in VP and the VP is targeted for ellipsis. When (376a) is sent to PF, the entire VP (including AdvP) undergoes PF-deletion with (376b) as the PF output.

(376) John will partially lose his mind and Bill will ~~partially lose his mind~~ too.

[13] As discussed in Chapter 3 and Chapter 4, there is considerable evidence that ellipsis can target either a phase complement or a full phase and that English predicate ellipsis can involve either type. Chapter 3 captured this point by analyzing English predicate ellipsis in terms of an [E]-feature bearing v phase head, which marks either the VP phase complement or full vP phase for ellipsis (following the analysis first proposed in Bošković 2014). It is worth pointing out that the analysis adopted for predicate ellipsis in the present chapter is full compatible with this more general proposal regarding the distribution of candidate ellipsis targets (i.e. phase or phase complements).

[14] Note that the present account is compatible with several implementations regarding how a [FOC] feature is represented in the syntax. One possibility is that a [FOC] feature combines with the Lexical Item in the Numeration prior to entering the syntactic derivation proper (Aboh 2010). Another possibility, along the lines of a proposal in Cable 2010, is that [FOC] is located on a dedicated head X^0 which merges with the target phrase in the syntactic derivation.

a. **Syntax:**

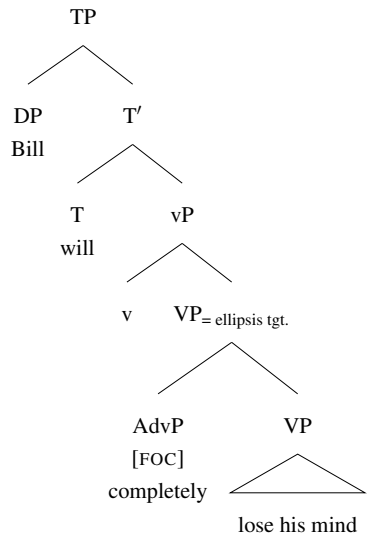


b. **PF:** [Bill will [~~partially lose his mind~~]] too.

Now consider the adverb shift case in (377) where the VP is elided. In the syntax, VP is the ellipsis target, which triggers PF-deletion of the VP, as in (377a). Crucially, when (377a) is sent to PF, the AdvP is inside the ellipsis site; if ellipsis were to also affect the AdvP it would be "silenced"; that is, ∅-realized. But, as previously shown, in adverb shift contexts the Adv^0 is focused, i.e. marked with [FOC] in the syntax and receives a focus interpretation in LF. Importantly, per (375), [FOC]-marked elements also have a realization requirement at PF, where they must be stressed. Thus, given (375), if the adverb remains in *in situ*, within the VP, in PF it will simultaneously have to satisfy two mutually incompatible PF requirements. Specifically, it would have to undergo PF-deletion due to being in the VP-ellipsis target, and it would have to be pronounced with focal stress due to (375), as in (377b) below.

(377) John will partially lose his mind and Bill completely will ~~lose his mind~~.

a. **Syntax:**



b. **PF output (without adverb shift):** *[Bill will [~~COMPLETELY lose his mind~~]]

In order to resolve this PF conflict, i.e. (377b), I propose that the PF operation in (378) is triggered and the adverb shifts to the nearest position where it can escape elision and be pronounced, i.e. immediately before the first ω, as in (379).

(378) **Adverb shift rule**: If a focused adverb is targeted for PF-deletion, place the adverb immediately before the first prosodic word (ω) preceding the ellipsis site.

(379) **Adverb shift:** [Bill COMPLETELY will [~~lose his mind~~]]

Thus, on the present proposal, adverb shift (i.e. (378)) is triggered to repair a PF-illegitimate structure. In cases where the adverb is not [FOC]-marked it is elided, e.g. (376b). But in cases where the adverb is [FOC]-marked it needs to satisfy two mutually incompatible requirements: to be elided and to be pronounced. To resolve this conflict, (378) is triggered and the adverb undergoes PF movement immediately outside of the ellipsis target, where it

can be realized with focal stress—-i.e. be pronounced.[15,16]

On the present analysis, adverb shift is a PF movement operation to resolve a PF conflict, involving the shortest movement that can resolve such conflict. In this respect, adverb shift resembles other proposals made in the literature regarding PF movement (in fact, probably the most convincing cases of PF movement). It is often thought that PF movement differs from syntactic movement in that it is a highly local operation that is driven

[15] See also Weir 2014 for a PF-movement based analysis of fragments in English that follows a similar logic.

[16] There is a residual question regarding why for most speakers adverb shift is somewhat comparatively more marked than non-shifted adverbs in VP-ellipsis contexts, as in (ia.) vs. (ib.).

i. a. ? Martha will slowly eat her dinner and Jane quickly will Δ.
   b. Martha will slowly eat her dinner and Jane will Δ quickly.

One possible explanation is that adverb shift can interact with other competing PF constraints involved with ellipsis. Assume that there is a general PF constraint preferring a faithful mapping between syntactic and PF representations, i.e. a constraint that prefers syntactic elements be PF-realized in a linear order that reflects syntactic c-command relations. Hence, (ia.) violates this constraint due to *quickly* being PF realized before *will* despite being syntactically c-commanded by T/ *will*. However, this faithfulness violation would be partially mitigated due to another constraint that prefers PF-deletion of all elements in the ellipsis domain (which is VP in (ia.)). Since both constraints cannot be mutually satisfied without violating the stress-realization rule (375), adverb shift is an option. Alternatively, faithful mapping (and (375)) can be preserved by violating maximum PF-deletion and eliding only a VP segment (the adverb being VP-adjoined), thus, resulting in (ib.). Given that (ia.) is more marked than (ib.), this would suggest that faithfulness is a more highly ranked constraint than maximum deletion. Another possible explanation for the contrast in (i) would be a general preference for adverbs to be realized in parallel positions relative to the auxiliaries in each clause. Since adverb shift causes the adverbs in (ia.) to be realized in non-parallel positions relative to the auxiliaries, cf. (ib.), there is markedness.

Interestingly, there is evidence that both options are not always available and that adverb shift is the only option in some cases. Specifically, there is some evidence that post-auxiliary manner adverb realization in VP-ellipsis contexts is restricted to adverbs that can be right-adjoined to VP, e.g. *quickly* (i.) (see Bell 2012 and Zyman 2012 for discussion). Adverbs that can only be left-adjoined to VP, e.g. *actually, nearly* as in (ii.), must undergo adverb shift in VP-ellipsis contexts and cannot be realized in a post-auxiliary position, as in (iiia.) vs. (iiib.).

i. Martha {quickly} ate her dinner {quickly}
ii. Martha {nearly/ actually } got a speeding ticket {*nearly/ *actually}
iii. a. You nearly got a speeding ticket and I actually did Δ.
   b. * You nearly got a speeding ticket and I did Δ actually.

The above contrast in (iiia.) vs. (iiib.) suggests that adverb shift targets left-adjoined VP-adverbs, while post-auxiliary adverbs involve right adjunction to a VP-segment that is outside of the ellipsis site. I leave a fuller investigation of this restriction for future work.

by a specific, PF-based need (e.g., Embick and Noyer 2001; Halpern 1995; Marantz 1988; Weisser 2020). Consider for example Prosodic Inversion (Halpern 1995). When an enclitic does not have a suitable host to its left, e.g. when it ends up being sentence-initial in the syntax, the PF rule in (380) is triggered, moving the enclitic the minimal distance required to satisfy the enclitic requirement, i.e. after the first prosodic word, and the enclitic "inverts" with the first prosodic word on its right.

(380) **Prosodic Inversion rule:** If an enclitic is sentence-initial, place the enclitic to the immediate right of the leftmost prosodic word (ω). (adapted from Halpern 1995)

To illustrate the logic of Prosodic Inversion, when the syntax outputs (381a), Prosodic Inversion is triggered and places the enclitic X_{CL} to the immediate right of the prosodic word, Y_{ω}, as in (381b).

(381) a. **Syntax output:** X_{ECL} Y_{ω} Z_{ω}

b. **PF:** Y_{ω} X_{ECL} Z_{ω} (PI)

The relevant point is Prosodic Inversion is a PF operation that is both highly local, with its locality stated in terms of PF considerations, involving shortest movement possible, and occurs to solve a specific PF problem (an enclitic without a host).

