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Suppletive allomorphy in Kurmanji is structurally non-local

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Abstract. We report a case of suppletive allomorphy in Kurmanji Kurdish that is sensitive to a structurally non-local context. The empirical facts in Kurmanji are evaluated from the perspective of two major views on the locality of suppletive allomorphy which respectively employ structural and linear notions of locality. The structural intervener being a prefix while the conditioning non-local context being a suffix gives us a chance to tease apart the empirical predictions of these two notions of locality in suppletive allomorphy.

Keywords. allomorphy; suppletion; locality; Distributed Morphology; Kurmanji

1. Introduction. Kurmanji is a Northern Kurdish language within the Western Iranian language family. This study focuses on the distribution of what is known in Iranian linguistics as the 'past' and 'present' stems in Kurmanji. Particularly interesting is the fact that the prefixal aspectual marking in Kurmanji does not block tense-related allomorphy concerning roots (Kalin & Atlamaz 2016). As seen in (1), in the past tense, the verb surfaces in the past form *xar* regardless of the aspectual prefix. The fact that it is the tense information that is responsible for the contrast between the root forms can be seen by comparing (1-a) and (1-c), in particular.[1]

(1) a. Ez nan di- x -im.
1SG food IMPF- eat.PRS -1SG
'I am eating food.'

b. Mî nan xar.
1SG.OBL food eat.PST
'I ate food.'

c. Mî nan di- xar.
1SG.OBL food IMPF- eat.PST
'I was eating food.'

While tense-related suppletion is not unique to Kurmanji, it is nevertheless worth investigating from a theoretical point of view. As will be made explicit in the next section, there is a debate on whether the locality conditions on suppletive allomorphy could be stated in structural or linear terms. Since tense-related allomorphy in Kurmanji is not blocked in the presence of overt aspectual marking, Kurmanji arguably presents a case of structurally non-local allomorphy, given that under standard assumptions, T hosts the tense features while Aspect is structurally between T and the root. We will argue that it is the prefixal nature of aspectual marking that licenses the allomorphic relation between the root and the tense morpheme, for the tense morpheme is realized via a suffix when it is overt unlike the aspectual prefix which is consistently a prefix.

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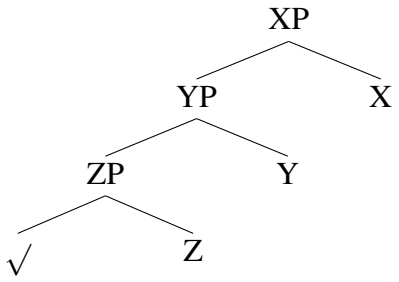
[1] There are two orthographic conventions in representing the unrounded high front [i] and high back [ɯ] vowels in Kurmanji. We follow the more commonly used convention and represent the former as 'î' and the latter as 'i' (Haig 2008) and accordingly modify the examples taken from Kalin & Atlamaz (2016) where [ɯ] = 'ı' and [i] = 'i'.

The paper is structured as follows. Two mainstream approaches within Distributed Morphology (DM), structural and linear adjacency views, are discussed in Section 2. Section 3 takes a closer look at the Kurmanji facts and introduces our analysis within the tenets of DM. In Section 4, we compare our approach to an alternative that was proposed in Kalin & Atlamaz (2016) to address the non-local allomorphy pattern in Kurmanji. Section 5 concludes the paper.

2. Locality of Allomorphy. Contextual allomorphy is a much debated topic in the literature (Bobaljik 2012; Božič 2019; Choi & Harley 2019; Embick 2010; Merchant 2015; Moskal & Smith 2016). We approach the phenomenon of context-sensitive allomorphy through the lens of the framework of Distributed Morphology (Halle & Marantz 1993). In Distributed Morphology (DM), there are two mainstream approaches to context-sensitive allomorphy. These are the Structural Contiguity and Linear Adjacency views, respectively.

