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Phases are *Read-Only*

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ABSTRACT OF THE THESIS

Phases are *Read-Only*

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Chomsky (2000, 2001)'s Phase Impenetrability Condition (PIC) states that phases induce the transfer of their complements, rendering the complements inaccessible. As a consequence, cross-phasal dependencies are ruled out. Recent work on phases has suggested that instead of being eliminated, phase complements are present in the syntax but can no longer be modified (Obata 2010, 2017, Chomsky 2012, Chomsky, Gallego, and Ott 2019). I adopt this idea of phase complements being visible but not modifiable as *Read-Only*, (1).

(1) ***Read-Only***: Once a phase is complete, its phase complement Z can be inspected, but Z's featural content cannot be changed.

Empirical evidence for *Read-Only* comes from Hindi-Urdu, where some syntactic dependencies (like φ-agreement) are in fact possible between two elements in different phases. In particular, there is evidence for an asymmetry in configurations with cross-phasal dependencies, such that dependencies modifying a phase-external element X in response to a phase-internal element Y are allowed, but dependencies modifying Y in response to X are disallowed. *Read-Only*—but not the PIC—accounts for this pattern of (im)possible cross-phasal dependencies in Hindi-Urdu.

The thesis of Hashmita Agarwal is approved.

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1 Introduction

1.1 Phases and locality

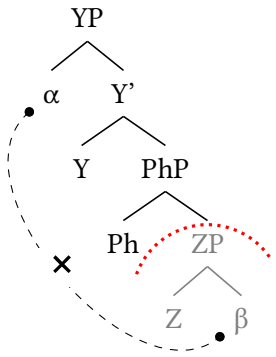
Phases are assumed to be domains for syntactic computation since Chomsky (2000, 2001). The Phase Impenetrability Condition in Chomsky (2000, 2001) states that phase complements are cyclically shipped off to the interfaces and are completely invisible to further syntactic operations, (2):

(2) **Phase Impenetrability Condition** (Chomsky 2000:108)

In phase α with head H, the domain of H is not accessible to operations outside of α, only H and its edge are accessible to such operations.

Any dependencies between elements in different phases are thus impossible in the PIC framework unless the lower element is in the phase edge, since different phases are not accessible in the derivation at the same time, (3):

(3) *No cross-phasal dependencies*



In this paper, I claim that some—but not all—cross-phasal dependencies are in fact possible. In particular, I argue for an asymmetry in configurations with cross-phasal dependencies like (3), such that phase-internal elements condition syntactic operations on phase-external elements, but phase-external elements do not similarly condition syntactic operations on phase-internal elements. In (3), β in a phase can condition syntactic operations on α outside that phase but

not vice-versa. Then, only those cross-phasal dependencies are possible where elements inside a phase condition syntactic operations on elements outside of that same phase.

I propose that this asymmetry between phase-internal and phase-external elements is due to phase complements being rendered *read-only* when a phase is complete (i.e., when the next higher head merges), such that phase complements are still visible to the syntax, but their featural contents are fixed, (4). Chomsky (2012), Chomsky et al. (2019) briefly suggests that phase complements can be "inspected" but not "modified". Building on Chomsky (2012), Chomsky et al. (2019)'s idea of phase complements being visible but not modifiable, I argue for an alternative view of phase locality called *read-only*,[1] which is compatible with phases being transparent for some cross-phasal dependencies, but opaque for others.[2]

(4) ***Read-Only***

Once a phase H is complete, its phase complement Z can be inspected, but Z's featural content cannot be changed.

Unlike in the PIC in (2), a phase complement being visible to the syntax is not ruled out by *read-only* in (4), since *read-only* only deters the mutability of features in phase complements, not their visibility. Under the standard view that φ-agreement involves feature valuation of a probe (Chomsky 2000, 2001, Preminger 2014), and no changes to the features of the goal, φ-agreement proceeding into a phase does not violate *read-only* in (4), as in (5a).[3] Dependent case competition relationships across a phase that value the phase-external element are also compatible with *read-only*, since they leave the features of the phase-internal case competitor unchanged (Baker and Vinokurova 2010, Baker 2015), as (5b) shows. Case assignment into a phase, however, is inconsistent with *read-only* in both (5a-b), since it involves tampering with the features of elements

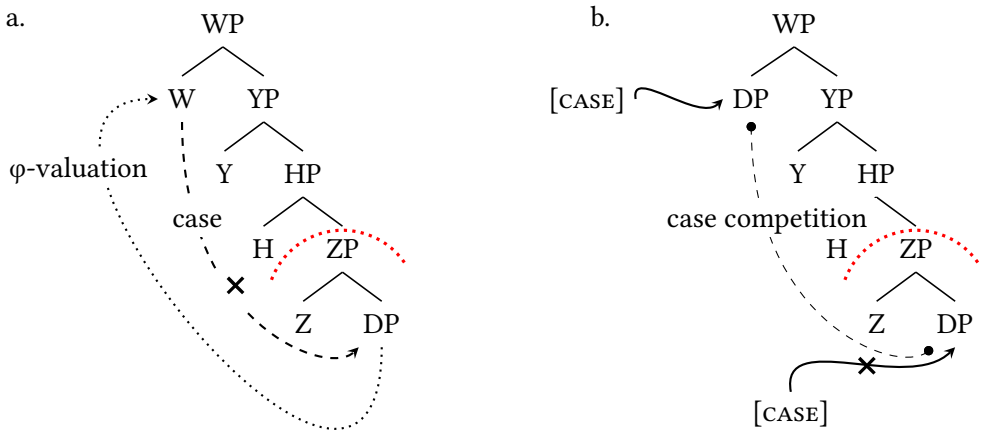
[1]Thanks to Ethan Poole for suggesting this term.

[2]I was made aware of Obata (2010, 2017), Ott (2011)'s work on the Transfer operation and its strength after this thesis was approved. This work was carried out independently of the aforementioned work on Transfer, so there is no mention or direct influence of these sources in the text.

[3]The φ-valuation arrow that points to T here and throughout the paper is used to indicate the direction of the flow of information, rather than the direction of probing.

in a phase complement. In short, *read-only* in (4) rules out cross-phasal dependencies that require changing features of the lower element in (5).

(5) *Phase-internal elements are visible but immutable*



The empirical generalisation based on the possibility of φ-agreement and dependent case competition to proceed into a phase and the impossibility of case assignment to do the same in (5a-b) is precisely that features of phase-internal elements cannot be altered in response to phase-external elements, but phase-internal elements can change the features of phase-external elements. (5) then shows that phase complements are themselves immutable, but are still accessible to condition syntactic operations on phase-external elements. To implement the *read-only* proposal, I assume the following functional sequence: $\langle C \succ T \succ Asp \succ Voice \succ v \succ V \rangle$. I further assume that C, Voice, and v are phases along the clausal spine whose complements become *read-only* upon the completion of the phase.

The motivation for *read-only* in (4) comes from Hindi-Urdu, where the same height asymmetry—lower elements conditioning featural change on a higher element across a phase but not undergoing featural changes themselves—shows up in three different case and φ-agreement-related areas:

(i) **Ergative case vs. φ-agreement**: An unaccusative argument in a phase cannot receive an Ergative case feature value from a higher, phase-external head, but the same argument serves as a goal for a φ-agreement relation with an even-higher phase-external φ-probe.

(ii) **Accusative case vs. φ-agreement**: A phase-internal direct object in its base position cannot receive dependent Accusative case conditioned by a higher, phase-external element, but the direct object is visible to control φ-agreement on an even-higher phase-external φ-probe.

(iii) **Accusative case vs. Dative case**: A phase-internal direct object obligatorily conditions dependent Dative case on a higher phase-external argument, but a higher phase-external argument does not obligatorily condition dependent Accusative case on a phase-internal direct object.

The argumentation in the paper is as follows: I briefly describe the Hindi-Urdu case alignment and φ-agreement pattern in §1.2. In §2, I discuss the asymmetry between Ergative case and φ-agreement. I first propose an Ergative case assignment rule for Hindi-Urdu, and show that Ergative case cannot be assigned into a phase. Then, I show that φ-agreement—on the other hand—can proceed into a phase, and argue that this phase-based asymmetry between the two syntactic operations follows from *read-only* phases in (4). Next, I turn to the asymmetry between Accusative case and φ-agreement. I propose a dependent Accusative case rule for Hindi-Urdu in §3, and claim that low Accusative case also cannot be assigned into a phase, in contrast with φ-agreement. I argue that the phase-based asymmetry between (Ergative) case assignment and φ-agree in §2 is replicated in comparing Accusative case vs. φ-agreement, and that this height asymmetry also follows from phases being *read-only*. In §4, I compare Accusative case to Dative case, which the permissive construction reveals to be a high dependent case, often conditioned by a DP in a lower phase. I show that while a DP cannot receive Accusative case across a phase, the same DP still

conditions Dative case on another phase-external DP. Consequently, I claim that Dative and Accusative case are also subject to the same high-low asymmetry as in §2 and §3, and that *read-only* phases also derives this asymmetry. In §5, I supplement the *read-only* proposal with additional ingredients, such as a theory of cyclicity (§5.1.1), movement (§5.1.2), and additional structure on scrambled elements (§5.1.3), for a complete locality-based analysis of the Hindi-Urdu case and agreement data. I conclude with a discussion on the predictions of and lingering issues with the *read-only* analysis.

1.2 Case Alignment in Hindi-Urdu

Hindi-Urdu (henceforth HU) has tripartite case alignment (Comrie 1978, 2005). S, A, and O may all receive different cases, (6a-e). HU also has aspectually split ergativity (Mahajan 1990, 2012, 2017a, Anand and Nevins 2006, Keine 2007) and differential object marking (Aissen 2003, Montaut 2018, Kalin 2018, Kalin and Weisser 2019). In (6a), the intransitive subject can either be Ergative or case-unmarked. (6b) shows that transitive subjects can be Ergative while objects can be Accusative. (6c) shows that objects can also be case-unmarked, while (6d) shows that transitive subjects may also be case-unmarked. Dative case on indirect objects/goals is exemplified in (6e), while (6f) shows that φ-agreement targets the highest DP that bears no case marker.

(6) a. *Unmarked/Ergative S*

raaj(=ne) khããsaa

Raj(=ERG) coughed

'Raj coughed.'

b. *Ergative A and Accusative O*

laṛkii=ne laṛke=ko bulaayaa

girl=ERG boy=ACC called

'The girl called the boy'

c. *Ergative A and unmarked O*

laṛkii=ne kitaab paṛhii

girl=ERG book read

'The girl read a book'

d. *Unmarked A and unmarked/Accusative O*

laṛkii kitaab(=ko) paṛhegii

girl book(=ACC) read.FUT

'The girl will read a/the book'

e. *Dative on Indirect Objects*

miina=ne ṭiina*(=ko) kitaab dii

Mina=ERG Tina*(=DAT) book gave

'Mina gave Tina a/the book'

f. *φ-agreement with highest case-unmarked DP*

laṛkii chaand dekheg-ii / *-aa

girl.F.SG moon.M.SG see.FUT-F.SG / *-M.SG

'The girl will see the moon'

2 The Ergative case–φ-agreement asymmetry

The first asymmetry in this paper has to do with the locality of Ergative case assignment (§2.1), contrasted with the nonlocality of φ-agreement (§2.2),[4] which I argue in §2.3 that a *read-only* account of phases derives.

2.1 Ergative case

In this subsection, I outline the delicate conditioning factors of Ergative case in Hindi-Urdu. I then propose a rule for Ergative case assignment in Hindi-Urdu, and show that Ergative case assignment in HU is local. Crucially, I show that Ergative case cannot be assigned into a phase, since Ergative case assignment involves valuing a phase-internal element's case feature, violating *read-only*. φ-agreement in §2.2, on the other hand, proceeds into a phase, since it obeys *read-only* and the featural content of phase-internal elements isn't tampered with.

2.1.1 Characterising Ergative case in Hindi-Urdu

Ergative case in Hindi-Urdu is conditioned by multiple structural factors, namely perfectivity, finiteness, base-generation in external argument position, and the presence/absence of an overt light verb (Mohanan 1994, Kachru 2006, Bhatt 2007a, Mahajan 2012). These conditions on Ergative case assignment are described below.

Perfectivity is the first condition on Ergative case assignment in HU. Hindi-Urdu, like most Indic languages, has aspectually-split ergativity (Mohanan 1994). The Ergative only appears in the perfective aspect in HU, as the minimal pair in (7) shows:

[4]Note that adjuncts in HU don't participate in/act as interveners for case assignment or φ-agreement. I uniformly assume that adjuncts are insulated in a PP layer which renders them invisible for φ-agreement and case assignment.

(7) a. *Perfective aspect*

anu*(=ne) kitaab paṛh-ii thii

Anu*(=ERG) book read-PF was

'Anu had read the book'

b. *Habitual / future / progressive aspects*

anu(*=ne) kitaab paṛh-tii thii / paṛh-egii / paṛh rahii thii

Anu(*=ERG) book read-HAB was / read-FUT / read PROG was

'Anu used to read / will read / was reading the book'

While perfectivity is necessary to license Ergative case on a DP in Hindi-Urdu, it is not sufficient. Ergative in HU only appears on an argument in a finite clause, as the minimal pair in (8) shows. In (8), the same argument that is Ergative-marked in the finite clause in (8a) cannot be Ergative-marked in the nonfinite clause in (8b), and must instead be obligatorily genitive-marked.

(8) a. *Finite clause*

anu*(=ne) kitaab paṛhii thii

Anu*(=ERG) book read.PF was

'Anu had read the book'

b. *Nonfinite clause*

anu=kaa/*=ne kitaab paṛhnaa...

Anu=GEN/*=ERG book read.INF

'Anu reading the book…'

Since nonfinite clauses in Hindi-Urdu do not show overt aspectual distinctions, it is possible that the finiteness requirement for Ergative case in Hindi-Urdu is contained in the perfectivity requirement in (7).

Other than perfectivity and finiteness, the realisation of Ergative case on a DP in Hindi-Urdu also requires the DP to be an external argument, (9). The DP *Raj* is obligatorily Ergative in (9a) where it is an external argument, and is obligatorily unmarked in (9b) where it is an (internal) argument of unaccusative *gir* '√FALL'—just like *thaalii* 'plate' in (9c).

(9) a. *External argument DP*

raaj*(=ne) thaalii giraayii

Raj*(=ERG) plate drop

'Raj dropped the plate'

b. *Internal argument DP*

raaj(*=ne) giraa

Raj(*=ERG) fell

'Raj fell'

c. *Internal argument DP*

thaalii(*=ne) girii

plate(*=ERG) fell

'A/the plate fell'

There are two ways to interpret the contrast in case on *Raj* in (9a-b):

1. Ergative case is only assigned to external arguments, as Woolford (1997), Aldridge (2004), Legate (2008), and Mahajan (2012) have argued.

2. Ergative in Hindi-Urdu is a dependent case[5] that appears on subjects of transitive clauses,

[5]Baker and Vinokurova (2010); Baker (2015) have extensively argued for an additional modality of case assignment to DPs known as dependent case, which involves case being triggered on an unvalued DP by another DP/a case competitor that it stands in a c-command relationship within the same domain; (i). In Baker (2015)'s terms, (ia) shows a high dependent case (usually called Ergative) being conditioned on the DP in Spec,*v*P due to the DP in Comp,VP, while (ib) shows a low dependent case (usually called Accusative) being conditioned on the DP in Comp,VP due to the DP in

as Baker (to appear) claims for Hindi-Urdu (Baker and Vinokurova 2010).

Based on (9a-c), Ergative in HU is a candidate for high dependent case (Baker and Vinokurova 2010, Baker 2015). The argument against Ergative being a dependent case—and for Ergative being assigned to external arguments only—comes from unergative verbs[6] that allow Ergative case on their sole arguments, (10):

(10) *Ergative case on intransitive argument*

raaj(=ne) cheekhaa / hãsaa / khããsaa

Raj(=ERG) screamed / laughed / coughed

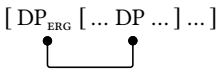
'Raj screamed/laughed/coughed.'

Baker (to appear) attributes Ergative case on intransitive predicates like *cheekh* 'scream', *hə̃s* 'laugh', *khããs* 'cough' in (10) to null cognate objects that trigger dependent Ergative case on the subject (Mahajan 1990, Hale and Keyser 1993, Laka 1993, Bobaljik 1993). Some cognate objects of unergatives can also be overtly realised, (11b). Note that in (11a), the verb shows default (masculine singular) agreement, but in (11b) the verb agrees in gender and number with the unmarked feminine singular object *khããsii* 'cough':

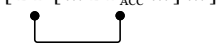
Spec,*v*P.

(i) *Dependent case assignment*

a.



b.



[6] Bhatt (2003) offers three tests for distinguishing between unergative and unaccusative predicates in HU—namely reduced relatives (only possible with unaccusatives), impersonal passives (only possible with unergatives), inabilitatives with passive syntax (only possible with unergatives). These tests—discussed in detail in Ahmed (2010)—were used to diagnose *cheekh* 'scream', *hə̃s* 'laugh', *khããs* 'cough' as unergative and *gir* 'fall' as unaccusative.

(11) a. *Ergative case on intransitive argument*

raaj=ne khããs-**aa**/*-**ii**

Raj.M.SG=ERG coughed-M.SG/*-F.SG

'Raj coughed.'

b. *Intransitive with cognate object*

raaj=ne khããsii khããs-**ii**/*-**aa**

Raj.M.SG=ERG cough.F.SG coughed-F.SG/*-M.SG

'Raj coughed a cough.'

Preminger (2012) argues based on Basque that the inability of some unergatives to take *overt* cognate objects—first discussed in Laka (2006)—calls into question the ability of these predicates to have *null* cognate objects to trigger dependent Ergative case on unergative subjects. Similarly, it is not the case that all HU unergatives[7] allow cognate objects. In (12), both unergative predicates *bhaag* 'run' and *chilaa* 'scream'[8] lack overt cognate objects—**bhaag* or **chilaa* are not nominals of HU. Similarly, other predicates like *nahaa* 'bathe' and *roo* 'cry' also lack cognate objects. If some HU unergatives lack overt cognate objects, it is unclear why these predicates should have covert cognate objects. As (12) demonstrates, the unergative subject is still Ergative despite the lack of cognate objects with these verbs, showing that HU Ergative cannot be a dependent case, since it is present on the sole argument of the verb in the absence of a lower DP.

(12) a. *No cognate object with bhaag 'run'*

raaj=ne (*bhaag) bhaagaa

Raj=ERG (*race) ran

'Raj ran (*a race).'

[7]That is, verbs that are classified as unergatives using Bhatt (2003)'s diagnostics for unergativity/unaccusativity in HU.

[8]*chilaa* in (12) and *cheekh* in (10) are synonyms giving rise to the meaning 'scream'.

b. *No cognate object with chilaa 'scream'*

raaj=ne (*chilaa) chilaaya

Raj=ERG (*scream) screamed

'Raj screamed (*a scream).'

Even more crucially, as Tollan (2021) shows, adding the cognate object *khããsii* 'cough' to the predicate *khããs* 'cough' in (11a) changes agreement on the verb from MASCULINE SINGULAR to FEMININE SINGULAR, (11b). In (11b), the predicate *khããs* 'cough' obligatorily agrees with the feminine singular object *khããsii* 'cough'. If there were a null cognate object in (11a), obligatory feminine singular agreement on the verb would be expected, but it isn't grammatical, as the example already shows.[9] Preminger (2009, 2012) has also similarly argued against null cognate objects in Basque based on changed φ-agreement. Since there is evidence against a null cognate object in (12), and since Ergative case may appear on unergative subjects in the absence of another DP, Ergative in Hindi-Urdu is not a dependent case triggered by a lower (cognate) object. Instead, the correct generalisation is that Ergative case only appears on base-generated external arguments.

The last condition on Ergative case assignment in HU is related to light verbs, and how light verb constructions make evident the locality of Ergative case assignment in HU (Bahl 1964, Hook 1974, Porízka 1969, Mahajan 2012). Light verb constructions involve a sequence of an uninflected MAIN VERB followed by an inflected LIGHT VERB (13a)—where the MAIN VERB carries most of the meaning, and the LIGHT VERB usually bears additional aspectual or directional information (Hook 1974, Mahajan 2012). Even when all the conditions on Ergative case surfacing—namely perfectivity, finiteness, and base generation in Spec,VoiceP—are met, there is still a disruptor of Ergative case on a DP: an unaccusative light verb (13b):

[9]It could be argued that there is in fact a null cognate object in (10) (and in the examples that follow) that gets incorporated into the verb and thus bleeds φ-agreement, but then the question would be why only null cognate objects can incorporate. If we go on to assume that all cognate objects incorporate, the question would be why only null cognate object bleed φ-agreement, when the syntax cannot differentiate between overt and null arguments.