Returning to adverb shift, it is noteworthy that it patterns with Prosodic Inversion in the relevant respects. It is a PF-movement operation that has PF motivation, and it takes place to resolve a PF issue. Furthermore, it has the same kind of locality as Prosodic Inversion. Shifted adverbs must surface immediately before the first prosodic word preceding the ellipsis site. As was shown in (344a) (repeated below), when the VP-ellipsis remnant has multiple auxiliaries, the shifted adverb can only precede the first auxiliary adjacent to the

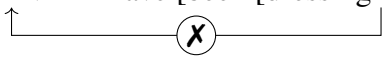
ellipsis site. But when the lower auxiliary is elided, as in (344b), the adverb can shift over the higher auxiliary.

(344a) The professors have been dressing shabbily, while [$_{TP}$ the students {*__elegantly__} have [$_{AUXP}$ {__elegantly__} been [$_{VP}$ Δ]]].

(344b) ? The professors have been dressing shabbily, while [$_{TP}$ the students __elegantly__ have [$_{AUXP}$ Δ]].

This effect straightforwardly follows if adverb shift is due to the PF operation in (378), which involves the shortest movement operation needed to satisfy (378). In (344a), the VP is the ellipsis target. In PF, the VP is targeted for PF-deletion including the focused *elegantly*, which must be realized with focal stress. Thus, PF imposes two incompatible requirements on *elegantly*—i.e. silence and pronunciation. To resolve this, *elegantly* must undergo PF movement outside the ellipsis site. While both PF movement to before *have* (i.e. (382a)) and *been* (i.e. (382b)) would equally avoid *elegantly* being silenced, PF movement to immediately before *been* involves the minimal PF movement distance required to avoid elision. Thus, the shifted adverb must immediately precede *been*, as in (382b). In (344b), however, the AUXP is targeted for PF-deletion, thus, *elegantly* must undergo PF movement to before *have*, i.e. there is no shorter movement that would avoid *elegantly* undergoing ellipsis (see (382c)).

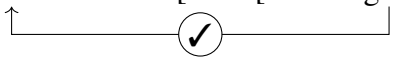
(382) a. **PF:** *[…the students ELEGANTLY have [been [~~dressing~~]]]



b. **PF:** […the students have ELEGANTLY [been [~~dressing~~]]]



c. **PF:** [...the students ELEGANTLY have [~~been [dressing~~]]]



Further, the quantifier float facts also straightforwardly follow from the locality of the adverb shift rule (378). As shown, the shifted adverb can follow a floated quantifier in (359b), but it can never precede it, as in (359c).

(359b) All the girls have been quickly finishing their assignments but the boys have [$_{\text{AUXP}}$ all slowly been [$_{\text{VP}}$ Δ]].

(359c) * All the girls have been quickly finishing their assignments but the boys have [$_{\text{AUXP}}$ slowly all been [$_{\text{VP}}$ Δ]].

If adverb shift is due to the operation in (378), then the adverb must move immediately before the ω before the ellipsis site. Since the floated quantifier is never the first ω before the ellipsis site (the auxiliary always is), the adverb cannot shift before it (i.e. (359c)). Rather, it must shift between the quantifier and the auxiliary, as in (359b).

5.4 Extensions: The limits of adverb shift

5.4.1 The impossibility of adverb shift under sluicing

In the previous sections, adverb shift was shown to be systematically possible in VP-ellipsis constructions. However, adverb shift is not possible in other ellipsis environments. As shown below in (383a), adverb shift is not possible under sluicing (cf. (383b)).

(383) a. * Someone partially understood the lecture but I don't know [$_{\text{CP}}$ completely who [$_{\text{TP}}$ Δ]].

b. Someone partially understood the lecture the but I don't know who completely did [$_{VP}$ Δ].

Why is this the case? One potential explanation for the impossibility of adverb shift under sluicing is that cases like (383a) are instances of the more general restriction in (384), that is, the issue with (383a) is not due to sluicing preventing adverb shift *per se* but rather is related to the more general Sluicing-COMP generalization, which states that no non-operator material, i.e. non-*wh*-item, may be realized in CP under sluicing, as illustrated in (385,386) (Baltin 2010; Lasnik 1999a; Lobeck 1995; Merchant 2001).

(384) **Sluicing-COMP generalization:** In sluicing, no non-operator material (i.e. *wh*-XP) may appear in COMP (=Spec, CP+C^0). (Merchant 2001, 62)

(385) a. A: He visited someone. B: Oh really. [$_{CP}$ Who did [$_{TP}$ he visit]]?

b. A: He visited someone. B: Oh really. [$_{CP}$ Who (*did) Δ]?

(adapted from Baltin 2010: 331)

(386) a. A: Martha will eat something. B: [$_{CP}$ What will [$_{TP}$ she eat]]?

b. A: Martha will eat something. B: [$_{CP}$ What (*will) Δ]?

Evidence that the unacceptability of (383a) is due to a Sluicing-COMP violation comes from the observation that adverbs quite generally cannot surface in a sluicing remnant. As shown below, CP-level adverbs (e.g. (387a,388a)) cannot survive sluicing, as shown in (387b,388b).

(387) a. [$_{CP}$ Who possibly can [$_{TP}$ we call at this hour of the night?]]

(Potsdam 1999)

b. A: Martha knows someone we can call at this hour of the night. B: Who?/ *Who possibly?

(388) a. [$_{CP}$ Which of them apparently does [$_{TP}$ he not like?]]

(Potsdam 1999)

b. A: Martha told me that Peter doesn't like some of his students. B: Which of them?/ *Which of them apparently?

Thus, both the unacceptability of shifted adverbs (383a) and adverbs base-generated in CP (387b,388b) can be regarded as instances of violations of the Sluicing-COMP generalization in (384), which is a general ban on non *wh*-elements in the sluicing remnant.

While the impossibility of both shifted and base-generated adverbs in a sluicing remnant can be understood in terms of the Sluicing-COMP generalization, the impossibility of adverb shift under sluicing has important implications for explaining the Sluicing-COMP generalization. In a number of works, it has been proposed that the Sluicing-COMP effect arises due to narrow syntactic factors. These works argue that this effect arises due to all material— excepting the *wh*-item— being marked for ellipsis in sluicing contexts and, thus, silenced. For example, Döring 2014; Heck and Muller 2003; Messick and Thoms 2016; Thoms 2010 and Benbaji-Elhadad and Pesetsky 2025 have proposed that sluicing involves elision of an intermediate CP; that is, on these approaches the sluicing domain is a CP projection that is c-commanded by the *wh*-item. Hence, on these approaches elements in C or CP-adjuncts (which adjoin to an intermediate CP projection) are elided under sluicing, as sketched in (389).[17] Alternatively, other approaches have proposed that sluicing involves the *wh*-item being located in a projection, e.g. FocP, above the CP-ellipsis target, as in (390) (Baltin 2010; Lipták and Aboh 2013, *i.a.*).[18]

[17]Note that some approaches in the 'intermediate CP-deletion' family, would actually require some modification to accommodate the data in (387b,388b) since on some approaches, e.g. Benbaji-Elhadad and Pesetsky 2025, what gets elided is $\bar{C}$ (i.e. first intermediate projection above C). Hence, those approaches would predict that base-generated CP-level adverb can survive ellipsis (since they would be above $\bar{C}$).

[18]Note that another family of accounts, e.g. Lasnik 1999a and Merchant 2001, account for the Sluicing-COMP generalization in terms of TP-ellipsis contexts bleeding T-to-C movement in cases like (385). However,

(389) [$_{CP}$ *wh* ~~[$_{CP}$ (Adjunct) C [$_{TP}$ …]]~~]

(390) [$_{FocP}$ *wh* ~~[$_{CP}$ (Adjunct) C [$_{TP}$ …]]~~]

The key point is that on both types of accounts, the Sluicing-COMP effect arises due to narrow syntactic factors related to sluicing, namely, that the phrase targeted for sluicing, i.e. either an intermediate or full CP, will always include CP-adjuncts and material in C.

While these proposals can explain the observation that adverbs base-generated in CP are illicit under sluicing, as in (387b,388b), I will show that these proposals cannot account for the observation that shifted adverbs also cannot surface in a sluicing remnant, as in (383a). On these accounts of the Sluicing-COMP effect, what prevents non-*wh* material from appearing in the sluicing remnant is that such elements are within the CP-ellipsis domain in the syntax and, thus undergo PF-deletion. But on this type of approach, (383a) should be acceptable, given that the point of adverb shift is for a focused adverb to undergo PF movement out of the ellipsis site.

