

Separating Concord and Agree: the Case of Zazaki Ezafe*

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1. Introduction

The Ezafe – most well-known from Persian – is usually a vowel thought to represent a single morpheme inserted between modifiers and their nominal hosts. Configurations often appear as in 1, where an arbitrary number of modifiers follow a head noun, each separated by the Ezafe morpheme.

(1) N-EZ MOD.1-EZ MOD.2-EZ MOD.3 ...

This is a common feature of many Iranian languages (Ghomeshi, 1997; Samiiian, 1994; Kahnemuyipour, 2014), and we follow Kahnemuyipour (2014) in taking Ezafe in general to be the result of the movement of the NP from a head-final base structure, taking along modifiers in a roll-up fashion. We further posit that this may occur as a resolution of a Chomsky (2013)-style labelling problem between an NP and a phrase-level modifier.

The case of Ezafe in Zazaki (also known as Dimlî; a Northwestern Iranian language) is of particular interest as it expresses both phi-features and case. The Ezafe morpheme uniformly agrees in phi-features with the head noun, including gender and number. When it comes to case, Ezafe usually reflects whichever case the whole DP receives in the clause. However, in a possessive construction, where the possessum is followed by the Ezafe and then the possessor, the Ezafe invariably shows oblique case, while nevertheless phi-agreeing with the head noun. This pattern is demonstrated in 2 below.

(2) (Adapted from Toosarvandani and van Urk (2014))

- a. Ju bîz=**a** gîrs=**e** vaş wen-a.
one goat=**F.EZ.SG.NOM** big-F.SG.NOM grass eat.PRS-3SG.F
'A big goat is eating grass.'
- b. Kutîk=**o** gîrs= \emptyset mî vînen-o
dog=**M.EZ.SG.NOM** big-M.SG.NOM 1SG.OBL see.PRS-3SG.M
'The big dog sees me.'

*We gratefully acknowledge funding from SSHRC grant #435-2018-0527. Thanks also to members of the Syntax of Nominal Linkers project at the University of Toronto as well as CLA participants for their valuable comments and questions.

- c. Ga=yê Fatık=e vaş wen-o
 ox(M)=EZ.M.SG.OBL Fatık(F)=F.SG.OBL grass eat.PRS-3SG.M
 ‘Fatık’s ox is eating grass.’

In 2a, the Ezafe agrees with the feminine ‘goat’, while in 2b it agrees with the masculine ‘dog’ (a vs. o). Both of these forms reflect the nominative case of the whole DP. Meanwhile in 2c, while the Ezafe reflects the masculine gender of the head noun ‘ox’, it shows oblique (as opposed to the expected nominative case) as it is part of a possessive construction.

The above distribution raises questions about the mechanics of phi-feature agreement and case realization in the Ezafe in Zazaki. If Ezafe receives its case from the possessor, why does it not also agree in phi-features with the possessor? Alternatively, if the Ezafe gets phi-features from the head noun, how does it sometimes reflect the case of the whole DP and other times that of the possessor? We argue in this paper that phi-agreement always takes the value of the head noun through the same mechanism of agreement between an Ezafe head and the head noun of the DP. However, case is valued on Ezafe through one of two mechanisms. When an adjective is present and there is no nominal material in the DP that enters with inherent case (e.g. a possessor), Ezafe will receive case via Norris-style concord after D has received structural case. However, when a possessor is present, the head noun receives genitive (marked as oblique) case from the internally-merged possessor, and Ezafe will value its case features from within the DP itself, reflecting oblique case.

This paper is structured as follows. The following section provides a brief overview of Zazaki, including a description of the number, gender and phi-feature system in the language, and paradigms of how these are marked in the ezafe and on case markers. Section 3 provides an overview of Toosarvandani and van Urk’s (2014) analysis of the same facts in Zazaki, taking an approach which requires bi-directional agree and an alternative analysis of Ezafe. Section 4 provides our analysis of the agreement patterns in Zazaki Ezafe, and section 5 concludes.

2. About Zazaki

Zazaki is a Northwestern Iranian language spoken by two to four million native speakers, primarily in Eastern Turkey. The language is often called Zaza, Kirmanjki, or Dimli by its speakers (Paul, 1998, xiv). Zazaki is closely related to Gilaki, Gorani and other Caspian languages. Zazaki historically has been heavily influenced by various Kurdish dialects due to close areal contact, and many ethnic Zazas in Turkey identify as ethnic Kurds despite the fact that their language is more closely related to dialects in Northwest Iran (Todd, 2002).

