



Agreeing against the odds: When clitic clusters trigger agreement

Sahar Taghipour¹ · Arsalan Kahnemuyipour²

Received: 10 April 2023 / Accepted: 18 June 2025 / Published online: 16 July 2025

© The Author(s) 2025

Abstract

This paper investigates split ergativity in Laki (Northwestern Iranian). Present-stem verbs follow the accusative alignment and past-stem verbs follow the ergative alignment. We argue that T and *v* are two loci of agreement in the ergative alignment. As a result of an Agree relation with *v*, the φ -features of the external argument are realized as a clitic. However, we argue that obtaining agreement with T depends on the argument type and its accessibility to T. Normally, the objects remain low inside the *v*P phase and are inaccessible to T (Chomsky's 2001 Phase Impenetrability Condition). Meanwhile, when the in-situ realization of deficient pronouns violates a clitic cluster restriction, they raise to the edge of the phase. This movement leads to an Agree relation between T and the pronoun. We show that deficient pronouns remain low only when their in-situ realization does not violate the clitic cluster restriction. In this *v*P-internal position, a deficient pronoun is inaccessible for an Agree relation with T, leading to its realization as a pronominal clitic. We show that agreement in Ardalani Kurdish closely parallels the agreement in Laki, except that it lacks a clitic cluster restriction. Without this restriction, a deficient pronoun remains in situ, and crucially its low realization consistently correlates with the absence of agreement. In line with previous findings (Johns 2000; Deal 2016; Haig 2017; Carrier 2020; Yuan 2022), we conclude that ergativity is not a unitary phenomenon. Rather, it should be characterized as a system resulting from the interaction between various parameters.

Keywords Ergativity · Alignment · Agreement · Case · Laki · Kurdish · Clitic cluster restriction

✉ S. Taghipour
sahar.taghipour@ucla.edu

A. Kahnemuyipour
a.kahnemuyipour@utoronto.ca

¹ Department of Linguistics, UCLA, Campbell Hall, 3125, Los Angeles, CA, USA

² Department of Language Studies, University of Toronto Mississauga, Maanjiwe Nendamowinan Building 3359, Mississauga Road, Mississauga, ON L5L 1C6, Canada

1 Introduction

Ergativity refers to a grammatical system in which the object of a transitive verb (O) and the subject of an intransitive verb (S) pattern alike and differently from the subject of a transitive verb (A). In such a system, S and O are marked absolutive, while A is marked ergative (Dixon 1979, 1994, among others). Languages employ different mechanisms to distinguish their alignments. Case and cross-referencing/agreement are the two mechanisms commonly used across languages. In languages using case to distinguish their alignments (e.g., Niuean (Polynesian: Massam 2006; Legate 2008; Tollan 2019); Dyirbal (Pama-Nyungan: Dixon 1994; Coon and Preminger 2017)), S and O bear absolutive case, and A bears ergative case. In such languages, ergative case is usually overtly expressed, as opposed to absolutive case which could have a null realization. Some languages employ an agreement/cross-referencing system to distinguish their alignment (e.g., Jacaltec (Mayan: Craig 1977); Chol (Mayan: Coon 2010); Abaza (Caucasian: Dixon 1994)). In such languages, S and O usually use the same agreement markers in contrast to A. In a number of other ergative languages (e.g., Basque (Laka 1993, 2006; Rezac et al. 2014); Hindi-Urdu (Indo-Aryan: Mahajan 2012; Mohanan 1994); Warlpiri (Pama-Nyungan: Legate 2002, 2008); Zazaki and Kurmanji (Northwestern Iranian: Haig 2008; Akkuş 2020), ergativity can manifest itself through both an overt case distinction and agreement marking.

Ergative languages are usually characterized as ergative only in a subset of their grammar (Silverstein 1976; Coon and Preminger 2012). This property has led to the emergence of split ergative alignments, where a language follows an accusative pattern under certain conditions, while following an ergative pattern under other conditions. Split ergativity is subject to language-specific constraints, leading to cross-linguistic variation. One common type of split is the aspectual split. In languages with an aspectual split (e.g., Basque, Hindi-Urdu), the perfective aspect follows an ergative pattern, whereas the imperfective aspect tends to follow an accusative pattern (Dixon 1979; Laka 2006; Coon 2010, 2013; Coon and Preminger 2012).¹

In this paper, we examine split ergativity in Laki, an understudied Northwestern Iranian language. Under some classifications (e.g., Öpengin and Mohammadirad 2022), Laki is classified as its own isolate, distinct from the Kurdish language family. However, here, following much of the dialectal studies on Iranian languages (e.g., McCarus 2009; Dabir-Moghaddam 2013, among others), we are classifying Laki as a Southern branch of Kurdish. The population of Laki monolingual speakers has been estimated to be around 150,000 (according to Ethnologue, Eberhard et al. 2025).²

Laki follows a split ergative alignment, which is found in many other Iranian languages. The split is traditionally associated with tense (Thackston 2006), with “present” showing accusative alignment and “past” showing ergative alignment. Following much previous studies, we will take the split to be conditioned by the verbal stem. Accordingly, present stem verbs follow the accusative alignment, while the past

¹For a discussion of other types of split ergativity, such as person split, clause type split or split intransitivity, see Silverstein (1976), Mithun (1991), Dixon (1994), Coon and Preminger (2017), among others.

²The data in this paper is elicited from four native speakers of the language and is based on the variety of Laki which is spoken in the city of Kuhdasht and its surrounding areas in the western parts of the Lorestan province of Iran.

stem verbs follow the ergative alignment. Furthermore, the alignment in Laki is reflected through agreement rather than an overt case system. This paper provides an account for the agreement patterns in both accusative and ergative alignments. We argue that the agreement pattern in the ergative alignment arises from the existence of two loci of agreement, one on *v* and the other on T, as opposed to the accusative alignment, where there is only a single locus of agreement on T. We posit that *v* is the locus of inherent agreement with the external argument (Nash 1996; Legate 2002, 2008; Massam 2006; Woolford 2006; Aldridge 2008; Mahajan 2012). As a result, the φ -features of the ergative argument are encoded via cross-referencing by a set of markers which we refer to as Series II clitics. T is another locus of φ -agreement. However, the Agree relation of an argument with T shows a much more intriguing pattern. In the context of the accusative alignment or in an intransitive structure in the past (i.e., the absolutive alignment), where there is no Agree relation with *v*, the Agree with T is straightforwardly established with the subject and realized as a verbal suffix, what we call the Series I agreement suffix. In the ergative alignment, where *v* establishes an Agree relation with the external argument, we find a mixed pattern with respect to T agreement, where the straightforward T agreement, realized as a verbal suffix, only occurs with some null arguments (taken as deficient pronouns). We show that this Agree relation is established only in contexts where the realization of a deficient pronoun leads to a clitic cluster formation, disallowed in Laki (Taghipour 2017; see also Öpengin 2013 for a similar restriction in other Kurdish varieties). The presence of such a restriction in Laki leads to the raising of a deficient pronoun to the edge of the *v*P phase, deeming it accessible for an Agree relation with T. We further posit that any deficient pronoun failing to establish an Agree relation with T has in fact remained low, with the phasehood of *v*P rendering it inaccessible for the Agree relation with T (Phase Impenetrability Condition (PIC), Chomsky 2001). This is the pattern also obtained with full DP arguments, which remain low within the *v*P phase. This proposal accounts for various patterns in the ergative alignment, including clauses with a direct object, a prepositional (indirect) object, and a possessive DP argument. The current proposal receives further support when we consider agreement patterns in complex predicate constructions.

We further substantiate our proposal by investigating the agreement patterns in another Kurdish dialect, namely Ardalani (Central Kurdish). We show that agreement in Ardalani Kurdish is very similar to Laki, with the only difference that this language lacks the clitic cluster restriction found in Laki. As a result, in the absence of a clitic cluster restriction, a deficient pronoun consistently remains low, even when adjacent to another clitic. Crucially, in this dialect of Kurdish, the realization of a deficient pronoun in situ correlates consistently with the absence of an Agree relation with T. The existence of Ardalani Kurdish, therefore, provides indirect support for the existence of the proposed clitic cluster restriction in Laki. Thus, we see how a small microparametric difference can lead to significant agreement differences in closely related languages. This, in turn, renders support for the idea that ergativity is not a unified phenomenon, and instead should be taken as a constellation of a range of linguistic properties (along the lines of Johns 2000; Deal 2016; Haig 2017; Carrier 2020; Yuan 2022).

The paper is organized as follows. In Sect. 2, we show the basic alignment patterns of Laki involving a direct object. In Sect. 3, we provide our proposal for agree-

Table 1 Series I agreement suffixes

1SG	2SG	3SG	1PL	2PL	3PL
-(e)m	-(i)n	-i/∅ ³	-(i)men	-(i)nān	-(e)n

Table 2 Series II clitics

1SG	2SG	3SG	1PL	2PL	3PL
=(e)m	=(e)t	=i	=mān	=tān	=(ā)n

ment patterns in basic transitive constructions involving a direct object. In Sect. 4, we substantiate our proposal with respect to the clitic cluster restriction by examining agreement patterns in other transitive constructions with a prepositional (indirect) object and a possessive argument. We also provide further support for our proposal from data involving complex predicates and agreement patterns in Ardalani Kurdish. In Sect. 5, we discuss possible alternative accounts for Laki agreement patterns and establish that the analysis proposed in this paper offers the best coverage. Section 6 concludes the paper.

2 Laki alignment

Laki alignment embodies a mixture of verbal suffixes and clitics. Henceforth, the verbal suffixes are referred to as Series I agreement suffixes, and the clitics are referred to as Series II clitics. These markers have different distributions. While Series I agreement suffixes are used only as verbal suffixes to mark agreement, Series II clitics are used in a variety of contexts: direct and indirect object and possessor pronouns as well as agreement with an ergative subject. We will illustrate each of these uses below.⁴ Table 1 and Table 2 show Series I and Series II markers, respectively.

Laki illustrates an instance of split ergativity which is sensitive to the verbal stem, traditionally referred to as past and present stems. We will elaborate on this issue in Sect. 2.3 and show that irrespective of the grammatical tense of the clause, the accusative alignment emerges in clauses with a present stem verb, while the ergative alignment is obtained in clauses with a past stem verb. First, let us look at the general agreement patterns.

2.1 Nominative-accusative alignment

In clauses with a present stem verb, an accusative alignment is obtained consistently. Example (1) illustrates an intransitive clause whose subject (S) is tracked by a Series I agreement suffix. (2) shows a transitive clause whose subject (A) is similarly tracked

³The Series I agreement suffix for the [3SG] is *-i* in the present and null in the past tense.

⁴The use of ergative markers as pronouns is a property observed in some other ergative languages as well. For example, see Johns (1992) for the use of ergative markers as possessive pronouns in Inuktitut.

by a Series I agreement suffix. Note that, as shown in (2), there is no agreement with the object. Example (3) shows that in the absence of a full DP object, its pronominal form is realized as a Series II clitic. For ease of illustration, we use Roman numeral superscripts to mark Series I agreement suffixes and Series II clitics. Note that Kurdish varieties, similar to the majority of Iranian languages, are pro-drop. Therefore, in some examples, the subject is either dropped or is in brackets to show optionality.

- (1) (to) beland=a ma-xan-in^I.⁵
 you loudly=PRS.IND DUR-laugh.PRS-2SG
 ‘You laugh loudly.’
- (2) āyl-ela imeru sif-ela=a m-a:r-en^I.
 child-PL.DEF today apple-PL.DEF=PRS.IND DUR-eat.PRS-3PL
 ‘The children (will) eat the apples today.’
- (3) āyl-ela imeru=a m-a:r-en^I=ān^{II}.
 child-PL.DEF today=PRS.IND DUR-eat.PRS-3PL=3PL
 ‘The children (will) eat them today.’

The above data clearly show that in clauses with a present stem verb (i.e., the accusative alignment), S and A pattern alike in that they both are tracked by Series I agreement suffixes. The object can be realized as a full DP or as a Series II clitic.

2.2 Ergative-absolutive alignment

Past stem clauses follow an ergative alignment. The same series of agreement suffixes and clitics, used in the accusative alignment, are used in the ergative alignment as well. In an intransitive clause, the subject (S) is consistently tracked by a Series I agreement suffix. (4a) illustrates the agreement pattern of an unaccusative verb, and (4b) illustrates the pattern of an unergative verb. By contrast, in a transitive clause (5–6), the subject (A) is tracked differently. The subject of these clauses are marked by Series II clitics appearing on the first syntactic constituent within the verb phrase. We should also note that marking the φ -features of the subject by second-position clitics within the verbal domain is a common property in Iranian languages. Similar patterns have been attested in other languages; see Karimi (2010, 2013), Öpengin (2013, 2019), Mohammadirad (2020), and Akkuş et al. (2025) for different Kurdish varieties, Moghaddam (2016) for Davani (Northwestern Iranian), Hippisley and Stump (2011), and Parker (2020) for Shughni (Eastern Iranian). Similar second position clitics have been attested in non-Iranian languages as well (see, e.g., Kahnemuyipour and Megerdooian 2011 for Armenian clitics).⁶ In (5–6), the direct object is a full DP ‘apple’ and a strong pronoun ‘you,’ respectively. In these examples, the Series II

⁵We have used Leipzig abbreviations throughout the paper.

⁶We do not attempt to provide a detailed account for the positional distribution of Series II clitics tracking the subject in a past transitive clause. There seem to be some constraints on the distribution of these clitics in Laki, which require a closer examination. While arguments typically host the subject clitic (when occupying the initial position within the verb phrase), adverbials cannot be a host for subject clitics. This is the case even with low adverbials which have been argued to occupy the first position within the verb phrase in some other Iranian languages (e.g., Kahnemuyipour 2009 for Persian). This pattern could be related to the structural position of adverbs in Laki, which could be taken to be a position above the verb

clitic tracking the subject appears on the object which occupies the initial position within the verb phrase. Note that no agreement is obtained with the object DP, and as such the verb remains in its default $\emptyset$ (3SG) form.

- (4) a. (ima) zu ras-i-men^I.
 we early arrive-PST-1PL
 ‘We arrived early.’
 b. (to) fera xu par-i-n^I.
 you much well jump-PST-2SG
 ‘You jumped very well.’
- (5) (to) sif-ela=t^{II} wārd.
 you apple-PL.DEF=2SG eat.PST.3SG
 ‘You ate the apples.’
- (6) (owen) ton=n^{II} di.
 they you=3PL see.PST.3SG
 ‘They saw you.’

Crucially, unlike the pattern shown in (5–6) above, in a transitive clause with a null direct object (7–8), the null object is tracked by a Series I agreement suffix on the verb. The comparison of the pattern in (5–6) above with an overt object, with the pattern in (7–8) involving a null object, highlights this important difference: in (5–6), when the object is overt, we see no agreement suffix in the clause. By contrast, in (7–8), when the object is null, we see Series I agreement suffixes tracking the null object (see Karimi 2010, Öpengin 2013, 2019; Mohammadirad 2020; Akkuş et al. 2025 for similar patterns in other Kurdish varieties).

- (7) wārd-en^I=et^{II}.
 eat.PST-3PL=2SG
 ‘You ate them.’
- (8) di-n^I=ān^{II}.
 see.PST-2SG=3PL
 ‘They saw you.’

Based on the description given above, in the ergative alignment, when the object is null, S and O pattern alike in that their φ -features are tracked by Series I agreement suffixes on the verb. These arguments pattern differently from A, whose φ -features are consistently tracked by Series II clitics, appearing after the initial element within the verb phrase (5–6). Table 3 summarizes the basic agreement patterns examined so far (underlining tracks subject marking).