Instead, I propose that the reason adverb shift under sluicing is unacceptable (alongside other "traditional" Sluicing-COMP violations) is due to the PF requirements that sluicing imposes. Messick 2014 suggests that a PF-licensing condition on sluicing is that the sluicing target must be an intonational phrase (ι) and that the *wh*-item must be focused and stressed in order to produce an ι-boundary between the remnant and the sluice.

Evidence that the *wh*-item in the sluicing remnant must bear focal stress comes from German *wh*-expletives under sluicing and aggressively non-d linked expressions under sluicing in English. Merchant (2001) observes that, as with other expletives (e.g. in (391)), German *wh*-expletives cannot bear stress, as in (392).

(391) a. *IT was raining.

since such accounts cannot explain the impossibility of base-generated material in CP, as in (387b,388b), I set these accounts aside.

b. *THERE are prisoners in the yard.

c. *IT is obvious that I'm right. (Merchant 2001: 52)

(392) *WAS^{x} hast du gesagt, an wen^{x} ich dich erinnern sollte?
what have you said on who I you remind should
'Who did you say I should remind you about?' (Merchant 2001: 52)

Further, Merchant (2001) observes *wh*-expletives cannot occur in sluicing remnants, as in (393a) (compare with the non-sluicing counterpart in (393b)).

(393) a. Du hast mir gesagt, ich sollte dich an
you have me told I should you on
jemanden erinnern, aber ich weiß micht mehr, was^{x}
someone remind but I know not longer what
~~du mir gesagt hast, an wen^{x} ich dich erinnern sollte~~.

'You told me to remind you about someone, but I can't remember who.'

b. Was^{x} hast du mir gesagt, an wen^{x} ich dich erinnern sollte?
what have you me told on who I you remind should
'Who did you tell me to remind you about?' (Merchant 2001: 52)

Merchant (2001) argues that the inability for *wh*-expletives to occur in sluicing remnants indicates that the *wh*-item must be focused in the remnant (see also Messick 2014 for further discussion on this point).

Further evidence that the *wh*-item in the sluicing remnant must bear focal stress comes from the inability of aggressively non-d linked *wh*-items to appear in sluicing remnants, as illustrated in (394b,395b) (Hartman and Ai 2009).

(394) a. John's talking about something but I don't know what.

b. *John's talking about something but I don't know what the hell.

(Hartman and Ai 2009: 108)

(395) a. Mary kissed someone but I have no idea who.

b. *Mary kissed someone but I have no idea who on earth.

As discussed in the previous section, aggressively non-d linked expressions cannot bear nuclear stress (see also Güneş and Lipták 2021; Hartman and Ai 2009). If the *wh*-item in the sluicing remnant must be focused and, therefore bear nuclear stress in (394b,395b), then the observation that cases like (394b,395b) are unacceptable is evidence that the *wh*-item in the sluicing remnant must bear focal stress.

Furthermore, evidence that focused elements induce an intonational phrase boundary comes from second position clitic placement possibilities in BCS. These clitics surface as the second element within the intonational phrase (Bošković 2001; Radanovic-Kocic 1988). As illustrated below in (396), the clitic, *je*, must be the second element in the clause, which correspond to the intonational phrase in (396,397). As (397) shows, the clitic cannot surface third in the clause.

(396) Noću *je* ovdje mirnije.
at-night AUX here more-quiet
'At night it is more quiet here.' (Radanovic-Kocic 1988: 106)

(397) *Petru on *će* prodati knjige.
Peter.DAT he will sell books.ACC
'To Peter, he will sell books.' (Bošković 2001: 65)

However, in cases where the first element in the clause bears heavy contrastive stress and is followed by a intonational pause, the clitic cannot surface as the second element in the clause, as in (398a). Rather, it surfaces as the third element in the clause, as in (398b).

(398) a. *NOĆU // *je* ovdje mirnije.
at-night AUX here more-quiet
'AT NIGHT, it is more quiet here.'

b. NOĆU // ovdje *je* mirnije.
at-night here AUX more-quiet
'AT NIGHT, it is more quiet here.' (based on Radanovic-Kocic 1988: 106)

In the above cases, the focused element induces an intonational phrase boundary immediately after it. Given that clitics must surface as the second element within their intonational phrase, the clitic (398b) surfaces as the third element in the clause (and, thus, the second element within the intonational phrase).

Returning to sluicing, Messick (2014) suggests that since sluicing targets an ι-boundary, which occurs immediately after the *wh*-item, elements in C and CP-level adjuncts will always be elided in sluicing contexts:[19]

(399) ($_\iota$ *wh*) // ($_\iota$ ~~(adjunct) C …~~)

As for why adverb shift cannot occur in sluicing contexts, I suggest that the prosodic structure of sluicing constructions plays a role here as well. As was shown in the the previous section, adverb shift is a PF operation that is sensitive to prosodic structure (i.e. (378)). Given that adverb shift is sensitive to prosodic structure, I suggest the reason that adverb shift cannot occur in sluicing remnants (i.e. (383a)) is due a prosodic constraint on PF operations. Specifically, I conjecture that the following PF restriction holds:

(400) PF operations cannot occur across ι-boundaries.

To illustrate, consider (383a). As illustrated in (401) below, after prosodification, there is an ι-boundary immediately following *who*. Further, the adverb *completely* is within the sluicing target and, thus, *completely* should undergo adverb shift before the first ω outside the ellipsis target, i.e. *who*. However, in order to do so, *completely* must cross the ι-boundary. Thus, due to the restriction in (400) adverb shift is blocked here.

[19] Bošković (2025) gives a principled account of this effect by proposing that the phrase that is sister to the *wh*-item is the Spell-out domain under sluicing, thus forcing the elision of all material other than the *wh*-item. Further, assuming that the clausal Spell-out domain maps to an ι-domain (see Bošković 2025 and references therein), Messick's (2014) proposal then directly follows.

(401) *(ι **completely** who) // (ι ~~understood the lecture~~)



There is a good deal of independent evidence that intonational phrase boundaries block otherwise operative PF operations. One piece of evidence to that effect comes from High Tone Spreading patterns in Básáa *wh*-questions (Hamlaoui and Makasso 2011). In Básáa, when a *wh*-item is realized *in situ* and is followed by additional material, the *wh*-item surfaces in its "short form" and spreads an H-tone to the first syllable of the word on its right. As illustrated in (402), the *wh*-item *kí* surfaces in its short form, and spreads an H-tone to /ɲàŋ/ (which has an underlying L-tone), which surfaces with a falling tone as [ɲâŋ].

(402) mààŋgɛ́ à ǹ-sɔ́mb **kí** ɲâŋ? (ɲàŋ)
child SM.3SG P_1-buy what mother
'What did the child buy for his mother?' (Hamlaoui and Makasso 2011: 52)

However, when the *wh*-item undergoes fronting, the *wh*-item surfaces in its "long form", i.e. with a long final vowel. Additionally, H-tone spreading to the element to the right of the *wh*-item does not occur. As shown in (403), the *wh*-item surfaces clause-initially in its long form *kíí* and the H-tone does not spread to the subject marker *à* (which is realized with its underlying L-tone and not with a falling tone, i.e. [*â*]). Similarly, when a *wh*-item is realized *in situ*, but is clause-final, the *wh*-item surfaces in its long form as well, as in (404).

(403) **kíí** à ǹ-lɔ́ˡná ɓés?
what SM.3SG P_1-bring us
'What did she bring us?' (Hamlaoui and Makasso 2011: 50)

(404) mààŋgɛ́ à ǹ-sɔ́mb **kíí**?
child SM.3SG P_1-buy what
'What did the child buy?' (Hamlaoui and Makasso 2011: 55)

Hamlaoui and Makasso (2011) argue that the *wh*-item is underlyingly CV́+H. Hence, in cases like (402), where the *wh*-item has an element to its right, the H-tone can float to the next syllable. However, in cases where there is not a syllable for the H-tone to float rightwards onto, e.g. when the *wh*-item is clause final (404), the final V on the *wh*-item is lengthened to create a mora for the floating H-tone to spread to. In the case where the *wh*-item fronts and surfaces in its long form, Hamlaoui and Makasso (2011) argue that H-tone spreading is blocked here as well, due to the presence of an ι-boundary between the *wh*-item and the rest of the clause, thus the vowel on the *wh*-item is lengthened.

