(d)e–(d)a: Rethinking the Origins of the Kurdish Imperfective Affixes

1 Introduction

In Northern and Central Kurdish, broadly, and Southern Kurdish, more sporadically, there is a present indicative/imperfective marker that variably surfaces as *de-* or *e-*. These markers conform in position and function with other regional languages; e.g. Neo-Aramaic *q-/k-*, Armenian *gə-*, New Persian *mi-*, Hewramî/Gorani *m-*, etc.[1] Although, the etyma for many of these markers is clear (e.g. New Persian *mi-* < Old Persian *hamē* 'always'), the etyma of the Kurdish markers *de-* and *e-* were previously unknown. Windfuhr (1989a), and Stilo (2007b) have proposed etymologies for similar particles in the Central Plateau Dialects and other Iranian languages. Although, they stop short of definitively connecting these forms with the Kurdish imperfective markers. Paul (2003) has suggested that the Baluchi present durative prefix *a-* could be related to the Kurdish prefix *e-* but not *de-* as they are thought to have separate etyma (MacKenzie 1961a: 223). MacKenzie (1961a) concluded that they must have separate origins based on the fact that there are dialects that feature the phoneme /d/ throughout their system that also have the marker *e-*. In other words /d/ : Ø is not a regular correspondence. I argue here that *de-* and *e-* are the same morpheme with the same etymon. This is explicitly clear when its distribution among the Northern, Central, and Southern Kurdish varieties is examined. Furthermore, it is unlikely that Kurdish *e-* (and *de-* for that matter) is related to Baluchi *a-* although they share some structural similarities. In addition to the phonological and analogical changes that must have taken place to create the diversity observed in the various Kurdish varieties, some Southern Kurdish varieties have borrowed features

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[1] See Noorlander & Stilo (2015) and Stilo & Noorlander (2015) for a discussion of convergence on this point and others.

of the neighboring Gorani verbal system (e.g. the negative marker). This seemingly innocuous change had deeply felt effects on those varieties as the same sound changes and analogy, observed in every variety, had different outcomes with this different material.

The languages of the Kurdish zone, or area where a majority of the population speaks Kurdish, are Iranian (Kurdish, Zaza-Gorani, Persian, Luri, etc.), Semitic (Neo-Aramaic, Arabic), Turkic (Iraqi Turkmani, Azeri, etc.), Indic (Domari), Armenian, Greek, and Caucasian. My focus here is on the Kurdish languages generally classified as Northern, Central, and Southern. Although these distinctions are salient when looking at the standard languages (for Northern and Central Kurdish), Kurdish varieties are best categorized as a dialect continuum. Because the variation between each group aids diachronic reconstruction, it is important to look at each variety as a separate entity capable of possessing a piece of the puzzle. For this reason, I will refer to each variety by the city, town, village, or region where it is spoken or the tribe that speaks it following Fattah (2000).[2] Throughout this paper, I use Southern Kurdish data from Fattah (2000) and Northern and Central Kurdish data from Matras et al. (2016). The former is an in-depth study of the Southern Kurdish dialects, and the latter is a dialect corpus. Altogether I have sampled forms from 114 Kurdish varieties (85 from (Matras et al. 2016) and 29 from (Fattah 2000)). In my commentary, I exclusively use the Hawar or standard Kurdish script for all varieties. However, in specific examples from Fattah (2000), I have replicated the source material's orthographic conventions.

Based on Matras et al. (2016) and Fattah (2000), I have constructed a map of the Kurdish varieties referenced here (fig. 1). They are labeled as follows: (yellow) Northern and Central Kurdish varieties, which have maintained ergative alignment; (purple) Southern Kurdish varieties; (blue) Southern Kurdish varieties, which have borrowed the Gorani negative imperfective marker (see §.2.2.1); dark colors represent varieties that remade the affirmative imperfective marker based on

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[2] Citations from Matras et al. (2016) are listed by the first city name to make it easier for the reader to find the data. This practice often uses city and village names as they appear on maps that would not be used by native speakers. It should be clear that I am using these names for ease of reference and not as a political statement.