2.1. STRUCTURAL CONTIGUITY. Bobaljik (2012) argues that allomorph selection is sensitive to structure, in particular contiguity of the nodes involved. Under this approach, the X node cannot be the context for the selection of an allomorph for the Z node or the root node, in a structure like (2). In other words, X cannot condition allomorphy on Z or the root. However, X can condition allomorphy on Y because X and Y are contiguous heads.

(2)



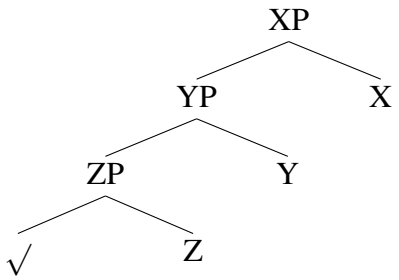
This means that the toy vocabulary item /wa/ is eligible for realizing Y while /ga/ is not eligible for realizing Z.

(3) /wa/ → Y / __ X — eligible, structurally local context

(4) /ga/ → Z / __ X — noneligible, structurally distant context

2.2. LINEAR ADJACENCY. Embick (2010), on the other hand, argues for a linear adjacency condition on allomorph selection. Allomorph selection is root-outwards but operates on a linearized string of nodes/morphemes. If the linearization of (5) is as in (6), X is not going to be able to condition allomorphy on Z because Y linearly intervenes. This means that Embick's approach makes the very same predictions, assuming the linearization in (6).

(5)



(6) √ - Z - Y - X

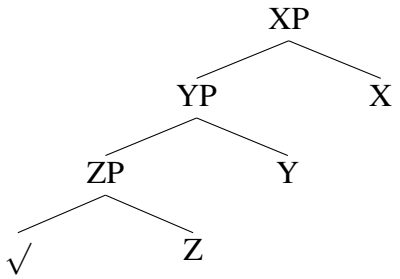
The toy vocabulary item /wa/ is eligible for realizing Y while /ga/ is not eligible for realizing Z.

(7) /wa/ → Y / __ X eligible, linearly adjacent

(8) /ga/ → Z / __ X noneligible, linearly nonadjacent

2.3. COMPARING THE TWO APPROACHES. In a language where everything is suffixal or everything is prefixal, these two approaches would not make any difference (*modulo* Embick's Pruning operation that is able to remove null morphemes from the string of morphemes that need matching with exponents). However, given that there are languages using both prefixes and suffixes, there are cases where these two approaches make different predictions. Let's consider the structure in (9). Suppose this structure is linearized as (10) where Y is a prefix and Z and X are suffixes.

(9)



(10) Y - √ - Z - X

The Structural Contiguity Approach predicts that X cannot condition allomorphy on Z (despite their linear adjacency) whereas X can condition allomorphy on Y because they are structurally contiguous (even though they are nonadjacent). The Linear Adjacency Approach, on the other hand, predicts that X can condition allomorphy on Z (despite lack of structural contiguity) whereas X cannot condition allomorphy on Y because they are linearly not adjacent even though they are structurally contiguous.

The fact that Kurmanji has both suffixes and prefixes, while also showing allomorphy, will provide us with a configuration that allows us to test the empirical predictions of the two approaches regarding context-sensitive allomorphy.

3. Kurmanji Allomorphy. Iranian languages employ two verbal stems. They are traditionally called "present" and "past" stems (Blau & Barak 1999; Haig 2008; Thackston 2006). Their names reflect the environments they are used in. Table 1 shows some irregular stems in Northern Kurdish (Haig 2008).[2]

[2] Note that there is variation within Kurmanji Kurdish, hence the differences between the data we report from our own fieldwork and the data drawn from published sources.

GLOSS	PRESENT	PAST
EAT	*xw*	*xwar*
SAY	*bêj*	*got*
GO	*ç, her*	*çû*
SEE	*bîn*	*dît*
DO	*k*	*kir*

Table 1. Irregular Stems in Northern Kurdish, adopted from Haig (2008:p. 211)

The use of verb stems in the present and past configurations are illustrated in (11).