Additional evidence that ι-boundaries block PF processes comes from BCS. Radanovic-Kocic (1988) observes that intonational phrase boundaries block degemination in BCS, as shown with the contrast between (405a) and (405b). In (405a), degemininations occurs. It is well-known that heavy fronted constituents induce intonational phrase boundaries. In (405b), there is an intonational phrase boundary between the heavy phrase and the rest of the clause and degemininations does not occur. Note also the second position clitic *je* surfaces immediately after the first element in the intonational phrase in (405b).

(405) a. Moj jorgan je od perja. [mo**j**organ]
my comforter is of down
'My comforter is down.'

b. Za prošlogodišnji Prvi maj // Janko je otišao u Paris. [ma**jj**anko],
for last.year's first May Janko is gone to Paris
*[ma**j**anko]

'For last year's May Day, Janko went to Paris.' (Bošković 2001: 71)

Returning to adverb shift and sluicing, the key point is that because sluicing involves elision of an intonational phrase, which is induced by the *wh*-item, PF operations cannot

occur across this intonational phrase boundary. Given that adverb shift is a PF operation, adverb shift out of the sluicing target (which is an intonational phrase), to the remnant, is blocked.

5.4.2 Why only *adverb* (and not DP or PP) shift?

An interesting property of the adverb shift operation, i.e. (378), is that only adverbs can be targeted for PF movement in VP-ellipsis ellipsis contexts. Other elements, e.g. DPs or PPs cannot be targeted with a parallel "DP/PP-shift" operation. As illustrated below in (406) and (407), unlike focused manner adverbs, focused DPs and PPs cannot surface preceding the auxiliary in VP-ellipsis contexts.

(406) * Bill will eat his dinner and Mary [$_{DP}$ her breakfast] will Δ.

(407) * Peter will play the trumpet for his mother and Bill [$_{PP}$ for his father] will Δ.

I propose that the absence of a parallel "DP/PP-shift" operation follows from the last-resort nature of the PF operation in (378). As discussed in the preceding sections, the adverb shift operation is triggered in VP-ellipsis context when, in PF, there is a focused adverb within the VP-ellipsis ellipsis target. In such contexts, the adverb is forced to satisfy two mutually incompatible PF demands: to be silenced and to be pronounced (with focal stress), thus the adverb undergoes PF movement out of the VP-ellipsis target to resolve this conflict. Importantly, this PF operation is triggered as a last resort repair operation, given that the adverb lacks any other means of escaping the ellipsis target. In contrast to adverbs, however, focused DPs and PPs have other means of moving out of a VP-ellipsis target, namely, these elements can undergo syntactic movement.

As shown below in (408) and (409), contrastively focused DPs and PPs can surface in pseudogapping remnants.

(408) Bill will eat his dinner and Mary will [$_{DP}$ her breakfast].

(409) Peter will play the the trumpet for his mother and Bill will [$_{PP}$ for his father].

Importantly, there is evidence that elements in pseudogapping remnants have undergone syntactic movement out of the VP-ellipsis target (Gengel 2013; Jayaseelan 2001; Lasnik 1999b; Takahashi 2004). For example, Takahashi (2004) observes that pseudogapping remnants can license parasitic gaps, as in (410).

(410) Although John didn't file a recent article about HNPS, he did [without reading e_1] [a recent article about Object Shift]$_1$
(Takahashi 2004: 576)

Given that parasitic gaps are only licensed under Ā-movement, the acceptability of (410) indicates that pseudogapping involves syntactic movement out of the VP-ellipsis target.
In contrast to DPs and PPs, focused adverbs cannot undergo such syntactic movement in VP-ellipsis contexts. As shown below in (411) and (412), *actually* and *slowly* cannot survive as a pseudogapping remnants (see also Abels 2003 for discussion of related data).

(411) * You nearly got a speeding ticket and I did actually.

(412) * Joe quickly ripped up his paper and Sue did slowly her essay.
(Abels 2003: 275)

What the above data show is that there is a crucial difference between VP-adverbs and DP/PPs with respect to to syntactic movement out of VP-ellipsis targets. In the case of DPs and PPs, when such elements are contrastively focused with a DP/PP in the antecedent clause, they can undergo syntactic movement out of the VP-ellipsis target; that is, surface as a pseudogapping remnant (as in (408,409)). However, for focused VP-adverbs this type of focus-driven syntactic movement is not possible (as in (411,412)). I propose that the

availability of this type of syntactic movement for focused DPs and PPs explains why there is no parallel "DP/PP-shift" PF operation. As was shown, when a DP/PP is contrastively focused in a VP-ellipsis context, it can undergo syntactic movement out of the ellipsis target. Given that such syntactic movement is possible, such elements will undergo this type of movement in the syntax and, thus a context where a focused DP/PP is located in the VP-ellipsis target in PF will not arise. In contrast, since focused VP-adverbs cannot undergo such syntactic movement, they can only undergo this movement in PF; that is, they undergo adverb shift.

5.5 Conclusion

In this chapter, I examined the adverb shift phenomenon and argued that adverb shift does not involve exceptionally high syntactic base-generation of the adverb, as argued for in Lasnik 2003/1995 and in Bošković 2004b. Rather it involves movement of the adverb; in fact, it involves PF movement of the adverb that is triggered by a specific PF-related issue. Moreover, the locality of adverb shift is also PF-related, it in fact involves the shortest possible PF movement that can satisfy the relevant PF condition. In these respects, adverb shift resembles other proposed PF movements, like Prosodic Inversion. Further, I developed an account of why adverb shift is not possible in sluicing contexts, which is due to the prosodic structure of sluicing remnants that blocks PF operations of the type that underlies adverb shift. Finally, I outlined how the "last resort" character of the adverb shift operation can explain why this type of PF operation is limited to adverbs; that is, why there is no parallel "DP/PP-shift" operation.

Chapter 6

Conclusion

In this chapter, I provide a summary of the thesis. Following the summary, I discuss some theoretical consequences of the results of the thesis and some speculative remarks regarding questions for future research.

6.1 Summary of thesis

In this thesis, I have investigated a range of points of cross-linguistic variation that, on the surface, appear to be unrelated. The range of phenomena investigated included: variation in differential object marking patterns, long-distance scrambling, case-marking in impersonal constructions, variation in object agreement patterns, and verb-stranding VP-ellipsis. In each of these cases, I showed that the variation in question can be traced to a single underlying factor: the location of the middle-field phase boundary.

As discussed in the introduction of the thesis, the theoretical starting point of this investigation was the contextual approach to phases from Bošković 2014. On this approach, phasehood is not a fixed property of particular phrases, e.g. vP is not uniformly a phase.

Rather, whether a phrase serves as a phase is determined by the surrounding syntactic context. Specifically, whether XP is a phase or not depends on whether XP is the highest phrase in the extended projection of a lexical head. Regarding the clausal middle-field, whether vP is a phase or not depends on whether vP is the highest projection in the extended projection of V. On this approach, phasal variation in the middle-field is due to an underlying difference in middle-field clause structure. In languages like Turkish (as argued here), where vP is the highest projection in the extended projection of V, vP is the phase. But in languages where vP is not the highest projection in the extended projection of V, vP is not the phase and a higher phrase is the phase. In this thesis, I argued that this is the case in a language like Uyghur, where a functional projection higher than vP serves as the middle-field phase.