(13) a. *Transitive light verb* TAKE *+ Transitive main verb*

anu*(=ne) kitaab paṛh lii

Anu*(=ERG) book read took

'Anu is done reading the book'

b. *Unaccusative light verb* END *+ Transitive main verb*

anu(*=ne) kitaab paṛh chukii

Anu(*=ERG) book read ended

'Anu has already read/is done reading the book'

Mahajan (2012)'s observation that an overt light verb is also involved in the conditioning of Ergative in HU is striking. Not only can an unaccusative light verb like *chukii* '√END' bleed Ergative marking on a DP even when the main verb *paṛh* '√READ' is transitive (13b), but a transitive light verb can also feed Ergative case assignment—even when the main verb *bɛɛṭh* '√SIT' is unaccusative, (14a). An unaccusative light verb does not similarly feed Ergative case assignment with an unaccusative main verb, (14b).

(14) a. *Transitive light verb* TAKE *+ Unaccusative main verb*

anu*(=ne) bɛɛṭh liyaa

Anu*(=ERG) sit took

'Anu has sat down'

b. *Unaccusative light verb* END *+ Unaccusative main verb*

anu(*=ne) bɛɛṭh chukii

Anu(*=ERG) sit ended

'Anu already sat down'

(14a) is an additional argument against Ergative being a dependent case in HU, since Ergative

case is obligatory on the external argument *Anu* despite the lack of a lower DP in the clause. Based on (13-14), the ability of a light verb to independently coappear with an Ergative subject crucially influences the presence of Ergative case on the DP in a main verb and light verb combination. Assuming that Ergative case originates in the (perfective) Asp(ect) head[10] on top of VoiceP (Bjorkman 2018), the inability to assign Ergative case when there is an intervening unaccusative light verb also shows that Ergative case assignment in HU is very local. The generalisation based on the behaviour of Ergative case with respect to light verbs in stated in (15):

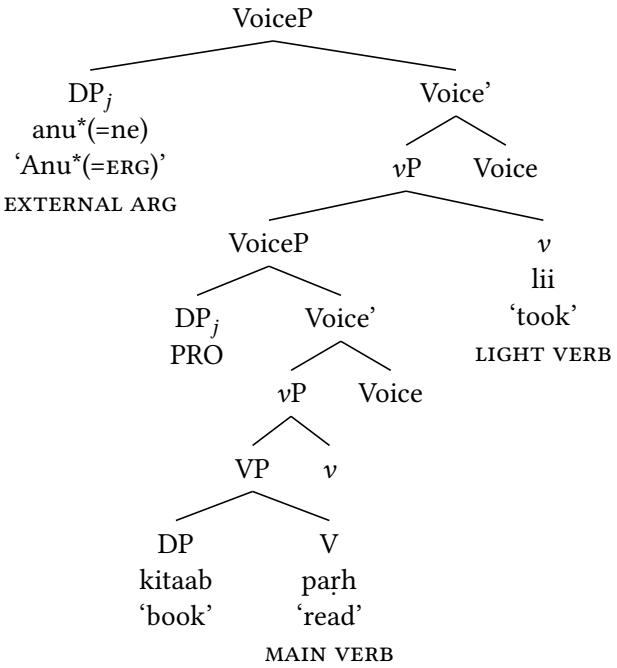
(15) The presence of Ergative case on the external argument in a light verb construction depends on the valency of the light verb.

Mahajan (2012) proposes a control structure for configurations involving transitive light verbs—such as (13a)—where the light verb introduces the external argument which controls a PRO in the lower verb shell,[11] (16). *Anu* in (16) is introduced in the higher VoiceP of the transitive light verb rather than in the VoiceP of the main verb (where the coindexed PRO sits), and is obligatorily Ergative.

[10]The rationale for this assumption is that HU has split ergativity, such that Ergative case is only assigned in the perfective aspect.

[11]PRO is shown in external argument position for ease of representation, but it could be an internal argument instead, as in with unaccusative main verbs. I delay the motivation as to why external arguments merge in Spec,VoiceP instead of Spec,vP until §3.1, but see Pylkkänen (2008), Harley (2013) for arguments in favour of external arguments being introduced in Spec,VoiceP. The disparity in Voice and *v* does not make a difference to the present argument, but both are included here for consistency in trees throughout the paper.

(16) *Control structure for transitive light verbs (adapted from Mahajan 2012)*[12]

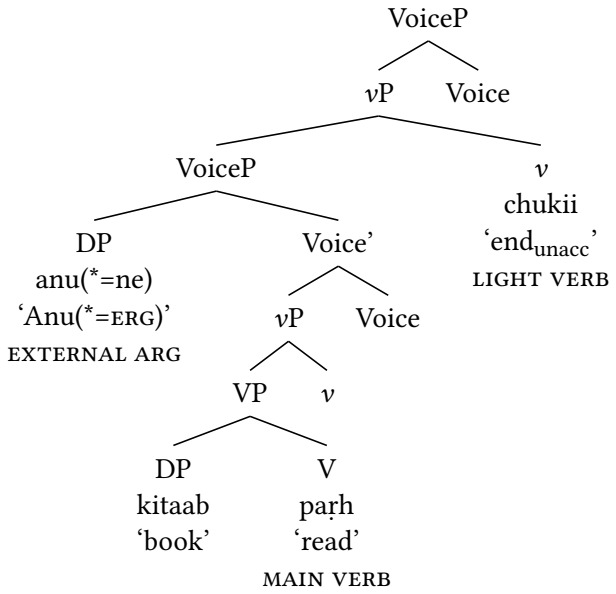


For configurations with unaccusative light verbs like (13b), Mahajan (2012) argues that the external argument is introduced in the *v*P shell of the main verb,[13] so there is no PRO in the lower verb shell and no control dependency. (17) exemplifies (13b), a light verb construction with an unaccusative light verb, where the external argument is introduced in the specifier of VoiceP of the main verb:

[12]Mahajan (2012)'s structures include two little *v* projections (one belonging to the main verb, one to the light verb) rather than two *v* + Voice pairs.

[13]Mahajan (2012) argues that the external argument raises to the specifier of the light verb's *v* projection, but does not provide independent evidence for this raising, so that part of his proposal isn't adopted here.

(17) *Structure for unaccusative light verbs (adapted from Mahajan 2012)*



Importantly, in (17), *Anu* is introduced in Spec,VoiceP but fails to receive Ergative case when dominated by the light verb's *v* and Voice projections. Then, (17) shows that being introduced in Spec,VoiceP (of a perfective, finite clause)—or as a specifier in general—is necessary but not sufficient to assign Ergative case to a DP. The contrast between (16) and (17) gives rise to the following generalisation in (18):

(18) Only a DP in the **highest** Spec,VoiceP of a perfective, finite clause receives Ergative case.

While Mahajan (2012) does not independently motivate the structures in (16-17), novel evidence for these structures comes from the idiom in (19).

(19) *Idiom*

gayii bhɛ̃ɛ̃s paanii=mɛ̃

went buffalo water=LOC

'The efforts were futile/all in vain' (Lit: 'The buffalo went into the water')

Importantly, adding a transitive light verb to the idiom in (19) only admits the literal interpre-

tation, a hallmark of control[14] since Postal (1974, 2004), as in (20b). Adding an unaccusative light verb as in (20a), however, preserves the idiomatic interpretation in (19)—suggesting that there's no control[15] involved with unaccusative light verbs.

(20) a. *Idiom preserved with unaccusative light verb*

jaa chukii bhɛ̃ɛ̃s paanii=mɛ̃

go ended buffalo water=LOC

'The efforts were (already) futile/all in vain' (Lit: 'The buffalo already went into the water')

b. *No idiom with transitive light verb*

#jaa daala bhɛ̃ɛ̃s=ne paanii=mɛ̃

go put buffalo=ERG water=LOC

'The buffalo has gone into the water' (no idiomatic interpretation)

We can conclude from the idiom facts in (19-20) that light verb constructions with transitive light verbs have a control structure, so *bhɛ̃ɛ̃s* 'buffalo' isn't an argument of the main verb and the constituency of the idiom cannot be preserved, resulting in a literal interpretation only. Contrastingly, light verb constructions with unaccusative light verbs do not have a control structure, so *bhɛ̃ɛ̃s* 'buffalo' is base-generated in the same constituent as the rest of the idiom, and an idiomatic interpretation is possible. The evidence for Mahajan (2012)'s structures in (19-20) also hints at the generalisation in (18) being correct, since a control structure with transitive light verbs ex-

[14] Compare the pair of English sentences in (i), where the idiomatic reading is preserved when the idiom is embedded under a raising verb, but not under a control verb (Postal 1974):

(i) a. *Idiom preserved with raising verb **seem***
The shit$_j$ **seems** to have ___$_j$ hit the fan

b. *Idiom not preserved with control verb **want***
#The shit **wants** to have PRO hit the fan

[15] As far as idiomatic evidence goes, idioms preserved under unaccusative light verbs only show evidence against control, not positive evidence for raising. I will not assume raising in these structures.

plains why the external argument generated in VoiceP of the light verb is local enough to the next (Aspect) head to receive Ergative case from it. Similarly, the lack of a control structure with unaccusative light verbs means the argument base-generates in Spec,VoiceP of the main verb, so the light verb intervenes between the Ergative-assigning Aspect head and the DP in the lower Spec,VoiceP, and Ergative case assignment is blocked.

The main takeaway of the discussion of light verbs in §2.1.1 is that **Ergative case in HU is strictly local**. It is only assigned to external arguments, but not all external arguments can be Ergative.[16] Since Ergative case only appears on the highest Spec,VoiceP in a perfective (finite) clause, a natural choice for the Ergative assigner is the Asp(ect) head with a [PERF] feature[17] —which assigns Ergative case under local c-command (Preminger to appear).[18] The perfective Asp head—heading the projection above Voice—assigns Ergative to *Anu* in Spec,VoiceP in (16) but

[16]While Ergative case was shown not to be a dependent case in §2.1.1, there is still a question of whether Ergative is inherent—as Mahajan (1990, 2012), Mohanan (1994), Butt (1995), Woolford (1997), Aldridge (2004), Legate (2008) have claimed—or structural (Marantz 1991, Bittner 1994, Bittner and Hale 1996, Davison 1999, 2004b, Ura 2000). That unergative arguments in HU are Ergative—as in (10)—may be initial evidence for Ergative being inherent, but the light verb facts in §2.1.1 make the picture hazier, showing that Ergative case in HU could be analysed as structural. Recall that unaccusative light verbs bleed Ergative case (14a), while transitive light verbs feed Ergative case, (14b). If Ergative in HU were inherent, we would unambiguously expect Ergative case on all external arguments. However, (13b, 25) and (14b) show that the agentive DP *Anu* fails to receive Ergative case in the presence of an unaccusative light verb in both cases, even though it is an external argument. Moreover, Preminger (2012) claims that inherent Ergative case in the theories of Woolford (1997), Aldridge (2004), Legate (2008) is associated with an AGENT thematic role. If the characterisation of Ergative case as inherent and associated with an AGENT thematic role is correct, the expectation would be that Ergative case only appears on AGENTS. (i) below shows that light verbs feed Ergative case assignment even on inanimate DPs like *water*, which are not canonical AGENTS.

(i) *Ergative case on non-AGENT DP*
paanii*(=ne) ubal liyaa
water*(=ERG) boil take
'The water has boiled'

However, if inherent case is associated with a particular structural position (Spec,VoiceP) in this case, rather than with a thematic role, the HU Ergative—which in this theory is only assigned to base-generated external arguments—could still be analysed as an inherent case. It is not entirely clear which assigned case category the HU Ergative falls neatly under in previous theories, but what is clear is that Ergative in HU is not a dependent case, and is instead a case assigned by the perfective Aspect head to a DP in its c-command domain.

[17]Bjorkman (2018) also similarly argues that a dedicated perfective Asp(ect) head is the source of Ergative case in HU, although her analysis of Ergative case assignment involves movement to Spec,AspP.

[18]Preminger (to appear) argues that case is assigned by a head to a DP that it c-commands. His definition of assigned case—which he calls LEXICALLY-GOVERNED CASE—is given in (i):

not in (17). In the latter, *Anu* is not the specifier of the highest VoiceP, so it does not receive Ergative case.

2.1.2 Ergative case rule in Hindi-Urdu

Currently, a rule for Ergative case in HU could be stated as (21), but such a rule would only state the distribution of Ergative case without deriving its locality properties.

(21) **Ergative case rule (nonfinal)**

Ergative case is assigned by Asp with a [perf] feature to the specifier of the closest VoiceP.

Instead, a more principled way to capture the locality of Ergative case assignment in HU is by appealing to **phases** (Chomsky 2000, 2001). Given that the only element ever visible to Ergative case assignment in §2.1 is the highest Spec,VoiceP in the structure, a standard, PIC-style conception of phase locality (22) is enough to derive the locality of Ergative case in HU:

(22) **Phase Impenetrability Condition** (Chomsky 2000:108)

In phase α with head H, the domain of H is not accessible to operations outside of α, only H and its edge are accessible to such operations.

If VoiceP is a phase[19] as Harley (2013) proposes, then the PIC in (22) dictates that only the highest Voice head and its specifiers (the edge) are accessible to outside operations. The complement of Voice is rendered inaccessible as soon as the next (Asp) head merges, so anything lower than the highest Voice head (including other VoicePs) is no longer present in the structure for the purposes of Ergative case assignment, and the locality of Ergative case assignment in this section

(i) **lexically governed case**
Case assigned under local c-command by a designated head

For Preminger (to appear), local c-command refers to c-command that is not disrupted by an intervener or some locality boundary, and I adopt this definition in my analysis of Ergative case, but the analysis could be modelled under other conceptions of assigned case as well.

[19]The locality of Ergative case assignment may be modelled as a *v*P phase effect too under standard assumptions where *v* is a phase, and the external argument is introduced in Spec,*v*P. The distinction between assignment to Spec,vP and Spec,VoiceP is not relevant for Ergative assignment, but will become relevant in §3.1.

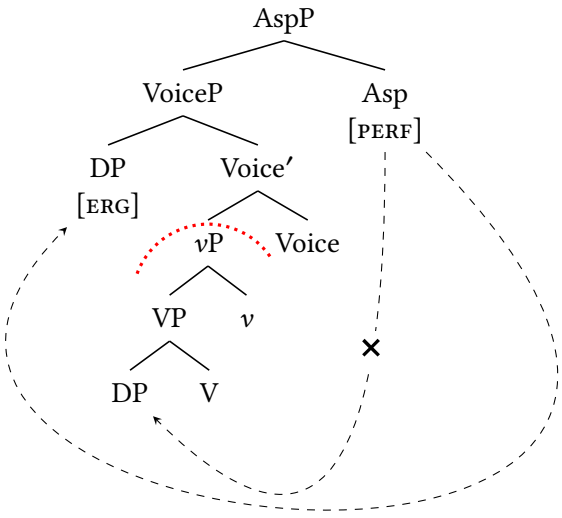
follows. Adopting a phase locality-based analysis of Ergative case in HU not only simplifies the Ergative rule, since Ergative is still a case assigned by Asp under local c-command à la Preminger (to appear), but also derives the pattern in §2.1.1, where Ergative is only assigned to a DP in the specifier of the highest VoiceP. Following Preminger (to appear) and the PIC (22), an Ergative case rule for Hindi-Urdu is given in (23):

(23) **Ergative case rule (final)**

Ergative case is assigned under local c-command by an Asp(ect) head with a [PERF] feature.

The ergative rule in (23) is illustrated in (24) below. Crucially, Asp only assigns Ergative case to the specifier of (the highest) VoiceP.[20]

(24) *Ergative case assignment*



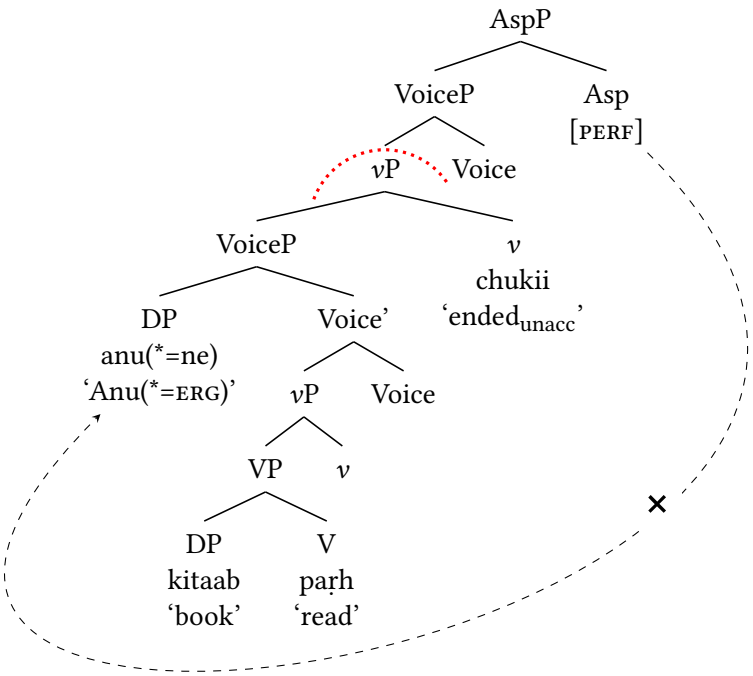
It immediately follows from the Ergative rule in (23) and the PIC in (2) why there is no Ergative case on *Anu* in (17)—given below as (25)—with an unaccusative light verb.[21] The Asp head in (25) below can only see the edge of the highest Voice phase, which is empty, so *Anu* in the lower

[20]Ergative case assignment to DPs that scramble to Spec,VoiceP is ruled out for independent reasons that will be discussed in §5.

[21]It also trivially follows from (23) that Ergative case assignment proceeds in (26), since *Anu* is in the highest Spec,VoiceP and is visible to the Asp head

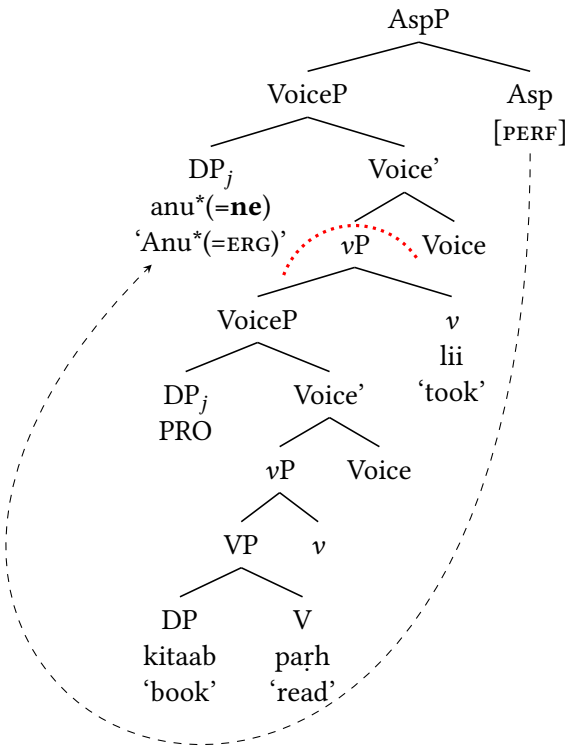
Spec,VoiceP is not visible for Ergative case assignment.

(25) *No ergative with unaccusative light verbs*



Similarly, the rule in (23) also explains the presence of Ergative case on *Anu* in (16)—illustrated in (26), since *Anu* is in the specifier of the highest VoiceP, which is the only position visible for Ergative case assignment:

(26) *Ergative with transitive light verbs*



Recall from (10), repeated as (27), that Ergative case on arguments of unergatives is optional.[22] Assuming that unergative arguments can base-generate as internal or external arguments, (23) also derives the optionality of Ergative case in unergatives. When the sole argument of an unergative verb is an internal argument, it does not receive Ergative case because it is separated from the Aspect head by a phase boundary (as exemplified for the internal argument in (24)). When the unergative argument is an external argument, it receives Ergative case due to being in the same phase as the Aspect head.

[22] As shown with unaccusative arguments in (9b-c), Ergative case is entirely disallowed on unaccusative arguments, which also follows from the rule in (23), since the argument is too far from the Ergative-assigning Aspect head.