(11) Northern Kurdish (Haig 2008:pp. 213-214) [glosses slightly modified]

a. ez te di-bîn-im
1SG 2SG.OBL IMPF-see.PRES-1SG
'I see you.'

b. min tu dît-î
1SG.OBL 2SG see.PST-2SG
'I saw you.'

Notice also that Kurmanji is split-ergative, requiring an OBL NP as the subject of a transitive verb in the past tense. Since OBL NPs are not targets for agreement, the verbal agreement tracks the ϕ-features of the unmarked NP. We will set aside this effect of Tense in the syntax of Kurmanji and focus on its effect on root forms.

Table 2 lists 'present' and 'past' forms of some verbs in Adıyaman Kurmanji, the dialect from which we mainly draw our data from. As can be seen in the table, some suppletive forms are phonologically quite distinct, suggesting the existence of true suppletion in the language.

GLOSS	PRESENT	PAST
EAT	*x*	*xor*
CATCH	*g*	*geşt*
DIE	*mır*	*mır*
STEAL	*diz*	*dizî*
GO	*her*	*çü*
SAY	*we*	*go*
SEE	*wun*	*dî*

Table 2. Stems in (Adıyaman) Kurmanji, from Kalin & Atlamaz (2016:pp. 86-87)

We also illustrate suppletive verbs from Bedir Khan & Lescot (1970) in (12) and (13), and from our data in (14). In all these examples, we see a different shape of the verb in the present and past configurations. These examples illustrate the suppletive forms of the verbs 'to eat' and 'to see'.

(12) Kurmanji (Bedir Khan & Lescot 1970:pp. 93, 235)[3]

a. Mirov di-xw-e.
man IMPF-eat.PRS-3SG
'The man eats / is eating.'

b. Te hindik xwar.
2SG a little eat.PST
'You ate a little.'

(13) Kurmanji (Bedir Khan & Lescot 1970:pp. 70, 174)

a. Ez mirov-an di-bîn-im.
1SG man-OBL.PL IMPF-see.PRS-1SG
'I see the men.'

b. Te ez dît-im.
2SG 1SG see.PST-1SG
'You saw me.'

(14) a. Ez nan di-x-im.
1SG food IMPF-eat.PRS-1SG
'I am eating food.'

b. Mî nan xar.
1SG.OBL food eat.PST
'I ate food.'

It is important to note that the past tense surfaces as a suffix along with regular verbs that do not show suppletion. The verb *kir-* 'to buy' is such a verb. The examples in (15) show that the verb stem does not change but a past suffix *-î* is added to the stem in the past tense (Durmaz 2025; Thackston 2006). Hence, the locus of realization for past tense is suffixal. The suffixal nature of the past tense morpheme will allow us to compare its interaction with the aspect morpheme, which is prefixal in the language.

(15) Kurmanji (Bedir Khan & Lescot 1970:pp. 104, 219)

a. Ez hespek-î di-kir-im.
1SG horse-MASC.SG.OBL IMPF-buy-1SG
'I buy/am buying a horse.'

b. Min ev kitêb bi deh qemer-iyan kir-î-∅.
1SG.OBL DEM book with ten lira-PL buy-PST-3SG
'I bought this book for ten liras.'

As the reader may have noticed, many pairs of past-present stems in Kurmanji are phonologically related, as shown in Table 3. In particular, it seems that the present stem may be a sub-string of the past stem. Therefore, an alternative decomposition is to take the root to be invariant in such pairs and take the string in the past stem that is not shared between present and past forms to be a realization of the past tense. Needless to say, this proliferates the number of past tense allomorphs. While this is a viable approach, we will not assume this type of decomposition and instead assume that all the past forms are suppletive, apart from those that take the past suffix *-î*.

[3] Bedir Khan & Lescot (1970) do not provide interlinear glosses and English translations. The glosses are added by the authors and all errors are ours.