In Chapter 2, I investigated a range of surface contrasts contrasts across several seemingly unrelated phenomena in Turkish and Uyghur, which I argued can all be traced to this difference in middle-field phase position. The empirical starting point concerned variation in the DOM patterns between Turkish in Uyghur. While both Turkish and Uyghur exhibit a typical DOM pattern with respect to specific objects, which are marked with accusative case, I observed a novel contrast between the two languages regarding objects that have been dislocated from their clause-medial position (e.g. scrambled clause-initially). In Turkish, such objects are still obligatorily marked with accusative case and still must be interpreted as specific. In contrast, in Uyghur, when an object is dislocated, it too must be marked with accusative case; however, these dislocated ACC-marked objects are not obligatorily specific (in contrast to their clause-medial counterparts). In this chapter, I developed a novel account of this contrast between Turkish and Uyghur's DOM patterns (and specificity-based DOM patterns in general), where specificity-based DOM effects (i.e. an obligatory specific interpretation of DOM-marked objects) are due to the marked object passing through a specific structural position, Spec, vP, which forces specificity for the DP

in these languages. Regarding the contrast between Turkish and Uyghur's dislocated DOM objects, where the former are always specific and the latter optionally specific, I argued that this is an effect of the interaction between vP's specificity requirement for DPs in Spec, vP, and a difference in middle-field phase boundaries between the two languages. In Turkish, vP is a phase, and thus all moving objects must pass through Spec, vP due to the PIC. Since vP forces specificity on DPs in its Spec, all moving objects must be specific. In contrast, I proposed that in Uyghur, vP is not a phase but rather a higher functional projection, FP, is present in Uyghur's extended verbal projection. Due to the presence of FP in the extended verbal projection, vP is not the middle-field phase and FP serves as the phase. Consequently, dislocated objects moving to a higher position do not have to pass through Spec, vP and thus no specificity effects are forced.

Building on this hypothesized difference between the Turkish and Uyghur middle-field, I showed how a range of additional contrasts between the two languages, which included scope effects, long-distance scrambling possibilities, and case-marking in impersonal constructions, can be explained in the same terms, namely, the location of the middle-field phase. Further, I showed that this difference in the middle-field phase position can explain different contrasts in other, unrelated languages. Specifically, I showed that variation in object agreement pattern between Swahili on one hand, and Bemba and Manyika on the other hand, abstractly displays the same type of pattern observed between Turkish and Uyghur's DOM patterns. In Swahili, animate objects in their canonical clause-medial position agree with the verb. Furthermore, when such objects undergo $\bar{\text{A}}$-movement, object agreement surfaces on the verb. In Bemba and Manyika, clause-medial objects also agree with the verb. However, when they undergo $\bar{\text{A}}$-movement, agreement with the object is impossible. I showed that this otherwise seemingly unrelated contrast in object agreement patterns can be understood as being the morphological parallel to Turkish and Uyghur's DOM patterns

and that this new contrast can be analyzed in the same terms, namely, the location of the middle-field phase.

In Chapter 3, I investigated another phenomenon where Turkish and Uyghur differ from each other, which is verb-stranding VP-ellipsis (VSVE) patterns. While both languages permit VSVE, they differ along two dimensions. I show that while Turkish requires strict identity between the antecedent and stranded verbs, Uyghur allows for mismatches between the two verbs. Further, I show that while Turkish disallows $\bar{A}$-extraction out of the VSVE target, Uyghur freely allows such extraction. I demonstrated that these two contrasts are not accidental but rather are due to the same underlying factor, namely, whether the vP-ellipsis target is a phase or not. I show that in Uyghur, where the VSVE target vP is a phase complement, both $\bar{A}$-extraction and syntactic V movement out of the VSVE target are possible (where the latter operation gives rise to verbal mismatches). But in Turkish, where the VSVE vP target is a full phase, $\bar{A}$-movement and syntactic V movement cannot proceed out of the vP phase. In this case, I argued that V-stranding arises from a last resort PF movement of the verb out of the VSVE target to provide PF support for an affixal element.

Chapter 4 concerned VSVE in a typological setting. I showed that the two dimensions of variation observed between Turkish and Uyghur VSVE, namely, whether verbal mismatches are possible and whether $\bar{A}$-extraction out of the ellipsis target is possible, are not simply a local point of variation between Turkish and Uyghur, but rather a more general point of typological variation. I argued that quite generally, VSVE languages differ regarding whether the VSVE target is a phase or phase complement. As a result of this underlying point of variation regarding the phasal status status of the VSVE target, there is the associated surface variation regarding verbal mismatches and $\bar{A}$-extraction, both of these being allowed cross-linguistically if the VSVE target is a phase complement, not when the

VSVE target is a full phase. Additionally, in this chapter I discussed another related phenomenon, which is verb echo answer constructions. I argued that that verb echo answers uniformly target TP, which is the complement of phasal C, and thus uniformly allow verbal mismatches and extraction out of the ellipsis target (even in languages which disallow mismatches and extraction in VSVE contexts).

Chapter 5 investigated PF movement through the examination of another phenomenon, which is adverb shift in English. As noted in Lasnik 2003/1995, adverb shift is the phenomenon where a low adverb, e.g. a manner adverb, may surface in an exceptionally high position in VP-ellipsis contexts. (e.g. **Martha loudly will play the trumpet* vs. *Bill will play the trumpet quietly but Martha loudly will* Δ). In this chapter, I investigated the empirical contours of the adverb shift pattern and argued that adverb shift is due to the adverb undergoing PF movement out of the VP-ellipsis target. I demonstrated that adverb shift occurs in VP-ellipsis contexts when the adverb is contrastively focused. Due to the adverb being focused, there is a PF requirement for it to be pronounced and realize focus stress. However, since the adverb is within the VP-ellipsis domain there is also a contradictory requirement for it to undergo PF-deletion. Subsequently, in order to resolve these contradictory PF requirements, the adverb undergoes PF movement the minimal distance required to escape elision and be pronounced with focal stress. Importantly, I showed that the PF movement operation underlying adverb shift displays the same type of characteristics associated with other proposed cases of PF movement, namely, adverb shift is a ”last resort” operation that occurs in contexts where it is required to resolve a specific PF related issue. Further, that the adverb moves in PF the shortest distance possible that resolves this issue. Additionally, I showed that the impossibility of adverb shift under sluicing and the absence of a parallel ”DP/PP shift” operation both can be explained in terms of adverb shift being a PF operation.

6.2 Theoretical consequences

One of the more general theoretical consequences of this thesis concerns the nature of phasal variation. As discussed in Chapter 1, on approaches that tie phasal variation to either language-specific parameterization (as in, e.g. Abels 2003) or a lexical feature of a head (as in, e.g. Takahashi 2011), two languages can differ regarding whether a phrase is a phase without any structural variation. For example, on such approaches, two languages can differ regarding the phasal status of vP, without any difference in the middle-field's structure. In contrast, on the contextual approach of Bošković 2014, phasal variation without structural variation is simply not an option. On this approach, a difference in phasehood always tracks with a difference in what phrases are present in the structure. For example, on this contextual approach, if two languages differ regarding the phasal status of vP, there must also be a difference in the structure of the extended verbal projection.

In one respect, this thesis is a sustained argument for the contextual approach to phases from Bošković 2014. In Chapters 2 and 3, I argued that several areas of variation between Turkish and Uyghur can be explained in terms of a single underlying point of variation: the location of the middle-field phase. In Turkish, vP is a phase, but in Uyghur, where an additional phrase, FP, projects in the middle-field, FP is the phase. Importantly, this point of phasal variation was not simply whether vP is a phase (or not) but rather, which phrase is the middle-field phase. In Turkish, it is vP; in Uyghur it is FP, which is located immediately above vP. As was shown in Chapters 2 and 3, the presence of this additional phrase, FP, which serves as the phase in Uyghur, played a key role in explaining the contrasts with Turkish with respect to a number of superficially unrelated phenomena. For example, in Chapter 2, I showed that in both Turkish and Uyghur, moving objects must have the Spec

of a middle-field phrase as an intermediate landing site. The key difference concerned what phrase moving objects must transit through. In Turkish, moving objects stop at the vP phase edge; in Uyghur they stop at the FP phase edge. The crucial point here is not simply whether vP is a phase or not, but the the location of the middle-field phase. In Turkish, it is vP; in Uyghur, another phrase, FP, is present and serves as the middle-field phase.

In this way, the account of these various contrasts between Turkish and Uyghur is evidence for the contextual approach to phases from Bošković 2014, where phasal variation tracks structural variation. In the cases discussed in Chapter 2 and 3 of the thesis, where phasal variation correlates with a difference in structure, this contextual approach straightforwardly captures this correlation between phasal location and middle-field clause structure due to its structure sensitivity.

Another broader theoretical consequence of this thesis concerns the nature of PF movement. As discussed in Chapter 3 and 4, in contexts where VSVE targets a full vP phase, syntactic V-to-X movement out of the vP is not possible and instead the verb undergoes PF movement to an affixal element outside of the VSVE target. In Chapter 5, I showed that adverb shift occurs in contexts where a focused adverb is inside a VP-ellipsis target and must undergo PF movement out of it in order to satisfy PF requirements placed on the adverb.