2.1 Case and Gender in Zazaki

The language has a two-case system: Nominative (NOM) and Oblique (OBL). In present-tensed sentences, subjects are marked with Nominative case, and objects, obliques and other

nominals (apart from vocatives and locatives) appear in the Oblique (Todd, 2002). In the past, the alignment reverses and subjects are marked with the Oblique. This may be seen as a type of Ergative split, although the present study is agnostic as to its finer analysis. Zazaki also exhibits a system of gender marking for both natural and grammatical gender, marking masculine and feminine agreement on adjectives, verbs and case endings. The language also exhibits singular and plural number marking on the same. Importantly, Zazaki is alike other Iranian languages in employing the *Ezafe* – a linker that appears between modifiers and their host nouns. Unlike some other Iranian languages, however, Zazaki Ezafe morphemes reflect case and phi features. The paradigms for case and Ezafe morphemes are presented below in tables 1 and 2:

Table 1: Zazaki Case Paradigm

		NOM.	OBL.
SG.	M.	-∅	-i/y
	F.	-e	-e
PL.	M./F.	-i/y	-u(n)

Table 2: Zazaki Ezafe Paradigm

		NOM.	OBL.
SG.	M.	-o	ê
	F.	-a	-a
PL.	M./F.	-ê	-un-ê

With adjectives, the ezafe morpheme reflects the case that the entire DP receives (be that Nominative or Oblique) as well as agreeing with the gender and number of the head noun. This is apparent in example 3 from Toosarvandani and van Urk (2014).

(3) (Adapted from Toosarvandani and van Urk (2014))

- a. Kutik=**o** girs-∅ mivinen-o.
 dog=**EZ.M.SG.NOM** big-M.SG 1SG.OBL
 ‘The big dog sees me.’
- b. Ez kutik=**ê** girs=i vinen-a
 1SG.NOM dog=**EZ.M.SG.OBL** big=OBL.M.SG see.PRS-1SG
 ‘I see the big dog.’

In 3a above, the modified DP ‘big dog’ appears in subject position, and the Ezafe morpheme expresses Nominative case and masculine singular phi features. In 3b however, the DP ‘big dog’ appears in object position, and the Ezafe morpheme and adjective marking both mark Oblique case (as well as masculine singular phi).

Most importantly for our study, genitive / possessive case is also realised as Oblique. Unlike the pattern seen above with adjectives, regardless of whether the larger DP appears in a position that structurally assigns it nominative or oblique case, if a possessor appears inside the DP, it will always be Oblique. This is observed in example 4 below.

(4) (Adapted from Toosarvandani and van Urk (2014))

- a. Bız=a Alık=i vaş wen-a.
 goat=**F.EZ.OBL** Alık=**OBL.M.SG** grass eat.PRS-3SG.F
 ‘Alik’s goat is eating grass.’
- b. Ez bız=a Alık=i vinen
 1SG goat(F)=EZ.F.SG.OBL Alık=**M.SG.OBL** see.PRS.1SG
 ‘I see Alik’s goat.’

In 6a, a possessed NP appears in subject position in a sentence with present tense. This position generally assigns Nominative case, but due to the presence of the possessor ‘Alik’, both the Ezafe morpheme (*a*) and the case-marker (*i*) after Alik appear in their Oblique forms. This is likewise true when the DP ‘Alik’s goat’ appears in the object position, as in 4b.

As mentioned above, the language tracks natural gender as well, and in 5, we can see that Ezafe morphemes and gender agreement markers on adjectives inflect for this phi feature. As expected, this is not affected by the case received by the entire DP. For completeness, sentences in 5 demonstrate that even when there is no possessor present and the DP receives Oblique case, this agreement pattern remains.

(5) (Translated & adapted from (Selcan, 1998, 257))

- a. U her=a gêwı=e an-o
 He donkey=EZ.F.SG.OBL grey=F.SG.OBL bring.prs-3SG.M
 ‘He’s bringing a grey (female) donkey.’
- b. U her=ê gêwı=i an-o
 He donkey=EZ.M.SG.OBL grey=M.SG.OBL bring.prs-3SG.M
 ‘He’s bringing a grey (male) donkey.’

Finally, sentences in 6 demonstrate that when a possessor *is present*, it is nevertheless still the case that the Ezafe morpheme tracks phi-features of the head-noun:

(6) (Adapted from Toosarvandani and van Urk (2014))

- a. Bız=a Alık=i vaş wen-a.
 goat=**F.EZ.OBL** Alık=**OBL.M.SG** grass eat.PRS-3SG.F
 ‘Alik’s goat is eating grass.’
- b. Ga=yê Alık=i vaş wen-a.
 ox=**M.EZ.OBL** Alık=**OBL.M.SG** grass eat.PRS-3SG.F
 ‘Alik’s ox is eating grass.’