2.3 The locus of split

Before we turn to an analysis of the agreement facts shown above, we need to address a question with respect to the locus of the split in Laki’s agreement alignment.

phrase (along the lines of Cinque 1999, 2002, 2004 and Pollock 1997). Furthermore, the verbal head itself can also host the subject clitics, when it occupies the initial position within the verb phrase. These patterns raise interesting questions about second-position clisis, which we leave for future work.

Table 3 Object and subject marking across alignments

ACCUSATIVE			
Intransitive	<u>Subject</u>		V-Series I
Transitive	<u>Subject</u>	Overt Object	V-Series I
Transitive	<u>Subject</u>		V-Series I=Series II (Pronominal Object)
ERGATIVE			
Intransitive	<u>Subject</u>		V-Series I
Transitive	<u>Subject</u>	Overt Object=Series II	V
Transitive	<u>Subject</u>	(Null Object)	V-Series I=Series II

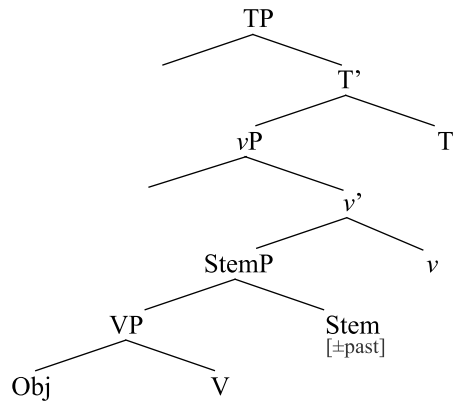
This type of split is very widespread in Iranian languages and more particularly in Kurdish varieties (see, e.g., Haig 1998, 2008, 2017; Karimi 2010, 2013; Gündoğdu 2011; Baker and Atlamaz 2014; Legate 2017; Öpengin 2013, 2019; Taghipour 2017; Mohammadirad 2020; Akkuş 2020; Akkuş et al. 2025 among others). In descriptive grammars on Iranian languages, this split has been treated as depending on tense (see, e.g., Thackston 2006), suggesting that accusative alignment is obtained in the present-tense clause, while the ergative alignment emerges in the past-tense clause. However, from an empirical perspective, the locus of split in Laki cannot be tense. Importantly, besides past tense verbs (which we saw above), the ergative pattern emerges in the present/future perfect paradigms as well. As shown in (9), with a present/future perfect verb, the subject is tracked by Series II clitics and the phi-features of a (null) pronominal object are expressed by Series I agreement suffixes, leading to the emergence of the ergative pattern.

- (9) a. (ima) wārd-en^I=mān^{II}-a
 we eat.PST-3PL=1PL-PERF
 ‘We have eaten them.’
 b. owen sow-šoaki kol sif-ela=n^{II} wārd-iya.
 they morning all apple-PL.DEF=3PL eat.PST-PERF.3SG
 ‘They will have eaten all the apples tomorrow morning.’

Often split ergative systems are attributed to an aspectual difference, as suggested for other languages, particularly a perfective-imperfective split (see Dixon 1979; Coon 2010, 2013; Coon and Preminger 2012, among others). In Laki, however, the split cannot be attributed to a perfective-imperfective contrast either, as the ergative pattern is also found in the past progressive clauses (10).

- (10) ma-wārd-en^I=mān^{II}.
 PROG-eat.PST-3PL=1PL
 ‘We were eating them.’

In diachronic studies (e.g., Bynon 2005; Haig 2008; Karimi 2010), it is argued that the split ergativity across Iranian languages is resulting from using the past stem evolving from a past participle/present perfect construction. In some recent proposals on split ergative alignments across Iranian languages, the source of the split has been

Fig. 1 Clausal structure of Laki

attributed to the verbal stem by referring to what is traditionally known as present versus past stem (see Haig 1998, 2008, 2017; Baker and Atlamaz 2014; Legate 2017; Taghipour 2017; Akkuş 2020). Akkuş (2020) provides a structural account for the stem-based split ergativity in a number of Iranian languages. Under this proposal, a structural position is specified for the verbal stem, namely StemP (headed by Stem⁰) bearing a [$\pm$ past] feature. StemP is then considered as the locus of the split. In the context of Laki agreement patterns, subject Series II clitics all appear with verbs having what is known as the past stem of the verb. The past stem verbs include all past tense verbs, present perfect (9a) and future perfect verbs (9b). The ergative pattern is also obtained in the past progressive (10) as it uses the past stem.

Considering the empirical observations in Laki and following the insights of previous proposals for other Iranian languages, we take the locus of the split to be on the verbal stem: Verbs with a past stem follow the ergative alignment, while verbs with a present stem follow the accusative alignment. Following Akkuş (2020), we posit a StemP and take its head as the locus of the split. We further consider StemP in a structurally higher position than VP. This structural relation is reflected in the surface ordering of the verb and the tense marker which is suffixed to it.⁷ Figure 1 illustrates the basic clausal structure we are assuming here.

So far, we have seen the agreement patterns in basic transitive clauses involving a direct object. We observed that the subject is tracked by Series II clitics that appear in the second position within the verb phrase. Furthermore, we saw that a contrast arises in the agreement with the direct object depending on the object type: when the object is overt, there is no additional agreement marking in the clause. By contrast, when the object is null, it is tracked by a Series I agreement suffix on the verb. In the next section, we will provide the analysis for the basic agreement patterns shown

⁷An anonymous reviewer suggests an alternative analysis of past progressive which takes progressive to be a functional projection above perfective (a kind of “secondary imperfective”). That way, we may be able to consider perfectivity as the locus of the split. This is an interesting idea worth further investigation. Importantly, such a proposal would need to capture the difference of behavior between present and past progressive, with the ergative pattern realized only in the past progressive. Furthermore, it needs to consider simple past as a subset of a perfective paradigm since the ergative pattern is also obtained in simple past paradigms.

so far, before proceeding to look at further patterns in Sect. 4 which substantiate this analysis.

3 Analysis

In the previous sections, we looked at the agreement patterns in the accusative and ergative alignments involving transitive clauses. In the accusative alignment, it was shown that there is agreement only with the subject which is realized as a Series I agreement suffix. In the ergative alignment, we see a different agreement pattern. The subject is tracked by a Series II clitic. Furthermore, a null direct object always triggers agreement since it is always tracked by a Series I agreement suffix, as opposed to an overt direct object which does not trigger agreement. We propose that the two alignments differ from one another in terms of the loci of agreement. We argue that *T* and *v* are two loci of φ -agreement in the ergative alignment. By contrast, we posit only one locus of φ -agreement in the accusative alignment, which is taken to be the *T* head. With these considerations in mind, let us move toward the detailed analysis of the agreement patterns examined above. In Sect. 4, we will look at further agreement patterns that fall out from the analysis we put forth in this section.

3.1 Present-stem clauses

As shown in Sect. 2.1, in present-stem clauses, Laki follows an accusative alignment. Subjects are consistently tracked by Series I agreement suffixes. In this alignment, the object does not trigger any agreement. It was shown that in the absence of a full DP object, its pronominal counterpart is realized as a Series II clitic. It is worth noting that the use of pronominal clitics in this context is also found in Iranian languages with a consistent accusative pattern, e.g., Persian. These pronominal clitics cannot double overt objects in Laki. We take these deficient pronominal arguments to have a smaller structure, standing in contrast to their overt lexical or strong pronominal counterparts (Cardinaletti and Starke 1999, and subsequent authors). The schematic summary below illustrates the agreement patterns with present-stem verbs. In this schema and other schemas presented in this paper, underlining tracks subject agreement. Further, we show lexical objects and strong pronouns as DPs and deficient pronouns as φ/φ Ps.⁸ When the deficient pronoun is realized as a Series II clitic, we

⁸Cardinaletti and Starke (1999) present a set of criteria, such as coordination or modification by certain adverbs to distinguish strong pronouns from deficient pronouns. We have abstracted away from these details here and suffice to point out that these diagnostics extend to the Laki case. For Cardinaletti and Starke, deficient pronouns can be further classified into weak pronouns and clitics, a distinction which has no bearing on our discussion here. Crucially, Cardinaletti and Starke assign a bigger structure to strong pronouns and a smaller structure to deficient pronouns. They use $C_L P$ for strong pronouns, $\Sigma_L P$ for weak pronouns, and $I_L P$ for clitics. We have translated this contrast into DP to represent the bigger structure of strong pronouns and φP to represent the smaller structure of deficient pronouns. This distinction is tangential to Dechaine and Wiltschko's (2002) contrast between pro-DP, pro- φP , and pro-NP. As they note in their work, all of Cardinaletti and Starke's classes fall under their pro- φP , with the structural differences obtained in a different manner. The important issue for this paper is a distinction between strong and deficient pronouns in terms of their structural size. The details of how this difference should be captured is beside the point.

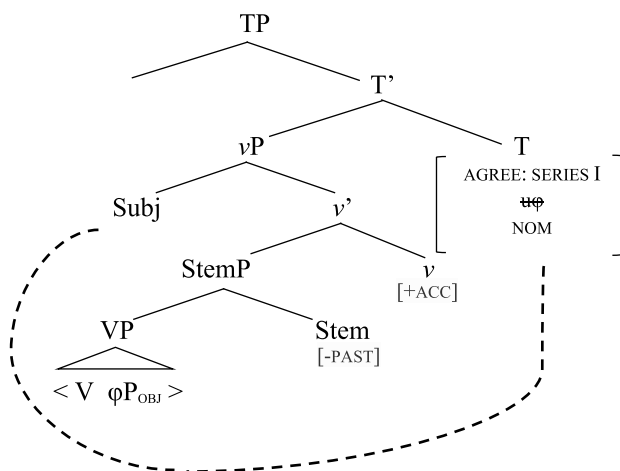


Fig. 2 Agreement in clauses with present stem

use the notation Series II($\varphi/\varphi P$). In (11), the optionality of the object indicated by the brackets corresponds to an intransitive clause.

- (11) Present Stem
- Full DP/Strong Pronoun $\underline{DP_{SBJ}}$ (DP_{OBJ}) V-Series I
 - Deficient Pronoun $\underline{DP_{SBJ}}$ V-Series I(=Series II($\varphi/\varphi P_{OBJ}$))

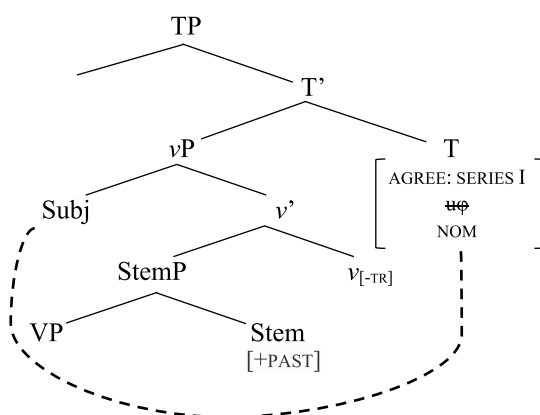
We propose that in present-stem clauses, v selects for a [-PAST] StemP. As such, vP cannot be a locus of ergative case, leading to an accusative alignment. In such constructions, T, the only locus of an unvalued φ -bundle, probes downward and establishes an Agree relation with the subject (external argument in Fig. 2). Through this Agree relation, the φ -features on T are valued and realized as a Series I agreement suffix. Furthermore, we posit that in transitive clauses, the object receives accusative case by v . In present-stem clauses, the deficient pronoun remains in its merge position and is realized as a Series II clitic.

3.2 Past-stem intransitive clauses

In an intransitive past-stem clause (Fig. 3), there is only one locus of φ -agreement, which is T. Similar to what is shown in Figure (2) above, the Agree relation is established between T and the external argument. By virtue of this Agree operation, the φ -features on T are valued, and as a reflex, the external argument is tracked by a Series I agreement suffix (12) (underlining tracks subject agreement).

- (12) Past Intransitive Stem
- $\underline{DP_{SBJ}}$ V-Series I

As shown in the data examined above, the ergative pattern emerges in transitive clauses with a past stem only. This stands in contrast to intransitive clauses with a past stem (12), where the ergative pattern is not obtained. We take transitive v to be

Fig. 3 Past intransitive: Subject agreement

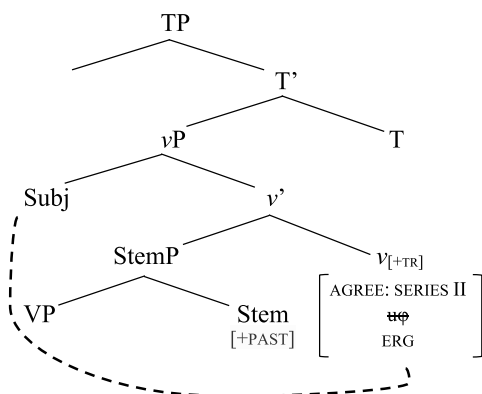
the locus of ergative case. By contrast, we assume that *v* in an intransitive clause is defective, and as such is unable to assign ergative case to its external argument. Following Akkuş (2020), we interpret the defectivity of the intransitive *v* as the absence of a [+TR] feature on *v* (hence the [-TR] feature in Fig. 3). Accordingly, the ergative pattern is restricted to a [+TR] *v* selecting a past stem.⁹ In the following section, we will discuss further details regarding case and agreement operations in the ergative alignment.

3.3 Past-stem transitive clauses with a direct object

In this subsection, we provide an analysis for the agreement patterns in the ergative alignment involving a direct object. Regarding a transitive past-stem clause, we posit that T and *v* are two loci of φ -agreement. The *v* head Agrees with the external argument. The external argument receives inherent ergative case by *v* (along the lines of Nash 1996; Legate 2002, 2008; Massam 2006; Woolford 2006; Aldridge 2008; Mahajan 2012; Karimi 2017, among others). As a result of this Agree relation, the φ -features of the external argument are tracked by Series II clitics (Fig. 4). Given the absence of overt case marking in Laki, one may question the need for any reference to case in an account of the ergative agreement patterns, instead relying only on the agreement between a φ -Probe on *v* and the external argument (along the lines of Kalin and van Urk's 2012, 2015 account of agreement in Neo-Aramaic, among others). While the φ -agreement between *v* and the external argument per se may not require case as a licensing mechanism, case provides us with a feasible explanation as to why no φ -agreement is established between T and the external argument. Under this view, the external argument receives ergative case through agreement with *v* and is rendered inactive (Chomsky 2001). Additionally, it is important to note that in some other Kurdish varieties, e.g., Kurmanji (Haig 2008; Gündoğdu 2011; Karimi

⁹ An anonymous reviewer raises a question with respect to defectivity of unergatives with putative internal arguments, e.g. "I ran a mile/the marathon". In Laki, such unergatives follow the intransitive pattern with the external argument being tracked by a Series I suffix. Accordingly, such putative internal arguments may need to be treated as adjuncts, as suggested by the reviewer.