the sandhi variant in the negative; (dark green) Gorani varieties; (light green) Southern Kurdish varieties, which borrowed Gorani imperfective and negation markers. Note that the Gorani varieties separate Kurdish varieties that have borrowed the Gorani markers from those that have not. This color scheme is repeated in all figures (e.g. 2, 4, and 3).
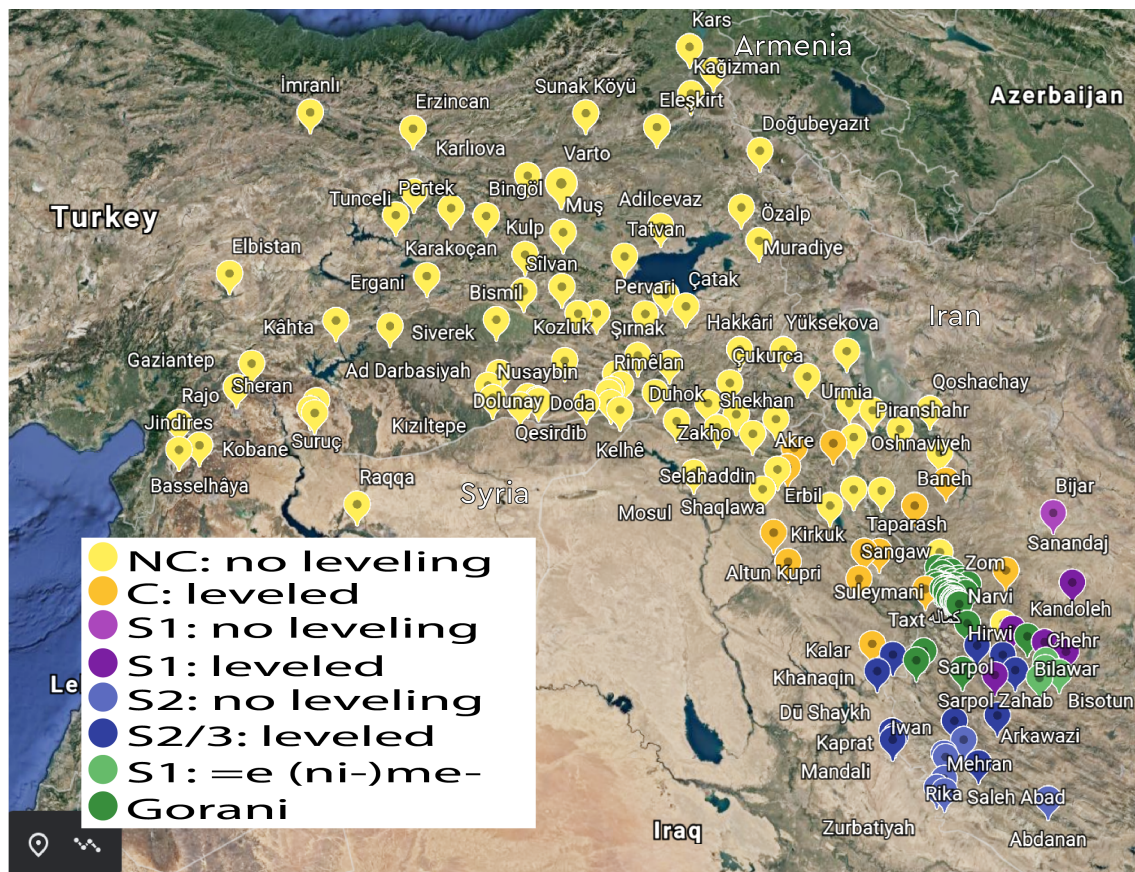

Figure 1: Map of the Kurdish languages[3].