With this basic agreement pattern in place, we can proceed to discuss the question

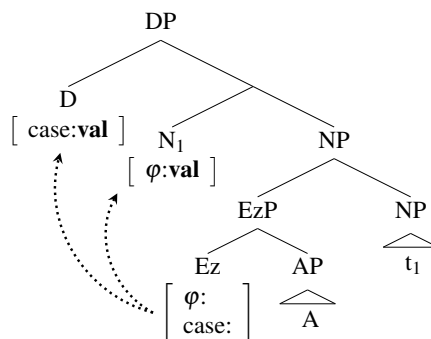
raised at the outset of the study: if the Ezafe morpheme invariably tracks the phi-features of the head-noun in a DP with possessors or adjectives, and usually matches the structural case the entire DP receives (as in 3 above) why is it that the presence of a possessor causes the Ezafe morpheme to appear in the Oblique? The following section outlines a paper by Toosarvandani & van Urk who originally described this problem, and presented a solution involving bi-directional probes.

3. Toosarvandani & van Urk (2014)

Toosarvandani and van Urk (hereafter TvU) analyze the pattern in 2 as a result of bidirectional Agree. In their system, there is a preference for downward Agree, but when no such relation can be established, upward Agree becomes available. TvU first suggest that the Ezafe consistently takes the noun modifier (be it an adjective or a possessor) as a complement. This is in contrast, for example, to an analysis that posits movement of nominals into the specifier of Ezafe phrases merged above head nouns.

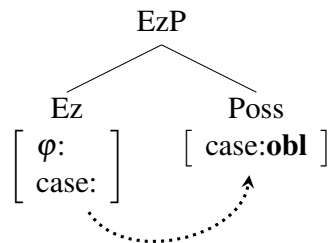
Let us first consider agreement in the context of adjectives (with no possessor). In this context, the Ezafe merges with AP, which does not have any inherent case or phi features. As a result, no Agree relation can be established. When N and D are merged with their phi and case features, respectively, Ezafe probes upward and the unvalued case and phi features on Ezafe are valued by N and D, respectively. This is shown in figure 7. Note that EzP is first merged as an adjunct to NP, and N moves out of the NP to some higher position where the Agree relation with Ez is established.

(7) (13) in Toosarvandani and van Urk (2014)



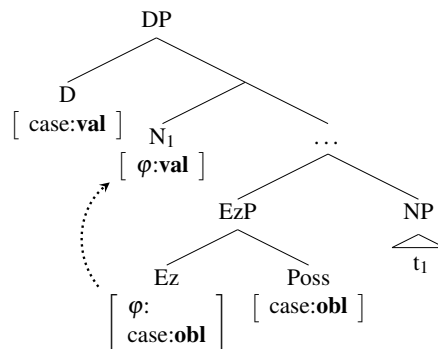
In the context of a possessive construction, Ezafe merges with the possessor carrying an oblique case. Given the preference for downward Agree, Ezafe establishes a relation with the possessor and copies its Oblique case feature. This is shown in figure 8.

(8) (15) in Toosarvandani and van Urk (2014)



Crucially, the phi features of the possessor are inaccessible to Ezafe. TvU posit that this is due to the fact that there is a null P which assigns Oblique case to the possessor and that this P is phasal, making the phi features of the possessum inaccessible for Agreement. As a result, Ezafe probes upward and values its phi with the phi features of N, in a manner similar to the previous adjectival context. This is shown in figure 9.

(9) (19) in Toosarvandani and van Urk (2014)



This analysis leaves several open questions with respect to the analysis of Ezafe in general, as well as to the specific mechanisms underlying the Zazaki case. Firstly, it is unclear under their analysis how structures with multiple modifiers (e.g. multiple adjectives) appear, and how correct linear order is achieved. Figures in 7 and 9 seem to indicate that the head noun (marked by a subscript as in N_1) has merged in a base position at the lower right of these figures and has moved to a position below D. And yet, this position is unmarked – is this the specifier position of an unmarked phrase on the spine of the DP, the second specifier of Ezafe or an adjunct of DP? What's more, this movement is unmotivated in the paper, leaving the entire operation and the ultimate linearisation of DP's with Ezafe a mystery. These issues are not discussed in the original paper.