Fig. 4 Past transitive: Subject agreement



2013; Akkuş 2020), case is sometimes overtly realized and case licensing seems to offer a plausible way to account for the parametric variation across Kurdish varieties (see Taghipour 2024).¹⁰

Under the current proposal, we take Series II clitics as agreement markers tracking the ϕ -features of the transitive subject (for similar analyses see Roberts 2000, 2001 on Pashto, Moghaddam 2016 on Davani and Akkuş et al. 2025 on other dialects of Kurdish).¹¹ It should be noted that in some previous accounts, similar clitics in Central dialects of Kurdish have been analyzed as an instance of clitic doubling (Karimi 2010, 2013, 2017) (see also Parker 2020 for a doubling analysis of the subject second position clitics in Shughni, Eastern Iranian). There are certain facts that militate against a clitic doubling analysis of these clitics in Laki. For one, these clitics are obligatory in all contexts in Laki. Typically, in known cases of clitic doubling, the doubled clitic is either optional or obligatory only in certain contexts. Moreover, Laki does not allow

¹⁰There are different views on ergative case. Under dependent case approaches (Marantz 1991, further developed in subsequent work by Bittner and Hale 1996; Baker 2014, 2015), ergative case is taken as a dependent case assigned to a higher argument when two arguments are in the same licensing domain. Some approaches take ergative as a structural case assigned under the raising of either the external or the internal argument to the specifier of a phrase assigning ergative case (for proposals along these lines see Rezac et al. 2014; Deal 2019). Under a different structural approach, ergative case is argued to be assigned under multiple agreements (see Clem 2019). It is worth noting that under certain conditions in Laki, a specific class of complex predicates shows ergative agreement with their internal argument as well. The examination of agreement patterns with these specific group of complex predicates and its implications for ergative case in this language is not the concern of the current paper (see Taghipour 2024).

¹¹An anonymous reviewer raises an issue about the agreement mechanism we have proposed, questioning the association between inherent case assignment and v 's Agree relation with the subject. According to the reviewer, under the assumption that Agree is downward (Chomsky 2001), v should be able to agree with the internal argument, especially because the external argument has not yet merged. They provide the example of Georgian, which exhibits inherent ergative case and yet the probe on v prioritizes agreement with the internal argument. First, we work under the assumption that all Agree operations apply after the whole phase is built (Chomsky 2000, 2001), hence both arguments are, in principle, available for agreement at the vP phase. Moreover, for us, case and agreement go hand in hand, under the Agree relation (Chomsky 2001). There are other languages which, like Laki, show this association between inherent ergative case and agreement. In other words, while the external argument receives inherent ergative case, it also has to control agreement on v , leading to what has been referred to as “inherent agreement” (Wiltchko 2006; Coon 2017; Forbes 2018; Coon et al. 2021). The dissociation the reviewer refers to seems to be necessary for the Georgian pattern.

object clitic doubling, even though this is common in Iranian languages. It would be strange for the language to allow clitic doubling only with subjects and only in the past stem environment. The fact that these clitics in Laki appear obligatorily and irrespective of the overt presence of the subject seems incompatible with a doubling analysis for these clitics (see also Öpengin 2019, where similar clitics in Central Kurdish have been taken as pronominal elements that have historically developed into agreement markers).

Let us turn to the second locus of φ -agreement, namely T. The Agree relation established between the external argument and v , discussed above, leaves T available for further Agree with another argument. As we saw in Sect. 2, depending on the object type, two different patterns are obtained. With an overt object, realized either as a full DP or a strong pronoun (5–6), we see no agreement between T and the object, indicated by the absence of Series I agreement suffixes in these constructions. By contrast, when the object is null, we see the expected Series II clitics tracking the φ -features of the external argument, but in addition, we find a Series I agreement suffix on the verb tracking the null object (7–8). This contrast raises the question of why the agreement with T becomes available only in this context, i.e., how are the φ -features of a deficient pronoun (and not a full DP object) accessible to T here? This pattern is reminiscent of the complementarity between strong pronouns (or full DPs) and subject agreement in Celtic languages (see, for example, Joutteau and Rezac 2006 for Breton and McCloskey and Hale 1984 for Irish). There is a debate in the literature about the preferred account for this complementarity. Some view it as a case of incorporation of the deficient pronoun into the verb (Anderson 1982; Doron 1988; Ackema and Neeleman 2003), and others take it to be the result of agreement (McCloskey and Hale 1984; Stump 1984; Legate 1999) between T and the deficient pronoun and seek an explanation for why this Agree relation is absent with full DPs or strong pronouns.

It is important to note that in Laki, the φ -features of the deficient pronoun are clearly realized as agreement suffixes, both in terms of form and position. These are the same agreement suffixes found in the straightforward accusative alignment. This distribution provides support for an Agree account of these markers in Laki. We take the null object to be merged as $\varphi P/\varphi$ (i.e., a deficient pronoun). We further propose that the presence of Series I agreement suffixes with null objects is the result of an Agree relation between T and $\varphi P/\varphi$. Under this view, Series I suffixes are seen as the consistent realization of φ -agreement with T across all tenses and contexts. (13a–b) provide a schematic illustration of the agreement patterns obtained with an overt DP object as opposed to a deficient pronoun (underlining tracks subject agreement and bold tracks agreement with a deficient pronoun).

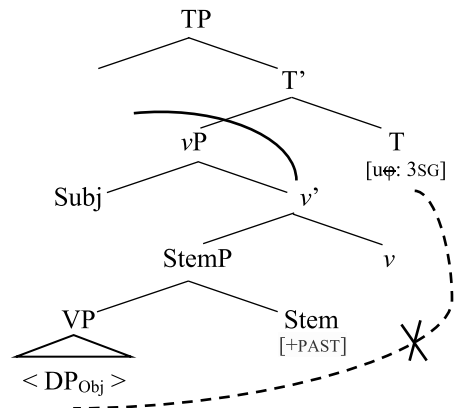
(13) Past Transitive: Direct Object

- | | | | |
|---------------------------|-------------------------|--------------------------------------|------------------------------|
| a. Full DP/Strong Pronoun | <u>DP_{SBJ}</u> | DP _{OBJ} = <u>Series II</u> | V |
| b. Deficient Pronoun | <u>DP_{SBJ}</u> | $\varphi P/\varphi_{OBJ}$ | V-Series I= <u>Series II</u> |

Our proposal regarding the contrast between (13a–b) is twofold. First, we posit that vP in Laki is a phase.¹² Thus, T and the object merged inside vP are in two

¹² An anonymous reviewer raises a question with respect to vP phasehood. First, it is important to clarify that we are not making a distinction between vP , VoiceP or other similar functional projections in the

Fig. 5 Past transitive: Failure of agreement with a full DP object



different phases (Chomsky 2000, 2001). As such, the object, merged within *vP*, is not an accessible Goal for the Probe in *T* (Chomsky's PIC). As a result, no Agree relation is established between *T* and the overt object, leading to the default [3SG] inflection on the verb (Fig. 5). It is worth noting that Kurdish ergative structures have been argued to be historically derived from the past participle/present perfect constructions, hence retaining some nominal/participial properties (see Holmberg and Odden 2004; Haig 2008; Karimi 2010). One such property has been taken to be the inability to assign accusative case to the theme argument (see Karimi 2010, 2013 for discussion). In line with this literature, we assume that the ergative *v* head in Laki does not have the ability to assign accusative case. This proposal raises a question with respect to the case licensing of the object. We assume that at PF a default accusative (=Oblique) case (Schütze 2001) is assigned to the overt theme argument, which has remained caseless in the syntactic derivation. Under this approach, a nominal does not necessarily value its case feature by operations in syntax. Rather, case can be handled post-syntactically at PF. In Laki, like many other Iranian languages, case is not overtly marked on full DPs (or strong pronouns), while pronominal clitics always appear in the oblique form. It is important to note that in some dialects, such as Ardalani Kurdish, the oblique form of the pronominal clitics is found across all tenses and contexts (see Sect. 4.4), but its distribution is constrained in Laki, in ways to be elaborated below.

Second, regarding the Agree relation between *T* and a deficient pronoun in (13b), we posit that, unlike full DP objects, deficient pronouns become accessible for an

extended verbal domain. We can abstract away from these differences and use "lower phase domain" as a cover term. The existence of a lower phase domain is a standard assumption in minimalism (Chomsky 2000, 2001). In the context of Iranian languages as well, many have postulated a lower phase domain (see S. Karimi 2005; Kahnemuyipour 2009; Moghaddam 2016; Parker 2020, among others). Some have suggested that there may be variation among languages or syntactic contexts in this regard. For example, Baker and Atlamaz (2014), Atlamaz and Baker (2016) propose the existence of a lower phase domain only in the present (as opposed to the past) tense in Kurdish. Taghipour (2024) uses the presence/absence of a lower phase domain in Kurdish varieties as a basis to explain the variation in agreement patterns in these languages. To the extent that the current proposal succeeds in accounting for the agreement patterns in Laki, it provides further support for the presence of a lower phase domain in this language. A closer examination of phasal structure in Iranian languages is beyond the scope of the current paper.

Agree relation with T, as they move to the edge of the vP phase. This reduces the question to the underlying reason for the raising of deficient pronouns to the edge of the phase. Do all deficient pronouns in Laki move upwards systematically (as, for example suggested for German and Hebrew (Laenzlinger and Shlonsky 1997) and for some varieties of Inuit (Yuan 2022 and references therein))? While such a systematic raising of all deficient pronouns would capture the facts we have seen so far, in Sect. 4, we will see cases of deficient pronouns remaining in their base position in certain contexts, undermining the postulation of such a consistent raising to the phase edge. If deficient pronouns do not consistently raise to the phase edge, what are the conditions under which the deficient pronoun moves to the edge of the phase? The surface generalization that seems to arise, when we look at the fuller picture (see Sect. 4), can be formulated as a clitic cluster restriction (14). Based on this restriction, deficient pronouns cannot be realized on an element which hosts another Series II clitic (see also Taghipour 2017; for similar restrictions see Arregi and Nevins 2012 for Basque, Tyler 2019 for Choctaw, and Öpengin 2013 for some other Kurdish varieties¹³). Below, after reviewing the basic agreement mechanism, we return to a discussion of the nature of the clitic cluster restriction, where we provide a more refined formulation.

- (14) Clitic Cluster Restriction (CCR) in Laki: *X=Series II=Series II (to be revised)

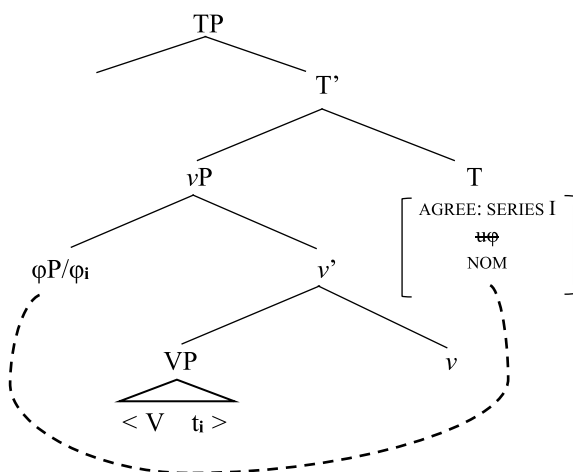
We propose that deficient pronouns move to the edge of the vP phase and become accessible for an Agree relation with T, because their realization in base position leads to a violation of the CCR. This raising leads to an Agree relation between T and the deficient pronoun, which is realized as a Series I agreement suffix on the verb. Clitic clustering is exactly the condition obtained in basic transitive clauses with a direct object deficient pronoun (13b). In this context, the host of the Series II clitic, which hosts the subject Series II clitic is V, which in turn cannot host an additional Series II clitic for the direct object. This leads to the raising of the deficient pronoun to the edge of vP and its Agree relation with T (Fig. 6).¹⁴ In Sect. 4, we provide further support for the existence of the CCR and its consequences for the raising of deficient pronouns and agreement in ergative contexts.

A question may arise as to what happens to the deficient pronoun $\varphi P/\varphi$ when the Agree relation with T is established. Why do we not see it realized as a Series II clitic on some other element in addition to the Series I agreement suffix on the verb?

¹³Öpengin (2013) takes this restriction to be a ban on the sequence of either two adjacent clitics or two clitics in a preverbal domain. In Sect. 4, we present several data-points supporting the view that in Laki, the ban is specifically on the sequence of two adjacent clitics.

¹⁴An anonymous reviewer asks why we should even expect the direct object to be realized as a Series II (Oblique) clitic, leading to a violation of the CCR, given the Absolutive nature of the direct object in the Ergative alignment. In the framework adopted in this paper, Absolutive is a derived property. The direct object becomes Absolutive by virtue of establishing an Agree relation with T. Deficient pronouns that remain in the lower phase domain cannot establish an Agree relation with T and are as such realized as default Accusative (=Oblique). It is worth noting that in a variant like Ardalani, which does not have the CCR, no agreement is obtained with T and an Oblique object clitic is found next to the subject clitic, providing support for the Oblique status of these clitics and the agreement being triggered by the CCR (see Sect. 4 for details). In Sect. 4, we see more examples of the CCR-dependent complementarity between Series I agreement markers and Oblique clitics in Laki.

Fig. 6 Past transitive:
Agreement with a $\varphi P/\varphi$ (direct
object)



We posit that whenever an Agree relation is established with a deficient pronoun, the deficient pronoun is deleted. We take this deletion process to be directly related to the deficient pronoun's Agree relation with T. This idea can be extended to all cases of pro-drop cross-linguistically. In the context of null subjects, we are also dealing with a φ -bundle which agrees with T and has a null realization. In both these cases, when the Probe establishes an Agree relation with the deficient pronoun, the deficient pronoun is marked for deletion at PF. As a result, while the pronoun is interpreted at LF, it has a phonetically null realization. In other words, the object deletion posited for Laki is just another example of pro-drop, albeit in a different context. It is worth mentioning that a similar pattern has been attested in other languages. For example, the Laki pattern shows striking similarities to the Aleut pattern discussed by Woolford (2017). Woolford (2017) proposes that object pronouns in Aleut undergo raising out of VP (through an object shift process), where they trigger agreement. Similar to the pattern in Laki, the agreement with the object pronoun leads to its null realization (see also Merchant 2011).

The current proposal raises an interesting question with respect to the relation between syntax and PF. How can a syntactic operation, such as movement, be triggered by a seemingly PF constraint, namely the CCR in (14)? According to the Y-model of grammar, adopted in one form or another in the generative tradition, syntax is the only generative module which feeds the interpretative modules LF and PF (Chomsky 1981; Chomsky and Lasnik 1993, and subsequent authors; also Zwicky's 1969 Principle of Phonology-Free Syntax). Crucially, under this view of grammar, PF cannot feed syntactic operations. We maintain that the proposed CCR can be couched within a system which is compliant with the Y-model of grammar, in ways to be discussed below. Meanwhile, before elaborating on how such a model can be implemented, it is worth noting some previous approaches to syntactic operations triggered by phonological or more specifically prosodic considerations. The best-known example of this is Zubizarreta's (1998) prosodically motivated movement (p-movement), a movement triggered by prosodic needs, but with syntactic consequences (e.g., for the licensing of negative polarity items). In other words, for Zubizarreta, some prosodic consid-

erations are active in the syntactic derivation before spell-out (see also Suñer 2000). Richards (2010, 2016) has developed a framework in which syntactic movement is more generally triggered by prosodic considerations. More recently, in his analysis of the placement of second position clitics, Bruening (2021) develops a system in which syntax has direct access to phonology. In this system, the operations that place clitics in second position can make reference to syntactic and prosodic information simultaneously.

With this background, we can now turn to the proposed movement operation for Laki triggered by the CCR. Do we need to resort to views such as the ones in the above paragraph, which allow for PF feeding syntax, or can we maintain a separation between syntax and phonology, à la the Y-model of grammar? We can conceive of two ways that the separation between syntax and PF can be maintained. One option would be to allow for syntax to generate multiple derivations and for a global assessment (or filtering) of these derivations with reference to phonological constraints, leading to the illicit derivations crashing and the licit one winning out (see, for example, Bošković 2001; Büring and Gutiérrez-Bravo 2001; Revithiadou 2006; Büring 2013, all cited in Bruening 2021). Such global evaluations have been seriously criticized in favor of more local assessments (Poole 1995; Ura 1996; Collins 1997, 2001; Yang 1997; Chomsky 2000, among others). Below, we offer an account of the CCR in Laki, which is local, while maintaining the separation between Syntax and PF.