GLOSS	PRESENT	PAST
BE	b	bû
GIVE	d	da
DO	k	kir
WASH	şo	şû

Table 3. Similar stems in Kurmanji, from Durmaz (2025)

Let us now turn to the aspect morpheme in Kurmanji, which is, unlike the past tense morpheme, realized prefixally. Notably, the imperfective aspect prefix has no effect on the choice of the suppletive root allomorph. As shown by the examples repeated in (16), the verb 'to eat' shows context-sensitive allomorphy regardless of the aspectual prefix. (16-a) shows a present context where we see the allomorph *x*. On the other hand, the allomorph *xar* appears in both simple past and past imperfective constructions.

(16) a. Ez nan di- x -im.
1SG food IMPF- eat.PRS -1SG
'I am eating food.'
b. Mî nan di- xar.
1SG.OBL food IMPF- eat.PST
'I was eating food.'
c. Mî nan xar.
1SG.OBL food eat.PST
'I ate food.'

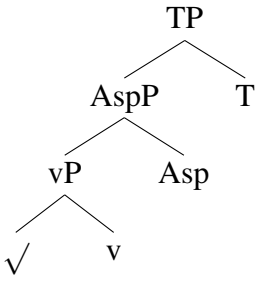
We argue that, in the spirit of Kalin & Atlamaz (2016), the context that determines the root allomorph is not the past tense but the present tense. This analysis will be justified based on the evidence to be discussed in the next section, where we will show that nominalizations which arguably do not contain a Tense layer nevertheless require the stem that occur in past tenses. Hence, in DM terms, the past stem must be the elsewhere realization of the root that is not dependent on the tense information. Thus, we assume Vocabulary Items as in (17), where the present stem form is an exponent that can only be inserted in the context of the present tense while the past stem does not come with a context-sensitive insertion condition, i.e. is the elsewhere form.

(17) a. $\sqrt{\text{EAT}} \leftrightarrow$ /x/ / _____ PRS
b. $\sqrt{\text{EAT}} \leftrightarrow$ /xar/ (elsewhere)

This analysis entails that Kurmanji exhibits structurally non-local suppletive root allomorphy. In particular, assuming the structure in (18) where Tense is higher in the structure than Aspect (hence structurally not contiguous with the root), we infer that Tense node is able to condition allomorphy on the verb root regardless of the Aspect node. We argue that this is possible precisely because the Aspect node is realized prefixally. Since the past tense marker in the language is a suffix, we can plausibly assume that the Tense node (regardless of the feature it bears) is a suffixal morpheme. Accordingly, the root and the Tense nodes will be concatenated (i.e., be lin-

early adjacent) in the sense of Embick (2010).[4] The concatenated string of morphemes in which the allomorph selection operates will be as in (19). Under Embick's approach, this will allow for the conditioning of the root by the Tense morpheme, for they will be linearly adjacent and in the same PF cycle.

(18)



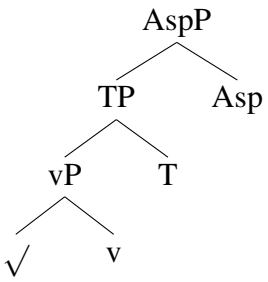
(19) ASP - √ - TENSE

4. An alternative: Kalin & Atlamaz (2016). In our analysis where Tense is able to condition allomorphy on the root across a structural intervener, we made a crucial assumption, taking the hierarchy of Root-Aspect-Tense to be universal as in (20) (Julien 2002).

(20) TENSE ≫ ASPECT ≫ ROOT

Nevertheless, this type of approach is not the only approach that has been defended for Tense-conditioned root suppletion in Kurmanji. Kalin & Atlamaz (2016) (K&A, henceforth) argue that in Kurmanji, the functional sequence diverges from the standardly assumed hierarchy in (20). They argue that Tense is structurally closer to the root than Aspect, hence as in (21).