(27) *Ergative case on intransitive argument*

raaj(=ne) cheekhaa / hãsaa / khããsaa

Raj(=ERG) screamed / laughed / coughed

'Raj screamed/laughed/coughed.'

The main conclusion of this section is that Ergative case assignment is strictly local—the light verb facts in particular show that Ergative case is only assigned to the specifier of the highest VoiceP. The locality of Ergative case is captured by adopting the case rule in (23) in conjunction with VoiceP phasehood. While PIC-style phases correctly derive the locality of Ergative case assignment in this section due to phase complements being inaccessible, in the next section we will see that the non-locality of φ-agreement creates an apparent conflict with the locality of Ergative case assignment being attributed to PIC-style phases.

2.2 φ-agreement

Now that the locality of Ergative case assignment is established and derived in §2.1, we switch gears to φ-agreement, which is strikingly nonlocal. This subsection briefly outlines the properties of φ-agreement in HU, and discusses its nonlocality.

Local φ-agreement in Hindi-Urdu invariably targets the structurally highest case-unmarked DP, [23] and is never optional (Mahajan 1989, Butt 1993a, Mohanan 1994). Following Bobaljik (2008), Preminger (2014), I assume that the HU φ-probe on T[24] is *case-discriminating*, which means that

[23] φ-agreement in HU targets the DP that is structurally highest in its base position, so even if an unmarked direct object scrambles over a bare subject, the subject will still be the φ-agreement target. I don't delve into this property of HU φ-agreement in this paper. I also don't comment on the phenomenon of φ-agreement spreading, which has to do with how auxiliaries and other functional heads display the same agremeent morphology as the verb/T, see Bhatt (2005) for more on this topic. Lastly, I also won't comment on agreement with nonfinite auxiliaries, see Mahajan (1989) for the same.

[24] There is good reason to claim that the φ-probe is on T and not on a lower head like *v* or Voice. First, when both arguments in a transitive clause are unmarked, subject agreement is the only possibility, as shown in the φ-agreement algorithm in (29) and in (30). The preference of subject agreement over object agreement follows straightforwardly if φ-agreement is a syntactic operation that involves a c-command-invoking Agree relation between the probe and the goal (Preminger 2014, Keine 2016, 2020b), since the subject is more local to the probe. Object agreement is then

φ-probes are sensitive to the case value of the DPs they target, such that only DPs without a valued case feature control φ-agreement. The φ-agreement algorithm for HU is given in (28):

(28) φ-**AGREEMENT ALGORITHM**

Agree with a subject iff it is case-unmarked;

or else agree with an object iff it is case-unmarked;

or else show default (masculine singular) agreement

If the subject is not case-marked, it obligatorily agrees with the verb, whether or not the object is case-marked, (29).

(29) *Unmarked subject obligatorily controls agreement*

laṛk**ii** chaand(=ko) dekheg-**ii** / *-**aa**

girl.F.SG moon.M.SG(=ACC) see.FUT-F.SG / *-M.SG

'The girl will see the moon'

If the subject is case-marked but the object isn't, the object obligatorily agrees with the verb, (30).

---

correctly predicted to only be possible when the subject is invisible for φ-agreement (due to being case-marked, as the φ-agreement algorithm in (29) states). Béjar and Rezac (2009) use a similar line of argumentation for Basque, where they claim that the Basque φ-probe is on *v*, given that object agreement has precedence over subject agreement in the language.

The second argument for the HU φ-probe being on T comes from the interaction between Ergative case assignment and φ-agreement. In this analysis, Ergative case is assigned by Asp above the *v* and Voice phases, so the φ-probe being on *v*/Voice would give rise to the prediction that φ-agreement precedes Ergative case assignment. If φ-agreement precedes Ergative case assignment by Asp, we would expect that φ-agreement-controlling subjects can receive Ergative case by Asp. However, such a pattern where a subject is both Ergative and controls φ-agreement is completely unattested in any variety of HU (i), suggesting that the φ-probe is at least higher than the Ergative-assigning Aspect head.

(i) *Ergative subjects never control agreement*

laṛkii=ne seeb khaay-**aa** / *-**ii**

girl.F.SG=ERG apple.M.SG saw-M.SG / *-F.SG

'The girl ate an apple'

Additionally, if the φ-probe were on *v*/Voice the preference of subject agreement over object agreement would not follow from the probe's location, and the Agree relation involved in φ-agreement would be predicted to be upward or downward, instead of just downward, making the system more complex.

(30) *Unmarked object obligatorily controls agreement*

laṛke=ne tasviir dekh-**ii** / *-**a**

boy.M.SG=ERG photograph.F.SG saw-F.SG / *-M.SG

'The boy saw a photograph'

If both the subject and object are case-marked, the verb shows default masculine singular agreement, (31).

(31) *Obligatory default agreement*

laṛki=ne billii=ko dekh-**aa**

girl.F.SG=ERG cat.F.SG=ACC saw-M.SG

'The girl saw the cat'

(29-31) demonstrate that φ-agreement never targets a DP that is overtly case marked, even if it is the highest DP. Since we never see instances of φ-agreement with a case-marked DP in Hindi-Urdu, (28) shows that case assignment bleeds φ-agreement.

A noteworthy property of φ-agreement in Hindi-Urdu is that it does not require movement of the agreement controller, as Davison (1991), Boeckx (2004), Bhatt (2005), Bhatt and Keine (2017), Keine (2020b) have argued (pace Mahajan 1989, 2017b). It has been argued by Bhatt (2005) that objects controlling φ-agreement are not structurally higher than non-agreeing objects. Crucial evidence for φ-agreement in HU not requiring movement comes from idioms, where objects that cannot move to preserve the constituency of an idiom are still obligatory φ-agreement targets, as Keine (2016, 2017, 2020b), Bhatt and Keine (2017) show. In the idiom in (32a)—from Bhatt and Keine (2017)—X-*kii khuub marammat karna* 'give X a beating',[25] the idiomatic object *marammat* must stay in its base position for the idiomatic reading to be preserved (32b), and the same object in the same base position obligatorily is a φ-agreement target when the subject is Ergative (32c).[26]

[25]The literal meaning of *khuub marammat karna* is 'do many repairs'.

[26]Keine (2016, 2020b) shows that idiomatic objects also control long distance agreement from their base position.

(32) a. *Idiom*

simran=ne komal=kii khuub marammat kii

Simran=ERG Komal=GEN many repairs did

'Simran gave Komal a good beating' (lit.: 'Simran did Komal's many repairs')

b. *No movement of idiomatic object marammat*

#[khuub marammat]$_j$ simran=ne komal=kii ___$_j$ kii

many repairs$_j$ Simran=ERG Komal=GEN ___$_j$ did

'Simran did Komal's many repairs' (*no idiomatic reading*)

c. *Idiomatic object marammat controls φ-agreement*

simran=ne komal=kii khuub marammat ki-**i**/*ki-**yaa**

Simran=ERG Komal=GEN many repairs.F.SG did-F.SG/*did-M.SG

'Simran gave Komal a good beating' (lit.: 'Simran did Komal's many repairs')

Given that φ-agreement is obligatory—it never fails when there is a case-unmarked subject or direct object in a clause—and that it doesn't require movement, the lack of *v*P phase effects for HU φ-agreement is very surprising. That is, φ-agreement can look through a clause-internal phase to target a phase-internal object, which was shown to be impossible for Ergative case assignment in §2.1.

Additional evidence for φ-agreement not being phase-bounded in HU comes from long distance agreement, which is permitted into embedded nonfinite clauses, (33).[27] In the configuration

[27]There is a caveat here—long distance agreement is optional in most constructions (i), unlike obligatory local agreement. While local agreement in (29-31) is obligatory and long distance agreement in (33) is optional, both share the property of only targeting DPs that aren't overtly case-marked.

(i) *Default agreement*
larkiiyõ=ne [billii dekhn-**aa**] chaah-**aa**
girls.F.PL=ERG cat.F.SG see-M.SG want-M.SG
'The girls wanted to see a/the cat'

The optionality of long distance agreement in HU has been previously documented and studied by many, including

below, the φ-probe on matrix T looks into (at least) two *v*P phases to agree with the embedded object *billi*. Given the stark nonlocality of φ-agreement in (32c) and (33), the PIC-phase explanation of the locality of Ergative case assignment in §2.1 can no longer hold. Phase complements need to be visible to enter into φ-agree dependencies in both (32c) and (33), so it could not be the case that they have been rendered inaccessible.

(33) *Long distance agreement in HU*

laṛkiiyõ=ne [bill**ii** dekhn-**ii**] chaah-**ii**

girls.F.PL=ERG cat.F.SG see-F.SG want-F.SG

'The girls wanted to see a/the cat'

The workings of HU φ-agreement can thus be summarised as the generalisation in (34):

(34) φ-agreement in HU involves the φ-probe on T searching its c-command domain for a case-unmarked DP to agree with, possibly across one or more phase boundaries.

If we compare the φ-agreement generalisation in (34) with the Ergative rule in (23), both target a case-unmarked DP in their c-command domain, but only the φ-agreement rule in (34) isn't phase-bounded.

This section discussed the properties of φ-agreement in HU, particularly that it does not require the agreement controller to move, and that it is possible to φ-agree with DPs in phase complements. The ability of φ-agreement to target a phase-internal element is in striking contrast with Ergative case in §2.1, which can only be assigned to DPs that are not trapped in phase complements. While the locality of Ergative case assignment could be explained through Chomsky (2000, 2001)'s PIC, such an explanation fails to account for the φ-agreement pattern in HU. The next section discusses in detail this phase-related asymmetry with respect to Ergative case assignment and φ-agreement, and shows that a *read-only* account of phases simultaenously en-

Mahajan (1989), Butt (1993b), Boeckx (2004), Bhatt (2005), Keine (2016, 2020b). I refer the reader to these accounts of long distance agreement in HU for more on the nature of its optionality, and leave to further research how this optionality fits into the *read-only* proposal.

compasses both the φ-agreement and Ergative case assignment patterns in HU.

2.3 The Ergative case-φ-agreement asymmetry

Here, I contrast the locality of Ergative case assignment with the nonlocality of φ-agreement in HU, and show that only a *read-only* conception of phases makes the right predictions about which syntactic operations proceed into a *v*P phase. First, I illustrate through unaccusatives and light verb constructions that PIC-style phases cannot account for the disparity in Ergative case assignment and φ-agreement in HU. Then, I show how *read-only* phases account for the aforementioned asymmetry, since phase complements are visible (so φ-agreement can proceed into them), but unchangeable (so Ergative case assignment into them is impossible).

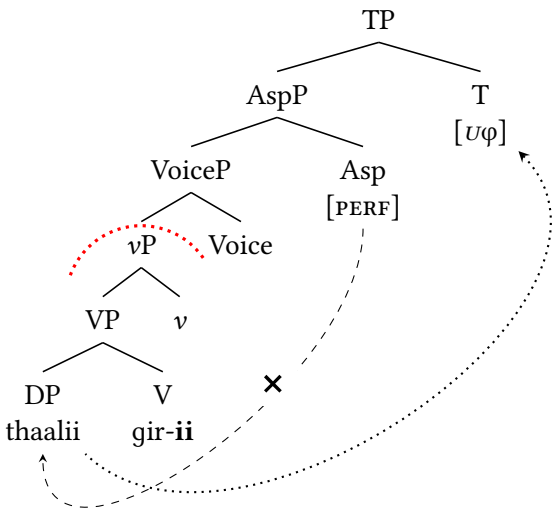
Recall (9b)—repeated as (35a)—which shows that the unaccusative argument *thaali* cannot receive Ergative case. (35b)[28] shows that *thaalii* is in the c-command domain of Asp in a perfective unaccusative, but it still cannot be Ergative-marked because it is trapped in the Voice phase complement.

(35) *No Ergative on unaccusative subjects*

a. thaalii(*=ne) gir-**ii**: / *-**aa**
plate.F.SG(*=ERG) fell-F.SG / *-M.SG
'A/the plate fell'

b.

[28]One might ask why the unaccusative subject *thaali* doesn't string-vacuously move to Spec,TP here. Since HU is head-final, there isn't strong evidence based on word order for EPP movement to Spec,TP; and adverbs don't show conclusive evidence for movement due to abundant scrambling in HU. Moreover, we will see in 5.1.3 that movement higher than *v*P is accompanied by a countercyclic, phasal QP layer—in the spirit of Cable (2010), Poole (2022)—on top of the moved element that bleeds case assignment to it regardless.



Even though Ergative case assignment into the VoiceP phase is impossible, φ-agreement—a different syntactic operation that invokes c-command—with *thaalii* 'plate' into the VoiceP phase is obligatory. The φ-probe on T in (35b) looks into its c-command domain and must enter into an Agree relationship with the internal argument *thaalii* 'plate' that cannot receive Ergative case from Asp. Under a PIC-based theory, (35) poses an irresolvable conflict. If VoiceP is a phase under standard phase theory, φ-agreement into a phase should also be impossible, just like Ergative case assignment. If VoiceP is not a phase, both φ-agreement and Ergative case assignment to *thaalii* should be possible in (35). Under no conception of standard phase theory can the asymmetry φ-agreement and Ergative case assignment be derived, so a different theory of phase locality is necessary.

The asymmetry between local Ergative case assignment and nonlocal φ-agreement is replicated in light verb constructions. Recall that Ergative case assignment is blocked by the light verb *chukii* 'end', however light verbs crucially do not obstruct φ-agreement, (36). The light verb in (36) obligatorily agrees with *Raj*, even though the same argument *Raj* in the same construction cannot receive Ergative case. (37) illustrates that φ-agreement obligatorily proceeds through two *v*P phases, while Ergative case assignment crucially cannot.

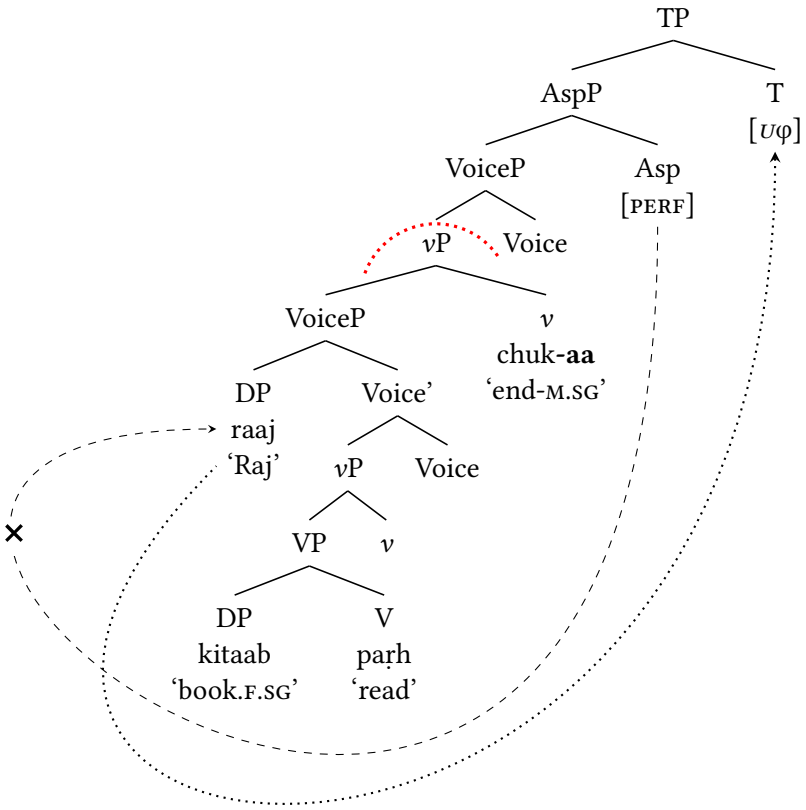
(36) *Unaccusative light verb* END *+ Transitive main verb*

raaj(*=ne) kitaab paṛh chuk-**aa** / *-**ii**

Raj.M.SG(*=ERG) book.F.SG read end-M.SG / *-F.SG

'Raj already read/is done reading the book'

(37) *φ-agreement proceeds into a phase, case assignment does not*



The selective visibility of *Raj* in (37) for φ-agreement but not for case assignment is once again unexpected given the PIC in (2). The PIC predicts that *Raj* should be invisible for both ergative case assignment and φ-agreement, while rejecting VoiceP phases altogether would predict *Raj* to be visible for both φ-agreement and case assignment.

How do we reconcile the strict locality of Ergative case assignment in (35) and (37) on the one hand, and the nonlocality of φ-agreement on the other? If Voice is a phase—as proposed in §2.1.1—the locality of Ergative case follows, but the non-locality of φ-agreement violates the PIC in (2), since φ-agreement into a phase requires its complement to be visible. If Voice is **not** a phase, the φ-probe on T targeting a DO in its base position is unsurprising, but the locality of Ergative case is mysterious. A crucial difference between (Ergative) case assignment and φ-agreement is that the former changes the features of a phase-internal DP in response to a phase-external element, while the latter changes the features of a phase-external DP in response to a phase-internal DP. What emerges from this difference is that an operation that requires feature valuation on a phase-internal element cannot proceed into a phase, while an operation that only requires changing the features of a phase-external element—and no change to the featural content of phase-internal elements—has to proceed into a phase, (38).

(38) Syntactic operations that require changing the features of phase-internal elements are disallowed, while operations that only require inspecting the features of phase-internal elements are allowed.

To derive (38), I propose that the PIC as a syntactic locality constraint should be abandoned (following Stjepanović and Takahashi 2001, Bošković 2003, 2007, Fox and Pesetsky 2005 etc.) in favour of *read-only* phases in (4), repeated below as (39). Under (39), the asymmetry between impossibile Ergative case and obligatory φ-agreement with the same DP in (35) immediately follows while maintaining VoiceP phasehood. A *read-only* phases analysis of (35) derives that Asp cannot

assign Ergative case into a Voice phase because case assignment results in feature valuation on the DP *thaalii* inside the phase, violating *read-only* in (4). T, on the other hand, agrees into a Voice phase with *thaalii*, because φ-agree does not change the DP's features—only the probe's, which does not violate (39).

(39) ***Read-Only***

Once a phase H is complete, its phase complement Z can be inspected, but Z's featural content cannot be changed.

Adopting a *read-only* phases account explains why Ergative case cannot be assigned to any internal argument or to an external argument obstructed by a light verb, but φ-agreement must target the same arguments, and the Ergative case-φ-agreement asymmetry automatically follows. The following sections will go on to show that phases inducing feature freezing of their complements—as disucssed in (39)—also derives other related syntactic phenomena in HU.

3 The Accusative case–φ-agreement asymmetry

The second asymmetry in this paper is between Accusative case assignment and φ-agreement. I argue that the asymmetry between local Ergative case and nonlocal φ-agreement in the previous section extends to Accusative case and φ-agreement as well. That is, Accusative case (a dependent case, unlike Ergative) is very local and does not proceed into a phase (§3.1), while φ-agreement may target a phase-internal DP. I then show in §3.2 that *read-only* phases also derive the contrast between Accusative case and φ-agreement.

3.1 Accusative case

Here, I outline the distribution of Accusative case[29] in Hindi-Urdu, and show that it—like Ergative case—is strictly local. I argue following Bhatt and Anagnostopoulou (1996) that Accusative case assignment to a HU nominal is fed by movement to a *v*P phase-external position, and that Accusative case cannot be assigned into a *v*P phase.

3.1.1 Characterising Accusative case in HU

Accusative case on direct objects in HU is sensitive to semantic properties of a nominal, but it is also reliant on the presence of a higher nominal in the same phase, and on the structural height of the direct object.

(40) shows that the direct object of a HU transitive clause is either obligatorily Accusative (40a), or optionally Accusative (40b), depending on semantic (and information structure-related) properties of the DP (Mahajan 1990, Butt 1993a, Mohanan 1994, Butt and King 2004, Kachru 2006, Keine 2007, Mahajan 2017a, Kidwai 2022). While Accusative *-ko* is obligatory only on certain

[29]In this work, Accusative case refers solely to the *-ko* marker—also called a DOM marker—that is obligatory on some direct objects and optional on most other direct objects in Hindi-Urdu (Bhatt and Anagnostopoulou 1996, Aissen 2003, De Hoop and Narasimhan 2005, Baker and Vinokurova 2010, Kalin 2018, Kalin and Weisser 2019, Kagan 2020). I am not concerned with issues of Abstract Case on case-unmarked DPs.

kinds of DPs like *Siima* (40a), it can optionally be assigned to most (referential) direct objects like *fuul* 'flower' (40b).