In the phase-based derivational framework adopted in this paper (Chomsky 2000, 2001 and subsequent authors), syntactic derivation proceeds incrementally, and in a bottom-up fashion through multiple stages that are referred to as phases. When the derivation reaches a phasal head, the complement is spelled out, i.e., sent off to LF and PF for interpretation. Accordingly, syntax has no further access to the spelled-out material (Chomsky's 2001 Phase Impenetrability Condition or PIC). It is important to note that while (14) accurately captures the surface generalization with respect to the ban on the sequence of two adjacent Series II clitics, we take the constraint to be on the subsequent placement of two φ -bundles with no reference to their phonological content. Crucially, the positioning of these φ -bundles is decided in Syntax, whereas the phonological content is inserted late at PF (à la the Distributed Morphology framework, Halle and Marantz 1993, and subsequent authors). Hence, the CCR can be more properly formulated as (15), a restriction on the sequence of φ -bundles in the lower phase.¹⁵

(15) Clitic Cluster Restriction (CCR) in Laki: *X- φ_{pro} - φ_v (Final)

According to (15), once the valued φ -bundle on v finds itself next to a deficient pronoun, the CCR is identified and the offending deficient pronoun (φ_{pro}) moves to the edge of the phase and escapes spell-out. Spell-out takes place, and in the next phase, the Agree relation between T and the deficient pronoun is established involving a φ -feature valuation on T. To sum up, the CCR, formulated in (15), is a constraint triggered in syntax and feeding a syntactic operation. This leads to the surface prohibition

¹⁵In (15), we have placed φ_{pro} before φ_v based on the ordering we find in a language like Ardalani. As we will see in Sect. 4, in Ardalani Kurdish, where no CCR is at work, φ_{pro} appears before φ_v . Additionally, in Laki, when CCR is not at play, φ_{pro} always appears immediately after its host, e.g., see PP and possessive contexts in Sect. 4.

of a sequence of two clitics in Laki (see (14)). Crucially, this revised formulation is local and it maintains the separation between Syntax and PF (see also Tyler's (2019) syntactic formulation of a similar clitic co-occurrence restriction).

In this section, we provided an account for the agreement patterns in transitive constructions involving a direct object. We saw that object agreement is obtained only with deficient pronouns as a result of their raising due to the existence of CCR in the language. In the next section, we will be looking at further agreement patterns in Laki, which substantiate the CCR proposed in this section.¹⁶ It is important to note that while in the remainder of the paper reference will be made to the CCR or clustering of clitics for convenience, the intended formulation is a syntactic ban on the sequence of φ -bundles (15).

4 Series I agreement markers in other contexts: Substantiating the CCR

In this section, we will be looking at the agreement patterns in transitive constructions involving prepositional object pronouns as well as possessor pronouns. Importantly, when these arguments are deficient pronouns, under certain conditions, they are tracked by Series I agreement suffixes on the verb. We also examine the agreement patterns in the context of complex predicates. We will argue that the agreement of a deficient pronoun with T in all these contexts is the result of the CCR in the language, leading to the raising of a deficient pronoun to the vP phase edge, and hence its accessibility for an Agree relation with T. We end the section with a discussion of agreement patterns in Ardalani, a dialect of Kurdish with an agreement system similar to Laki but without the CCR.

4.1 Prepositional objects

Similar to other arguments in the language, prepositional objects can be overt or null. When they are overt, they can be realized either as a strong pronoun or a full DP. In (16–17), we see an example with a strong pronominal object in a present-stem clause, where the PP can appear preverbally (16) or postverbally (17).

- (16) a ton-a m-uš-em^I.
to you-PRS.IND DUR-tell.PRS-1SG
'I tell you.'

- (17) m-uš-em^I a to.
DUR-tell.PRS-1SG to you
'I tell you.'

¹⁶An anonymous reviewer raises a question about the existence of PCC effects in Laki, as PCC effects are often found in two probe systems with strong/weak pronominal distinctions. A preliminary investigation has not revealed the existence of known PCC effect, though some preferences seem to be present in certain pronominal combinations. A closer examination of this issue is left for future research.

In present-stem clauses, in the absence of a full DP prepositional object, its pronominal form is consistently realized as a Series II clitic (18–19). These prepositional objects are the complement of a preposition, and thus are normally realized on the preposition, as their expected host. It is worth noting that the form of the preposition varies depending on whether its complement is a strong pronoun (or a full DP) or a pronominal clitic. When hosting a pronominal clitic, the full form of the preposition is used (18–19), but with strong pronouns (or full DPs), a contracted form is used (16–17).

- (18) $\text{aben}=\text{t}^{\text{II}}=\text{a}$ $\text{m-uš-em}^{\text{I}}$.
 $\text{to}=\text{2SG}=\text{PRS.IND DUR-tell.PRS-1SG}$
 ‘I tell you.’
- (19) $\text{m-uš-em}^{\text{I}}$ $\text{aben}=\text{t}^{\text{II}}$.
 $\text{DUR-tell.PRS-1SG to}=\text{2SG}$
 ‘I tell you.’

Let us now consider the realization of prepositional objects with a past stem verb. Similar to the patterns observed above, the prepositional phrase can appear either in the pre-verbal position (20), or in the post-verbal position (21). With an overt prepositional object, realized as a strong pronoun ((20a) and (21a)) or a full DP ((20b) and (21b)), the prepositional object follows the preposition, as expected, and other than the Series II clitic tracking the subject, there is no other agreement marker in the clause. Note that with the preverbal PP (20), the whole PP constituent, occupying the initial position within the verb phrase, hosts the Series II clitic tracking the subject, and with the post-verbal PP (21), the verb, occupying the initial position within the verb phrase, hosts the subject Series II clitic. These patterns are in line with the expected ergative pattern: The subject (A) is tracked by Series II clitics, and the first element within the verb phrase hosts the subject clitic.

- (20) a. $\text{a ton}=\text{em}^{\text{II}}$ vet.
 $\text{to you}=\text{1SG tell.PST.3SG}$
 ‘I told you.’
- b. $\text{a hasan}=\text{em}^{\text{II}}$ pers-i.
 $\text{from Hasan}=\text{1SG ask-PST.3SG}$
 ‘I asked Hasan.’
- (21) a. $\text{vet}=\text{em}^{\text{II}}$ a to.
 $\text{tell.PST}=\text{1SG to you}$
 ‘I told you.’
- b. $\text{pers-i}=\text{m}^{\text{II}}$ a hasan.
 $\text{ask-PST}=\text{1SG from Hasan}$
 ‘I asked Hasan.’

However, crucially, in the absence of a full DP prepositional object, a contrast arises between post-verbal and pre-verbal PPs: When the PP is in the post-verbal position (22–23), the object is realized as a Series II clitic on its expected host—the preposition—and the φ -features of the subject are realized as a Series II clitic on V. Here, the verb is the first element within the verb phrase, thus it hosts the subject

Series II clitic. Note that in this context, there is no Series I agreement suffix. In the ungrammatical (b) examples below, the Series II clitic tracking the subject is attached to the preposition and the prepositional object is realized as a Series II clitic on the verb. In the ungrammatical (c) examples, the prepositional object is tracked by a Series I agreement suffix on the verb and the Series II clitic tracking the subject is appearing on the preposition.

- (22) a. vet=m^{II} aben=et^{II}.
tell.PST=1SG to=2SG
'I told you.'
- b. *vet=et^{II} aben=em^{II}.
tell.PST=2SG to=1SG
intended: 'I told you.'
- c. *vet-in^I aben=em^{II}.
tell.PST-2SG to=1SG
intended: 'I told you.'
- (23) a. pers-i=m^{II} ažen=ān^{II}.
ask-PST=1SG from=3PL
'I asked them.'
- b. *pers-i=n^{II} ažen=em^{II}.
ask-PST=3PL from=1SG
intended: 'I asked them.'
- c. *pers-i-n^I ažen=em^{II}.
ask-PST-3PL from=1SG
intended: 'I asked them.'

By contrast, when the PP is in the pre-verbal position (24–25), the prepositional object receives a null realization, and its φ -features are realized as a Series I agreement suffix on the verb. Therefore, instead of having the expected prepositional constructions; i.e., *aben=et* 'to you' in (24a) and *ažen=ān* 'from them' in (25a), the prepositions host the Series II clitic tracking the subject and the prepositional object is tracked by a Series I agreement suffix on the verb. The examples in (b) are ungrammatical. In these examples, the prepositional object is realized in its Series II clitic form adjacent to the Series II clitic tracking the subject. The pattern in (c) is ungrammatical as well. In these examples, the subject Series II clitics are attached to the verb and the prepositional object is realized as a Series II clitic on the preposition (compare with the present-stem clause in (18)).

- (24) a. aben=em^{II} vet-in^I.
to=1SG tell.PST-2SG
'I told you.'
- b. *aben=et^{II}=em^{II} vet.
to=2SG=1SG tell.PST.3SG
intended: 'I told you.'
- c. *aben=et^{II} vet=em^{II}.
to=2SG tell.PST=1SG
intended: 'I told you.'

- (25) a. ažen=em^{II} pers-i-n^I.
 from=1SG ask-PST-3PL
 ‘I asked them.’
 b. *ažen=ān^{II}=em^{II} pers-i.
 from=3PL=1SG ask-PST
 intended: ‘I asked them.’
 c. *ažen=ān^{II} pers-i=m^{II}.
 from=3PL ask-PST=1SG
 intended: ‘I asked them.’

It is important to note that when the PP is in a pre-verbal position, but there is an additional overt direct object in the clause, the Series II clitic tracking the subject appears on the direct object—the first element within the verb phrase—and the prepositional object is expressed in its expected pronominal form as a Series II clitic on the preposition, as shown in (26). In (27), we see counterparts with full DP prepositional objects, where the verb shows no agreement and inflects as [3SG].

- (26) a. rāz-a=m^{II} aben=et^{II} vet.
 secret-DEF=1SG to=2SG tell.PST.3SG
 ‘I told you the secret.’
 b. soāl-a=m^{II} ažen=et^{II} pers-i.
 question-DEF=1SG from=2SG ask-PST.3SG
 ‘I asked you the question.’
 (27) a. rāz-a=m^{II} a to vet.
 secret-DEF=1SG to you tell.PST.3SG
 ‘I told you the secret.’
 b. soāl-a=m^{II} a to pers-i.
 question-DEF=1SG from you ask-PST.3SG
 ‘I asked you the question.’

Based on the patterns shown above regarding prepositional objects in transitive past-stem clauses, we can conclude that a full DP prepositional object always appears on the preposition (in a preverbal or a post-verbal position). In such contexts, there is no agreement marker tracking the prepositional object. By contrast, when the prepositional object is a deficient pronoun, the agreement pattern varies. When the PP is in the preverbal position and there is no further argument in the verbal domain, the prepositional object is tracked by a Series I agreement suffix on the verb, meanwhile the Series II clitic tracking the subject appears on the preposition (see (24) and (25) above). These patterns are shown schematically in (28).

- (28) Prepositional object (pre-verbal)
 a. Deficient Pronoun $\overline{DP}_{SBJ}$ [PP P $\phi P/\phi$]=Series II V-Series I
 b. Full DP / Strong Pronoun $\overline{DP}_{SBJ}$ [PP P DP]=Series II V

Crucially, in (28a), the element hosting the subject Series II clitic is the prepositional phrase that is occupying the initial position within the verb phrase, and is also expected to host the Series II clitic, which is the default realization of a deficient pronoun. This leads to a violation of the CCR. As a result, the deficient pronoun cannot

be realized on its expected host, and hence raises to the edge of the phase and establishes an Agree relation with T. Through this Agree relation, the φ -features of the deficient pronoun are realized as a Series I agreement suffix. After the agreement, the deficient pronoun is deleted and receives a null realization. When the prepositional object is a full DP (28b), the prepositional object is realized on the preposition, which is its expected host, and the whole PP (consisting of the P and its complement) hosts the subject Series II clitic.

Our proposal makes two predictions: 1. In contexts where the clitic cluster is resolved, the deficient pronoun should be realized on its expected host as a Series II clitic; 2. Due to the phasehood effect by vP , a deficient pronoun remaining low in merge position, should not be accessible for an Agree relation with T. This should lead to the absence of Series I agreement suffixes in such contexts. These predictions are borne out. We saw in (26), shown schematically in (29a), when the prepositional object is preverbal but there is an additional direct object which can host the Series II subject clitic, the deficient pronoun is realized on the preposition as a Series II clitic, and not a Series I agreement suffix. The absence of Series I agreement suffixes indicates the lack of an Agree relation between T and the deficient pronoun. In addition, we saw in (22–23) above, shown schematically in (30a), when the PP is post-verbal, and hence there is no competition for hosting the two Series II clitics, each clitic is realized on its expected host and no Series I agreement suffix is present. Note that the full DP prepositional object, irrespective of its position, always appears on the preposition as expected ((28b), (29b) and (30b)).

- (29) Prepositional object (pre-verbal, additional object)
- | | | | | | |
|---------------------------|-------------------------|---------------------|------------------|--|---|
| a. Deficient Pronoun | <u>DP_{SBJ}</u> | DP _{OBJ} = | <u>Series II</u> | [_{PP} P=Series II ($\varphi P/\varphi$)] | V |
| b. Full DP/Strong Pronoun | <u>DP_{SBJ}</u> | DP _{OBJ} = | <u>Series II</u> | [_{PP} P DP] | V |
- (30) Prepositional object (post-verbal):
- | | | | | | |
|---------------------------|-------------------------|----|------------------|--|--|
| a. Deficient Pronoun | <u>DP_{SBJ}</u> | V= | <u>Series II</u> | [_{PP} P=Series II ($\varphi P/\varphi$)] | |
| b. Full DP/Strong Pronoun | <u>DP_{SBJ}</u> | V= | <u>Series II</u> | [_{PP} P DP] | |

Before turning to Laki agreement patterns in the context of possessives, we should note that Laki offers an alternative pattern for (29a). In this alternative pattern, exemplified in (31) (cf. (26)), in the presence of an additional object hosting the subject Series II clitic, the prepositional object is still tracked by the Series I agreement suffix, indicating its raising to the vP phase edge. We return to this example and its possible consequences for the proposed account of the Laki agreement patterns in Sect. 5 in the context of a discussion of possible alternatives to the current proposal.

- (31) $\bar{r}\bar{a}z\text{-}a=m^{\text{II}}$ $ab\bar{e}n\text{-}vet\text{-}in^{\text{I}}$.
 secret-DEF=1SG to tell.PST-2SG
 ‘I told you the secret.’

So far, we have examined transitive constructions involving direct and prepositional objects. The transitive constructions involving PP arguments provided supporting evidence for the CCR. In the next subsection, we will investigate the agreement patterns with possessive DPs. Possessive constructions provide further evidence for the current proposal. These constructions likewise suggest that the agreement with a deficient possessor pronoun is the result of a CCR in the language.

4.2 Possessive DPs

In this subsection, we consider the agreement patterns obtained in clauses containing a possessive construction. We start with a possessive construction which uses a full DP or a strong pronoun as possessor. In (32), we see an example of a full DP possessor used in the context of a transitive clause with a present verbal stem. The only agreement marking found in this example is the subject agreement realized as a series I suffix on the verb. The possessor appears in its expected position with the usual Laki [possessum possessor] order.