(21)



In motivating their analysis, K&A employ the very same suppletive allomorphy patterns we have examined. Why, then, do they reach a different conclusion? In order to further motivate the idea that the distribution of past vs. present stems is best explained by positing a low Tense head (below Aspect), they turn to nominalizations in Kurmanji. The key idea they put forth is that nominalizations in Kurmanji include the Tense morpheme but not the Aspect morpheme.

They argue that nominalizations, in all cases, include the root and the Tense suffix. They substantiate this idea by decomposing the past forms into root and a tense allomorph as shown in Table 4. Notably, under this decomposition, the present tense is consistently a zero and the roots are constant across the tenses but the tense morpheme, in its elsewhere from, i.e., when it does not have the present tense feature, has a variety of root-dependent allomorphs.

[4] Under Embick's approach, null nodes are irrelevant, for they undergo *Pruning*. This operation applies to null nodes, preventing them from appearing in the concatenation statements. Accordingly, since there is no exponent/VI that realizes v, the linear adjacency between the Tense node and the root is not broken by v.

	IMPF-ROOT-T[PRES]	IMPF-ROOT-T[ELSE]
EAT	di-x-∅	di-x-or
CATCH	di-g-∅	di-g-eşt
DIE	di-mir-∅	di-mir-∅
STEAL	di-diz-∅	di-diz-î

Table 4. Morphemic analysis proposed in Kalin & Atlamaz (2016:p. 93)

Adopting this decomposition, K&A argue that the nominalization is built by suffixing the elsewhere realization of the tense morpheme (called T-else in their analysis) on the root followed by the nominalizer *-in*, as shown in (22-a). Crucially, the imperfective prefix is illicit in nominalizations, as shown in (22-b).

(22) Kalin & Atlamaz (2016:p. 94)

a. x-or-in-ê Mehemed-ê
eat-T-NMLZ-EZ Mehemed-OBL
'Mehemed's eating'

b. *di-x-or-in-ê Mehemed-ê
IMPF-eat-T-NMLZ-EZ Mehemed-OBL
'Mehemed's eating'

Under the decomposition that K&A offer, this constitutes direct evidence that nominalizations include the tense morpheme but excludes the aspect morpheme. This, then, indirectly justifies the idea that the Tense head is lower than the Aspect head, hence surviving under nominalizations.

Recall, however, that we do not adopt the composition that K&A offer and instead assume that the past stems are root allomorphs, occurring with a zero tense suffix. Accordingly, our segmentation of the nominalization will be different from the one that K&A adopts. See the examples in (23) for a comparison. In essence, we predict the elsewhere form of the root, namely *xar* to be found in nominalizations since they do not contain the present tense feature.

(23) a. x-or-in-ê Mehemed-ê
eat-T.ELSE-NMLZ-EZ Mehemed-OBL
'Mehemed's eating' (K&A's segmentation)

b. xor-in-ê Mehemed-ê
eat-NMLZ-EZ Mehemed-OBL
'Mehemed's eating' (our segmentation)

Notably, under our analysis, too, the fact that the present stem is not used in nominalizations, as shown in (24), is captured. Given that *xor* is the elsewhere realization of the root while *x* can only occur under the T head bearing the present tense feature, *x* cannot be selected in a nominalization where the T head is missing.

(24) *x-in-ê Mehemed-ê
eat-NMLZ-EZ Mehemed-OBL
Intended: 'Mehemed's eating'

While there is no independent motivation for the bi-morphemic analysis of irregular past stems, there is also a prediction that goes against the idea that nominalizations contain a tense morpheme. For K&A, the nominalizer must have two realizations: *-in*, and *-n*, which follows the tense suffix *-î*. In contrast, we argue that the nominalizer morpheme, which is also found in the infinitival forms of roots, has two realizations in the language: *-in* and *-în*. In other words, we argue against the bi-morphemic decomposition of the nominalizer *-în*.