On a more theoretical level, it is not clear if the use of bi-directional Agree is warranted (see Bošković 2007, among others). In general it may be possible to reframe analyses that employ downward Agree using upward Agree (given a different set of assumptions), but there is little motivation to support a bi-directional operation in any theory of syntax. We in fact demonstrate that the pattern in Zazaki only requires uni-directional agree. Rather,

we argue that with a correct separation between Concord and Agreement on the one hand and DP-internal (i.e. genitive) and DP-external case on the other hand, we can capture the above pattern without resorting to the structural assumptions made by TvU, while capturing both the correct linear order of complex DP's and agreement patterns within. This analysis is spelled-out in the following section below.

4. Our Analysis

To recap the puzzle of Zazaki ezafe inflection, recall that while ezafe uniformly agrees in phi-features of the head noun of a complex DP, it will nevertheless take the oblique case form should there be a possessor present in the DP, regardless of the structural case that the entire DP receives. This is seen in example 10 (repeated from 4).

(10) (Adapted from Toosarvandani and van Urk (2014))

- a. **B**ız=**a** Alık=**i** vaş wen-a.
 goat=**F.EZ.OBL** Alık=**OBL.M.SG** grass eat.PRS-3SG.F
 ‘Alik’s goat is eating grass.’
- b. Ez bız=**a** Alık=**i** vinen
 1SG goat(**F**)=**EZ.F.SG.OBL** Alık=**M.SG.OBL** see.PRS.1SG
 ‘I see Alik’s goat.’

This problem can be conceptualised from two angles. If the Ezafe morpheme agrees in case with the possessor (oblique / genitive), why would it not also agree in phi-features with this nominal? Alternatively, if the Ezafe morpheme agrees in phi-features with the head noun, why does it not uniformly reflect the case that the entire DP receives? The former conceptualisation of this problem is where Toosarvandani and van Urk departed: they posit that Ezafe agrees in case directly with the possessor, but that its phi features are inaccessible, so it must probe again to receive phi-agreement. We, however, approach the problem from the alternative angle, assuming that phi-agreement always proceeds as usual with the head-noun, but that case valuation can occur either DP internally, or via concord based on whatever structural case the entire DP receives. This section outlines this analysis in detail. First, however, we approach the ‘unproblematic’ case: when an AP and NP form a complex DP. In the following figures, we use italics to mark features that already have values and a colon to show their feature content. Bold is used for unvalued features and the equals sign (=) for the valuation process.

4.1 Ezafe Pattern in the context of Adjectives

We assume that NP's are merged with inherent phi-features, while AP's are not. Ezafe does not take a modifier as its complement (*pace* Toosarvandani and van Urk 2014) but rather the Ezafe Phrase provides a specifier position as a landing site into which the head-noun may raise after it leaves its base-merge position as a sister to a modifier (e.g. an AP). This

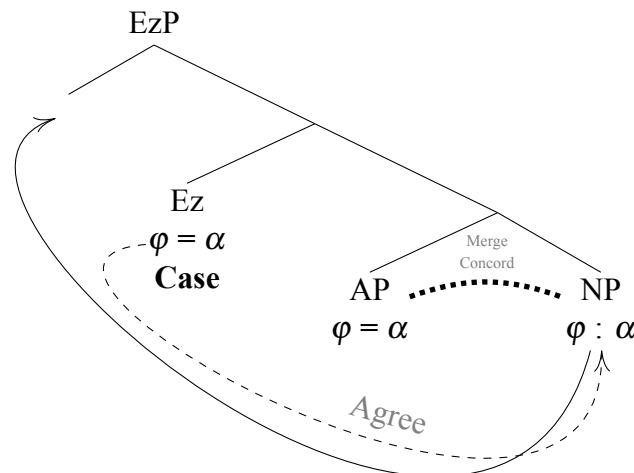
movement may be motivated to resolve a Chomsky (2013)-style labelling problem when the two XP's merge.

When the AP is merged with the NP, which has inherent phi-features, feature sharing between them takes place. This mechanism has been described as ‘Merge Concord’ by Bejar et al. (2019), where a phrase with valued phi-features merges as sister to one requiring valuation, and proceeds to share these features. This is reflected in the morphology by the marking on the adjective in 11:

- (11) Ju bız=**a** gırs=**e** vaş wen-a.
 one goat=**F.EZ.SG.NOM** big-F.SG.NOM grass eat.PRS-3SG.F
 ‘A big goat is eating grass.’