- (32) to a madrasa [det maryam]=a m-own-in^I.
 you at school daughter Maryam=PRS.IND DUR-see.PRS-2SG
 ‘You (will) see Maryam’s daughter at school.’

The example in (33) shows the pattern with a possessive DP used as the object in a sentence with a transitive past verbal stem. Here, the possessor “I” is a strong pronoun appearing after the possessum, as expected. In this example, we are dealing with an ergative alignment, and as such, subject agreement is realized as a Series II clitic on the first constituent inside the verb phrase, here the possessive DP. There is no further agreement marking in this example.

- (33) to doaka [āyl men]=et^{II} di.
 you yesterday daughter I=2SG see.PST.3SG
 ‘You saw my daughter yesterday.’

When the possessor is a deficient pronoun, similar to other arguments in the language, it is expressed in its pronominal form, realized as a Series II clitic. In a present-stem clause, when the possessor is a deficient pronoun, the possessor is invariably realized as a Series II clitic on the possessum. In (34a) and (34b), possessive DPs are in the object and subject positions, respectively. In these examples, as expected, the possessor pronoun is realized as a Series II clitic on its expected host, the possessum. The only agreement found in these examples is the Series I agreement marker on the verb, showing agreement with the subject. This is expected since we are dealing with an accusative alignment.

- (34) a. homa a madrasa [rafix-a=m^{II}]=a
 you(PL) at school friend-DEF=POSS.1SG=PRS.IND
 m-own-inān^I.
 DUR-see.PRS-2PL
 ‘You see my friend at school.’
 b. [homsā-ela=(a)n^{II}] men=a ma-šnās-en^I.
 neighbor-DEF.PL=POSS.3PL me=PRS.IND DUR-know.PRS-3PL
 ‘Their neighbors know me.’

Importantly, in past-stem clauses, when the possessor is not a full DP, there is variation in the realization of the possessor depending on the grammatical function of the possessive DP: If the possessive DP is the subject of the clause, the possessor is invariably realized as a Series II clitic on the possessum (35). In this example, the

Series II clitic tracking the subject appears on the first element within the verb phrase, (i.e., object).

- (35) [homsā-la=t^{II}] men=nān^{II} ma-šnāxt.
 neighbor-DEF.PL=POSS.2SG me=3PL DUR-know.PST.3SG
 ‘Your neighbors knew me.’

By contrast, as shown in (36a, 37a), when the possessive DP functions as the object of the clause, the possessor is not realized as a Series II clitic on the possessum, which is the expected host for the clitic. Instead, the possessor is tracked by a Series I agreement suffix on the verb (see Mohammadirad 2020, 2024; Öpengin and Mohammadirad 2022 for similar observations in other varieties of Laki). Meanwhile, the Series II clitic tracking the subject appears on the object—the possessum. The (b) and (c) counterparts are ungrammatical. In (b), the possessor and subject Series II clitics both appear on the object of the clause. In (c), the possessor pronoun is realized as a Series II clitic on the possessum, and the subject Series II clitic appears on the verb.

- (36) a. ketew-a=n^{II} xwan-i-m^I.
 book-DEF=3PL read-PST-POSS.1SG
 ‘They read my book.’
 b. *ketew-a=m^{II}=ān^{II} xwan-i.
 book-DEF=POSS.1SG=3PL read-PST.3SG
intended: ‘They read my book.’
 c. *ketew-a=m^{II} xwan-i=n^{II}.
 book-DEF=POSS.1SG read-PST=3PL
intended: ‘They read my book.’
- (37) a. keyk-a=mān^{II} wārd-en^I.
 cake-DEF=1PL eat.PST-POSS.3PL
 ‘We ate their cake.’
 b. *keyk-a=n^{II}=mān^{II} wārd.
 cake-DEF=POSS.3PL=1PL eat.PST.3SG
intended: ‘We ate their cake.’
 c. *keyk-a=n^{II} wārd=mān^{II}.
 cake-DEF=POSS.3PL eat.PST=1PL
intended: ‘We ate their cake.’

In this subsection, we have investigated a new agreement pattern in Laki ergative alignment involving possessive phrases. Based on the possessive patterns examined above, we can conclude that an overt possessor is invariably realized on the possessum. Meanwhile, the subject clitic appears on the first phrase within the verb phrase. When the possessor is a deficient pronoun, the agreement pattern varies depending on the function of the possessive phrase. When the possessive phrase is the subject of the clause, the possessor pronoun appears in its default Series II clitic form on the possessum, which is its expected host. Meanwhile, the subject Series II clitic appears on the first element inside the verb phrase, which is usually the direct object. This pattern was shown above in (35) and is schematically shown in (38).

(38) Possessive Subject: Past transitive clause

Deficient Possessive Pronoun [$\text{DP}_{\text{Possessum}} = \text{Series II } (\varphi\text{P}/\varphi)_{\text{Possessor}}]_{\text{SBJ}} \text{ DP}_{\text{OBJ}} = \text{Series II } \text{V}$

By contrast, when the possessive phrase is the object of the clause, the subject Series II clitic is hosted by the possessum. Meanwhile, the null possessor is tracked by a Series I agreement suffix on the verb. This pattern was shown in (36) and (37) above, also schematically shown in (39a). Crucially, in this context, the element hosting the subject clitic is the same element that is also expected to host the clitic, which is the default realization of a deficient pronoun. This leads to a violation of the CCR. As a result, the deficient pronoun cannot be realized on its expected host, and hence raises to the edge of the phase and establishes an Agree relation with T. Through this Agree relation, the φ -features of the deficient pronoun are realized as a Series I agreement suffix. Note that in contexts where the possessive DP functions as the subject of the clause ((35) and (38)), there is in fact no clitic cluster formation. In this context, the host of the subject clitic is the direct object, which is different from the host of the possessor deficient pronoun, namely the subject. As a result, we see that the possessor deficient pronoun is realized in its default Series II clitic form on the possessum (see also Öpengin 2013 for a similar generalization regarding external possessor constructions in Mukriyani/Mukri dialect of Central Kurdish). In addition, with possessive objects, when the possessor is a full DP ((33) and (39b)), the whole possessive phrase (consisting of the possessum and the possessor) hosts the subject Series II clitic. In these contexts, there is only a single clitic involved, which tracks the agreement with the subject. There is no additional agreement suffix on V either.

(39) Possessive Object

a. Deficient Pronoun $\text{DP}_{\text{SBJ}} [\text{DP}_{\text{Possessum}} \varphi\text{P}/\varphi_{\text{Possessor}}]_{\text{OBJ}} = \text{Series II } \text{V-Series I}$

b. Full DP/Strong Pronoun $\text{DP}_{\text{SBJ}} [\text{DP}_{\text{Possessum}} \text{DP}_{\text{Possessor}}]_{\text{OBJ}} = \text{Series II } \text{V}$

CCR in the context of possessives can be tested in another transitive construction. Above, we examined a transitive clause containing a possessive construction as the direct object. The context that we will be examining below is a transitive clause that involves a prepositional object, itself containing a possessive construction. In this context, if the CCR was not at play, we would expect the possessor pronoun to be realized on the prepositional object (possessum) as a Series II clitic, followed by the subject Series II clitic, as schematized in (40a). By contrast, based on the CCR, we should expect to see only one Series II clitic on the PP, which is the subject Series II clitic. Meanwhile, the possessor deficient pronoun is expected to be tracked by a Series I agreement suffix on the verb. As predicted by the current proposal, the pattern obtained involves only one Series II clitic on the PP, which tracks the subject (40b). Meanwhile, the possessor deficient pronoun is tracked by a Series I agreement suffix on the verb. An example is shown in (41).

(40) a. $*\text{DP}_{\text{SBJ}} [\text{P } \text{DP}_{\text{Possessum}} = \text{Series II } (\varphi\text{P}/\varphi)_{\text{Possessor}}] = \text{Series II } \text{V}$

b. $\text{DP}_{\text{SBJ}} [\text{P } \text{DP}_{\text{Possessum}} = \varphi\text{P}/\varphi_{\text{Possessor}}] = \text{Series II } \text{V-Series I}$

(41) a. $\bar{\text{a}}\text{yl-ela} = \text{t}^{\text{II}} \quad \text{vet-en}^{\text{I}}.$
 to child-PL.DEF=2SG tell.PST-POSS.3PL
 ‘You told their children.’

In (40b), the position for second position clisis is specified to be on the PP argument, which occupies the initial position within the verb phrase. In addition, the possessor deficient pronoun clitic is also expected to be realized on the PP, given that the complement of the preposition is the possessum. This condition leads to the formation of a clitic cluster on the PP. As a result, the deficient pronoun raises to the *vP* edge, where it becomes accessible for an Agree relation with T. As such, the possessor is tracked by a Series I agreement suffix on the verb. Note that, as mentioned earlier (see Sect. 4.1), transitive clauses with a prepositional object can have their PP either in a pre-verbal, or a post-verbal position. In (41), we saw the pre-verbal PP order. In (42), the PP appears in the post-verbal position, and thus the verb occupies the initial position within the verb phrase. Therefore, as expected, in (42) the verb hosts the subject Series II clitic. Given that, in this context, there is no clitic cluster formation on the PP, the deficient possessor pronoun is realized in its default form as a Series II clitic on the possessum, as predicted.

- (42) vet= t^{II} a āyl-ela= n^{II} .
 tell.PST=2SG to child-PL.DEF=POSS.3PL
 ‘You told their children.’

One further context illustrating the behavior of the possessor pronoun and providing further support for the CCR is a ditransitive clause containing both a direct object and a prepositional object. In (43a), the direct object contains a possessor pronoun. As expected, this is a pattern that leads to clitic clustering. On the one hand, the object is the host for the subject clitic. On the other hand, the object is a possessum, hence the object is expected to host the possessor pronoun as well. As a result of a clitic cluster formation in this context, as expected, the possessor pronoun cannot be realized there, leading to raising of the pronoun and its agreement with T. In (43b–c), it is the prepositional (indirect) object that is a possessive construction. In such contexts, the direct object can host the subject clitic. As predicted by the current proposal, given the lack of a clitic cluster formation, the possessor pronoun is realized on its default host (the possessum) as a Series II clitic, both in a post-verbal (43b) and a preverbal position (43c).

- (43) a. ketew-a= man^{II} dā-yn^I a Maryam.
 book-DEF=1PL give.PST-POSS.2SG to Maryam
 ‘We gave your book to Maryam.’
 b. ketew-a= $mān^{\text{II}}$ dā a berā= t^{II} .
 book-DEF=1PL give.PST.3SG to brother=POSS.2SG
 ‘We gave the book to your brother.’
 c. ketew-a= $mān^{\text{II}}$ a berā= t^{II} dā.
 book-DEF=1PL to brother=POSS.2SG give.PST.3SG
 ‘We gave the book to your brother.’

In this subsection, we further substantiated the CCR by looking at contexts involving possessive constructions in different positions. We saw that only in cases when the realization of a deficient pronominal possessor leads to a violation of the CCR, we see the possessor tracked by a series I agreement suffix. In the next subsection,

we will be looking at Laki agreement patterns in the context of complex predicates, which provide further support for our proposed system.

4.3 Complex predicates

Transitive complex predicates provide one more context leading to the formation of a clitic cluster and consequently an additional piece of support from Laki for the current proposal. Complex predicates in Laki are formed by a non-verbal element (e.g., noun, adjective, PP) and a light verb.¹⁷ The particular class of complex predicates relevant to our current discussion here is the class of transitive complex predicates involving a direct object argument. As illustrated in (44a), in present-stem clauses, the light verb hosts the Series I agreement suffix tracking the external argument. Similar to the simplex verbs examined above, in the presence of an overt object, there is no marker tracking the overt object. In (44b), we see the realization of the object as a pronominal clitic on the non-verbal element. The realization of object clitics on non-verbal elements in complex predicates is found across Iranian languages.

- (44) a. (to) kabuter-ela parvāz=a me-yn^I.¹⁸
 you pigeon-PL.DEF flight=PRS.IND DUR.give.PRS-2SG
 ‘You fly the pigeons.’
 b. (to) parvāz=ān^{II}=a me-yn^I.
 you flight=3PL=PRS.IND DUR.give.PRS-2SG
 ‘You fly them.’

In past-stem clauses (45), as expected and similar to the patterns we have seen so far, the subject is tracked by a Series II clitic. Also, as expected, when the object is overt, there is no further agreement in the clause.

- (45) (to) kabuter-ela=et^{II} parvāz dā.
 you pigeon-PL.DEF=2SG flight give.PST.3SG
 ‘You flew the pigeons.’

When the object is a deficient pronoun, the non-verbal element hosts the Series II clitic tracking the subject. Meanwhile, based on the pattern of the present-stem clause we saw above, one could expect the deficient pronoun to be realized on the non-verbal element as well. However, the realization of the object on its expected host leads to a violation of the CCR since the non-verbal element hosts the subject Series II clitic. In this context, the Series II clitic tracking the subject remains on the non-verbal element and the object pronoun, receiving a null realization, is tracked by a Series I agreement suffix on the light verb (46). The realization of both clitics on the non-verbal element leads to the ungrammaticality of the clause (47). These agreement patterns likewise suggest that the Agree relation between T and the object pronoun in a transitive complex predicate construction is triggered by the CCR in the language.

¹⁷This compositional property of complex predicates is common across Iranian languages (see Karimi 1997; Megerdooian 2001, 2012; Folli et al. 2005; Gündoğdu 2015; Taghipour 2024, among others).

¹⁸-in changes to -yn due to vowel hiatus.

- (46) a. parvāz=et^{II} dā-n^I.
 flight=2SG give.PST-3PL
 ‘You flew them.’
 b. šekast=em^{II} dā-yn^I.
 defeat=1SG give.PST-2SG
 ‘I defeated you.’
- (47) a. *parvāz=ān^{II}=et^{II} dā.
 flight=3PL=2SG give.PST.3SG
 b. *šekast=et^{II}=em^{II} dā.
 defeat=2SG=1SG give.PST.3SG

We have seen so far that a key component of the agreement pattern we observe in Laki is the CCR. If Laki was a language with no CCR, deficient pronouns would be expected to be consistently realized as Series II clitics and sometimes adjacent to subject Series II clitics. Furthermore, due to the phasehood of *vP* and the PIC, T would be expected to fail to establish an Agree relation with the deficient pronoun inside *vP* consistently. In the next subsection, we will look at a variety of Kurdish with these exact properties, providing further support for the current proposal.

4.4 Ardalani Kurdish: What happens when there is no CCR?

In the previous subsections, we established the key role that the CCR plays in accounting for the agreement patterns in Laki. That left us with the question of what we would expect if a language like Laki did not have the CCR. Here, we will see that Ardalani (or Ardelani) Kurdish is precisely the language we are looking for.¹⁹ This Central Kurdish dialect is very similar to Laki in many respects, but it lacks the CCR. Crucially, the lack of the CCR in this dialect of Kurdish nicely correlates with the consistent realization of deficient pronouns as Series II clitics, and hence the lack of agreement between T and deficient pronouns. Similar to Laki, in a past-stem transitive clause, subjects are tracked by Series II clitics, as shown in (48a). This is in contrast with the pattern of subject marking in a present-stem clause, where subjects are tracked by Series I agreement suffixes on the verb (48b).

- (48) a. hasan=mān^{II} di.
 Hasan=1PL see.PST.3SG
 ‘We saw Hasan.’
 b. hasan a-win-in^I.
 Hasan DUR-see.PRS-1PL
 ‘We see Hasan.’