While PF V movement in VSVE contexts and adverb shift differ in a number of respects, both operations share a common feature in that both operations occur to resolve a specific PF-related issue. In the case of PF V movement, V undergoes movement out of the VSVE domain to provide PF-support for an affixal element outside of the ellipsis site. In the case of adverb shift, the adverb PF moves out of the VP-ellipsis domain in order to be pronounced and realize focal stress. Further, both PF movement operations discussed in this thesis display a kind of locality which is distinct from the type of locality characteristic

of syntactic movement operations. In the case of syntactic movement, the type of locality observed is governed by certain phrases which delimit a locality domain (i.e. phases) and movement within a locality domain is otherwise unbounded. In contrast, the type of locality observed with PF movement is even more restricted. In particular, PF locality is governed by a strict "shortest move" constraint, namely, an element may PF move only the minimal distance needed to resolve a specific PF issue. In the case of verb-stranding, V moves in PF the minimal distance required to support a stranded affix. In the case of adverb shift, the adverb PF moves the shortest distance to be pronounced. In this respect, PF movement locality is significantly more restricted than syntactic movement.[1]

Regarding PF movement to support an affix, there are other mechanisms that can accomplish this. Interestingly, in cases where another resolution to a stranded affix is available, PF V movement does not take place. This was shown for languages like Danish, which have other means of supporting the relevant affix, namely, a *do*-support type mechanism. As was shown in Chapter 4, affixation in Danish typically proceeds through V-to-T movement in the syntax (or PF merger in certain cases), but syntactic V-to-T movement is blocked in vP-ellipsis contexts. In vP-ellipsis contexts, V does not move to an affixal T in PF (thus, no verb stranding ellipsis in Danish). Instead, in such contexts, *do*-ellipsis is triggered to support the affixal element. I proposed that what the Danish facts indicate is that when a language has *do*-support as a PF repair, there is a preference for *do*-support. Thus, since Danish has *do*-support, *do*-support is deployed to support a stranded affix and there is no V movement in PF. In languages that deploy PF V-movement to support a stranded affix, since those languages lack *do*-support, PF V-movement is the only way to support the

[1]Note, there are some analyses of certain phenomenon that invoke a conception of PF movement which essentially mirrors the locality of syntactic movement, see, e.g. Aoun and Benmamoun 1998; Sauerland and Elbourne 2002; Weir 2014. Given the conception of PF movement argued for in the thesis, which is much more local than syntactic movement, such analyses will have to either be revised or discarded.

stranded affix, thus PF V-movement occurs in those languages. More generally, I suggested that there is a preference for *do*-support to resolve a stranded affix and that PF movement only occurs when there is no other means to provide PF repair.

It is worth noting that this conception of PF movement makes an interesting prediction regarding the VSVE languages where verb-stranding is due to PF V-movement. In these languages, the PF movement operation that underlies verb stranding occurs to resolve a specific PF issue: rescue a stranded affix outside of the VSVE site. Specifically, PF movement occurs in an ellipsis context, where the ellipsis target is a full phase, which prevents syntactic V-movement to an affixal X outside the VSVE target. Consequently, V undergoes PF movement to support the affixal X. Consider now a hypothetical case where V typically undergoes syntactic movement to a non-affixal X (e.g. V2 configurations, V-to-V restructuring). Consider further a phasal ellipsis context, such that this syntactic V-to-X movement is blocked, as sketched below in (413).

(413) $[_{XP}\ X\ \sout{[_{YP_{\text{phase/ellipsis tgt.}}}\ Y\ [\ldots\ \ldots\ V\ ]]}]$

In such a context, since there is no affixal X outside the ellipsis target that requires PF support, V should not be able to undergo PF movement to X. Subsequently, in such contexts, verb-stranding ellipsis should not be possible, even in languages where such ellipsis is possible through PF V-movement in other contexts (i.e. those that involve a verbal affix outside the ellipsis site).

6.3 Speculative remarks and loose ends

6.3.1 On the identity of FP in Uyghur

So far, I have remained neutral regarding the identity of the functional projection, FP, which serves as the middle-field phase in Uyghur. In the preceding chapters, the crucial difference between Turkish and Uyghur was a structural difference between the two languages' middle-field; the precise featural specifications of the heads involved were not relevant. The key point was that in Turkish, vP is the highest projection in the extended verbal projection and therefore serves as the middle-field phase, whereas in Uyghur an additional functional projection, FP, is present in the extended verbal projection and serves as the phase. By positing this structural difference, a range of contrasts across highly diverse phenomena was explained in terms of a single underlying point of variation.

While the results of the preceding chapters do not depend on FP having any particular featural identity, in this section I offer some speculative remarks on the matter. Specifically, I discuss two differences between the Turkish and Uyghur clausal spines and consider how they may bear on identifying FP.

As briefly discussed in Chapter 2 (§2.3.1), Uyghur has a number of aspectual auxiliaries. As observed by Sugar (2019), there is considerable evidence that these auxiliaries fall into two classes, "high" and "low", characterized in terms of their structural positions. Regarding the structural position of "low" auxiliaries, there is evidence indicating they are located below the phrase hosting voice morphology. As illustrated with *baq*, in a passive construction the passive morpheme is placed on the aspectual auxiliary rather than the lexical verb, as in (414a) vs. (414b).

(414) a. Chay-ni ich-ip baq-il-di
tea-ACC drink-NFT ASP.AUX-PASS-PST.3SG
'The tea was attempted to be drunk.'

b. *Chay ich-**il**-ip baq-di
tea drink-PASS-NFT ASP.AUX-PST.3SG
'The tea was attempted to be drunk.' (Sugar 2019: 187)

With "high" aspectual auxiliaries, the pattern of passive morpheme placement is reversed. As illustrated with *qal* (inchoative/rapid change of state), the passive morpheme must be placed on the lexical verb rather than the auxiliary, as in (415a) vs. (415b).

(415) a. Telewizor buz-**ul**-up qal-di.
TV break-PASS-NFT AUX.INCH-PST.3SG
'The TV broke.'

b. *Telewizor buz-up qal-**in**-di.
TV break-NFT AUX.INCH-PASS-PST.3SG
'The TV broke.' (Sugar 2019: 188)

Following Sugar 2019, I take these facts to indicate that Uyghur's clausal spine involves two AspPs, as sketched in (416). One AspP is "high", above the head hosting voice morphology (which I label VoiceP for convenience), and hosts "high" aspectual auxiliaries; another is "low", below VoiceP, and hosts "low" aspectual auxiliaries.

(416) [$_{TP}$ … [$_{\textbf{AspP}}$ … [$_{VoiceP}$ … [$_{\textbf{AspP}}$ … [$_{vP}$ … [$_{VP}$ … V] v] **AspP**] Voice] **Asp**] T]

Interestingly, while Turkish also has aspectual auxiliaries, Turkish's auxiliary inventory appears to be limited to what would correspond to Uyghur's "high" auxiliaries. Based on discussions with native Turkish speakers and previous research in descriptive works (Johanson 2021; Kornfilt 1997), Turkish appears to lack clear counterparts of Uyghur's "low" aspectual auxiliaries, e.g. *baq* and *qoy*. Rather, Turkish appears to only have counterparts of

Uyghur's "high" aspectual auxiliaries. As shown below, the Turkish *kal* auxiliary is counterpart to Uyghur's inchoative auxiliary *qal*, where passive morphology must be placed on the lexical verb (417a) and cannot be placed on *kal* (417b).

(417) a. Cam kir-**il**-ip kal-di.
glass break-PASS-NFT AUX.INCH-PST.3SG
'The glass broke.'

b. *Cam kir-ip kal-**il**-di.
glass break-NFT AUX.INCH-PASS-PST.3SG
'The glass broke.'

Given this difference between Turkish and Uyghur's aspectual inventory, where Turkish appears to lack "low" aspectual auxiliaries, I suggest this corresponds to a structural difference, where Turkish lacks the low AspP that is present in Uyghur (as sketched in (416)).