This paper is structured as follows. I describe the semantic and morpho-phonological changes that led to the development of the imperfective markers among the Kurdish (Northern, Central, and Southern) varieties (§.2). This description includes a more nuanced understanding of the phe-

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[3] As this map is of varieties referenced in this paper, a few things are missing. Gorani varieties, especially of the Shabaki, Bajelani, and Kaka'i type, dot the landscape between Khanaqin and Mosul. They were omitted due to a lack of understanding of their precise locations. Their omission should not be a problem as they are thought to be later migrations (see Bailey (2016)). Additionally, Rawlinson described Gahwárah as the heart of Gorani country (Rawlinson 1839: 29) putting its center toward its southernmost representation on this map. Also missing from the map are the Southern Kurdish varieties spoken by tribal organizations or over whole geographic sub-regions (i.e. not cities, towns, or villages).[4] These have been left off as they correspond to swaths of land or groups of people who live among speakers of other varieties. They are not well represented by dots on a map. The distribution of related varieties in figure 1 should give a clear and accurate picture of the subgroups I have described. These tags represent a convenience sample of Kurdish varieties that have forms of the past imperfective represented in Matras et al. (2016) or Fattah (2000). As such, nothing should be gleaned from gaps between tags.

nomenon known as Zagros *d* (McCarus 2009) being the catalyst for all other changes (§.2.2.1). Additionally, I propose that Gorani contact is responsible for the differences observed in Southern Kurdish (§.2.2.2). This is not a new proposal (e.g. MacKenzie (1961b)), but it is the first proposal to give an example not easily attributed to mutual inheritance. Additionally, I discuss several topics that have become salient in reference to this study of imperfective marking including: subdivisions within Southern Kurdish (§.A); competing theories of Gorani-Kurdish Contact (§.**??**); problems with several previously made proposals about these markers (§§.3.1, 3.2, 3.3); and a general framework for evaluating the relationships between these languages (§.3.4).

2 The development of the imperfective prefix

I argue here that the imperfective prefix in Kurdish has developed from the locative circumposition. There are several such circumpositions among Kurdish varieties. Most notable among these are the *di* NP=*da* type (Sheran: *di vî gundî da* 'in this village' (Matras et al. 2016)) and the *le* NP=*a* type (Suleymanî: *lem gûndeya* 'idem.'). Often one element of the circumposition can be dropped without changing the meaning of the phrase. Generally speaking, it is the postpositional element that can be dropped (Helebce: *lem gunde* 'idem.' (Matras et al. 2016)) (Thackston 2006). However, in certain Northern Kurdish varieties, it is the prepositional element that may be dropped (Basselhâya: *gûnd da* 'in the village' (Matras et al. 2016)) (Haig & Opengin 2018).

  New Persian, the most wide-spread of the New Iranian languages, has several non-finite verbal forms, including the infinitive, the past participle, and the short form infinitive. The infinitive is built on the past stem of the verb (from the PIIr. past participle *-ta) adding the suffix *-án*. The past participle is built on the past stem of the verb adding the suffix *-e*. The short infinitive is identical to the past stem of the verb. Kurdish varieties have the infinitive (past stem + *-ín*) and the past participle (past stem + *-î*, *-û*, or *-iɣ*), but short infinitives or periphrastic constructions that employ the bare past-tense stem are conspicuously missing. In New Persian, the constructions that

use the short infinitive do not include combination with simple prepositions. However, this is not unheard of among the Iranian languages; cf. Shughni: *wuz-um çi tīd* 'I am going to go [lit. I'm to go]' that uses the short infinitive of go *tīd* with the preposition *çi 'to'* (Edelman & Dodykhudoeva 2009: 807). As the form of the short infinitive is the old participle stem, it is not unreasonable to assume that it would have had a more noun-like distribution at one point in time.

Stage Ø: This investigation of the various imperfective marking strategies found in Kurdish varieties begins with a point where there is no strategy in place. That is to say that there is no morphologically marked imperfective in the past of present tenses. This stage is lost in all Kurdish varieties. In Southern Kurdish, there are a few varieties that appear not to have any such markers.[5] However, all these varieties have preserved one or more remnants of these markers in sandhi forms that have been generalized; e.g. *têm < d(i)-hê-m* [IPFV-come.PRS-1SG] 'I come' or *nyekem < n(i)-de-ke-m* [NEG-IPFV-do.PRS-1SG] 'I won't do'.