In what follows, we will be focusing on the patterns observed in past-stem transitive clauses with deficient pronouns. Crucially, in such clauses, unlike what we saw above in Laki, a direct object deficient pronoun is consistently realized as a Series II clitic in its expected position. The examples in (49) illustrate the realization of the

¹⁹Ardalani is a dialect of Sorani Kurdish (Central Kurdish), primarily spoken in the Kurdistan province of Iran (also known as Sanandaji, see Badakhshan et al. 2015). The Ardalani data in this paper have been elicited from two native speakers of the language.

direct object deficient pronoun as a Series II clitic and adjacent to subject Series II clitics. The appearance of two series II clitics next to each other shows clearly that Ardalani does not have the CCR.

- (49) a. $xward=y\bar{a}n^{II}=em^{II}$.
eat.PST=3PL=1SG
'I ate them.'
- b. $di=t^{II}=y\bar{a}n^{II}$.
see.PST=2SG=3PL
'They saw you.'

Furthermore, similar to Laki, prepositional phrases can appear either in a preverbal or a post-verbal position. However, crucially, unlike the pattern we saw in Laki, the deficient prepositional object pronoun is consistently realized as a Series II clitic. (50a) illustrates the pattern with a preverbal PP and (50b) shows the pattern with a post-verbal PP. (50c) shows the pattern in the presence of a direct object argument. In all these contexts, the deficient pronoun is consistently realized as a Series II clitic on the preposition and there is no Series I agreement suffix in the clause. Furthermore, Ardalani allows another pattern with preverbal PPs, through which two clitics appear adjacent to each other on the preverbal preposition, shown in (50d). This data-point shows very clearly the lack of CCR in the context of prepositional objects in Ardalani. Recall that this same example would lead to a violation of the CCR in Laki, with the prepositional object pronoun raising to the edge of the νP phase and becoming accessible for agreement with T, which is realized as a Series I agreement suffix on the verb (see (24) and (25)).

- (50) a. $pi=t^{II}$ $wet=em^{II}$.
to=2SG tell.PST=1SG
'I told you.'
- b. $wet=em^{II}$ $pi=t^{II}$.
tell.PST=1SG to=2SG
'I told you.'
- c. $r\bar{a}z-ak=am^{II}$ $pi=t^{II}$ wet.
secret-DEF=1SG to=2SG tell.PST.3SG
'I told you the secret.'
- d. $pi=y\bar{a}n^{II}=em^{II}$ wet.
to=3PL=1SG tell.PST.3SG
'I told them.'

Possessive constructions show a similar pattern regarding the realization of deficient pronouns in Ardalani. In this dialect, a possessor deficient pronoun is invariably realized as a Series II clitic, and consequently there is no agreement with T in such constructions. As shown in (51a), the possessive DP functions as the subject of the clause, and the deficient pronoun is realized in its Series II clitic form on the possessum. Crucially, when the possessive DP is the object of the clause (51b), the deficient pronoun is still realized as a Series II clitic on the possessum. Importantly, the possessum, as the object of the clause, is also hosting the subject Series II clitic, leading to the clitic clustering on the object. Note that (51b) was one of the contexts in Laki

that led to the raising of a deficient pronoun, and hence its accessibility for an Agree relation with T (see (36) and (37)).

- (51) a. hāweri-ak=t^{II} hāt.
 friend-DEF=2SG come.PST.3SG
 'Your friend came.'
 b. hāweri-ak=t^{II}=em^{II} di.
 friend-DEF=2SG=1SG see.PST.3SG
 'I saw your friend.'

In light of the observations made above, we can conclude that Ardalani Kurdish is a language with an alignment system very similar to Laki with the only difference that there is no CCR in this dialect. The Ardalani data examined above suggest that in the absence of the CCR in this dialect of Kurdish, deficient pronouns consistently remain low, and hence are realized as Series II clitics, sometimes forming a clitic cluster with the Series II subject clitics. The phasehood of *vP*, proposed for Laki, could provide an account for the lack of an Agree relation between T and a deficient pronoun in Ardalani Kurdish, leading to the absence of Series I agreement suffixes. In what follows, we will be looking at the agreement patterns in the context of complex predicate constructions in Ardalani. We saw above that in Laki complex predicate constructions, the deficient object pronoun Agrees with T, realized as a Series I agreement suffix in such constructions. We argued that this agreement is resulted from a clitic cluster formation on the non-verbal component of a complex predicate.

As we saw above, Ardalani Kurdish is not sensitive to clitic clustering. With respect to complex predicates in this variety of Kurdish, we can have the following prediction: if the non-verbal element is the default host for the realization of a deficient pronoun, as clearly shown with present-stem predicates in Laki, the deficient pronoun in Ardalani is expected to be consistently realized as a Series II clitic on the non-verbal element of a complex predicate and adjacent to a Series II subject clitic in the past tense. This prediction is borne out. Example (52a) illustrates the pattern with a present-stem transitive complex predicate involving an external argument and an internal argument (a direct object). Similar to Laki (44b), with present-stem complex predicates, the direct object deficient pronoun is realized as a Series II clitic on the non-verbal element, and the light verb hosts a Series I agreement suffix. Crucially, with a past-stem complex predicate (52b), unlike Laki, the deficient object pronoun is realized as a Series II clitic on the non-verbal element. Note that in this context, the deficient pronoun is adjacent to the Series II clitic tracking the subject, both appearing on the non-verbal component of the complex predicate. Recall that in Laki, in a context like (52b), the deficient pronominal object is tracked by a Series I agreement suffix on the verb, while the non-verbal element hosts the subject clitic (see (46)).

- (52) a. rāw=yān^{II} a-n-in^I.
 escape=3PL DUR-give.PRS-1PL
 'We make them escape.'
 b. raw=yān^{II}=man^{II} nia.
 escape=3PL=1PL give.PST.3SG
 'We made them escape.'

The Ardalani complex predicate facts examined above clearly suggest that in the absence of a CCR, the deficient object pronoun remains low (adjacent to a subject clitic), where it is inaccessible for an Agree relation with T. Overall, the cross-linguistic data examined above provide support for the role of the CCR as a linguistic parameter leading to the diversity of ergative patterns in dialects which are otherwise very similar.

In this section, we have provided further support for the CCR in Laki by looking at agreement patterns in three contexts in Laki: prepositional objects, possessives, and complex predicates. We showed that in contexts where the default realization of a deficient pronoun as a Series II clitic in situ leads to the formation of a clitic cluster, the deficient pronoun raises to the *v*P phase edge, and thus becomes accessible for an Agree relation with T. Additionally, we presented supportive evidence for our proposal from agreement patterns in Ardalani Kurdish, a dialect otherwise similar to Laki, but without the CCR. In the following section, we will consider some possible alternatives to the current account of agreement patterns in Laki.

5 Alternative accounts

In this section, we consider possible alternative accounts of the Laki agreement patterns discussed in this paper. Our starting point is the example in (31), repeated below (53). This example challenges the CCR, a key component of the account proposed in this paper, by presenting an example in which Series I agreement is invoked in the apparent absence of a clitic cluster context. Note that in (53), the Series II subject clitic is on the direct object, and the merge position of the deficient pronoun is the complement of the preposition *aben* ‘to.’ Therefore, with the preposition intervening between the two clitics, one should not expect the raising of the deficient pronoun to the edge of *v*P and its agreement with T. The Series I agreement on the verb is thus a surprise here. The example in (53) may instead motivate an independent raising analysis of pronouns (see Laenzlinger and Shlonsky 1997; Merchant 2011; Woolford 2017; Yuan 2022; Akkuş et al. 2025 for proposals along these lines). Under this view, we should assume that the deficient pronoun raises to the edge of *v*P independently and irrespective of its positioning next to another clitic (the CCR). This would explain the appearance of the Series I agreement in (53) as a result of an Agree relation between T and the pronoun. While this alternative analysis may account for (53), we show below that it faces serious challenges with respect to several agreement patterns discussed in Sect. 4.

- (53) *rāz-a=m^{II} aben vet-in^I.*
 secret-DEF=1SG to tell.PST-2SG
 ‘I told you the secret.’

Before proceeding any further, it is important to recall that (53) has a counterpart shown in (26a), repeated in (54), which is in full compliance with the CCR analysis. In (54), the direct object carries the subject clitic, and the preposition hosts the prepositional object pronoun, realized in its default Series II clitic form. In other words, while the independent raising analysis can capture the pattern in (53), it fails to account for the lack of raising and the absence of a Series I agreement marker in (54).

- (54) $r\bar{a}z-a=m^{\text{II}}$ $aben=et^{\text{II}}$ vet.
 secret-DEF=1SG to=2SG tell.PST.3SG
 'I told you the secret.'

Below, we enumerate those patterns from the previous sections which can be explained by the CCR analysis, but pose a serious challenge to the independent raising analysis. Before doing so, it is important to note that some of the patterns we have analyzed in this paper can be explained by both the CCR analysis and the independent raising analysis, e.g., the deficient pronoun in the direct object position. These cases will not be discussed in this section.

The first example which provides support for the CCR analysis while seriously challenging the independent raising analysis is the contrast between pre-verbal and post-verbal PPs, illustrated in (22)–(23) versus (24)–(25). An illustrative minimal pair is given in (55). While both the CCR analysis and the independent raising analysis can capture the appearance of Series I agreement in (55b), it remains a question why independent raising of the deficient pronoun does not apply to (55a). For the CCR analysis, raising does not take place in (55a), because there is no clitic clustering in this context.

- (55) a. $vet=m^{\text{II}}$ $aben=et^{\text{II}}$.
 tell.PST=1SG to=2SG
 'I told you.'
 b. $aben=em^{\text{II}}$ $vet-in^{\text{I}}$.
 to=1SG tell.PST-2SG
 'I told you.'

The second pattern clearly favoring the CCR analysis over the independent raising account is the contrast in the behavior of a possessive pronominal clitic when the clitic is part of a DP functioning as a subject versus an object. Recall that when the possessive DP is the subject of the clause, the possessor is invariably realized as a Series II clitic on the possessum (35), repeated below in (56a). By contrast, when the possessive DP functions as the object of the clause, the possessor is tracked by a Series I agreement suffix on the verb (36a), repeated in (56b). The CCR analysis attributes the contrast in (56) to the presence or absence of a clitic cluster. In (56a), the host of the subject clitic is the direct object, whereas the possessive pronominal clitic has a different host, namely the subject. In (56b), where the two clitics compete over the direct object as their host, the possessive pronominal clitic moves to the edge of the phase, triggering agreement with T. It is not clear how the independent raising analysis can capture this contrast, as there is no obvious reason for the absence of raising in (56a).

- (56) a. $homs\bar{a}-la=t^{\text{II}}$ $men=n\bar{a}n^{\text{II}}$ $ma-\bar{s}n\bar{a}xt$.
 neighbor-DEF.PL=POSS.2SG me=3PL DUR-know.PST.3SG
 'Your neighbors knew me.'
 b. $ketew-a=n^{\text{II}}$ $xwan-i-m^{\text{I}}$.
 book-DEF=3PL read-PST-POSS.1SG
 'They read my book.'

Further supporting evidence for the CCR analysis (as opposed to the independent raising account) comes from the context of a possessive pronominal clitic appearing inside a prepositional object (41)–(42), repeated in (57). In (57a), we see an example of a preverbal PP containing a possessive construction, where both clitics compete for the indirect object as the host. In this construction, the possessor pronoun raises and is tracked by a Series I agreement suffix. Meanwhile, in (57b), we see an example of a post-verbal PP, where both the subject clitic and the possessor appear as Series II clitics, as there is no clitic cluster formation. The CCR analysis captures this contrast straightforwardly based on the presence or absence of a clitic cluster. Meanwhile, the independent raising analysis should be expected to apply to both these examples equally, contrary to fact.

- (57) a. a āyl-ela=t^{II} vet-en^I.
to child-PL.DEF=2SG tell.PST-POSS.3PL
'You told their children.'
- b. vet=t^{II} a āyl-ela=n^{II}.
tell.PST=2SG to child-PL.DEF=POSS.3PL
'You told their children.'

The final pattern providing evidence in favor of the CCR analysis and against the independent raising analysis comes from the behavior of the possessor pronoun used in a ditransitive clause containing both a direct object and a prepositional object, a pattern presented in (43) and repeated in (58). In (58a), the direct object contains a possessor pronoun. This is a pattern that leads to clitic clustering, as both the subject clitic and the pronominal possessor compete for the same host, namely the direct object. The clitic cluster formation triggers the raising of the pronoun and its agreement with T, realized as a Series I suffix. In (58b–c), it is the indirect object that is a possessive construction. In such contexts, the direct object can host the subject clitic. As predicted by the CCR analysis, given the lack of a clitic cluster formation, the possessor pronoun is realized on its default host as a Series II clitic, both in a postverbal (58b) and a preverbal position (58c). The independent raising analysis would wrongly predict a uniform behavior for all the examples, with the pronominal clitic raising independently, leading to the appearance of a Series I clitic in all these contexts.

- (58) a. ketew-a=man^{II} dā-yn^I a Maryam.
book-DEF=1PL give.PST-POSS.2SG to Maryam
'We gave your book to Maryam.'
- b. ketew-a=mān^{II} dā a berā=t^{II}.
book-DEF=1PL give.PST.3SG to brother=POSS.2SG
'We gave the book to your brother.'
- c. ketew-a=mān^{II} a berā=t^{II} dā.
book-DEF=1PL to brother=POSS. 2SG give.PST.3SG
'We gave the book to your brother.'

The facts examined above clearly suggest that deficient pronouns in Laki only raise due to the CCR. In contexts with no clitic clustering, as shown above, the deficient pronouns remain low and are realized as Series II clitics. These facts clearly

militate against an independent raising analysis of deficient pronouns.²⁰ Meanwhile, we are still left with the question of why we have a Series I agreement suffix appearing in a Laki example like (53) in the absence of a clitic cluster formation. While we cannot offer a fully satisfactory account for this single pattern, we may speculate on its existence by looking at other neighboring Kurdish varieties. In some varieties of Central Kurdish, e.g., Mukriyani, the only pattern found in these contexts is the equivalent of (53) (see, e.g., Öpengin 2013; Mohammadirad 2020; Akkuş et al. 2025). As a matter of fact, for these dialects, it can be shown that the CCR is not in effect, as clitic clustering is in fact allowed in certain contexts. The overall patterns observed in these dialects can be best captured by the independent raising analysis, as opposed to the CCR. One can take the presence of the pattern in (53) in a language like Laki to be the result of contact with these surrounding Central Kurdish dialects. It is worth noting that many of these varieties exist not only in close proximity, but are sometimes mixed within the same communities. Such exchanges are not uncommon in language contact situations (see Thomason and Kaufman 1988; Thomason 2006; Winford 2007; Maitz and Németh 2014, but see Sankoff 2002). A closer examination of this Laki pattern and its connection to the other varieties of Kurdish is left for future research.²¹

²⁰An anonymous reviewer has suggested that defective pronouns may still raise for reasons independent of the CCR, and that the base-position realization of deficient pronouns as Series II may be driven by independent constraints. Regarding the distribution of post-verbal PPs, the reviewer proposes a constraint banning stranded prepositions, which could account for the obligatory appearance of a Series II clitic on post-verbal prepositions. However, this generalization is challenged by cases of preposition stranding in Laki. The evidence comes from certain constructions in present tense clauses: when the prepositional object is [3SG], the object can optionally surface as a Series II clitic on the verb, leaving the preposition stranded clause-finally (i). We do not aim to provide an account for preposition stranding in this context. The existence of this albeit restricted pattern casts doubt on the use of a general ban on stranded prepositions as an account for the Laki agreement patterns.

(i) m-uš-in^{I=II} aben.
DUR-tell.PRS-2SG=3SG to
'You (will) tell him/her.'