There is also evidence for a second difference between the two clausal spines, concerning whether a dedicated TP is present in the clausal spine in addition to a "high" AspP. Todorović (2016) shows that in a range of languages TP is absent, and the temporal interpretation of the clause is instead encoded by aspectual morphology located in a "high" Asp. One key diagnostic for whether TP is present is whether the language has a dedicated tense morpheme that is clearly segmentable from agreement morphology. As shown in Tab. 6.1, Uyghur has an invariant non-past morpheme *-i-*, which is clearly distinct from agreement morphology and is present throughout the conjugation paradigm.

TABLE 6.1: Uyghur non-past paradigm of *kör-* 'see'

	SG		PL
1	kör-i-men	'I see/will see'	kör-i-miz
2	kör-i-sen	'you see/will see'	kör-i-siler
2 (formal)	kör-i-siz	'you see/will see'	kör-i-sizler
3	kör-i-du	'(s)he sees/will see'	kör-i-du

Turkish, by contrast, lacks a dedicated future or present tense morpheme (Göksel and Kerslake 2004; Kelepir 2001; Kornfilt 1997). Instead, non-past temporal information can be encoded with the aspectual morphemes in Tab. 6.2. Future orientation, for instance, is expressed by the prospective aspectual morpheme *-(y)AcAK*.

TABLE 6.2: Turkish aspectual paradigm of *gör-* 'see'

	Progressive	Aorist	Prospective/ "Future"
1SG	gör-üyor-um	gör-ür-üm	gör-eceğ-im
2SG	gör-üyor-sun	gör-ür-sün	gör-ecek-sin
3SG	gör-üyor	gör-ür	gör-ecek
1PL	gör-üyor-uz	gör-ür-üz	gör-eceğ-iz
2PL	gör-üyor-sunuz	gör-ür-sünüz	gör-ecek-siniz
3PL	gör-üyor-lar	gör-ür-ler	gör-ecek-ler

There are good reasons to treat *-(y)AcAK* as an aspectual morpheme rather than a true tense morpheme; that is, the realization of a finite T. As shown in (418), the question particle *=mi* can separate it from the agreement morpheme (Kelepir 2001; Kornfilt 1997; Zanon 2014). In this respect *-(y)AcAK* patterns with the clearly aspectual progressive *-iyor*, which is separable in the same way, as shown in (419).

(418) yakala-yacak=mı-∅-sınız?
catch-PROSP=Q-COP-2.PL
'Are you going to catch it?' (Fenger 2020: 53)

(419) Gid-iyor=mu-∅-yuz?
go-PROG-Q-COP-1PL
'Are we going?' (Kelepir 2001: 31)

On the basis of this separability, Kelepir (2001), Kornfilt (1996), and Zanon (2014) propose that verbs marked with *-(y)AcAK* are not finite inflected forms but participles, with agreement morphology hosted by a null copula. In contrast, the Uyghur non-past morpheme *-i-* cannot be separated from agreement morphology in this way, as shown in (420a).

(420) a. *Siz meni kör-i=mi-siz?
2.SG 1.SG see-NPST=Q-2.SG
'Do you see me?'

b. Siz meni kör-i-siz=mu?
2.SG 1.SG see-NPST-2.SG-Q
'Do you see me?'

That Uyghur allows no material to intervene between *-i-* and agreement morphology indicates that verbs marked with *-i-* are fully finite inflected forms. Given that the Uyghur non-past morpheme involves full finite inflection, while Turkish's is more closely identifiable as a non-finite participle, on a par with other clearly aspectual morphemes, I tentatively propose that Uyghur's clause involves a dedicated TP in addition to a high AspP, while Turkish's clause only has a high AspP, which can encode temporal information, as sketched in (421).[2]

(421) [$_{\textbf{AspP}}$ … [… [$_{\text{vP}}$ … [$_{\text{VP}}$ … V] v] …] **Asp**]

Taken together, I suggest that these two differences; that is, the presence/absence of a low aspectual auxiliaries and the presence/absence of true finite tense morphology, identify two regions where the Uyghur clausal spine involves more structure than the Turkish one.

[2]See also Zanon 2014, which also argues Turkish lacks TP on the basis that Turkish's "past tense" morpheme fails to behave like a morpheme that is the realization of T.

Specifically, Uyghur's clause has a low AspP that Turkish lacks and Uyghur has a dedicated TP above the high AspP whereas Turkish only has a high AspP (as sketched in (416) vs. (421)). Importantly, both of these differences point in the same direction, which is precisely what the contextual approach to phases adopted in this thesis requires: in Turkish, vP is the highest projection in the extended verbal projection and serves as the middle-field phase, whereas in Uyghur the presence of additional structure in the clause affects the middle-field phase position.

The identity of FP is a further question, which I leave for future research, though several candidates are worth investigating. One possibility is that FP is the low AspP, which sits between vP and VoiceP in Uyghur (as in (416)) but is absent in Turkish (as in (421)). On the contextual approach, the presence of this projection would raise the middle-field phase in Uyghur to AspP or to what I have labelled VoiceP in (416). Another possibility is that FP is the high AspP in Uyghur. Bošković (2014) and Todorović (2016) conjecture that where both TP and AspP project, AspP can delimit the middle-field phase.[3] But in languages projecting only a high AspP, AspP gets "pushed up" above the middle-field phase, which would be vP in Turkish. While these options are only speculative, both are worthy of pursuit in future research. What matters for present purposes is that there is suggestive evidence that the Uyghur clausal spine is more articulated than the Turkish one with respect to tense and aspectual projections, which, on the contextual approach to phases, is what underlies the difference in the location of the middle-field phase.

[3]For relevant discussion see also Wurmbrand 2013.

6.3.2 VSVE cross-linguistically and FP

In Chapter 4, I examined VSVE across a range of typologically diverse languages and established the following generalization:

(422) **Extraction-VIR Generalization**: VIR violations are only possible in a VSVE context, if Ā-extraction out of the VSVE target is possible.

I showed that European Portuguese, Greek, and Swahili VSVE all permit Ā-extraction out of the VSVE target and allow for VIR violations (i.e. mismatches between the antecedent and stranded verbs). Meanwhile, Japanese, Korean, BCS, Russian, and Hindi-Urdu do not permit Ā-extraction out of the VSVE target and do not permit VIR violations (i.e. the antecedent and stranded verbs must be lexically identical). Further, I show that key factor underlying (422) is the phasal status of the ellipsis target: full phase VSVE blocks Ā-movement and syntactic V-movement (the latter being what underlies VIR violations), while phase complement VSVE permits both Ā-movement and syntactic V-movement.

Given the heterogeneity of the languages discussed in Chapter 4, I adopted a simplifying assumption in the chapter, namely, that vP is uniformly the phase in these languages and that VSVE targets either the full vP phase or the VP phase complement. In Chapter 3, however, I showed that Turkish and Uyghur VSVE uniformly targets vP, with the languages differing in the phasal status vP. In Turkish, vP is the middle-field phase. But in Uyghur, FP projects immediately above vP and serves as the phase, with VSVE involving phase complement vP-ellipsis. Importantly, the simplifying assumption in Chapter 4 is not crucial for the analysis presented in that chapter. What matters for deriving (422) is only whether the VSVE target is a phase or not.

In this section, I offer some speculative remarks regarding the two types of VSVE

languages discussed. Specifically, it may be the case that VSVE uniformly targets vP in all of the languages discussed in Chapter 4.[4] Consequently, the key difference between the two groups of languages concerns whether vP is a phase or phase complement in those VSVE languages. For Japanese, Korean, BCS, Russian, and Hindi-Urdu VSVE, which involves full phase ellipsis, vP is the phase. But in European Portuguese, Greek, and Swahili VSVE, which involve phase complement ellipsis, vP is not a phase but rather a higher phrase, FP, which is immediately above vP, is the phase. Given this phasal difference, the two groups of languages fully parallel Turkish and Uyghur's VSVE constructions (as discussed in Chapter 3), where a difference in middle-field phase boundary results in a difference in the phasal status of the VSVE target.

It is worth noting that an important clarification is in order regarding the hypothesis that European Portuguese, Greek, Swahili, and Uyghur all project an additional functional projection, FP, above vP. The claim is not that FP has a uniform identity across all of these languages. As discussed in the above section, this is an open question for future research as to what the identity of FP is in Uyghur. Similarly, it is a open question for these languages as well. What matters is not that all these languages project the same FP immediately above vP, but only that some FP projects and that FP serves as the middle-field phase in these languages.