(40) a. *Obligatorily Accusative direct object*

miina=ne siima*(=ko) deekhaa

Mina=ERG Sima*(=ACC) saw

'Mina saw Sima'

b. *Optionally Accusative direct object*

miina=ne fuul(=ko) deekhaa

Mina=ERG flower(=ACC) saw

'Mina saw a(/the) flower'

While I'll return to the optionality of Accusative case on some direct objects like *fuul* 'flower' in (40b) in §3.1.3 and §3.1.4, the relevant generalisation here is that on direct objects with certain semantic properties,[30] Accusative case is strictly obligatory in transitive clauses, as in (40a).

Even though they are internal arguments like direct objects, unaccusative arguments cannot be Accusative, (41) (Bhatt 2007b). Similarly, unergative arguments are also never Accusative.

(41) *No Accusative on unaccusative / unergative arguments*

laṛkaa/*laṛke=ko giraa / khããsaa

boy/*boy=ACC fell / coughed

'The boy fell / coughed'

One key difference between Ergative and Accusative case then is that Accusative case never surfaces on arguments of any intransitive clauses, while Ergative case is possible on unergative ar-

[30]The hedging here is to avoid discussing the exact semantic properties of the DPs that are obligatorily Accusative in transitive clauses, which is not entirely relevant to my analysis. While proper names and pronouns are always Accusative, all that matters to my analysis is that DPs that need to be Accusative-marked need to move out of the VP for independent reasons. I refer the reader to the extensive literature on Hindi DOM for this matter, including Montaut (2018), Aissen (2003), Bhatt and Anagnostopoulou (1996), Butt (1993a).

guments, as (10) showed. In other words, Accusative case appears only on objects of transitive clauses, in the presence of a higher argument. The pattern for Accusative case on a direct object in Hindi-Urdu—from Aissen (2003), Davison (2014) is summarised in (42):

(42) *Accusative case in Hindi-Urdu*

a. Specific/definite animate DOs must be Accusative

b. Specific inanimate DOs that are referential may be Accusative

c. Non-referential DOs are never Accusative

3.1.2 Accusative case rule

Under any conception of functional head case theory, the appearance of Accusative case on a direct object only in the presence of another, higher nominal in the structure is a coincidence. There isn't an obvious **explanation**[31] for why the presence of an Accusative-assigning head correlates with the presence of an external argument.

However, treating HU Accusative case as a dependent case conditioned by another nominal in the same domain (Marantz 1991, Baker and Vinokurova 2010, Baker 2015) helps make sense of the correlation between Accusative case on a direct object and the presence of an external argument. According to Baker (2015), dependent case is precisely triggered on a nominal in the presence of another nominal in the same phasal spellout domain,[32] so the appearance of Accusative case only in the presence of another nominal in the clause is unsurprising under dependent case theory. If we extend to Hindi-Urdu Baker and Vinokurova (2010), Baker (2015)'s dependent case approach to Accusative case in Sakha—where Accusative case is also partly conditioned by semantic factors—the pattern of Accusative case only with a higher nominal in the same domain follows.

[31]Any variant of Burzio's generalisation is not an *explanation* (Woolford 2003).

[32]For Baker (2015), dependent case rules are keyed to phases, and a Spellout domain corresponds to a phase complement. I follow Baker (2015) in keying dependent case rules to phases, but my proposal will differ from his in that dependent case rules apply in full phases, rather than in phase complements only. The justification for this departure is detailed later in this section.

In fact, Baker (to appear) develops a dependent case analysis for Accusative case in Hindi-Urdu, where Accusative case is assigned to the lower of two nominals in a CP phase. Baker (to appear)'s analysis of Accusative (DOM in his terms) case in Hindi-Urdu—adapted from Baker and Vinokurova (2010)'s analysis of Sakha—is given in (43):

(43) **Dependent Accusative case in Hindi-Urdu** (Baker to appear)

If DP_1 c-commands DP_2 in CP, assign Accusative to DP_2

Nevertheless, since the φ-probe in HU is on T (Bhatt 2005, Keine 2020b), and φ-agreement only targets visibly case-unmarked DPs (29), delaying Accusative case assignment until C would result in φ-agreement preceding Accusative case assignment. This reversal in rule order would predict opaque interactions where the probe appears to have agreed with an Accusative DP, but such a pattern is unattested in HU,[33] (44). Then, Accusative case assignment must be complete before the φ-probe on T starts its search.

(44) *No φ-agreement with Accusative objects*

*deev=ne siima=ko deekh-**ii**

Dev=ERG Sima.F.SG=ACC saw-F.SG

'Dev saw Sima'

Since Accusative case requires a higher case competitor, Accusative case assignment must be delayed until after the external argument merges in Spec,VoiceP, but it must also occur before φ-agreement at T. Given the sequence of functional projections along the clausal spine, the only point at which the dependent Accusative case rule could apply is VoiceP. If the rule applies any earlier than VoiceP, there would be no higher case competitor in the structure, and if the rule applies at a projection higher than the VoiceP phase, the DO would be trapped in the *read-only* Voice complement—making it ineligible to receive case. Then, VoiceP has to be the domain for

[33]Such a pattern—where there is φ-agreement with Accusative objects—is attested in closely-related Gujarati, so it is possible that in Gujarati, Accusative is indeed a dependent case keyed to C.

the dependent Accusative case rule in HU. The reformulated rule for dependent Accusative case in Hindi-Urdu—still very much in the spirit of Baker and Vinokurova (2010)'s analysis of DOM in Sakha—is given in (45):[34]

(45) **Dependent Accusative case** (final)

If a case-unmarked DP_1 c-commands DP_2 in VoiceP, assign Accusative to DP_2

Note that the rule in (45) diverges from Baker (2015)'s standard dependent case rules in that it factors in the external argument in Spec,VoiceP as a case competitor for the Accusative-receiving object in the complement of Voice. In Baker (2015)'s system, the phase edge does not interact with material in the phase complement, as far as dependent case relationships go—these relationships apply only within the phase complement. Then, the external argument at the VoiceP phase edge should not be able to license dependent case on a DP in Spec,*v*P in the Voice complement. I will, however, assume following Poole (2022)[35] that the phase edge can participate in dependent case relationships with the phase complement, which follows from the formulation in (46):[36]

(46) Full phasal phrases (and not non-phasal phrases) are domains for dependent case rules.

Crucially, for this analysis, (46) validates the status of the external argument in Spec,VoiceP as a

[34]The need for the Accusative rule to have a caseless competitor doesn't become clear until the Dative experiencer constructions discussed in 4.1.1, where the lower of the two arguments is always case-unmarked.

[35]Poole (2022) notes that movement to the phase edge precedes phasal Spellout, so movement to the phase edge should in principle be able to influence the case of a DP in the phase complement. Then, material moved to a phase H's edge should be able to interact with the same phase H's complement, as well as with material in the next higher phase J, since the edge of phase H itself isn't spelled out until the higher phase J's complement is. If material *moved to* the edge of a phase H can interact with H's complement as well as with material in the next higher phase J, there is nothing stopping material *base-generated* in H's phase edge from also interacting with H's complement (along the lines of Chomsky (2000)'s *Merge before Move* principle, which, for our purposes, says that (external) merge is crucially ordered before movement). If internal merge is intrinsically ordered before phasal Spellout (Poole 2022), and external merge is ordered before internal merge (Chomsky 2000), then c-commanding elements base-generated at the edge of H should also be able to affect the case of material in H's complement—just like c-commanding elements moved to H's edge can. The result is that material at the phase edge is special in that it may be considered for two cycles of dependent case assignment. First, the edge of a phase H is factored in for dependent case relationships before the complement of H is spelled out, then the edge of phase H is considered again before the next higher phase head's complement is spelled out.

[36]The phase edge factoring into dependent case relationships with the phase complement is nicely compatible with a *read-only* phases proposal, since *read-only* applies only once the phase is complete—so after the phase edge has also merged in.

case competitor for dependent Accusative case in VoiceP in (45), since it allows for the edge of a phase to be considered for dependent case relationships with material in the phase complement (contra Baker 2015). Then, (45) predicts Accusative case on direct objects in transitive clauses due to the presence of the subject, and predicts no Accusative case on intransitive arguments due to the lack of a higher argument.

The rule in (45) grants us the lack of Accusative case in intransitive clauses and the presence of Accusative case on direct objects of transitive clauses,[37] but it still predicts obligatory Accusative case on all direct objects in transitive clauses, which is too strong given the optionality of Accusative case on some arguments, as in (40b). §3.1.3 deals with the locality of the Accusative rule, which becomes evident given the need for Accusative case assignment to be fed by object shift in HU—showing why Accusative case assignment may fail on some direct objects (Bhatt and Anagnostopoulou 1996, Baker and Vinokurova 2010).

[37]In (what is descriptively called) passives in HU, Accusative case on a direct object becomes optional even in instances where it was obligatory in active voice—suggesting that additional/different structural factors are involved in determining the distribution of Accusative case in passive constructions, (i).

(i) a. *Active voice, obligatorily Accusative direct object*
laṛkii=ne **laṛke*(=ko)** deekhaa
girl=ERG boy*(=ACC) saw
'The girl saw a/the boy'

b. *Passive voice, same direct object now optionally Accusative*
laṛkaa/laṛke=ko (laṛkii-dwaaraa) deekhaa gayaa
boy/boy=ACC (girl-by) saw PASS
'The boy was seen (by the girl)'

Baker (to appear) and Kidwai (2022) argue for an implicit agent (*pro* in Kidwai (2022)) in the *-ko*–marked version of the passive in (ib). If their proposals are on the right track, the case pattern in passives immediately follows from the dependent Accusative rule in (45). Baker and Vinokurova (2010) propose for Sakha that the implicit agent is optionally represented in the syntax, and this assumption can also be extended to HU. When there is an implicit agent in a passivised clause, the passivised argument is *-ko*–marked due to the agent triggering the Accusative rule in (45). When there is no implicit agent, the structural description of the Accusative rule is not met due to the lack of a case competitor, and the passivised argument is null.

3.1.3 Object shift

This subsubsection discusses how the Accusative case rule interacts with other structural properties to produce the optionality of Accusative case assignment discussed in (40b). Mahajan (1990), Bhatt and Anagnostopoulou (1996) have shown that in HU, there is a correlation between the structural height of an object and its ability to receive Accusative case, while Baker and Vinokurova (2010) show the same for Sakha.[38] That movement is required for Accusative case assignment importantly shows that—like Ergative case assignment—Accusative case assignment is also strictly local, and cannot proceed into a phase.

In ditransitive clauses with unmarked direct objects, the neutral word order is S IO **DO** V. However, as (47) shows, when the direct object is Accusative, it must shift over the indirect object, resulting in a S **DO** IO V word order (Bhatt and Anagnostopoulou 1996).[39]

(47) *No -ko on unmoved direct objects*[40]

a. *S IO ***DO*****=ko** V

miina=ne ṭiina=ko kitaab(*=ko) dii

Mina=ERG Tina=DAT book(*=ACC) gave

'Mina gave Tina a/the book'

[38] Although see Kalin and Weisser (2019), who argue that movement is not in fact required for DOM/Accusative case assignment crosslinguistically, based on how languages like Spanish, Tamil, and Hebrew allow asymmetric DOM in coordinations. However, even under their analysis, HU is interestingly predicted to require movement to feed DOM/Accusative case on a direct object, since it does not allow asymmetric DOM in coordinations, corroborating Bhatt and Anagnostopoulou (1996)'s and my findings.

[39] A case-unmarked direct object may scramble over the indirect object for reasons unrelated to semantically-motivated object shift, but scrambling a bare direct object over the indirect object is never obligatory, unlike object shift. The ability of a case-unmarked direct object to shift over an indirect object is discussed in 5.1.3.

[40] Note that the indirect object also bears the marker *-ko*, which I claim in §4.1 is a different (Dative) case marker than the Accusative *-ko* discussed here, due to their differing syntactic and semantic properties.

b. *Object shift*

miina=ne kitaab=ko$_j$ ṭiina=ko ___$_j$ diiyaa

Mina=ERG book=ACC$_j$ Tina=DAT ___$_j$ gave

'Mina gave Tina the book'

In transitive clauses, the contrast in the height of Accusative vs. case-unmarked objects isn't overtly observable due to the lack of intervening elements, but Accusative *-ko* being strictly limited to shifted objects in ditransitives in (47) is evidence for Accusative direct objects being structurally higher than bare direct objects. As already noted by Bhatt and Anagnostopoulou (1996) and Baker and Vinokurova (2010) among others, Diesing (1992) independently argues that specific DPs need to move out of the *v*P (VP in Diesing 1992's terms). (48a) shows that movement out of the *v*P is motivated, since the specific direct object *Anu* cannot stay in its base position, independent of Accusative marking. (48b) shows that a shifted specific object obligatorily bears Accusative case.

(48) *No unmoved definite/human direct objects*[41]

a. *Specific DOs must shift*

*miina=ne ṭiina=ko anu(=ko) beechaa

Mina=ERG Tina=DAT Anu(=ACC) sold

Intended: 'Mina sold Anu to Tina'

b. *No bare shifted specific DOs*

miina=ne anu*(=ko)$_j$ ṭiina=ko ___$_j$ beechaa

Mina=ERG Anu*(=ACC)$_j$ Tina=DAT ___$_j$ sold

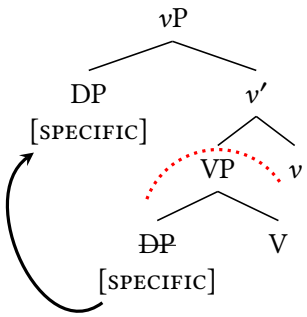
'Mina sold Anu to Tina'

[41]The Accusative version of (48a) is fine under the interpretation 'Mina sold Tina to Anu', but not under the relevant interpretation 'Mina sold Anu to Tina'.

Since the kinds of DPs that must undergo Diesing (1992)-style movement correspond to the DPs that are obligatorily Accusative in (di)transitive clauses, and since direct objects in their base position cannot be Accusative (47a), Bhatt and Anagnostopoulou (1996) propose that object shift is required for Accusative case.

Following Bhatt and Anagnostopoulou (1996) as well as Baker and Vinokurova (2010), I assume that certain direct objects undergo semantically-motivated Diesing (1992)-style movement, and that movement is required for Accusative case in HU.[42] As shown in (49), I further assume that Diesing (1992)-style movement lands in the specifier of *v*P—which is also a phase, as mentioned in §1.

(49) *Object shift to Spec,vP*



The kinds of DPs that are obligatorily Accusative post-object shift in ditransitives are the same DPs that are obligatorily Accusative in transitives as well, suggesting that Accusative DPs in both transitives and ditransitives occupy Spec,*v*P. Baker and Vinokurova (2010), Baker (to appear) also similarly propose that differential Accusative case is fed by movement for Sakha and Hindi-Urdu respectively.

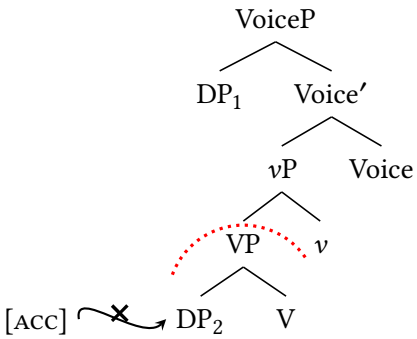
[42] An alternative, Enç (1991)-style implementation of specificity-based movement out of the *v*P is also possible under my analysis, where a [+SPECIFIC] feature on a DP forces it to move out of the *v*P.

3.1.4 *v*P phases

We've now reconciled the object shift facts in (47) with the Accusative case rule in (45), so we know that movement is required for Accusative case, but the question of why a DO never receives Accusative case in its Comp,VP base position still bears clarifying. Like with Ergative case in §2.1, the pattern that emerges with Accusative case is that the lower DP has to be sufficiently close to the case-conditioning element—the external argument in this instance—in order to get case. If the lower DP and its higher case conditioner aren't in the same phase, the lower DP isn't Accusative.

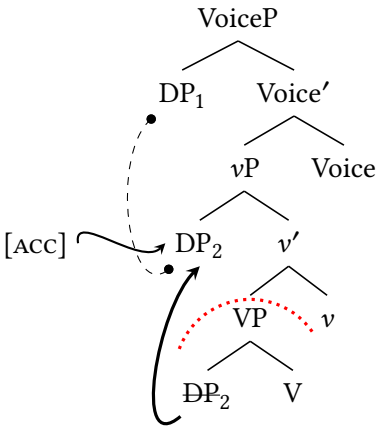
In §3.1.3 we saw that only objects moved to Spec,*v*P receive Accusative case. The locality of Ergative case assignment was modelled as a VoiceP phase effect (only elements in Spec,VoiceP can be Ergative), so the locality of Accusative case can similarly be derived by appealing to ***v*P** phases, such that only elements in Spec,*v*P can be Accusative. Then, the locality of both Accusative and Ergative case is the motivation for two clause-internal phases—*v* and Voice—in HU. If *v* is a phase, and its complement becomes *read-only* upon completion of the *v*P, the inability to get Accusative case on a DO in its base position in ditransitives follows, since the DO's features are unchangeable—as *read-only* in (4) dictates—by the time its case competitor merges in Spec,VoiceP.

(50) *No Accusative case on DO in base position*



Why Diesing-style movement—which lands in Spec,*v*P—always feeds Accusative case assignment is also explained. Object shift results in the DO and external argument being in the same VoiceP phase, which results in the structural description of the Accusative rule in (45) being met.

(51) *Movement to Spec,vP feeds Accusative case*



Given the following ingredients:

1. v is a phase whose complement is rendered *read-only* as in (4) upon completion of the vP,
2. DOs undergo independently-motivated Diesing (1992)-style movement to Spec,vP escape existential closure,
3. Accusative in HU is a low dependent case keyed to VoiceP,

The puzzling pattern of Accusative case—including its locality—on direct objects in Hindi-Urdu follows. The Accusative rule in (45) is repeated in (52).

(52) **Dependent Accusative case** (final)

If a case-unmarked DP_1 c-commands DP_2 in VoiceP, assign Accusative to DP_2

3.2 The Accusative case-φ-agreement asymmetry

This subsection shows that the asymmetry between local Accusative case assignment and non-local φ-agreement—which is parallel to the contrast between Ergative case assignment and φ-agreement—also follows from phases being *read-only*, repeated in (53).

(53) ***Read-Only***

Once a phase H is complete, its phase complement Z can be inspected, but Z's featural content cannot be changed.

The Accusative case-φ-agreement has a similar character to the Ergative case-φ-agreement asymmetry in §2.3. While Ergative case is a functional head case and Accusative case is a dependent case, both involve a lower element that fails to receive case when it is too far from the higher case-conditioning element. Crucially, both Ergative and Accusative case cannot be assigned into a phase, due to a phase complement being *read-only* as in (4)/(53) once the phase is complete.

Recall that direct objects in their base position do not receive Accusative case, as (52c) and (47a) show. Accusative case assignment requires Diesing (1992)-style movement to be fed. An object in its base position (DP_2) cannot receive Accusative case even when there is a higher case competitor (DP_1) due to its features being frozen in a *read-only* *v*P phase, but the same object is obligatorily a φ-agreement target.[43] An example of a transitive clause with an unshifted object is given in (54a) and illustrated in (54b) below, where the direct object is case-unmarked but is an obligatory φ-agreement controller:

(54) a. *Case-unmarked agreeing object*

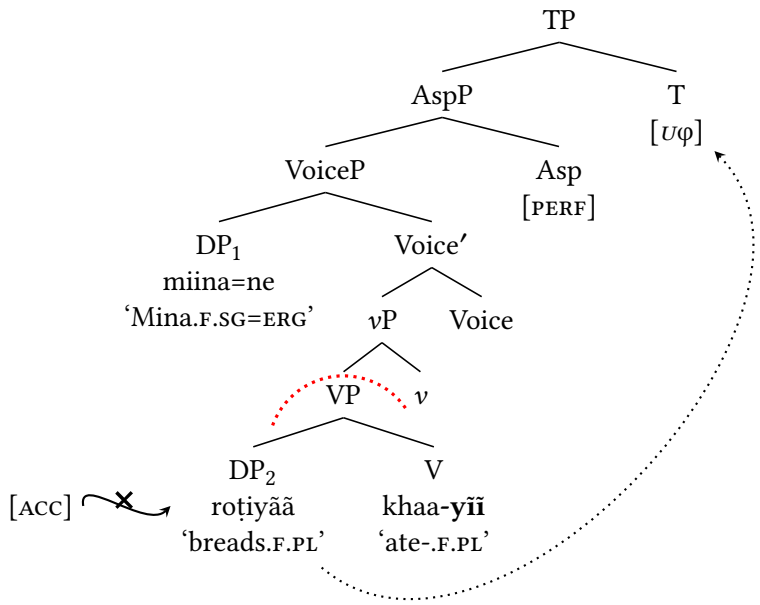
miina=ne roṭiyãã khaa-**yĩĩ**

Mina.F.SG=ERG breads.F.PL ate-.F.PL

'Mina ate (the) breads'

b.