With respect to possessor raising, the reviewer highlights a cross-linguistic asymmetry, in which possessors of object DPs, rather than subject DPs, are more likely to undergo raising. If Laki conformed to this typological tendency, we would expect to find possessor raising also in present-stem clauses involving object DPs. However, as we saw above (see Sect. 4.2), in present-stem clauses, possessor pronouns consistently appear as Series II forms, regardless of the grammatical function of the possessum. This undermines the claim that the Laki possessor raising pattern may be a reflection of this broader cross-linguistic generalization. With no independent support, the introduction of such constraints appears to complicate the analysis of the observed Laki patterns, which find a uniform explanation under the CCR analysis.

²¹The pattern in (53) raises the possibility of treating prepositions as special elements regarding their role in breaking/retaining clitic clustering in Laki. One can posit that in (53), the preposition, as a functional element, may be ignored in prosodic parsing of the phrase (along the lines of Selkirk 2011). Under this view, placing a Series II clitic on the direct object and another one on the preposition would still be a violation of the CCR, leading to the pattern in (53). This explanation is challenged by the behavior of post-verbal PPs (55a), where the two occurrences of Series II clitics is intervened only by a preposition, and yet no alternative pattern with a Series I suffix is possible. Based on a preliminary assessment of these examples, there may be a difference in the prosodic phrasing of examples, such as (53) and (55a), which may pave the way for an explanation along the lines of what we have offered in this footnote. A closer examination of these facts is left for future research.

To end this section, let us briefly consider a few other proposals for similar patterns in other Kurdish dialects and see how they fare with the Laki facts. Regarding the agreement with a direct object deficient pronoun, Karimi (2013) posits that the VP containing the pronominal object (*pro*) moves to [Spec, FocP], where the pronoun becomes accessible for agreement with a higher Probe. The fact that such null objects are not associated with any focus interpretation casts doubt on a focus-driven movement. Moreover, such a proposal cannot account for the various patterns we have discussed for Laki in this paper and the correlation between the presence of different hosts for the Series II clitics and the absence of Series I agreement markers.

Karim and Salehi (2022) have analyzed the pattern with deficient prepositional objects in Sorani Kurdish as an instance of an applicative construction, where the prepositional object is treated as an applied argument triggering agreement on the verb. This analysis raises an immediate global question as to why the applicative analysis is restricted only to pronominal arguments and cannot be extended to the full DP prepositional object counterparts. Regarding Laki patterns particularly, the contrast in some contexts (e.g., preverbal versus postverbal PPs) are also left unexplained.

Regarding similar patterns in some other Kurdish dialects, Akkuş et al. (2025), building upon Öpengin (2019), take the Series I suffixes tracking arguments in the past transitive clause as pronominal affixes, based on the observation that these markers never co-occur with their corresponding full DP arguments in past transitive clauses. Under this proposal, the indexation of a deficient pronoun by what we call Series I is the result of the movement of a [-oblique] pronoun to T, leading to its realization as a pronominal affix. It is further proposed that in dialects, where the pronoun surfaces as a Series II clitic (as seen in Ardalani above), the pronoun is [+oblique], and thus moves to an Oblique head, leading to its realization as a pronominal clitic. Note that for us, Series I suffixes used in past transitive clauses were uniformly taken as agreement markers. We acknowledge the complementarity restriction that limits the use of these Series I suffixes to contexts where the full DP argument counterpart is absent, making these Series I markers look like pronominal elements in past transitive clauses. However, we argue that while this analysis can provide an account for some of the Laki patterns discussed here, it cannot explain all the existing patterns, discussed in Sects. 3 and 4. More specifically, under this proposal, the contrasts between the patterns where Series I agreement suffixes appear as opposed to Series II clitics in past transitive clauses remain unexplained, since in this model pronouns are expected to either consistently move to T or to the Oblique head. If we want to force this analysis to capture Laki facts, we would need to assume that a pronominal argument in a past transitive clause can have different cases, leading to its movement to either the Oblique head or T, depending on its case feature. To be more specific, we would need to assume that in a past transitive clause, where the pronominal argument is realized as a Series II clitic (e.g., postverbal PP), the pronoun is [+oblique], as opposed to a past transitive clause in which the pronoun is realized as a Series I suffix, where it has to be [-oblique] (e.g., preverbal PP). Such an ad hoc formulation clearly poses a serious challenge for the predictability and uniformity of their proposed system. In the system proposed in this paper, the Series I vs Series II realization follows systematically from the CCR. Additionally, as noted in Sect. 3.3, both in terms of

form and position, the Series I suffixes indexing the deficient pronoun are the same as agreement suffixes found in the straightforward accusative and absolutive alignments, making a uniform analysis of these forms desirable. On a related note, we have seen that in contexts where the pronominal element stays in its merge position in both past and present stem clauses, the pronoun occupies the canonical argument position. As such, considering Series I affixes as pronominal elements adds a further complication to their analysis, by allowing them to appear in either an “agreement” or an “argument” slot. In addition, when we consider facts from other Kurdish dialects, particularly those in the Kurmanji (Northern Kurdish) branch, we find that Series I suffixes in past transitive clauses can in fact co-occur with full DP arguments, undermining the complementarity restriction. The proposed Agree-based account of Series I suffixes can be extended to other dialects, offering a more unified explanation for their distribution across Kurdish (see Taghipour 2024 for discussion).

In this section, we have reviewed a number alternative analyses for the Laki patterns discussed in this paper. We maintain that the CCR has the best coverage for these facts.²²

6 Conclusion

In this paper, we investigated the alignment in Laki and proposed an account for the complex distribution of suffixes and clitics realizing φ -features in this language. Laki shows a stem-based split ergative alignment. In the accusative alignment, which exhibits a straightforward nominative agreement, T Agrees with the subject, realized as a Series I agreement suffix on the verb. In an intransitive past-stem clause, similar to the accusative alignment, T Agrees with the subject, with the φ -features of the subject realized as a Series I agreement suffix. We proposed that in a transitive clause involving a past stem (the pattern which shows the ergative alignment), besides T, *v* is another locus of agreement. *v* establishes inherent agreement with the external argument. Meanwhile, no agreement is obtained between T and the object if it's a full DP or a strong pronoun. We argued that the lack of an Agree relation between T and an internal argument is due to the Phase Impenetrability Condition (PIC), resulted from the phasal status of the ergative *v*P. By contrast, we showed that when an argument is a deficient pronoun and when its realization in situ leads to the formation of a clitic

²²An anonymous reviewer asks why the CCR is resolved by the movement of the deficient pronoun, as opposed to other ways, such as not pronouncing one of the clitics, or realizing one clitic in another form, or pronouncing the clitic in a different place. We acknowledge that other logical possibilities could in principle resolve the CCR; it remains an empirical question whether there are other world languages with a restriction like CCR, which respond to it in some other ways. Meanwhile, it is important to recall that the movement of a deficient pronoun is more readily available cross-linguistically (see Laenzlinger and Shlonsky 1997; Woolford 2017; Merchant 2011; Yuan 2022). We noted in this section that other varieties of Kurdish, such as Mukriyani, may be employing this raising strategy more broadly. Against this backdrop, Laki's resolution to the CCR should not come as a surprise, as it can be viewed as a way of constraining this more broadly available raising of deficient pronouns. Meanwhile, we should not lose sight of varieties such as Ardalani (see Sect. 4.4) which allow clitic clustering and lack the raising of the deficient pronoun altogether. If we take Ardalani and Mukriyani to be on the two ends of a spectrum with respect to the raising of the deficient pronoun, Laki falls somewhere in between by constraining the raising only to contexts which violate the CCR.

cluster, hence violating the Clitic Cluster Restriction (CCR), the deficient pronoun raises to the edge of *vP*, where it establishes agreement with T. We showed that when the realization of a deficient pronoun in situ does not lead to the formation of a clitic cluster, it remains low and the phasehood of *vP* renders it inaccessible for an Agree relation with T. This proposal received support from agreement patterns in various ergative constructions, including transitive clauses involving a direct and an indirect object and clauses with a possessive argument, as well as complex predicates.

Furthermore, we analyzed agreement facts from another Kurdish dialect, namely Ardalani. The data clearly suggested that in the absence of the CCR in this dialect, deficient pronouns are always realized in situ as a Series II clitic, leading to a clitic cluster formation. Crucially, in this language, no agreement is obtained with T providing support for the inaccessibility of a deficient pronoun within *vP* for an Agree relation with a higher Probe, due to the *vP* phasehood effect. This, in turn, provided indirect support for the CCR in Laki.

Overall, the data investigated here highlights the point that the emergence of agreement patterns in so-called ergative alignments is in fact under the influence of various syntactic (or in this case possibly interface) properties and parameters. Thus, ergative systems cannot simply be characterized as a single uniform phenomenon (Dixon 1994; Johns 2000; Deal 2016; Haig 2017; Carrier 2020; Yuan 2022, among others). We identified a number of such parameters in this study. In particular, we argued that the Agree with T in the ergative constructions depends on the argument type (i.e., deficient pronoun versus full DP), the phasehood of the *vP*, and the CCR. It was shown that the agreement patterns in Laki ergative constructions are the result of the interaction of these parameters. We further showed that in Ardalani, another Kurdish dialect, due to the absence of the CCR, different agreement patterns emerge.

Finally, the current proposal raised an interesting interface question with respect to how we can have a syntactic resolution to an apparently PF problem. We discussed that one undesirable option would be to allow for a global assessment (or filtering) of different derivations, which would lead to the illicit derivation crashing and the licit one winning out. Meanwhile, we offered a strictly local solution that maintains the separation between Syntax and PF.

In this paper, we showed how the presence or absence of the CCR can lead to distinct ergative patterns in two dialects of Kurdish. Meanwhile, these issues need to be further investigated in future research with an eye to variations observed across a larger family of Kurdish dialects. A fine-grained parametric analysis for the Kurdish language family requires a close examination of various parameters in a larger number of dialects.

Acknowledgements We would like to thank Faruk Akkuş, Susana Béjar, Cristina Cuervo, Songül Gündoğdu, Alana Johns, Martha McGinnis, Keir Moulton, the audience at CLA 2019, WCCFL 38, Glow 43, TU+5, and the members of the Syntax Project at the University of Toronto for their helpful feedback. We would like to extend our heartfelt gratitude to the native speakers of Laki and Ardalani: Mahdiah Ghobadifard, Tahereh Ghobadifard, Sadaf Kalami, Alireza Mehrabi, Kobra Taghipour, and Rounak Zarei, for their generosity, patience, and constant support with the data collection. We are grateful to the anonymous reviewers for their valuable feedback, which greatly improved the quality of the paper. We would also like to express our gratitude to the journal editors, Daniel Harbour and Julie Anne Legate, for their help and guidance throughout the publication process.

Declarations

Competing Interests The authors declare no competing interests.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Ackema, Pete, and Ad Neeleman. 2003. Context-sensitive spell-out. *Natural Language and Linguistic Theory* 21:681–735.
- Akkuş, Faruk. 2020. On Iranian case and agreement. *Natural Language and Linguistic Theory* 38(3):671–727.
- Akkuş, Faruk, David Embick, and Mohammed Salih. 2025. *Case and the syntax of argument indexation: Sorani Kurdish and beyond Oxford studies in theoretical linguistics*. London: Oxford University Press.
- Aldridge, Edith. 2008. Generative approaches to ergativity. *Language and Linguistics Compass* 2(5):966–995.
- Anderson, Stephen R. 1982. Where's morphology? *Linguistic Inquiry* 13:571–612.
- Arregi, Karlos, and Andrew Nevins. 2012. *Morphotactics: Basque auxiliaries and the structure of spellout*. Berlin: Springer.
- Atlamaz, Ümit, and Mark Baker. 2016. Agreement with and past oblique subjects: New considerations from Kurmanji. In *Proceedings of the 46th*, eds. Christopher Kimmerly and Brandon Prickett. *North East Linguistic Society (NELS 46)*, 39–49. Amherst: GLSA.
- Badakhshan, Ebrahim, Yadgar Karimi, and Rozita Ranjbar. 1393/2015. Hālat namāyi dar kordiyē sorāni (sanandajī va bānei) (in Persian). *Zabānshenāsi va Guyeshhāye Xorāsān* 11:1–28.
- Baker, Mark. 2014. On dependent ergative case (in Shipibo) and its derivation by phase. *Linguistic Inquiry* 45(3):341–379.
- Baker, Mark. 2015. *Case: Its principles and its parameters*. Cambridge: Cambridge University Press.
- Baker, Mark, and Ümit Atlamaz. 2014. On the relationship of case to agreement in split-ergative Kurmanji and beyond. Ms. Rutgers University.
- Bittner, Maria, and Ken Hale. 1996. The structural determination of case and agreement. *Linguistic Inquiry* 1–68.
- Bošković, Željko. 2001. *On the nature of the syntax-phonology interface: Cliticization and related phenomena*. Amsterdam: Elsevier.
- Bruening, Benjamin. 2021. Second Position Clitics: Syntax Can See Phonology. Ms. Available at <https://udel.edu/~bruening/downloads.html>.
- Büring, Daniel. 2013. Syntax, information structure, and prosody. In *The Cambridge handbook of generative syntax*, ed. Marcel den Dikken, 860–895. Cambridge: Cambridge University Press.
- Büring, Daniel, and Rodrigo Gutiérrez-Bravo. 2001. Focus-related word order variation without the NSR: A prosody-based crosslinguistic analysis. In *Syntax at Santa Cruz 3*, ed. Séamas Mac Bhloscaidh, 41–58.
- Bynon, Theodora. 2005. Evidential, raised possessor, and the historical source of the ergative construction in Indo-Iranian. *Transactions of the Philological Society* 103:1–72.
- Cardinaletti, Anna, and Michal Starke. 1999. The typology of structural deficiency: A case study of the three classes of pronouns. In *Clitics in the languages of Europe*, ed. Henk van Riemsdijk, 145–233. Berlin: Mouton.
- Carrier, Julien. 2020. *Ergativity on the move*, PhD diss., University of Toronto.
- Chomsky, Noam. 1981. *Lectures on government and binding*. Dordrecht: Foris.