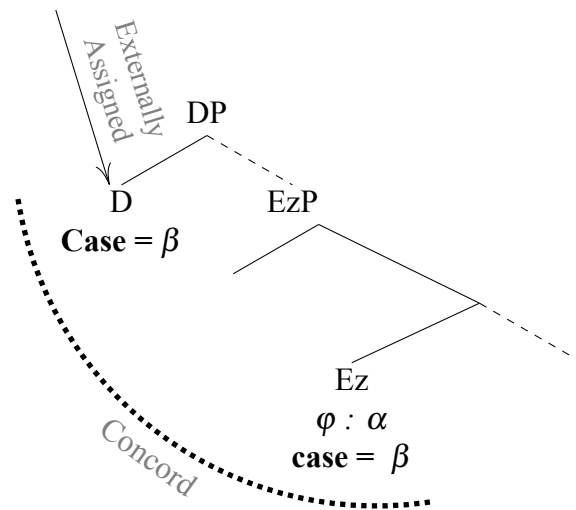
Next, when the ezafe phrase merges with unvalued phi and case features, an agree relation is established between Ezafe and NP: Ezafe probes downward and the phi features are valued as the NP moves to the specifier of EzP. This stage in the derivation is visualised in figure 1.

Figure 1: After Merge Concord, NP moves to Spec,EzP



At this point, case on the Ezafe is still unvalued. If multiple AP modifiers must be merged, they do so at this point, and the NP continues to ‘roll-up’ through succeeding ezafe phrases, just as in the mechanism described above. This analysis of Ezafe is described in great detail in Kahnemuyipour (2014). Ultimately D is merged, whose case is valued externally (by T or v in the present tense) as Nominative or Oblique. At this point, now that one head in the complex DP has a value for case, it may be copied to all ezafe heads via a Norris 2017-style concord mechanism. This process is visualised in figure 2.

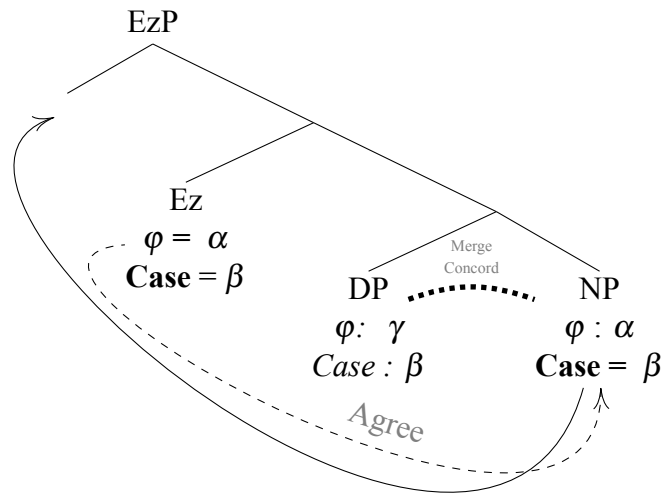
Figure 2: D receives case externally, Concord values case on ezafe heads



4.2 Pattern in the context of Possessors

We argue that when there is a possessor present in a DP, there is no reason to argue for a mechanism drastically different from the one above. We hold that phi-agreement proceeds as normal, and the only difference is that the possessor comes into the derivation with inherent genitive case (which is realised as Oblique in a two-case system). The same mechanism of merge-concord values case on the NP in its base-merge position. Therefore, when Ezafe agrees with the NP, the probe is able to find values for both phi and case at this stage. This results in the observed pattern where the phi features on Ezafe match those of the head noun, but the Case feature is technically valued by the internal Oblique case (albeit indirectly). Once the feature has been valued internally, no further valuation by concord is possible, regardless of what structural case D receives. This is visualised in figure 3.

Figure 3: Phi and Case are valued via Merge Concord



5. Conclusions

In this paper, we have developed a solution to the problem of agreement in Zazaki Ezafe without resort to bidirectional agree. This was achieved by assuming a separation between phi-Agree and case valuation. The phi features on the Ezafe are always valued via Agree (which is downward) with the phi features of the head noun. When there is no possessor involved, the case value on the Ezafe is obtained via case concord with D (à la Norris 2017). Meanwhile, in the context of a possessive construction, the case on Ezafe is valued DP-internally, preventing further concord with D. Phi-Agreement with the head noun is no different from the previous case.

While this paper addresses the basic agreement patterns of the Ezafe morpheme in Zazaki in the context of adjectival modifiers and possessors, there are several questions worthy of further investigation in future research. One interesting issue involves cases of “double” Ezafe in Zazaki, where the presence of a possessor and an adjective result in a different form of the Ezafe morpheme entirely (*-de/da/do*). It is also possible to see whether this approach to the valuation of phi and case features in Zazaki can be extended to other Kurdish languages whose Ezafe morphemes mark gender and/or case. Finally, it is worth considering whether or not a labelling-conflict approach is appropriate to explain other types of Ezafe (or reverse-Ezafe) in other Iranian languages.

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