[43]The object is a φ-agreement target only when the subject is overtly case-marked, as (28) shows.



As with §2.3, the pattern that emerges with regard to Accusative case assignment and φ-agreement is that only the latter can look into phases, since it does not involve any feature valuation on the phase-internal target, and thus does not violate phases being *read-only*. Assigned Ergative case assignment and dependent Accusative case assignment into a phase both require valuing a phase-internal DP's case feature, which is prohibited once a phase is complete, given *read-only*.

4 The Accusative-Dative case asymmetry

The last asymmetry discussed in this paper has to do with the locality of Accusative case assignment, in contrast with the nonlocality of Dative case assignment—which becomes apparent in the appearance of dependent Dative case on the higher embedded argument of a biclausal construction called the permissive (Butt 1994). The inability of a phase-internal element to receive dependent (Accusative) case, while conditioning dependent (Dative) case on a phase-external element is also derived via phases being *read-only*.

4.1 Dative case

In this subsection, I discuss Dative *-ko*, and show that it is syntactically different from Accusative *-ko* despite their syncretism, particularly in their locality properties. Unlike local dependent Accusative case, dependent Dative case is nonlocal (and also does not require a caseless competitor), as the permissive construction shows. I also propose a dependent case rule for the HU Dative.

4.1.1 Distribution

In ditransitives, the indirect object invariably receives Dative case, which is syncretic with Accusative *-ko* in §3.1, (55).

(55) *Dative on Indirect Objects*

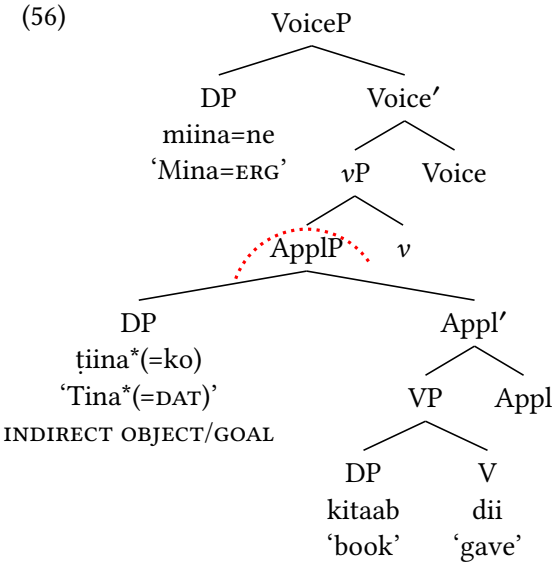
miina=ne ṭiina*__(=ko)__ kitaab dii

Mina=ERG Tina*(=DAT) book gave

'Mina gave Tina a/the book'

Following Larson (1988), Pylkkänen (2008), I assume that indirect objects are introduced in the specifier of a (high) Applicative head, as illustrated for (55) in (56).

(56)



Dative *-ko* and Accusative *-ko* may also coappear in the same clause, but the Accusative direct object must precede the Dative indirect object (49), as was shown in (47) (Bhatt and Anagnostopoulou 1996).

(57) a. * *DAT > ACC in ditransitives*

* miina=ne ṭiina=ko kitaab=ko dii

Mina=ERG Tina=DAT book=ACC gave

Intended: 'Mina gave Tina a/the book'

b. *ACC > DAT*

miina=ne kitaab=ko$_j$ ṭiina=ko ___$_j$ diiyaa

Mina=ERG book=ACC$_j$ Tina=DAT ___$_j$ gave

'Mina gave Tina the book'

Dative case also appears on experiencer arguments, which merge in Spec,VP (Spec,ApplP in our terms) as per Davison (2004a), (58).

(58) a. *Dative experiencer*

monaa=ko bukhaar hɛɛ

Mona=DAT fever be

'Mona has a fever'

b. *Dative experiencer II*

monaa=ko siima dikhii

Mona=DAT Sima appeared

'Mona saw Sima' (Lit.: 'Sima appeared to Mona')

Note that the lower argument in Dative experiencer constructions is never Accusative (59), which will follow from the Accusative rule in (45) requiring a caseless competitor once the Dative rule is introduced in (77).

(59) a. *No Accusative in experiencer constructions*

monaa=ko bukhaar(*=ko) hɛɛ

Mona=DAT fever(*=ACC) be

'Mona has a fever'

b. *No Accusative in experiencer constructions II*

monaa=ko siima(*=ko) dikhii

Mona=DAT Sima(*=ACC) appeared

'Mona saw Sima' (Lit.: 'Sima appeared to Mona')

Evidence for Dative *-ko* and Accusative *-ko* being different cases (pace Kalin 2014) comes from Dative case always being obligatory—including in passives—in contrast with the often optional Accusative case. As the ditransitive examples in (55) and (47)—repeated as (60)—show, Dative *-ko* is always obligatory on the indirect object as well as on experiencers, but Accusative *-ko* is

optional on some direct objects, even after the direct object has shifted over the indirect object. Unlike with Accusative case, a DP's semantic properties have no influence on the obligatoriness of Dative case.

(60) a. *Obligatory Dative -ko, no Accusative -ko*

miina=ne **ṭiina*(=ko)** kitaab dii

Mina=ERG Tina*(=DAT) book gave

'Mina gave Tina a/the book'

b. *Obligatory Dative -ko, optional Accusative -ko*

miina=ne kitaab(=ko)$_j$ **ṭiina*(=ko)** ___$_j$ dii/diiyaa

Mina=ERG book(=ACC)$_j$ Tina*(=DAT) ___$_j$ gave

'Mina gave Tina the book'

In passives of transitives,[44] Accusative *-ko* becomes optional on a direct object (61a), even in cases where it was obligatory in active voice (c.f. (6b)) . When an indirect object is passivized, Dative *-ko* remains obligatory on the indirect object, (61b).[45]

(61) a. *Passivised DO, optional Accusative -ko*

raam(=ko) bulaayaa gayaa

Ram(=ACC) called PASS

'Ram was called'

[44]Note that while the experiencer construction discussed in §4.1.1 is also transitive, it is not discussed here because it cannot be passivised/made into an active impersonal construction in a similar way as the constructions in (61).

[45]This example could be analysed as an active impersonal construction, à la Mahajan (1995), Kidwai (2022), but the relevant point is still that Dative *-ko* is preserved once there is no overt external argument, but Accusative *-ko* need not be.

b. *Passivised IO, obligatory Dative -ko*

raam*(=ko) kitaab dii gayii

Ram*(=ACC) book given PASS

'The boy was given a book'

It is clear from (60) and (61) that although Dative and Accusative case is HU are both realised as *-ko*, they are structurally different.

4.1.2 Dative is not a functional head case

Based on the distribution of Dative *-ko* in §4.1.1, it could be modelled as a functional head case assigned by Appl to its specifier in ditransitives and constructions with experiencer arguments, akin to what Kalin (2014) has proposed, formulated in (62):

(62) **DATIVE CASE RULE (NONFINAL)**

Dative case is assigned by Appl to its specifier.

However, notice that in every example discussed in §4.1 so far, a Dative-marked DP is always in the environment of a lower DP within a *v*P domain. Then, the data in §4.1.1 also supports Dative *-ko* being a dependent case—as Baker and Vinokurova (2010) have argued for Dative case in Sakha—that appears on the higher of two DPs in the *v*P phase, for both ditransitives and experiencer constructions. The permissive construction discussed below—where the embedded external argument is exceptionally marked Dative—shows crucial evidence for Dative being a dependent case in Hindi-Urdu.

(63) is an example of the permissive construction in HU—first discussed by Butt (1993b)—where a finite *deenaa* '√LET' appears after an infinitival verb to give a meaning amounting to *allow* (Davison 2014). The DP sandwiched between two other DPs in this construction—*aag* 'fire' in (63) and *mariiz* 'patient' in (64)—is obligatorily Dative.

(63) *ECM permissive from Keine and Dash (2018)*

anu=ne aag*(=ko) fasal jalaane dii

Anu=ERG fire*(=DAT) crops burn.INF let

'Anu let the fire burn down (the) crops.'

(64) *ECM permissive from Davison (2014)*

daaktar=ne mariiz*(=ko) bukhaar aane nahii diiyaa

doctor=ERG patient*(=DAT) fever come.INF not let

'The doctor didn't let the patient get a fever.'

As Butt (1993a, 2014), Davison (2014) have noted, the *-ko* on *aag* 'fire' in (63) and *mariiz* 'patient' in (64) is Dative—and not Accusative—firstly because it is obligatory, while Accusative *-ko* is usually optional on inanimate arguments as discussed in (60).

Secondly, Davison (2014) has showed that passivising (63) and (64) does not make *-ko* on *aag* 'fire' in (63) and *mariiz* 'patient' in (64) optional, it remains obligatory, (65). Only Accusative *-ko* is optional in passives, so the instances of *-ko* in (65) are Dative.

(65) a. aag*(=ko) fasal jalaane diiyaa gayaa

fire*(=DAT) crops burn.INF let PASS

'The fire was allowed to burn down (the) crops.'

b. mariiz*(=ko) bukhaar aane nahii diiyaa gayaa

patient*(=DAT) fever come.INF not let PASS

'The patient wasn't allowed to get a fever.'

Davison (2014) analyses the permissive construction as a biclausal construction where *deenaa* '√LET' embeds a nonfinite clause. She claims that the permissive construction is syntactically ambiguous between a control construction (66a) and an ECM construction (66b).

(66) a. **Control**

$DP_1\ DP_{2_k}\ [PRO_k\ DP_3\ V_{inf}]\ \sqrt{\text{LET}}$ 'x permitted y to...'

b. **ECM**

$DP_1\ [\mathbf{DP_2}\ DP_3\ V_{inf}]\ \sqrt{\text{LET}}$ 'x didn't prevent e from happening'

Davison (2014) offers an important syntactic argument for the existence of the ECM structure in (66b). In Davison (2004a, 2008), she argues for a case restriction on PRO in HU,[46] stated in (67):

(67) ***(PRO-Dat) condition**

In Hindi-Urdu, PRO cannot receive Dative case.

The *(PRO-Dat) condition in (67) predicts that embedding the Dative experiencer constructions in (58) under permissive *deenaa* '√LET'—as in (68) below—could only have an ECM structure. The reason for this prediction is that in Dative experiencer constructions like (58a-b), the higher argument is Dative for independent reasons, even in unembedded clauses. If (68) had a control structure, the embedded PRO controlled by *chhaatr* 'student' would be Dative, which would violate the *(PRO-Dat) condition in (67) and result in ungrammaticality. Assuming that Davison (2004b, 2008)'s the *(PRO-Dat) condition is on the right track, the grammaticality of (68) shows that the construction must have an ECM structure.

(68) *Permissive with embedded experiencer construction*

praadhyaapak=ne chhaatr*(=ko) ḍigrii milne dii
professor=ERG student*(=DAT) degree get.INF let
'The professor let the student get the degree.'

The object control and ECM structures in (66) also correspond to different parses with different modal properties in Davison (2014)'s system. Davison (2014) notes that the meaning of the

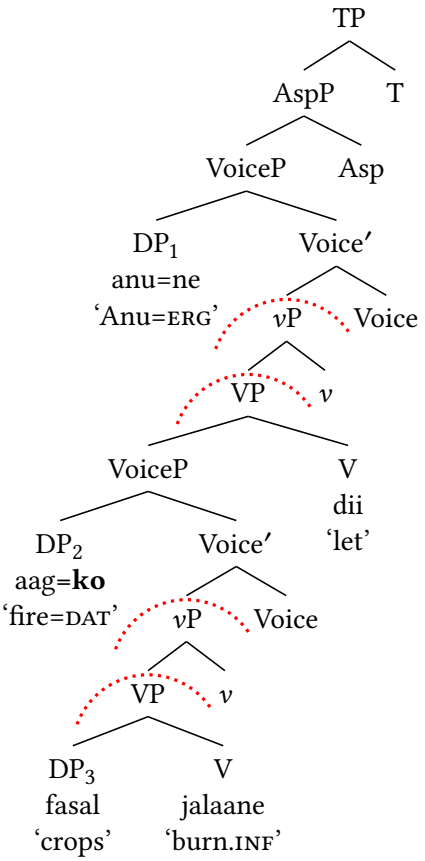
[46]For Davison (2004a, 2008), Dative case in HU is a lexical case, but her arguments are equally applicable to a dependent case analysis of the HU Dative.

control structure implies the meaning of the ECM structure, but not vice versa. DP_2—which is obligatorily Dative in both parses—represents a synactically encoded 'locus of permission' in the control reading, but not in the ECM reading (Davison 2014). Only the ECM structure and parse in (66b) are discussed in this paper, since Dative case on **DP_2**, the external argument of the embedded clause, is surprising under a functional head case account. The ECM parse is forced in (63) since it is semantically deviant to give the inanimate Dative argument *aag* 'fire' permission to do anything, ruling out a control parse. The ECM parse is also ensured in (64), since it is implausible to give explicit permission to the patient to (not) get a fever in any sense, as fevers are involuntary bodily occurrences.

I assume (an updated version of) Davison (2014)'s biclausal structure for the ECM parse of the permissive (pace Butt 1994, 2014). A Davisonian ECM structure for (63) is shown in (69),[47] where *deenaa* '√LET' has *Anu* as its external argument, and takes the *jalaane* '√BURN' clause as its complement in (69). *aag* 'fire' and *fasal* 'crops' are the external and internal arguments of *jalaane* '√BURN' respectively, and the relevant point is that *aag* 'fire' is obligatorily Dative:

[47]The embedded clause might have additional structure, like Asp and T heads, but these are omitted since I haven't shown any evidence for them. Davison (2014)'s states that the embedded clause of the ECM parse is a TP but doesn't independently motivate it.

(69) *Permissive clause structure*



In the permissive, the embedded direct object can also be Accusative,[48] resulting in two subsequent *-ko*–marked arguments in the embedded clause (70), similar to the ditransitive clause in (60b). However, in contrast with (60b), there is no obligatory object shift of the Accusative argument over the Dative argument in the permissive, since the Dative DP is an external argument and not an indirect object/goal.

[48]The distribution of Accusative case on a direct object in the permissive is the same as in regular (di)transitive clauses.

(70) *DAT > ACC in the permissive*

anu=ne aag=**ko** fasal=**ko** jalaane.INF diiyaa

Anu=ERG fire=DAT crops=ACC burn let

'Anu let the fire burn down the crops.'

The puzzle related to Dative case in the (ECM) permissive has to do with the Dative case assigner (Davison 2014). If Dative *-ko* is an assigned functional head case, it must be assigned to the embedded external argument in the permissive in (69) either by the embedded predicate, or ECM-style by the matrix predicate *deenaa* '√LET'. I will now show that neither the embedded predicate nor the matrix predicate can assign Dative case to the embedded external argument in the permissive in (63).

First, we can show that the embedded predicate—*jalaa* '√BURN' in (63)—does not assign Dative case to the embedded external argument, because in an unembedded clause, the same argument receives Ergative case or is unmarked (71), it is never Dative.[49]

(71) aag=ne/*=ko fasal jalaayii

fire=ERG/*=DAT crops burned

'The fire burned down the crops.'

If *jalaa* '√BURN' assigned Dative to the embedded external argument in the permissive, we would also expect it to assign Dative to an unembedded external argument, but (71) shows that this expectation isn't borne out.

It is also not the case that Dative case is exceptionally assigned to an embedded argument by *deenaa* '√LET', because the predicate would also obligatorily assign Dative case to the unergative

[49]One might be tempted to argue here that Dative case arises from the causative semantics introduced by *v*, since causees are invariably Dative in HU as well (Mohanan 1994, Pylkkänen 2008, Harley 2013, 2017). The argument against *v* assigning Dative case in the permissive is the same as the argument against the embedded predicate assigning Dative case: If *v* assigned Dative case to the embedded external argument in the permissive, we would also expect it to do so in an unembedded clause, however the external argument in an unembedded clause bears Ergative case, not Dative, as (71) shows.

argument in (72a) and unaccusative argument in (72b).[50] In §4.1.1, the **optionality** test is used to diagnose between the often optional Accusative case, and the ever-obligatory Dative case. Then, as the **optionality** of *-ko* on both arguments *TV* in (72a-b) shows, the *-ko* in these instances is Accusative not Dative.[51]

(72) a. *No Dative in the permissive with embedded unergatives*

anu=ne TV**(**=ko**)** chalne dii/diiyaa

Anu=ERG TV(=ACC) move.INF let

'Anu let the TV run.' (Anu didn't turn off the TV)

b. *No Dative in the permissive with embedded unaccusatives*

anu=ne peṛ**(**=ko**)** katne diiyaa

Anu=ERG tree(=ACC) cut.INF let

'Anu let the tree be cut.'

The **passivisation** test for Dative vs. Accusative *-ko* in §4.1.1 also corroborates the result of the optionality test for *-ko* in the permissive with embedded intransitives. Unlike Dative *-ko*, the *-ko* in the passivised versions of (72a-b)—given in (73a-b)—is optional, so it is Accusative.

[50]Recall Bhatt (2003)'s tests in fn.6 for distinguishing between unergative and unaccusative predicates in HU—reduced relatives (only possible with unaccusatives), impersonal passives (only possible with unergatives), inabilitatives with passive syntax (only possible with unergatives). These tests—discussed in detail in Ahmed (2010)—were used to diagnose *chal* '√MOVE' and *kaṭ* '√CUT' as unergative and unaccusative respectively.

[51]Ethan Poole (p.c.) notes that there is still a possibility that √LET assigns Dative case to external arguments, and the optionality of *-ko* in (72) is a result of two different structures—one where the embedded argument is an internal argument and is thus bare, and one where the embedded argument is an external argument and receives Dative case from √LET. The argument against such an analysis comes from sentences like (i) below, where the embedded argument *zalzalaa* 'earthquake' cannot be *-ko*-marked at all. If √LET assigns Dative case to external arguments, and *zalzalaa* 'earthquake' has the option of being base-generated as an external argument, the impossibility of *-ko* on it is mysterious.

(i) *No -ko in the permissive with embedded intransitive*

bhagwaan=ne zalzalaa(*=ko) hoone diiyaa

God=ERG earthquake(*=ACC) be.INF let

'God let the earthquake happen.'

(73) a. *No Dative in passivised permissive with embedded unergatives*

TV**(**=ko**)** chalne dii/diiyaa gayii/gayaa

TV(=ACC) move.INF let PASS

'The TV was allowed to keep running.'

b. *No Dative in passivised permissive with embedded unaccusatives*

peṛ(=ko**)** katne diiyaa gayaa

tree(=ACC) cut.INF let PASS

'The tree was allowed to be cut.'

To reiterate, in the permissive construction, the embedded predicate does not assign Dative case because the (embedded) external argument is not Dative in unembedded clauses. The matrix predicate also does not assign Dative case, since intransitive embedded arguments are Accusative rather than Dative. Since neither predicate is a Dative case assigner in the permissive in (63), the invariable appearance of Dative case on the external argument of an embedded transitive clause in the permissive is puzzling. Dative case in the permissive thus has to stem from a source other than the embedded or matrix predicate. Since Dative case on a DP only appears in the presence of a lower DP within a domain, a dependent case analysis of the HU Dative better explains its distribution.

4.1.3 Dependent Dative case in HU

Functional head case theory doesn't offer a straightforward explanation for obligatory Dative case on the external argument of an embedded transitive clause in the permissive, repeated in (74):

(74) anu=ne aag*(=ko) fasal jalaane dii

Anu=ERG fire*(=DAT) crops burn.INF let

'Anu let the fire burn down (the) crops.'