If it is the case that VSVE uniformly targets vP and that the difference between the two groups of languages is whether vP is a phase or phase complement, there are two important consequences. First, a uniform account of VSVE for all languages discussed in this thesis would be possible, where VSVE always targets vP and the typological split regarding the phasal status of the VSVE target would be explained in terms of independent variation in

[4]Note, that if this is correct, the following may not be compatible with all of the options discussed in the previous section regarding possible areas of variation in the clausal middle-field.

clause structure. Second, the typological split among VSVE languages would be tied to the same point of architectural variation discussed in Chapter 2 and 3, namely, the location of the middle-field phase.

While no single diagnostic for the location of middle-field phase is applicable across all the VSVE languages discussed in Chapter 4, there are several suggestive lines of evidence that bear on determining whether the two groups of VSVE languages vary in middle-field clause structure and the location of the middle-field phase.

Regarding Japanese and Korean, there is fairly straightforward evidence that vP is the phase in these languages. For Japanese and Korean, both languages exhibit raising to object configurations of the type observed in Turkish, where the subject raises to the matrix Spec, vP for ACC-Case (as discussed in Chapter 2, see Kuno 1976; Tanaka 2002 for Japanese, see Yoo 2018 for Korean). In both of these languages, long-distance scrambling out of embedded clauses with ACC-subjects is blocked, as shown in (423) for Japanese and in (424) for Korean).

(423) *Gengogaku$_i$-ni John-ga [Mary-**o** t_i kuwashii to] omotteiru.
linguistics-DAT John-NOM Mary-ACC familiar C] think.PROG
'With linguistics, John thinks that Mary is familiar.'

(424) *Kong-ul John-ka [Mary-ul t_i cal chanta-ko] sayngkakhanta.
ball-ACC John-NOM Mary-ACC well kick-C think
'John thinks that Mary kicked the ball well' (adapted from Yoo 2018: 84)

As discussed in Chapter 2, the impossibility of long-distance scrambling over an embedded ACC-subject is straightforwardly explained, if in these configurations the embedded subject has raised to matrix Spec, vP and vP is a phase. Due to matrix vP's phasal status, the moving object will require matrix Spec, vP as an intermediate landing site in (423) and (424). However, since matrix Spec, vP is already filled with the raised embedded subject,

the moving object will have to ”tuck-in” below the subject, thus trapping it inside the vP due to the PIC, given that only the outermost edge is accessible from the outside.

For the remaining languages in this group, namely, Russian, BCS, and Hindi-Urdu, the raising-to-object diagnostic is not possible. However, there are data that suggest these languages differ in clause structure from those in the second group of VSVE languages; that is, European Portugese, Greek, and Swahili. As discussed above, Todorović (2016) argues that languages vary as to whether their clausal spines involve a TP projection. In languages lacking a dedicated TP, AspP serves as the main locus of tense information. In languages with TP, AsP may be present as well, below TP (see also Bošković 2012, 2014 for discussion). Todorović 2016 shows that a diagnostic for this difference concerns ”finiteness mismatches” under AUX-stranding ellipsis. The logic underlying this test is that a mismatch in finiteness between the antecedent and elided verb is not tolerated in languages where TP is present, since Vs in those languages are specified with a finiteness-related feature (and thus featural mismatches would violate syntactic identity under ellipsis; see Todorović 2016 for detailed discussion). European Portuguese does not tolerate such mismatches, as shown in (425), where the antecedent is the finite form of the verb and the elided verb is a non-finite participle.

(425) *Ela perguntou se alguém lera o jornal, mas minguém tinha
she asked if anybody read.PLUPERF the newspaper, but nobody had
~~lido o jornal.~~
read.PART the newspaper
‘She asked if anybody had read the newspaper but nobody had (read the newspaper).’ (Cyrino and Matos 2005: 80)

In contrast, BCS and Russian allow for such ”finiteness mismatches”, as shown below in (426) and (427), respectively.

(426) ?Ivan povremeno pobedi Anu, a Petar je samo jedanput ~~pobedio Anu~~
Ivan occasionally wins.PF Ana and Petar is only once win.PF.PART Ana
'Ivan sometimes defeats Ana, while Petar has (defeated Ana).' (Todorović 2016: 19)

(427) Ja segodnja zanimajusj linvistikoj, a zavtra (ja) ne budu
I today study.1SG.PRS linguistics but tomorrow I not will
~~zanimatjsya~~.
study.INF
'Today I study linguistics, but tomorrow I won't (study linguistics).' (Todorović 2016: 25)

On the basis of this diagnostic (and others), Todorović 2016 argues that BCS and Russian lack TP, and only have an AspP, while European Portuguese has both TP and AspP. Additionally, it has been argued that both the Greek and Swahili clausal spines are highly articulated, where their clauses have both TP and AspP (for Greek, see Alexiadou 1997; Xydopoulos 1996; for Swahili, see Arregi and Pietraszko 2026; Meadows 2024) and that Korean and Japanese may lack TP (for Korean, see Kang 2014; for Japanese see Fukui 1988; Sawada 2015). Putting it together, there is suggestive evidence that Russian, BCS, Japanese, and Korean (and potentially Hindi-Urdu; see below) have a less articulated clausal spine than European Portugese, Greek, and Swahili.

This split regarding the level of articulation of the clausal spine bears on the issue of the phasal status of the vP VSVE target in the following way. As discussed in the preceding section, Bošković 2014 and Todorović 2016 conjecture that the presence/absence of TP can affect the position of the middle-field phase, namely, whether AspP is within the extended verbal projection. When TP projects, AspP remains within the extended verbal projection and may be the highest phrase in it, thus serving as the middle-field phase. When TP is absent, AspP serves as the locus of temporal information and AspP is outside the extended verbal projection. Subsequently, vP is the phase. If this proposal is on the right track, then

the differences in clausal articulation discussed above align with the two VSVE groups in the following way. For Japanese, Korean, BCS and Russian, where VSVE involves full phase ellipsis, their clausal spine may lack a dedicated TP and only has an AspP. Hence, vP is the phase and is the VSVE ellipsis target. For European Portugese, Greek, and Swahili, where VSVE involves phase complement ellipsis, their clausal spine involves both a TP and AspP. Hence, there is another phrase, FP, which is the middle-field phase and vP is the phase complement ellipsis VSVE target. Due to this difference in clausal articulation, there is a difference in whether vP is a phase or not, which bears on whether the vP ellipsis target is a full phase or phase complement.

It is important to point out two caveats regarding this tentative proposal. For Hindi-Urdu, which is a full phase VSVE language, it is not clear whether TP is always present, and whether AspP is inside the middle-field phase when TP is present. Although I do not have enough evidence at present to resolve these questions, it is worth noting that Hindi-Urdu is rich in aspectual morphology, which Todorović 2016 observes is often characteristic of languages where TP does not always project.[5] Second, there is a theoretical issue concerning the location of the middle-field phase in Swahili. In Chapter 2, Swahili's object agreement pattern strongly suggested that the middle-field phase was vP (given the retention of object agreement morphology under Ā-movement, which indicated that Spec, vP was the phase edge). Yet, Swahili is also VIR-violating VSVE languages that permits Ā-extraction out of the VSVE site, which is indicative of VSVE involving phase complement ellipsis. On the implementation of VSVE in Chapter 4, there is no issue since vP is uniformly the phase and Swahili VSVE involves phase complement VP ellipsis. However,

[5]Note, that simply consulting glosses in descriptive grammars is not a helpful guide here, since as Todorović (2016) points out, in many cases what is traditionally labeled a tense morpheme is not the realization of a T (in fact, Todorović (2016) shows this is the case for a number of languages discussed in the thesis, e.g. BCS, Russian).

on the proposal under present discussion, where Swahili's middle-field phase is an FP immediately above vP, this tension between the object agreement and VSVE facts arises. One possibility is that the locus of object agreement in Swahili is a projection above vP, which serves as the phase. Another possibility is that Swahili VSVE is simply an exception to the present proposal, where for other languages VSVE targets vP but Swahili VSVE involves VP ellipsis. At any rate, further research in the Swahili middle-field is required to definitively resolve this question.

Although much of the preceding discussion is only speculative at present, the key point is that the issue of what phrases serve as the middle-field phase in a given language is tightly connected to the issue of how articulated the clausal spine is in that language. As discussed, a potential area of clausal variation concerns whether certain AspPs and TP project in a language, where the presence/absence of these phrases affect the location of the middle-field phase.

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