- Chomsky, Noam. 2000. Minimalist inquiries: The framework. In *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, eds. Roger Martin, David Michaels, and Juan Uriagereka, 89–155. Cambridge: MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. Michael Kenstowicz, 1–52. Cambridge: MIT Press.
- Chomsky, Noam, and Howard Lasnik. 1993. The theory of principles and parameters. In *Syntax: An international handbook of contemporary research, vol. I*, eds. Joachim Jacobs, Arnim von Stechow, Wolfgang Sternefeld, and Theo Vennemann, 506–569. Berlin: de Gruyter.
- Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic perspective*. London: Oxford University Press.
- Cinque, Guglielmo. 2002. Complement and adverbial PPs: Implications for clause structure. Paper presented at CONSOLE XI. Università di Padova.
- Cinque, Guglielmo. 2004. Issues in adverbial syntax. *Lingua* 114(6):683–710.
- Clem, Emily. 2019. Amahuaca ergative as agreement with multiple heads. *Natural Language and Linguistic Theory* 37:785–823.
- Collins, Chris. 1997. *Local economy*. Cambridge: MIT Press.
- Collins, Chris. 2001. Economy conditions in syntax. In *The Handbook of Contemporary Syntactic Theory*, eds. Mark Baltin and Chris Collins, 45–61. Malden: Blackwell.
- Coon, Jessica. 2010. Rethinking split ergativity in Chol. *International Journal of American Linguistics* 76(2):207–253.
- Coon, Jessica. 2013. *Aspects of split ergativity*. London: Oxford University Press.
- Coon, Jessica. 2017. Little-*v*⁰ agreement and templatic morphology in Ch'ol. *Syntax* 20:101–137.
- Coon, Jessica, and Omer Preminger. 2012. Taking 'ergativity' out of split ergativity: A structural account of aspect and person splits. *lingBuzz*/001556.
- Coon, Jessica, and Omer Preminger. 2017. Split ergativity is not about ergativity. In *The Oxford handbook of ergativity*, eds. Jessica Coon, Diane Massam, and Lisa Travis, 226–252. Oxford: Oxford University Press.
- Coon, Jessica, Nico Baier, and Theodore Levin. 2021. Mayan agent focus and the ergative extraction constraint: Facts and fictions revisited. *Language* 97(2):269–332.
- Craig, Colette. 1977. *The structure of Jacaltec*. Austin: University of Texas Press.
- Dabir-Moghadam, Mohammad. 2013. *rade shenāsiye zabānhāye Irāni*. Tehran: SAMT. (in Persian).
- Deal, Amy Rose. 2016. Person-based split ergativity in Nez Perce is syntactic. *Journal of Linguistics* 52(3):533–564.
- Deal, Amy Rose. 2019. Raising to ergative: Remarks on applicatives of unaccusatives. *Linguistic Inquiry* 50(2):388–415.
- Déchaine, Rose-Marie, and Martina Wiltschko. 2002. Decomposing pronouns. *Linguistic Inquiry* 33(3):409–442.
- Dixon, Robert. M. 1979. Ergativity. *Language* 55:59–138.
- Dixon, Robert. M. 1994. *Ergativity*. Cambridge: Cambridge University Press.
- Doron, Edit. 1988. On the complementarity of subject-verb agreement. In *Agreement in natural language: Approaches, tendencies and descriptions*, eds. Michael Barlow and Charles A. Ferguson, 201–218. Stanford: CSLI.
- Eberhard, David M., Gary F. Simons, and Charles D. Fennig (eds.). 2025. *Ethnologue: Languages of the World*. Twenty-eighth edition. Texas: Dallas. SIL International.
- Folli, Raffaella, Heidi Harley, and Simin Karimi. 2005. Determinants of event type in Persian complex predicates. *Lingua* 115(10):1365–1401.
- Forbes, Clarissa. 2018. *Persistent ergativity: Agreement and splits in Tsimshianic*, PhD diss., University of Toronto.
- Gündoğdu, Songül. 2011. *The phrase structure of two dialects of Kurmanji Kurdish: Standard dialect and Muş dialect*, MA thesis, Boğaziçi University.
- Gündoğdu, Songül. 2015. Noun-verb complex predicates in Kurmanji: A syntactic account. In *Proceedings of ConSOLE XXIII*, eds. Kate Bellamy, Elena Karvovskaya, Martin Kohlberger, and George Saad, 279–301. Leiden: Leiden University Center for Linguistics.
- Haig, Geoffrey. 1998. On the interaction of morphological and syntactic ergativity: Lessons from Kurdish. *Lingua* 105(3):149–173.
- Haig, Geoffrey. 2008. *Alignment change in Iranian languages: A construction grammar approach*, Vol. 37. Berlin: de Gruyter.
- Haig, Geoffrey. 2017. Deconstructing Iranian ergativity. In *The Oxford handbook of ergativity*, eds. Jessica Coon, Diane Massam, and Lisa Demena Travis, 465–500. London: Oxford University Press.

- Halle, Morris, and Alec Marantz. 1993. Distributed morphology and the pieces of inflection. In *The view from building 20*, eds. Ken Hale and Samuel Jay Keyser, 111–176. Cambridge: MIT Press.
- Hippisley, Andrew, and Gregory Stump. 2011. Head and dependent marking and the Pamiri verb: A defaults-based account in Network Morphology. Talk presented at Explorations into Syntactic Government and Subcategorisation, University of Cambridge.
- Holmberg, Anders, and David Odden. 2004. Ergativity and role-marking in Hawrami. In *Paper presented at Syntax of the World's Languages (SWL 1)*, Leipzig, Germany.
- Johns, Alana. 1992. Deriving ergativity. *Linguistic Inquiry* 23(1):57–87.
- Johns, Alana. 2000. Ergativity: A perspective on recent work. In *The first GLOT international state of the article book: The latest in linguistics*, eds. Lisa Cheng and Rint Sybesma, 47–73. Berlin: de Gruyter.
- Jouitteau, Mélanie, and Milan Rezac. 2006. Deriving the complementarity effect: Relativized minimality in Breton agreement. *Lingua* 116(11):1915–1945.
- Kahnemuyipour, Arsalan. 2009. *The syntax of sentential stress*. London: Oxford University Press.
- Kahnemuyipour, Arsalan, and Karine Megerdooimian. 2011. Second-position clitics in the vP phase: The case of the Armenian auxiliary. *Linguistic Inquiry* 42(1):152–162.
- Kalin, Laura, and Coppe van Urk. 2012. Aspect-based agreement reversal in Neo-Aramaic. In *Proceedings of the 30th West Coast Conference on Formal Linguistics (WCCFL 30)*, eds. Nathan Arnett and Ryan Bennett, 184–194. Somerville: Cascadilla Proceedings Project.
- Kalin, Laura, and Coppe van Urk. 2015. Aspect splits without ergativity: Agreement asymmetries in Neo-Aramaic. *Natural Language and Linguistic Theory* 33:659–702.
- Karim, Shuan Osman, and Ali Salehi. 2022. An applicative analysis of Sorani “absolute prepositions”. In *Applicative morphology: Neglected syntactic and non-syntactic functions*, eds. Sara Pacchiarotti and Fernando Zuniga, 263–298. Berlin: de Gruyter.
- Karimi, Simin. 1997. Persian complex verbs: Idiomatic or compositional. *Lexicology* 3(2):273–318.
- Karimi, Simin. 2005. *A minimalist approach to scrambling: evidence from Persian*. Berlin: de Gruyter.
- Karimi, Yadgar. 2010. Unaccusative transitives and the person-case constraint effects in Kurdish. *Lingua* 120(3):693–716.
- Karimi, Yadgar. 2013. Extending defective intervention effects. *The Linguistic Review* 30(1):51–75.
- Karimi, Yadgar. 2017. Remarks on ergativity and phase theory. *Studia Linguistica* 71(3):241–265.
- Laenzlinger, Christopher, and Ur Shlonsky. 1997. Weak pronouns as LF clitics: Clustering and adjacency effects in the pronominal systems of German and Hebrew. *Studia Linguistica* 51(2):154–185.
- Laka, Itziar. 1993. Unergatives that assign ergative, unaccusatives that assign accusative. *MIT Working Papers in Linguistics* 18:149–172.
- Laka, Itziar. 2006. Deriving split ergativity in the progressive: The case of Basque. In *Ergativity: Emerging issues*, eds. Alana Johns, Diane Massam, and Juvenal Ndayiragije, 173–196. Dordrecht: Springer.
- Legate, Julie Anne. 1999. The morphosyntax of Irish agreement. In *Papers on morphology and syntax, cycle one, MIT working papers in linguistics 33*, ed. Karlos Arregi. Cambridge, MA, 219–240.
- Legate, Julie Anne. 2002. *Warlpiri: Theoretical implications*, PhD diss., MIT.
- Legate, Julie Anne. 2008. Morphological and abstract case. *Linguistic Inquiry* 39(1):55–101.
- Legate, Julie Anne. 2017. The locus of ergative case. In *The Oxford handbook of ergativity*, eds. Jessica Coon, Diane Massam, and Lisa Demena Travis, 135–158. London: Oxford University Press.
- Mahajan, Anoop. 2012. Ergatives, antipassives and the overt light v in Hindi. *Lingua* 122(3):204–214.
- Maitz, Péter, and Attila Németh. 2014. Language contact and morphosyntactic complexity: Evidence from German. *Journal of Germanic Linguistics* 26(1):1–29.
- Marantz, Alec. 1991. Case and licensing. In *Proceedings of the 8th Eastern States Conference on Linguistics (ESCOL 8)*, eds. German Westphal, Benjamin Ao, and Hee-Rahk Chae, 234–253. Ithaca: CLC.
- Massam, Diane. 2006. Neither absolutive nor ergative is nominative or accusative. In *Ergativity: Emerging issues*, eds. Alana Johns, Diane Massam, and Juvenal Ndayiragije, 27–46. Dordrecht: Springer.
- McCarus, Ernest N. 2009. Kurdish. In *The Iranian languages*, ed. Gernot Windfuhr. London: Routledge.
- McCloskey, James, and Kenneth Hale. 1984. On the syntax of person-number inflection in modern Irish. *Natural Language and Linguistic Theory* 1:487–534.
- Megerdooimian, Karine. 2001. Event structure and complex predicates in Persian. *Canadian Journal of Linguistics* 46(1–2):97–125.
- Megerdooimian, Karine. 2012. The status of the nominal in Persian complex predicates. *Natural Language and Linguistic Theory* 30:179–216.
- Merchant, Jason. 2011. Aleut case matters. In *Pragmatics and autolexical grammar: In honor of Jerry Sadock*, eds. Etsuyo Yuasa, Tista Bagchi, and Katharine Beals, 193–210. Amsterdam: Benjamins.

- Mithun, Marianne. 1991. Active/agentive case marking and its motivations. *Language* 67:510–546.
- Moghaddam, Safieh. 2016. *Split Ergativity in Davani*, PhD thesis, University of Toronto.
- Mohammadirad, Masoud. 2020. *Pronominal clitics in Western Iranian languages: Description, mapping, and typological implications*, PhD diss., Sorbonne Nouvelle Paris III.
- Mohammadirad, Masoud. 2024. External possession constructions in Laki. *Linguistic Discovery* 18(1):1–25.
- Mohanan, Tara. 1994. *Argument structure in Hindi*. Stanford: CSLI.
- Nash, Léa. 1996. The internal ergative subject hypothesis. In *Proceedings of the 26th*, ed. Kiyomi Kusumoto. *North East Linguistics Society (NELS 26)*, 195–210. Amherst: GLSA.
- Öpengin, Ergin. 2013. *Clitic/affix interactions. A corpus-based study of person marking in the Mukri variety*, PhD diss. Sorbonne Nouvelle Paris III.
- Öpengin, Ergin. 2019. Accounting for the combinations of clitic and affix person markers in Central Kurdish. In *Current issues in Kurdish linguistics*, eds. Songül Gündoğdu, Ergin Öpengin, Geoffrey Haig, and Erik Anonby, 243–261. University of Bamberg Press.
- Öpengin, Ergin, and Masoud Mohammadirad. 2022. Pronominal clitics across Kurdish: Areal distribution, structural variation, and diachrony. In *Structural and typological variation in the dialects of Kurdish*, eds. Yaron Matras, Geoffrey Haig, and Ergin Öpengin, 181–237. Cham: Springer.
- Parker, Clinton. 2020. Vestigial ergativity in Shughni: At the intersection of alignment, clitic doubling, and feature-driven movement. *Glossa: A Journal of General Linguistics* 5(1).
- Pollock, Jean-Yves. 1997. Notes on clause structure. In *Elements of grammar: Handbook in generative syntax*, ed. Liliane Haegeman, 237–279. Dordrecht: Kluwer.
- Poole, Geoffrey. 1995. Constraints on local economy. In *Is the best good enough? Optimality and competition in syntax*, eds. Pilar Barbosa, Daniel Fox, Paul Hagstrom, Martha McGinnis, and David Pesetsky, 385–398. Cambridge: MIT Press.
- Revithiadou, Anthi. 2006. Prosodic filters on syntax: An interface account of second position clitics. *Lingua* 116:79–111.
- Rezac, Milan, Pablo Albizu, and Ricardo Etxepare. 2014. The structural ergative of Basque and the theory of case. *Natural Language and Linguistic Theory* 32(4):1273–1330.
- Richards, Norvin. 2010. *Uttering trees*. Cambridge: MIT Press.
- Richards, Norvin. 2016. *Contiguity theory*. Cambridge: MIT Press.
- Roberts, Taylor. 2000. *Clitics and agreement*, PhD diss. MIT.
- Roberts, Taylor. 2001. Deriving second position. *Canadian Journal of Linguistics* 46(1–2):127–153.
- Sankoff, Gillian. 2002. 25 linguistic outcomes of language contact. In *The handbook of language variation and change*, eds. Jack K. Chambers and Natalie Schilling, 638–668. Malden: Blackwell.
- Schütze, Carson T. 2001. On the nature of default case. *Syntax* 4(3):205–238.
- Selkirk, Elisabeth. 2011. The syntax-phonology interface. In *The handbook of phonological theory*, eds. John Goldsmith, Jason Riggle, and Alan Yu, 435–484. Oxford: Blackwell Publishing.
- Silverstein, Michael. 1976. Hierarchies of features and ergativity. In *Grammatical categories in Australian languages*, ed. Robert M. Dixon, 112–171. New Jersey: Humanities Press.
- Stump, Gregory. 1984. Agreement vs. incorporation in Breton. *Natural Language and Linguistic Theory* 2:289–426.
- Suñer, Margarita. 2000. Object-shift: Comparing a romance language to Germanic. *Probus* 12(2):261–289.
- Taghipour, Sahar. 2017. *Laki Verbal Inflection*, MA thesis, University of Kentucky. Lexington, Kentucky.
- Taghipour, Sahar. 2024. *Case and Phi-agreement in Laki: Parametrizing split-ergativity in Kurdish*, PhD diss., University of Toronto.
- Thackston, Wheeler M. 2006. *Kurmanji Kurdish: A reference grammar with selected readings*. Diyarbakir: Renas Media.
- Thomason, Sarah G. 2006. Language change and language contact. *Encyclopedia of Language and Linguistics* 6(2):339–346.
- Thomason, Sarah Grey, and Terrence Kaufman. 1988. *Language contact, creolization, and genetic linguistics*. Berkeley: University of California Press.
- Tollan, Rebecca. 2019. *Cross-linguistic effects of subjecthood, case, and transitivity in syntax and sentence processing*, PhD diss., University of Toronto.
- Tyler, Matthew. 2019. Absolutive promotion and the condition on clitic hosts in Choctaw. *Natural Language and Linguistic Theory* 37(3):1145–1203.
- Ura, Hiroyuki. 1996. Multiple Feature Checking: A Theory of Grammatical Function Splitting. PhD diss., MIT.

- Wiltschko, Martina. 2006. On 'ergativity' in Halkomelem Salish. In *Ergativity: Emerging issues*, eds. Alana Johns, Diane Massam, and Juvenal Ndayiragije, 197–227. Dordrecht: Springer.
- Winford, Donald. 2007. Some issues in the study of language contact. *Journal of Language Contact* 1(1):22–40.
- Woolford, Ellen. 2006. Lexical case, inherent case, and argument structure. *Linguistic Inquiry* 37(1):111–130.
- Woolford, Ellen. 2017. Mainland Scandinavian object shift and the puzzling ergative pattern in Aleut. In *Order and structure in syntax I: Word order and syntactic structure*, eds. Laura R. Bailey and Michelle Sheehan, 117–134. Berlin: Language Science.
- Yang, Charles D. 1997. Minimal computation: Derivation of syntactic structures. MS, MIT.
- Yuan, Michelle. 2022. Ergativity and object movement across Inuit. *Language* 98(3):510–551.
- Zubizarreta, Maria Luisa. 1998. *Prosody, focus, and word order*. Cambridge: MIT Press.
- Zwicky, Arnold M. 1969. Phonological constraints in syntactic description. *PiL I*. 411–463.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.