Like with Accusative case in §3.1, the coappearance of Dative case on a DP with a lower nominal in the structure in every single structure in §4.1 is coincidental under functional head case theory. Based on the examples in §4.1.2, the conditioning environments for Dative in the permissive include:

i **Matrix clause structure**: (71) shows that Dative case disappears when the *jalaanaa* '√BURN' clause is no longer embedded under *deenaa*'√LET'

ii **A second, lower DP in the embedded clause**: In (72), the embedded argument is unmarked/Accusative, so Dative case disappears on the EA when there is no lower argument

Dative case in the HU permissive therefore cannot be attributed to a single element in the structure, which doesn't follow directly from functional head case theory, but is easily captured under dependent case theory, if Dative is a high dependent case in a particular phasal domain (Baker and Vinokurova 2010, Baker 2015).

Looking solely at HU ditransitives/experiencers (55)—where the higher argument in ApplP is obligatorily Dative (even if the direct object scrambles over it)—ApplP is a natural choice for the domain of the Dative rule, such that the higher of two nominals in ApplP is Dative. A first formulation of the Dative rule with ApplP as its domain is given in (75):

(75) **Dependent Dative case rule** (nonfinal)

If DP_1 c-commands DP_2 in ApplP, assign Dative to DP_1

However, in permissives with embedded transitives like (63), where the external argument is obligatorily Dative, there is no ApplP, so this language-wide Dative rule must be keyed to another domain that ditransitives/experiencers and the permissive have in common.

Dependent case rules in the style of Baker (2015) are keyed to domains corresponding to phase complements (but I show in (46) that the phase edge can also factor into dependent case relationships), so the clause-internal VoiceP phase could then be the domain for the dependent

Dative rule, where the higher of two DPs in VoiceP is Dative, (76).

(76) **Dependent Dative case rule** (nonfinal)

If DP_1 c-commands DP_2 in VoiceP, assign Dative to DP_1

The immediate problem with keying Dative to VoiceP is that the rule would result in Dative case assignment to the external argument in unembedded transitive clauses. However, the external argument in simple transitive clauses is either Ergative or case-unmarked (as was shown in (71)), never Dative, so VoiceP is not the domain of the Dative rule in HU.

The next lower phase is *v*P, which could also be the domain of the Dative rule in HU, (77):

(77) **Dependent Dative case rule** (final)

If DP_1 c-commands DP_2 in *v*P, assign Dative to DP_1

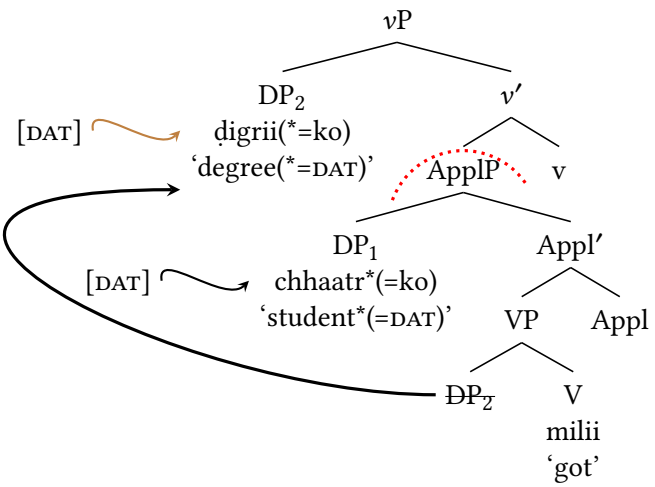
A minor concern with *v*P being the domain of the Dative rule is that in experiencer constructions like (78) (where the lower embedded argument cannot bear any case marker), a direct object that scrambles over the experiencer argument to an outer specifier of *v*P would wrongly be Dative-marked upon building the *v*P (especially given the generalisation in (46)), since it is the higher of two nominals in *v*P,[52] (78).

(78) *Incorrect Dative case on lower argument in experiencer construction*

a. ḍigrii(*=ko)$_j$ chhaatr*(=ko) ___$_j$ milii
degree(*=DAT)$_j$ student*(=DAT) ___$_j$ got
'The student got the degree.'

b.

[52]In this representation, the experiencer argument *chhaatr* 'student' gets marked Dative first due to being higher than the lower copy of the direct object *ḍigrii* 'degree' in *v*P, since syntactic derivations proceed bottom up, then the indirect object triggers Dative case on the moved copy of *ḍigrii* 'degree'. The assumption that a pre-movement copy triggers dependent case on another DP is not unfounded, since it is also indepedently required to derive instances of the permissive where the embedded DO scrambles past the embedded EA but the embedded EA is still Dative.



Since lower arguments in the experiencer construction in HU never bear any case marker—let alone Dative case, the configuration in (78) must be ruled out. One way to prevent Dative case on the direct object of the experiencer construction is to assume that a dependent case rule applies only once in a phasal projection. In other words, only one DP can receive the same dependent case value in one phase, (79):

(79) Once a DP receives dependent case X within a phasal ZP, X cannot be assigned in the same ZP again.

Given that syntactic structure proceeds bottom-up, (79) derives that DP_1 *ṭiina* first receives Dative case by virtue of being higher than (the lower copy of) DP_2 *kitaab* 'book' in *v*P, then the higher copy of *kitaab* 'book' cannot receive Dative case because Dative case has already been assigned in *v*P once. Owing to the assumption in (79),[53] (77) also no longer incorrectly predicts Dative case on a DO that undergoes Diesing (1992)-style movement to Spec,*v*P. Then, (77) is the correct formulation of the dependent Dative case rule in HU.

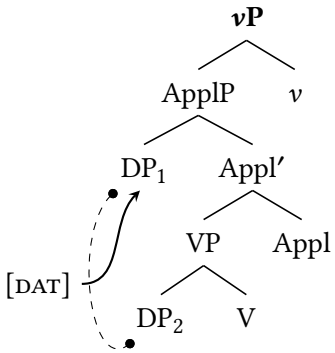
The Dative rule in (77) derives the distribution of Dative case in ditransitives/experiencers

[53] An alternative to adopting the assumption in (79) would be to say that a Dative-marked DP cannot trigger Dative case on another DP, or to reformulate the rule in (77) such that it applies only and only in **the complement of *v*** rather than in the whole *v*P phase. The first assumption is nonstandard in Baker (2015), the second goes against the idea in (46), so (79) seems the most principled. Another alternative to (79) would be that the Dative rule requires a caseless competitor, as is stated for Accusative case in (52), but (85) will show why this assumption cannot extend to the Dative case rule.

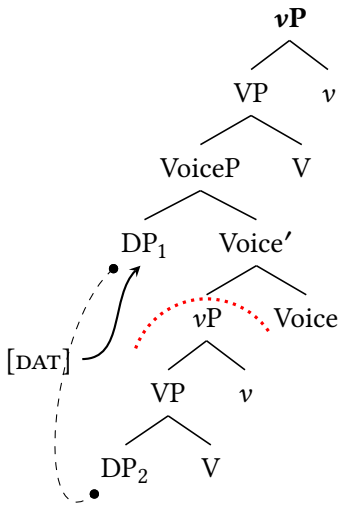
since dependent Dative case is triggered on the goal in Spec,ApplP at the *v*P phase level. Similarly, the distribution of Dative case in the permissive also follows from the dependent Dative rule in (77). Even though the embedded Dative argument is not in the embedded *v*P, once matrix *v*P comes in, the structural description of the rule in (77) is met in the permissive, since the embedded external argument (which is still visible due to being at the edge of the embedded VoiceP phase) now becomes the higher of two DPs in *v*P and thus receives Dative case. Recall that removing either the lower DP or matrix *v*P from the structure bleeds Dative case on the embedded external argument, as was shown in (72) and (71) respectively. While these facts were puzzling under a functional head case account for Dative case in the permissive HU, they follow neatly under a dependent Dative case analysis of the permissive, since the rule requires both—a lower DP and the higher *v*P structure. The Dative case rule in (77) is schematised for ditransitives/experiencers in (80a) and in the permissive in (80b):

(80)

a. *Dative case in ditransitives/experiencers*



b. *Dative case in the permissive*



The Dative rule in (77) then derives the distribution of Dative case in ditransitives, in the permissive, and on experiencers.The derivations for the ditransitive clauses in (47) repeated in (81)—with

bare and Accusative DOs respectively—are given in (82):

(81) *Ditransitive clauses*

a. *Unmarked direct object*

miina=ne ṭiina=ko kitaab dii

Mina=ERG Tina=DAT book gave

'Mina gave Tina a/the book'

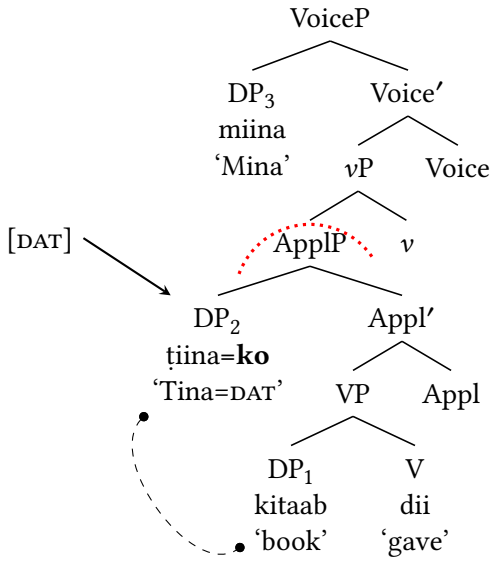
b. *Accusative direct object*

miina=ne kitaab=ko$_j$ ṭiina=ko ___$_j$ diiyaa

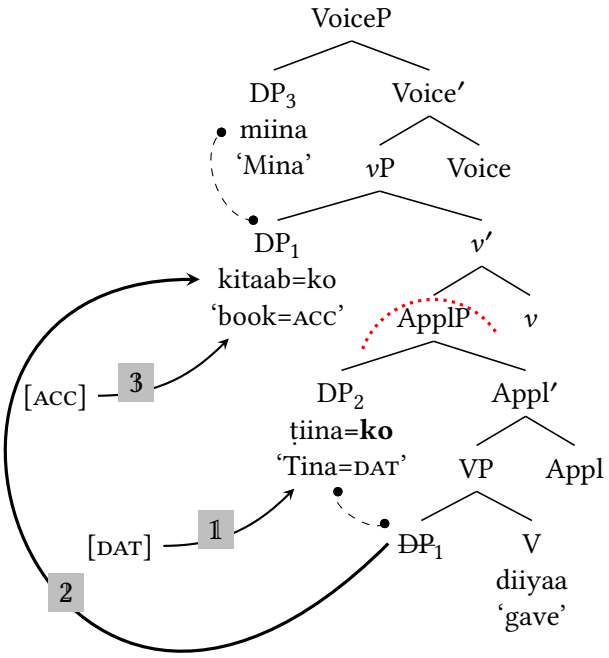
Mina=ERG book=ACC$_j$ Tina=DAT ___$_j$ gave

'Mina gave Tina the book'

(82) a. *Ditransitive with case-unmarked DO*



b. *Ditransitive with Accusative DO*



In (82a), the direct object DP_1 conditions Dative case on the indirect object DP_2 as soon as *v* merges. Since DP_1 stays in-situ, Accusative case assignment is not conditioned on DP_1 by the external argument DP_3. In (82b), the direct object DP_1 conditions Dative case on the indirect object DP_2 as soon as ApplP is complete, as in 1. Then, DP_1 undergoes Diesing (1992)-style movement to Spec,*v*P, given in 2. Once the external argument—DP_3—merges and VoiceP is complete, DP_3 conditions Accusative case on DP_1 in Spec,*v*P, as 3 shows.

Dative case on DP_2 is conditioned by DP_1 in *v*P before *read-only* applies, so the features of every element in ApplP are in principle eligible for valuation. On the other hand, Accusative case on DP_1 is conditioned by DP_3 in VoiceP, so before the strucutral description of the Accusative rule can be met, the phasal *v* and Voice heads have already merged and the complement of *v* is *read-only*. Then, feature freezing in the complement of *v* given *read-only* is the reason that DP_1 is case-unmarked in its base position in (82a). Diesing (1992)-style movement to Spec,*v*P feeds Accusative case assignment to DP_1 in (82b), since it prevents DP_1's features from being frozen in

the complement of *v*—allowing DP_3 to condition Accusative case on DP_1.

Given the Dative rule in (77),[54] it also now follows that the lower argument is never Accusative in experiencer constructions, as shown in (59) repeated as (83). As the illustration of (83a) in (84) shows, the Dative rule applies in *v*P first, before the structural description of the Accusative rule is met at VoiceP. The Accusative rule requires a caseless competitor—as stated in (45) and as is standardly assumed in Baker and Vinokurova (2010), Baker (2015). Dative case is assigned first in experiencer constructions because it applies at *v*P, and the Dative DP is the only case competitor for the lower Accusative-receiving DP, so Accusative case is always bled by Dative case being assigned first to the case competitor in these configurations.[55]

(83) a. *No Accusative in experiencer constructions*

monaa=ko bukhaar(*=ko) hɛɛ

Mona=DAT fever(*=ACC) be

'Mona has a fever'

b. *No Accusative in experiencer constructions II*

monaa=ko siima(*=ko) dikhii

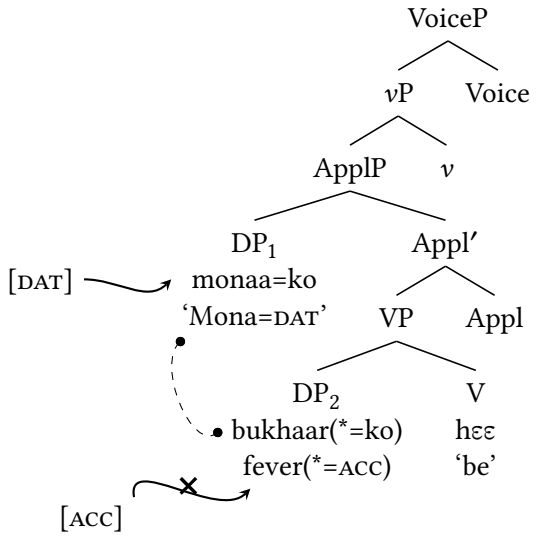
Mona=DAT Sima(*=ACC) appeared

'Mona saw Sima' (Lit.: 'Sima appeared to Mona')

[54]Under the assumption that *v* introduces causative semantics (Pylkkänen 2008, Harley 2013), the Dative rule also derives the distribution of Dative case on causees. I direct the reader to Saksena (1980), Mohanan (1994), Begum and Sharma (2010), Bhatt and Embick (2017) for more on Hindi-Urdu causatives and case assignment in these constructions.

[55]Even if we assume Diesing-style movement for DOs like *Sima* in (83b), followed by another step of movement of the Dative DP over the DO, the impossibility of Accusative case on the DO can still be attributed to the Accusative rule in (45) requiring a caseless competitor.

(84) *No Accusative in experiencer constructions*

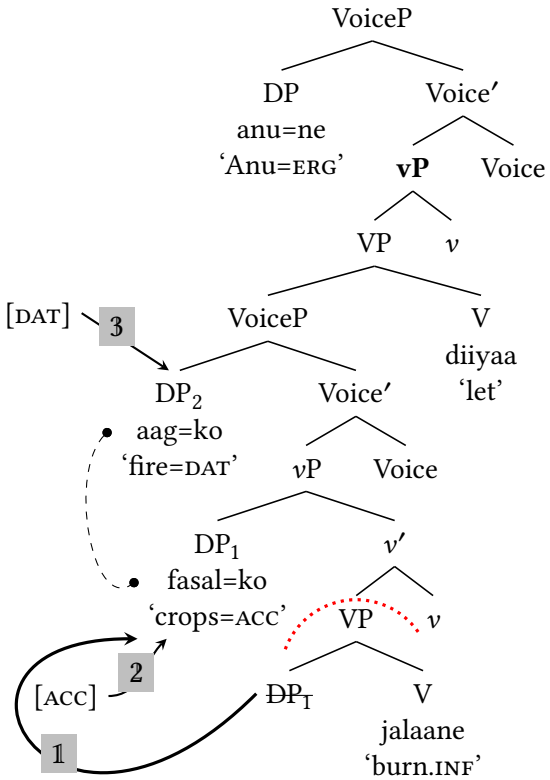


The derivation of the permissive (with an Accusative embedded direct object) is given in (85) below.[56] In (85), the embedded DO DP_1 moves to Spec,*v*P, shown as 𝟙. Once the higher DP_2 merges in Spec,VoiceP, it conditions Accusative case on DP_1, given as 𝟚. When matrix *v* merges, Accusative DP_1 in Spec,*v*P obligatorily conditions Dative case on DP_2, shown in 𝟛.

[56]Permissives with embedded ditransitives, where both the embedded external argument and indirect object are marked Dative, (i) are also compatible with the rule in (77) and generalisation in (79), since in these constructions the embedded indirect object first gets Dative case in the **embedded *v*P** with the embedded DO as its case competitor, while the embedded EA gets Dative case in the **matrix *v*P** with the embedded DO/IO as its case competitor:

(i) *ECM Permissive with embedded ditransitive*
anu=ne raam*(=ko) miina*(=ko) kitaab deene dii
Anu=ERG Ram*(=DAT) Mina*(=DAT) book give.INF let
‘Anu let Ram give Mina a/the book.’

(85) *Permissive with Accusative embedded DO*



(85) also crucially shows that the Dative rule can have a case–valued competitor,[57] because the embedded DO in the permissive is assigned Accusative at embedded VoiceP, and the embedded EA is marked Dative at matrix *v*P even though its case competitor has Accusative case.

[57] Additional support for the Dative rule allowing a case-valued competitor comes from permissives with embedded predicates that take Instrumental (*-se*-marked) objects, like *milnaa*. Assuming that Instrumental case in HU is a functional/lexical head case (and assuming an ECM parse of the following example), the embedded object is already Instrumental by the time the Dative rule applies at matrix *v*, but the embedded external argument is still obligatorily Dative, (i):

(i) *ECM Permissive with Instrumental embedded DO*
anu=ne raam*(=ko) miina=se milne diiyaa
Anu=ERG Ram*(=DAT) Mina=INST meet.INF let
'Anu let Ram meet Mina.'

4.2 The Dative-Accusative case asymmetry

The main takeaway of this subsection is that the notion of *read-only* phases also derives the asymmetry between local Accusative case and nonlocal Dative case. I show that the nonlocality of dependent Dative case on a phase-external element conditioned by a phase-internal element follows from case-competition not involving any change to the featural content of phase-internal material. Contrastingly, the locality of Accusative case follows from the inability of assign it to a phase-internal element, which involves phase-internal featural manipulation and violates *read-only*.

Dative in §4.1 is a high dependent case that is conditioned by lower (c-commanded) DPs in any structural position in *v*P. Accusative §3.1 is a low dependent case that is conditioned by a higher argument in VoiceP and must be preceded by movement to Spec,*v*P.[58] An example of the permissive (with a case-unmarked embedded DO)—where the Dative-Accusative asymmetry is prevalent—is repeated in (86), with its structure in (87):

(86) *Permissive with case-unmarked embedded DO*

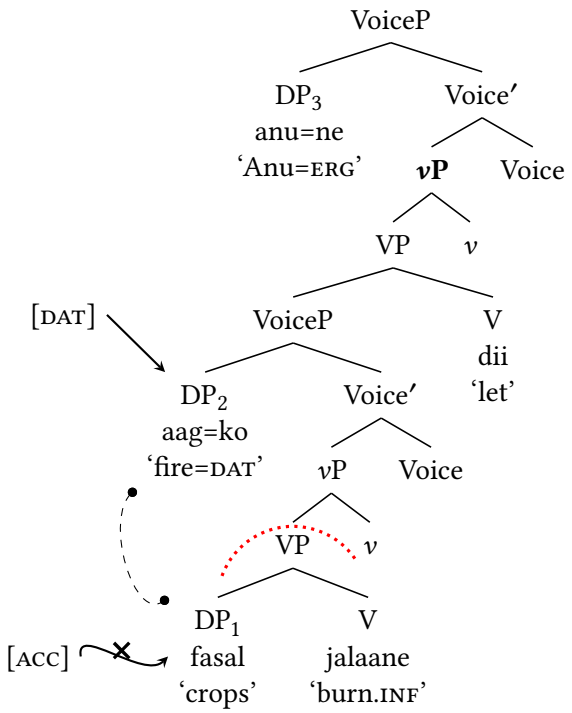
anu=ne aag=**ko** fasal jalaane dii

Anu=ERG fire=DAT crops burn let

'Anu let the fire burn down the crops.'

(87) *Permissive with case-unmarked embedded DO*

[58] Anoop Mahajan (p.c.) notes that this analysis of both Accusative and Dative as clause-internal dependent cases hints at why they are syncretic not only in HU but in many other Indic languages as well.