Infinitival forms of some irregular roots constitute our evidence for why we do not agree with the decomposition that K&A offer and do not take the vowel [î] in nominalizations as the tense marker. Two examples of such verbs, which have varying forms in different varieties of Kurmanji (Thackston 2006), are shown in (25). Crucially, these irregular verbs, when used in finite tensed clauses, do not take the regular past tense marker *-î*. Nevertheless, we see that their nominalizations can include the vowel [î], as part of the suffix *-în*. If *-în* were not an allomorph of the nominalizer, we would not expect such irregular roots to have infinitival forms that feature the vowel [î], at all.

(25) a. çûna min ∼ çûy-în-a min
go.NMLZ.EZ 1SG.OBL go-NMLZ-EZ 1SG.OBL
'my going'

b. dan ∼ day-în
give.NMLZ give-NMLZ
'to give/giving'

Considering these facts, it seems clear that the variation in the nominalizer suffix is root-dependent, most likely tracking inflection classes concerning roots. For example, while roots like *xar* 'eat' require the nominalizer suffix *-in*, roots like *firr* 'fly' require the nominalizer suffix *-în*. Given that there is no independent motivation to take the vowel *-î* in (26-a) as the tense marker, we propose the morphemic analysis in (26-b).

(26) Kalin & Atlamaz (2016:p. 91)

a. Me firr-î-n-ê Mehemed-ê mezi k-ir
we.OBL fly-T.ELSE-NMLZ-EZ Mehemed-OBL watch do-T.ELSE
'We watched Mehemed's flying/flight.' (their segmentation)

b. Me firr-în-ê Mehemed-ê mezi kir
we.OBL fly-NMLZ-EZ Mehemed-OBL watch do
'We watched Mehemed's flying/flight.' (our segmentation)

To summarize, there is no evidence for the idea that nominalizations in Kurmanji host a tense morpheme. The so-called past stems do appear in nominalizations simply by virtue of the fact that they are the elsewhere realizations of the suppletive roots. Furthermore, we have shown that there is evidence against the regular past tense suffix appearing in nominalizations. Different roots take different endings in nominalizations. In particular, they take *-in* or *-în* in a root-dependent manner. Most importantly, the choice here does not seem to be dependent on whether they take the regular tense suffix *-î* in their finite past forms. This suggests that the [î] of *-în* is not the tense suffix *-î*.

5. Conclusion. In this paper, we have investigated the distribution of past vs. present stems in Kurmanji Kurdish, with a particular focus on the inability of the aspect node to intervene in the selection of tense-dependent root exponents. In a previous analysis, Kalin & Atlamaz (2016) argued that this state of affairs is best captured by positing a low Tense head below the Aspect head, thereby ensuring the structural locality between root and the Tense head. We have argued against this position, offering an analysis where past stems are root allomorphs which constitute their elsewhere realizations. On the other hand, the present stems are root allomorphs that are conditioned by the present tense feature found on the T head. This analysis has eliminated the apparent need for taking the Tense head to be lower than the Aspect head. Crucially, this analysis relies on a notion of locality understood in linear terms à la Embick (2010). Given that the Aspect head is realized as a prefix, it is not linearly an intervener for the allomorphic relation between the root and the suffixal tense morpheme.

We have also investigated nominalizations in Kurmanji, an environment offered in Kalin & Atlamaz (2016) as corroborating evidence for the idea that Kurmanji has a low Tense head. From the perspective we developed, we argued that so-called past stems being used in nominalizations is neither surprising nor brings evidence for a low Tense head. Since the so-called past stems are root allomorphs that are the elsewhere realizations of the root, they are expected to be used in nominalizations where the Tense head is missing.

Further cross-linguistic work is surely needed to better grasp what conditions are most suitable for stating when an allomorphic relation breaks. Earlier work on root allomorphy in Laz, a South Caucasian language, has investigated a parallel prefix-root-suffix configuration and found supporting evidence for the importance of structural contiguity (Demirok 2021). Comparing Kurmanji with Laz and other Iranian systems will broaden our understanding on allomorphy in natural language, allowing us to see if there is any cross-linguistic variation on the metric of locality.

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