Read-only in (4), repeated as (88) derives the Dative-Accusative asymmetry in the permissive in (87). The embedded DO DP_1 is in its base position, where it does not get Accusative case despite being in the same VoiceP as the higher DP_2, because DP_1's features are frozen in embedded *v* complement, and Accusative case assignment requires feature valuation on a phase-internal DP_1. Upon the merger of matrix *v*, DP_1 obligatorily conditions Dative case on DP_2 while still in-situ, across the *v* phase, which does not violate (4)/(88). In other words, DP_1 in (87) has its features frozen in Comp,*v*P so it cannot receive Accusative case, but is still visible for case competition with DP_2 when matrix *v* merges, across the embedded *v* and Voice phases. Then, just like agreement on the (phase-external) φ-probe on T was shown to be controlled by a phase-internal element in §2.3/§3.2, dependent Dative case on phase-external DP_2 is also conditioned by a phase-internal case competitor DP_1. However, for DP_2 to condition Accusative case on DP_1, DP_1 has to independently move closer to DP_2 and avoid having its features frozen due to (88). Like φ-agreement, case competition can proceed into a phase since both don't involve feature change on the conditioning

DP, but case assignment into a phase is impossible because case features cannot be valued once phase complements are rendered *read-only*.

(88) ***Read-Only***

Once a phase H is complete, its phase complement Z can be inspected, but Z's featural content cannot be changed.

Comparing (87) and (85) (the structure of the permissive but with an Accusative embedded DO), it is clear that the lower, Accusative DP in the complement of phasal *v*P obligatorily conditions Dative case on a higher DP, uninterrupted by the Accusative DP's structural position or case feature value. However, the higher, Dative DP doesn't obligatory condition Accusative case on a lower DP in VoiceP; the Accusative DP first has to move to the phase edge and escape *read-only*, like in (85). Feature change on a higher element outside a phase is obligatorily conditioned by elements inside a phase, but outside elements do not similarly condition featural change on elements in a phase. The same high-low asymmetry as in Ergative/Accusative vs. φ-agree is also replicated in Dative vs. Accusative case assignment, where both are dependent cases.

5 Discussion, Predictions and Issues

This paper has argued for a *read-only* account of phases, such that phase complements remain visible, but their featural content becomes unchangeable when a phase is complete. The phasal projections in the functional sequence are C, Voice, and *v*. Support for *read-only* phases came from the asymmetric visibility of phase-internal elements for φ-agreement and case competition, but not case assignment. In particular, §2.3 showed how DPs in phase complements do not receive Ergative case (assigned by Asp via local c-command) as Ergative case assignment into a phase requires tampering with the features of a phase-internal DP (so Ergative case assignment is strictly local), but the same DP can control φ-agreement from within the phase, since the nonlocal φ-agreement dependency only requires the DP to be visible in a phase complement. The Ergative case-φ-agreement asymmetry was also replicated for Accusative case (a low dependent case in VoiceP, unlike Ergative) and φ-agreement in §3.2, where phase-internal DPs were shown to control φ-agreement, but needed to undergo object shift to receive Accusative case locally.

The visibility but unchangeability of phase-internal content was also evident in the asymmetry between nonlocal Dative case (a high dependent case in *v*P) and local Accusative case (a low dependent case) in §4.2, where the two DPs in a case competition dependency with each other behave differently. Dative case conditioned on a phase-external DP by a lower, phase-internal DP is unobstructable at any cost, but Accusative case assignment to the same lower DP conditioned by the same higher (Dative) DP requires independently-motivated object shift to be fed. All three of these patterns were derived by phase complements being *read-only*, which predicts precisely that only dependencies that don't change the featural content of phase-internal elements are possible into a phase (i.e. case competition, φ-agreement), but not dependencies that tamper with phase-internal content, like case assignment.

The *read-only* account of phases sketched in this paper is compared to other notions of cyclicity in §5.1.1 and is aided by cyclic linearisation to account for successive cyclic movement in §5.1.2,

as well as phasal *Q*Ps to account for the non-interaction of case assignment/φ-agreement with scrambling in §5.1.3.

5.1 Taking the proposal further

This subsection addresses the interaction of *read-only* phases with cyclicity, successive cyclic movement and scrambling, and thus outlines the additional assumptions required to complete a *read-only* phase-based account of the aforementioned height-based asymmetries in HU.

5.1.1 *Read-only* phases and existing notions of cyclicity

In this paper, I have proposed a *Read-only* account of phases as a new notion of cyclicity that sufficiently accounts for the case and φ-agreement-related asymmetries in §2.3, §3.2, and §4.2. There is still a question of whether a new notion of cyclicity is needed at all to derive these asymmetries, or if other ideas of cyclicity in the literature already derive the HU case and agreement pattern. In this subsection, I will argue that only *read-only* phases indeed derive the HU facts, and show how preexisting notions of cyclicity—like soft and hard phases (Baker 2015), phase unlocking (Rackowski and Richards 2005), the strict cycle condition (SCC; Chomsky 1973, 1995), the no-tampering condition (NTC; Chomsky 2008), cyclic linearisation (Fox and Pesetsky 2005), Bošković (2003, 2007), and of course the phase impenetrability condition (PIC; Chomsky 2000, 2001)—fail. The basic pattern that needs to be derived is the transparency of phases to φ-agree and case competition relations, along with the opacity of phases for case assignment (movement will be addressed in the next subsection, §5.1.2.).

First, as briefly noted in the above sections, the PIC—repeated as (89)—fails to derive the asymmetries in §2.3, §3.2, and §4.2 because it undergenerates. The PIC predicts all cross-phasal dependencies to be impossible, which also incorrectly rules out φ-agreement and case competition relationships to proceed into (or out of) a phase.

(89) **Phase Impenetrability Condition** (Chomsky 2000:108)

In phase α with head H, the domain of H is not accessible to operations outside of α, only H and its edge are accessible to such operations.

§2.3 and §3.2 crucially show the ability of φ-agree dependency to hold between a phase-internal DP and a phase-external φ-probe, which the PIC does not derive since it predicts that the phase-internal DP has already undergone phasal transfer and is no longer visible to be targeted by φ-agree. Similarly, §4.2 shows that a phase-internal DP can serve as a case competitor for a phase-external, dependent case-receiving DP, but the PIC would predict the case competitor to be invisible by the time the case-receiving DP comes in, particularly in the permissive. Then, the PIC does not derive the HU case and agreement patterns.

Next, Baker (2015)'s notion of soft and hard phases—given in (90)[59] —also does not derive the pattern detailed in §2.3, §3.2, and §4.2, as labelling the clause-internal *v* and Voice phases in HU as soft phases results in overgeneration. In particular, soft phases allow *any* dependency to proceed into them, so while φ-agree and case competition are correctly predicted to be cross-phasal, case assignment to a phase-internal element is also allowed given (90b), which is shown not to be possible for the HU Ergative and Accusative in §2.3 and §3.2 respectively. Indeed, Baker (2015:115) proposes such an account for Diyari, where a nominal trapped in a (*v*P) soft phase gets marked Accusative by virtue of being c-commanded by the phase-external subject. Since Ergative and Accusative case assignment into clause-internal *v* and Voice phases would incorrectly predict Accusative/Ergative case on certain DPs (unaccusative subjects, VP-internal direct objects, DPs obstructed by unaccusative light verbs), Baker (2015)'s soft and hard phases in (90) are not the correct notion of cyclicity for the HU pattern.

[59] Baker (2015)'s original formulation refers to *v* as the phase head and VP as its complement, but I've generalised the definition to any phase head here. The italicised part in the definition in (90) is also my addition.

(90) a. **Hard phase**

If P is a hard phase head, then the contents of its complement are invisible for the subsequent syntactic derivation after spelling out.

b. **Soft phase**

If P is a soft phase head, then the contents of its complement undergo spell out but they remain active in the derivation (*for inspection as well as feature manipulation*).

Similarly, Rackowski and Richards (2005)'s idea of phase unlocking—which involves embedded clauses entering into Agree relationships with phase-external heads to allow dependencies to proceed into them—is also not the correct notion to derive the HU pattern. Like Baker (2015)'s soft phases, phase unlocking also allows any dependency to proceed into a phase, which would once again lead to case assignment into a phase being possible—this was shown to be undesirable for the HU Ergative and Accusative in §2.3 and §3.2/§4.2 respectively.

Chomsky (1973)'s SCC also does not account for the case and φ-agreement asymmetries discussed in §2.3, §3.2, and §4.2. The SCC (Müller 2004's formulation) is given in (91) below.

(91) **Strict Cycle condition**

Within the current XP α, a syntactic operation may not target a position that is included in another XP β that is dominated by α.

For our purposes, the SCC makes it so that any dependency cannot be entirely embedded—i.e., there should be no new dependency between two phase-internal elements. The case and φ-agreement asymmetries discussed in this paper indeed don't predict dependencies to be possible between two phase-internal elements. However, the SCC—like Baker (2015)'s soft phases and Rackowski and Richards (2005)'s phase unlocking—also incorrectly predicts case assignment to be possible into a phase, since the case-conditioning higher element (assigning head/case competitor) is within the current cycle. Then, the SCC is also not the correct notion of cyclicity with regard to Ergative and Accusative case assignment in HU.

The next notion of cyclicity I will discuss in relation to the HU case-agreement asymmetries observed in this paper is Chomsky (2007, 2008)'s No Tampering Condition (NTC). The NTC is formulated in (92):

(92) **No-Tampering Condition**

Merge of X and Y leaves the two syntactic objects unchanged

The idea of *read-only* phases in (4) is in the spirit of Chomsky (2007, 2008)'s NTC. Particularly, if the NTC is assumed to apply at a phasal level (i.e., when a phase head merges), it would predict that when a phase head merges with its complement XP, the complement XP cannot undergo further change, by virtue of it being one of the syntactic objects participating in the Merge relation. The unchangeability of the phase complement under the NTC is similar to the prediction of *read-only*, which is that features of phase-internal elements cannot be changed. Both notions also do not rule out the contents of phase complements being visible.

The problem with this modified conception of the NTC, then, is that while it predicts the immutability of phase complements, it doesn't derive the *asymmetry* between phase-internal and phase-external elements, which is a major point of this paper and of the idea of *read-only*. The NTC predicts that when a phase head merges with its complement (or when the specifier of a phasal XP merges), both elements should be unchanged, so there is no asymmetry between the phase edge and phase complement, and the featural content of the entire phase should be frozen upon merging. It was already discussed in (46) that the phase edge is special in that it is considered for two cycles of case assignment, so it is undesirable to rule out any feature change in the phase edge à la the NTC. Additionally, the NTC would predict that in a transitive clause, Ergative case assignment is never allowed because the external argument in Spec,VoiceP should be rendered unchangeable as soon as it merges with its Voice′ complement, which is again undesirable given how Ergative case assignment proceeds in §2.1.1.

Moreover, the NTC is strictly formulated as a condition on Merge and not on other syntactic

operations—Gallego (2020) in fact notes that Chomsky (2008)'s NTC is evidence for conditions being applicable to only some syntactic operations, so its generalisability to Agree, local c-command based case assignment (Preminger to appear), and dependent case assignment is unclear.

Fox and Pesetsky (2005)'s cyclic linearisation is the next idea of cyclicity discussed here, which makes similar predictions to Baker (2015)'s notion of soft and hard phases in (90). The cyclic linearisation system is summarised in (93) (the formulation is from Müller 2007):

(93) a. Linearisation of syntactic structure applies cyclically, to phasal spell-out domains.

b. Linearisation adds new ordering statements to the set of statements established by the linearisation of previous spell-out domains.

c. A new ordering statement generated in a spell-out domain must not contradict an ordering statement of a previous spell-out domain.

While Fox and Pesetsky (2005) do not directly address how their proposal relates to φ-agree and case assignment at all, the summary of their proposal in (93) does not rule out phase complements being visible to further syntactic operations after being linearised. Then, φ-agreement, case competition, and case assignment dependencies between phase-external and linearised elements are all predicted to be possible given (93). It was just shown in (90) that case assignment into a phase is not possible in HU due to §2.3 and §3.2, so (93) predicting possible case assignment into a phase is also too strong.

There is, however, a caveat to the claim that (93) allows case assignment into a phase. Phase complements that are linearised are irreversibly linearised, so no overt change in shape of phase-internal elements would be predicted when there are dependencies between phase-external material and material that is already linearised in a phase. Then, since (93) only predicts 'invisible' case assignment into a phase—i.e. case that is assigned after the order/shape of elements is already fixed and is thus not overtly realised—one might be tempted to think that (93) indeed makes exactly the right predictions about what dependencies are visibly possible across a phase. The idea

would be that φ-agree, case competition, and invisible case assignment do not change the shape of the linearised phase complement, and that could be why we don't *see* Ergative/Accusative case only a phase-internal argument, even though the argument does actually receive that case—case assignment just occurred post-linearisation. The argument against such an analysis is due to φ-agreement, which we already know by now to be intimately tied to case assignment in HU. Recall from §2.2 that the φ-probe in HU is *case-discriminating* (Bobaljik 2008, Preminger 2014), so φ-agreement only targets DPs that do not have a valued case feature. If case were assigned into a phase post-cyclic linearisation, a phase-internal nominal with a valued case feature would be predicted to be unable to control φ-agreement. This prediction is not borne out, as shown by the unaccusative (feminine) argument *thaalii* in (35a-b), which triggers (feminine) agreement on the φ-probe. If *thaalii* in (35a-b) were assigned Ergative case after the linearisation of the *v*P phase it is trapped in, the argument would become invisible to the φ-probe, and the φ-probe would resort to default agreement, which results in an ungrammatical sentence, (94):

(94) *No default agreement with case-unmarked argument*

*thaalii gir-**aa**

plate.F.SG fell-M.SG

Intended: 'A/the plate fell'

Since a Fox and Pesetsky (2005)-style analysis of the case and φ-agreement pattern in HU does not make clear predictions about the interaction between case and φ-agreement (and since a possible extension of their analysis makes wrong predictions as in (94)), it is also not the appropriate notion of cyclicity to derive the HU pattern. Then, the idea of *read-only* phases is even further justified.

Bošković (2003, 2007) is another important analysis in the spirit of Fox and Pesetsky (2005) that bears mentioning here. Specifically, Bošković (2003, 2007) proposes that Agree is not subject to the PIC in (2), but Move is. The logic behind the phasal part of his proposal is similar to what Fox

and Pesetsky (2005) have proposed, namely that phases are not syntactic locality domains, and instead irreversibly fix the order of elements of their complements, thus having the sole function of determining what is shipped off to PF. Since phases do not limit the information accessible to the syntax in his proposal and are available for inspection, Bošković (2003) argues that Agree dependencies can proceed into phases, but Move cannot target phase complements because it interferes with the linear order already determined at PF (I will return to his proposal about Move in the next subsubsection §5.1.2 on successive cyclic movement). If his proposal regarding φ-agreement into a phase is on the right track, there is an answer for the obligatoriness of φ-agreement with an object into a *v*P/VoiceP phase in §2.3 and §3.2. Even though Bošković (2003, 2007) does not directly discuss case competition relations, it also follows from his idea of phase complements being inspectable that a phase-internal DP can condition dependent (Dative) case on a higher DP in HU across a phase, as is shown in §4.2. There is indeed a clear resemblance between Bošković (2003, 2007)'s accounts of phase complements being visible but not alterable, and the *read-only* proposal sketched out in this paper.

However, Bošković (2003, 2007) doesn't make any predictions for the inability to assign Ergative/Accusative case into the same *v*P and VoiceP phases that allow φ-agreement and case competition into them, so they don't straightforwardly derive the selective opacity[60] of phases with respect to case assignment and φ-agreement/case competition.[61] This is where *read-only* and

[60]This handy idea of syntactic domains allowing some operations into them but not others is attributed to Keine (2016, 2020b).

[61]Additionally, adopting a Bošković (2003, 2007)-style account wholesale—i.e. assuming that Agree is not subject to the PIC across the board—fails to explain why HU does not allow φ-agreement into finite clauses, but my analysis of phases being *read-only* also does not improve on this point. Both accounts require the additional assumption—once again from Keine (2016, 2020b)—that the φ-probe on T has CP as its horizon—i.e. the φ-probe cannot look into anything CP-sized, which correctly rules out agreement into finite clauses, at least in HU. For more on languages like Tsez that allow agreement into finite clauses (Polinsky and Potsdam 2001), see Bošković (1997) who argues that some finite clauses are smaller than CP, and Keine (2016, 2020b) who argues that horizons on probes are parametrised across languages, so while the HU φ-probe has a horizon of CP, the φ-probe in languages like Tsez may be horizonless. Returning to the point about the lack of φ-agreement into HU finite clauses, even with the additional Keinean assumption that LDA into finite clauses is banned due to the φ-probe's CP horizon, Bošković (2003, 2007) does not predict the locality of Ergative/Accusative case assignment in HU, while my proposal derives the selective opacity of VoiceP phases to φ-agreement but not Ergative/Accusative case assignment in HU.

Bošković (2003, 2007)'s accounts come apart. Since case assignment into an inspectable, already-linearised phase complement doesn't technically alter existing linearisation statements at that phase, it is unclear what the constraints are for case assignment into a phase under Bošković (2003, 2007)'s analysis. (Recall that the idea of invisible case assignment into a visible phase complement was already ruled out in (94).) Under a *read-only* account, case assignment into a phase by an element outside it is clearly banned since it involves tampering with the featural content of a phase complement. Additionally, a *read-only* analysis of phases also derives the ability of a phase-internal element to control φ-agreement or be a case competitor to an outside element. Since *read-only* derives the selective transparency of phases to φ-agreement and case competition but not case assignment, and Bošković (2003, 2007) makes predictions only about φ-agreement (and case competition, by extension), the *read-only* proposal seems to best capture the HU Ergative/Accusative-φ-agree and Dative-Accusative assymetries in §2.3, §3.2, and §4.2 thus far. The next subsubsection on successive cyclic movement will show that Bošković (2003, 2007), Fox and Pesetsky (2005)'s ideas are still in fact needed to supplement the *read-only* proposal with successive cyclic movement, if the PIC is to be done away with entirely.

5.1.2 *Read-only* phases and successive cyclic movement

Chomsky (2000, 2001)'s PIC serves two purposes. The first is to locate the points at which syntactic structure is cyclically sent to the interfaces and removed from the workspace. In this paper, the concept of *read-only* phases replaces the cyclic spell out part of the PIC, such that phase complements are cyclically spelled out and have their featural content frozen, but they are not completely removed from the workspace.

The second purpose of Chomsky (2000, 2001)'s PIC is to force successive-cyclic movement through phase edges. The idea is that since phase complements are rendered completely inaccessible to phase-external material after Spellout, elements in a phase complement have to undergo

movement to the edge of the phase to escape Spellout and enter into any syntactic dependency with phase-external material. The notion of *read-only* phases alone does not capture successive cyclic movement through phase edges, since under a *read-only* conception, phase internal-material is not in fact inaccessible to higher structure—phase complements are still visible, but cannot be changed. In fact, if movement is simply copying (Chomsky 1995), *read-only* phases in (4) predicts that any material in a *read-only* phase complement can move to a phase-external position unboundedly, since the copying operation does not change the featural content of phase complement. That movement is not completely unbounded has been the focus of much of syntactic theory (Ross 1967, Chomsky 1973, and much subsequent work), so an account of how *read-only* phases relate to successive-cyclic movement is necessary. As noted in fn.70, there is evidence for successive-cyclic movement through the edge of clause-internal phases in many languages (Abels 2003, 2012, Bennett, Akinlabi, and Connell 2012, Aldridge 2008, Sato 2012, Georgi 2014, Van Urk and Richards 2015, Van Urk 2018), so any additional machinery needed to implement successive-cyclic movement under a *read-only* phases account is justified.

Stjepanović and Takahashi (2001), Bošković (2003, 2007), Fox and Pesetsky (2005) have argued that movement proceeds successive cyclically due to PF considerations, rather than to escape transfer. In Fox and Pesetsky (2005), movement of a non-leftmost element out of a phase is disallowed since it conflicts with the ordering statement generated at that phase, while leftmost elements in a phase can freely move. In Bošković (2003, 2007), movement out of a phase complement is banned, because linearisation information of elements in that phase complement has already been irreversibly fixed in PF, and every element can only be linearised in a phase complement once. The only way for an element R to escape linearisation in a phase under Bošković (2003, 2007)'s account is for it to move to a phasal specifier, which 'tells' the phonology that there are two copies of R within that phase, resulting in the deletion of the copy of R in the phase complement (thus preventing it from being linearised). The moved copy of R in the phasal spec-

ifier can then move through successive phasal specifiers without being linearised until its target position is reached, by repeating the lower copy deletion process.

To build in successive-cyclic movement into a *read-only* phases system, I propose that elements in a phase complement move to the phase edge for linearisation-related reasons,[62] following Bošković (2003, 2007), and Fox and Pesetsky (2005)'s cyclic linearisation. Phases determine the units shipped to the interfaces such that the order of elements within each unit is irreversibly fixed at Spellout, and the order of elements established in one phasal unit (i.e., a phase complement) cannot be violated in later units, as Fox and Pesetsky (2005), Bošković (2003, 2007) have proposed. Then, if a non-leftmost element X within an earlier phasal unit E is targeted for movement by a probe in a later unit L, the order of elements established at the earlier unit E would be violated in the later unit L, since X would be ordered to the right of the leftmost element Y in E, but X would be ordered to the left of Y in L, producing conflicting linearisation statements. So, if it is the case that in a later unit L, X will be ordered to the left of Y, X has to be ordered to the left of Y in the earlier unit E as well, so that consistent linearisation statements are produced at every phase. Thus, in order to prevent conflicting linearisation statements at every phasal unit, only the leftmost element in a phase can be a movement target in the next phase, which forces movement to proceed through the left edge of the phase, and explains why movement out of a phase is impossible for non-leftmost elements—even though these elements are still present in the syntax (Fox and Pesetsky 2005, also in the spirit of Bošković 2003, 2007). Once successive-cyclic movement is attributed to PF/linearisation considerations, and cyclic spellout is taken care of via

[62]The reasons for moving to phase edge are slightly different in Bošković (2003, 2007), and Fox and Pesetsky (2005). In Fox and Pesetsky (2005), an element moves to phase edge so it can be the leftmost element in a phase, making it eligible for further movement. If an element is already the leftmost one within a phase, it need not move to be eligible for movement. In Bošković (2003, 2007) however, an element moves to phase edge to escape being irreversibly linearised when the phase is shipped off to PF. In his theory, if the leftmost element of a phase is not in a phasal specifier position, it needs to move there to escape linearisation within that same phase (only elements with more than one copy in a phase are eligible for linearisation in a higher phase). We will see in §5.1.3 that this *read-only* proposal favours a Fox and Pesetsky (2005)-style account of cyclic linearisation, where leftmost elements in a phase do not need to move to a phasal specifier position.

read-only phases, there is nothing stopping the PIC from being eliminated as a condition on the locality of syntax, as argued by Bošković (2003, 2007) and hinted at by Chomsky (2008).

Unifying Fox and Pesetsky (2005), Bošković (2003, 2007)'s theories of phases inducing cyclic linearisation of their complements with the present theory of phases inducing feature freezing of their complements via *read-only* into one theory (where phases fix the order of elements *and* the featural content of their complements) has the advantage of deriving the inability to move out of a phase or assign case into a phase, while also accounting for the ability of φ-agreement and case competition to proceed into a phase. In short, with Fox and Pesetsky (2005), Bošković (2003, 2007)'s cyclic linearisation and *read-only* in this paper, all of the case and φ-agreement asymmetries in §2.3, §3.2, and §4.2 can then be derived, along with successive cyclic movement—without stipulating the PIC.

5.1.3 *Read-only* phases and scrambling

This subsubsection addresses the lack of interaction between case assignment/φ-agreement and scrambling. In the *read-only* phases system outlined in this paper, there is no mention of a case filter, or of case-unmarked DPs receiving any abstract case (Vergnaud 1977, Chomsky and Lasnik 1993, Chomsky 1981). In fact, φ-agreement only targets DPs that have an unvalued case feature, as detailed in §2.2. Additionally, case assignment is interspersed with syntactic structure building, and is assigned as soon as the structural description of a case rule is met. A question that emerges from this line of research is why scrambling—which is productive, robustly attested in HU, and also interspersed with structure building—does not interact with case assignment or φ-agreement.[63]

[63]Here, I differentiate scrambling from the semantically-motivated object shift in §3.1. The basis for differentiating between scrambling and object shift is that the latter is obligatory for object DPs with certain semantic properties, while the former is an optional operation (with possible information-structure effects) that targets any nominal in the structure. To implement the difference between scrambling and object shift, I assume that scrambling is triggered by a different feature on the probing head—like [Σ]—than object shift. As for object shift, it could be assumed that it is triggered by a [+SPECIFIC] feature on a DP, or by a different feature on *v*.

Along the lines of Poole (2022), I propose that HU scrambled nominals are encased in a Cable (2010)-style *Q*P[64] (*Q*-particle phrase).[65] The purpose of the *Q*P layer is to insulate a scrambled DP from subsequent syntactic operations.

I further propose that *Q*P is a phase, such that its DP complement is rendered *read-only* as soon as the *Q*P is complete, blocking case assignment to the DP. To motivate *Q*Ps being phasal, consider (48) repeated as (95) against the new example in (96)—where Accusative case is optional, rather than obligatory, on the direct object *foon* 'phone':

(95) *No bare shifted definite DOs*

miina=ne anu*(=ko)$_j$ ṭiina=ko ___$_j$ beechaa

Mina=ERG Anu*(=ACC)$_j$ Tina=DAT ___$_j$ sold

'Mina sold Anu to Tina'

(96) *Case-unmarked shifted indefinite DO*

miina=ne foon(=ko)$_j$ ṭiina=ko ___$_j$ beechaa

Mina=ERG phone(=ACC)$_j$ Tina=DAT ___$_j$ sold

'Mina sold a/the phone to Tina'

As the contrast in (95b) vs. (96) shows, it is not that all movement over the indirect object in ditransitives leads to obligatory Accusative case on the shifted direct object. When a nonspecific, inanimate direct object like *foon* 'phone' in (95b) moves over the IO, the DO is only optionally *-ko*–marked unlike the definite, human DP *Anu* in (95b). What's crucial here is that in (96), *foon* 'phone' can be case-unmarked even in the presence of a higher DP in the same domain, so there has to be a way to block Accusative case on *foon* 'phone'. The analysis of the Accusative variant

[64]Cable (2010) refers to *Q*-particle phrases as QPs, but I'm italicising the *Q* to avoid any conflation with quantifier phrases, which are also QPs and also sometimes proposed to be phases.

[65]Poole (2022) notes that while Cable (2010)'s *Q*P analysis originally applies to *wh*-movement, it can also extend to other types of Ā-movement to account for why Ā-moved DPs in Finnish do not license dependent case. Following Poole (2022), I further assume that a *Q*P analysis can also apply to scrambled DPs in HU, without taking a hard stance on whether HU scrambling is A-movement, Ā-movement, both or neither.

of *foon* 'phone' is pretty straightforward—it is specific and thus undergoes Diesing (1992)-style movement to Spec,*v*P. The phasal *Q*P analysis comes in to account for the case-unmarked variant of *foon* 'phone'. I propose that in the derivation with the case-unmarked DP *foon* 'phone', the DP has scrambled—rather than undergoing Diesing (1992)-style movement—and landed directly in Spec,VoiceP.[66] Once *foon* 'phone' becomes a scrambling target, its phasal *Q*P layer merges in countercyclically and prevents Accusative case from being fed on it.[67] If the *Q*P layer that *foon* 'phone' is encased in was not phasal, Accusative case assignment to *foon* 'phone' would not be bled.

Additionally, I propose that the *Q*P layer on scrambled elements merges countercyclically,[68] precisely at the point where a DP becomes a scrambling target. The need for postulating the countercyclic merge of *Q*Ps is to prevent case assignment from being blocked on DPs that receive case and then later become scrambling targets. In (97), the Accusative DP *Anu* has scrambled over the Ergative subject *Mina*. Considering that movement and case assignment are interleaved with structure building in this system, the only way for an Accusative DP to land over an Ergative DP is if the Accusative DP *Anu* receives Accusative case before becoming a scrambling target. Then, if the Accusative DP *Anu* started as a *Q*P in its base position, Accusative case assignment to *Anu* at Spec,*v*P would be blocked by the phasal *Q*P layer that *Anu* would be encased in, resulting in an ungrammatical sentence due to *Anu* being case-unmarked. Then, the phasal *Q*P layer has to come in after Accusative case assignment, once *Anu* actually becomes a scrambling target.

[66] I'm assuming that scrambling has a different, higher landing site than object shift because elements undergoing object shift can also be scrambling targets later in the derivation. In addition, given that object shift of certain DPs (pronouns, proper names) is obligatory, it is important to rule out derivations where such DPs underwent scrambling *instead of* object shift, which undesirably becomes possible if scrambling and object shift have the same landing site.

[67] Here, it becomes crucial that the kind of linearisation induced by phases in addition to *read-only* is the version proposed by Fox and Pesetsky (2005), where the leftmost element in a phase doesn't have to move to phase edge to be able to undergo further movement. If *foon* 'phone' had to proceed through Spec,*v*P like Bošković (2003)'s proposal requires, dependent Accusative case would be undesirably triggered on it as soon as the external argument merged in Spec,VoiceP.

[68] The countercyclic merger of *Q*P is in the spirit of Safir (2019), a proposal that Poole (2022) also adopts.

(97) *Scrambled case-marked DP*

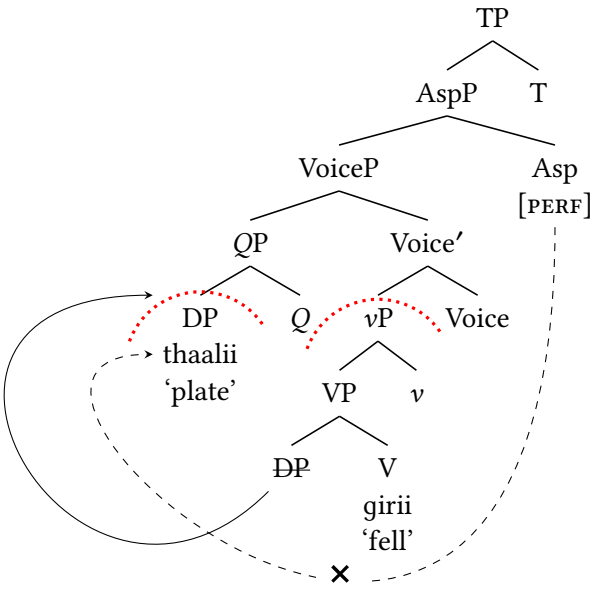
anu*(=ko)$_j$ miina=ne ṭiina=ko ___$_j$ beechaa

Anu*(=ACC)$_j$ Mina=ERG Tina=DAT ___$_j$ sold

'Anu, Mina sold to Tina'

The scrambling analysis involving a Cable (2010)-style *Q*P layer on the scrambling target sketched out in this subsection also accounts for why movement of unaccusative arguments to Spec,VoiceP does not feed Ergative case assignment. Unaccusative arguments that move to Spec,VoiceP are encased in a phasal *Q*P layer—like objects in (di)transitive clauses—that prevents case Ergative case assignment to them, since the DP complement of the *Q*P is rendered *read-only*, (98).

(98) *No Ergative case on scrambled DPs*



There are two facts that still warrant an explanation under the phasal *Q*P analysis detailed here. First, in the permissive with an embedded transitive clause, the embedded object scrambling over the embedded subject—before the structural description of the Dative rule is met—does not bleed Dative case on the embedded subject,[69] shown in (99).

[69]The embedded object scrambling over the embedded subject also does not feed Dative case on the embedded

(99) *Permissive with scrambled embedded DO*

anu=ne [fasal$_j$ aag=**ko** ___$_j$ jalaane] dii

Anu=ERG crops$_j$ fire=DAT ___$_j$ burn let

'Anu let the fire burn down the crops.'

To derive (99) under a *read-only* analysis, the assumptions that the lower copy of *fasal* 'crops' is a DP (so only the higher, moved copy is a *Q*P), and that that lower copy is sufficient to serve as a case competitor for *aag* 'fire' are required.

Additionally, as briefly noted in §2.2, scrambling does not interact with φ-agreement, since in a transitive clause with two case-unmarked arguments, the object scrambling over the subject does not make the object the φ-agreement controller. The subject still remains the φ-agreement controller, (100):

(100) *Unmarked subject obligatorily controls agreement*

chaand$_j$ laṛk**ii** ___$_j$ dekheg-**ii** / *-**aa**

moon.M.SG$_j$ girl.F.SG ___$_j$ see.FUT-F.SG / *-M.SG

'The moon, the girl will see'

The *Q*P analysis, as sketched thus far, does not predict this non-interaction of scrambling with φ-agreement in (100), since φ-agreement can proceed through a *read-only Q*P phase. The reason that the HU φ-probe targets the subject *laṛkii* 'girl' over the object *chaand* 'moon' despite the object being higher is simply that 'moon' is too high to be in the search space (recall from (34) that the φ-probe targets a DP in its c-command domain) of the φ-probe—namely in Spec,TP or higher, as Keine (2016, 2020b) also proposes. The φ-probe targets *laṛkii* 'girl' instead because it is the only DP visible to the probe. Then, scrambling not changing φ-agreement in (100) or case competition in (99) is also compatible with the phasal *Q*P analysis proposed here.

object, but the phasal *Q*P analysis already neatly accounts for the lack of Dative case on a scrambled object, since the encased DP has its features frozen and is no longer eligible to have its case feature valued.

5.2 Predictions and Issues

I have argued for a *read-only* account of phases (shown again in (101)) and tied it in with Fox and Pesetsky (2005), Bošković (2003, 2007)'s cyclic linearisation, to the effect that phases fix the featural content as well as linear order of their complements—instead of eliminating their complements from the syntax. C, Voice, and v[70] are phases whose complements are rendered *read-only* and cyclically linearised upon completion of the phase. I have shown that once a *read-only* theory of phases (supplemented with cyclic linearisation) is adopted, the ban on countercyclic case assignment as well as the ability to enter into φ-agree/case competition[71] dependencies into a phase in §2.3, §3.2, & §4.2, and the ban on movement out of a phase in §5.1.2 all follow from phases inducing *read-only* and cyclic linearisation of their complements.

(101) ***Read-Only***

Once a phase H is complete, its phase complement Z can be inspected, but Z's featural

[70] While this paper argues that *v*P is a phase, the status of *v*P as a phase has been questioned in the recent syntactic literature by Keine (2016, 2020a,b), Grano and Lasnik (2018), Keine and Zeijlstra (to appear), Mendes and Ranero (2021), Poole (2022). There is, however, evidence for *v*P phases due to successive cyclicity at the *v*P level, particularly in the form of morphological reflexes of (obligatory) movement through the *v*P edge in Dinka (Van Urk and Richards 2015, Van Urk 2018), Indonesian (Aldridge 2008, Sato 2012, Georgi 2014), and Defaka (Bennett et al. 2012). Additional evidence for *v*P phases also comes from Abels (2003, 2012), who shows that VP cannot move when embedded under a *v*P. Abels (2003) derives the inability of a VP to move under *v*P from his stranding generalisation, which says that complements of phase heads may not move by themselves. If *v*P is a phase, the inability of VP to independently move follows. Given the evidence for successive cyclicity through the *v*P edge in some languages, rejecting *v*P phases altogether is too unrestricted, and warrants alternative explanations of the above phenomena. Nevertheless, adopting *v*P phases wholesale leaves open the question of why φ-agreement in Hindi-Urdu can proceed into *v*P and violate the PIC in (2). Then, a different notion of phase locality is required to account for both, the visibility of a phase complement for φ-agree, as well as the *v*P-phase effects observed in some languages.

[71] The claim that a case competition dependency can proceed through a phase (i.e. a phase-internal element can condition case on a phase-external element) gives rise to the prediction that in languages like Niuean where Ergative is a dependent case (Massam 2001, Woolford 2015), a phase-internal object can condition dependent Ergative case on the subject. This goes against Massam (2001) and Woolford (2015)'s idea of objects having to shift out of the VP to condition Ergative case on the subject. Specifically, Massam (2001)'s proposal is that nonspecific objects stay VP-internal and do not condition Ergative case on the subject, while specific objects undergo semantically-motivated movement out of the VP—like the Diesing (1992)-style movement I assume here—and feed dependent Ergative case on the subject. However, Massam (2001) also claims that nonspecific VP-internal objects are NPs, while specific objects are DPs. If we assume that only DPs—and not NPs—participate in case competition and assignment, as I have anyway in this paper, the Niuean pattern can also be derived under this analysis of phases being *read-only*, since nonspecific objects in the VP lack the DP layer needed for them to be case competitors for the subject.

content cannot be changed.

As it stands, the *read-only* phases account in this paper makes certain predictions about the nature and timing of operations in the syntax. For example, it requires that case assignment relies on rules that apply in the syntax, and that case assignment precedes φ-agreement at T—which is also a syntactic operation. Then, both case and agreement are syntactic rather than post-syntactic operations, as Preminger (2014) has also argued.

Additionally, since case assignment is syntactic, case rules are interspersed with structure building, and the order that case rules apply in falls naturally from the way the structure is built—leading to the Accusative rule preceding the Dative rule in the permissive, but the Dative rule preceding the Accusative rule in ditransitives. Then, case rules do not need to be extrinsically ordered, their ordering is derived from the structure instead. Due to the way that case rules are set up, it also happens to be that Ergative case is always assigned after Dative and Accusative, since its structural description cannot be met until a perfective Asp head comes into the structure, by which time Dative and Accusative cases have already been assigned, if applicable. In addition, the architecture of case assignment laid out in this paper predicts that all case is assigned within a finite clause, deriving the fact that there are no attested case dependencies across finite clauses in HU.

There is also no assignment of unmarked case in the *read-only* phases proposal, so DPs that no case rule applies to simply stay caseless—there is no need for their case feature to be valued in order to produce a licit derivation, as Preminger (2014, to appear) has also argued. φ-agreement also only targets caseless DPs in this proposal (Bobaljik 2008), showing that φ-agreement at T happens after case assignment—there are never any instances of agreement with a case-marked DP in HU. If φ-agreement happens at T, it then follows that all case is assigned low in the structure, before the φ-probe on T starts its search.

Another prediction of the way dependent case rules are set up in this system is that some

cases are sensitive to the case value of their case competitor, while others are blind to the value of their case competitor. The Dative rule in §4.1 is indifferent to the case value of its case competitor—either a caseless or Accusative DP triggers Dative case on the higher of two nominals in *v*P (as shown in the permissive with a caseless embedded DO in (86) and Accusative embedded DO in (85)), which hints at the infallibility of Dative case. In contrast, the Accusative case rule in §3.1.2 requires a caseless competitor, which is evident in the experiencer constructions in §4.1.1, where the Accusative rule is never triggered because its case competitor is invariably marked Dative in *v*P before the Accusative rule can apply in VoiceP.

In this analysis, the connection between phases and case domains is different than what Baker and Vinokurova (2010), Baker (2015) has proposed. In particular, dependent case rules in this system apply within a full phasal projection (factoring in the phase edge), while for Baker (2015) the domains for dependent case rules are phase complements only. The point about dependent case rules applying within a full phase is particularly important for the Accusative case rule in §3.1.2, where the higher case competitor DP is always a part of the edge of the VoiceP phase that the rule applies in. Additionally, a dependent case rule only applies once within a particular phasal projection, as shown in (79).

A lingering issue of the system set up in this paper has to do with Accusative case assignment in permissives with embedded intransitive clauses, like in (72a-b). In particular, it is unclear how exactly Accusative case assignment is fed on the embedded argument in these constructions, since the embedded argument should be trapped in the complement of the phasal matrix *v*, and should thus be ineligible to receive case altogether due to becoming *read-only*. One way around this issue would be to assume that Diesing (1992)-style movement targets matrix Spec,*v*P rather than embedded Spec,*v*P in these constructions, so the embedded argument is forced out of the matrix *v*P phase complement, and can receive Accusative case when the matrix external argument merges. There is, however, no external motivation for this assumption, so I leave this issue to

further research. Another issue with the proposal has to do with the phasal *Q*P story for scrambled DPs in §5.1.3. It is not clear why in permissives with embedded transitive clauses—like (63)—the embedded external argument scrambling to matrix Spec,VP or Spec,*v*P does not bleed Dative case assignment. An answer to this issue could be that only movement to Spec,VoiceP or higher results in a phasal *Q*P, while movement to a position lower in the clause does not involve phasal *Q*P, which could also be an explanation for the differing properties of scrambling (which, as as it stands in this paper, only lands in Spec,VoiceP or higher) and object shift (which lands in Spec,*v*P).

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