2.1 Semantic Changes

The imperfective domain contains the event-in-progress (progressive) reading, the habitual or generic-characterizing reading, and the continuous reading with lexically stative predicates (Deo 2015: 144). Regarding the imperfective markers in Kurdish varieties, several semantic changes have taken place. One involves the recruitment of an inherited locative marker to mark the progressive aspect. Another is the extension of that progressive-aspect marker to be used as a generalized imperfective. Additionally, these steps have been repeated in several of the varieties. This locative recruitment to mark the progressive aspect is one of several well-attested sources for the progressive (see. Bybee et al. (1994)), and the progressive-to-imperfective shift is also a well-understood phenomenon. According to Deo (2015), this shift is part of a cyclic diachronic pattern:

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[5] E.g. Sarpol, Kałhor, İwân, Arkwâzi, Mandıli, Dušayx, Kaprât, many villages ouside of Xânaqin (not Arkwâzi), Soramayri, and marginally in Xânaqin city, Myaxŝ, and Malıkšay. These languages use a bare present tense stem for present indicative (Kałhor: *hał=Ø-gardine(d)* '(S)he returns, is returning, will return'), and the preterite for all past indicative sentences (Kałhor: *hał=Ø-gardân* '(s)he returned, used to return, was returning') regardless of aspect.

 i. zero-prog state: there is only one marker throughout the imperfective domain;

 ii. emergent-prog state: progressive marking is grammaticalized but is optional;

 iii. categorical-prog: progressive and imperfective marking have clearly demarcated sub-domains;

 iv. generalized-prog: a return to the zero-prog state with the progressive marker acting as the only imperfective form.

Most of the Kurdish varieties have gone through this cycle once in diachronic memory and have returned to the emergent-prog state. The one exception is Malıkšay, which has remained at the categorical-prog stage.

2.1.1 Emergent-progressive

The Kurdish locative circumposition *de* NP=*da* was added to the past-tense stem of the verb (i.e. the short infinitive; glossed as PST). This stem is the reflex of the substantiveized PIE participle in *-to acting as a deverbal noun. The resulting adpositional phrase 'in the verbing' combined with the copula to necessitate the act-in-progress reading (ex. (1)). The emergent progressive construction contrasts with the simple past form built from the same participle, also with the copula, was originally aspectually unmarked (ex. (2)).[6]

(1) de kird =da =Ø
  in.PRE do.PTCP =in.POST =COP.3SG
  '(s)he was doing [lit. (s)he is in doing]'

(2) kird =Ø
  do.PTCP =COP.3SG
  'did it [lit. it is done]'

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[6] I assume that this form was aspectually unmarked because it was the only past tense construction by the Middle Iranian period. However, it had its origins in a stative deverbal noun. I other words, at one point, it likely signified the perfect-tense, and it eventually became generalized as a past-tense form. For more on this change (i.e. aorist drift) see Condoravdi & Deo (2014).

This strategy is not attested synchronically (as a marker of progressive aspect) in any of the languages. However, there are varieties where the bipartite construction has been preserved on certain stems forming the past imperfective albeit with phonological reduction that will be described in section 2.2.1. There are other varieties that have kept the postpositive marker broadly and only preserved the prepositive marker when negation caused the coalescence of the negative and imperfective markers (§.2.2.1). The varieties that have maintained a bipartite marker with certain verbs are Harsin (ma-rasy-â-m 'I was arriving [IPFV-PST-IPFV-AGR]'), Bilawâr (a- w̆-â-m 'I used to be [idem.]'), Biǰâr (dı-ǰây-â 'he was chewing [idem.]'), Šėrwân (a-č-yâ-m 'I was going [idem.]'), Sahana (a-pırsy-â-m 'I was asking [idem.]'), Qorwa (a-ǰay-â-Ø 'he was chewing [idem.]'), and Kolyây (a-wâry-â-Ø 'he was kneading [idem.]') (Fattah 2000: 378). There are other varieties where the imperfective suffix is retained but the prefix is lost except when preceded by the negative marker.[7]

2.1.2 Categorical-progressive

As the emergent progressive starts to become a core part of the verbal system, the circumposition loses its (syntactic) character. At this point, progressive marking began to spread into the present tense. Past tense perfective constructions were built on the past-tense stem of the verb (past participle) and the copula (PST=COP).[8] This contrasted with the progressive construction only by the locative circumposition (LOC=PST=LOC=COP). At this point, the morphological parsing would best be characterized as PROG-PST-PROG-AGR. Although, the progressive markers still resemble the locative circumposition. The assertion that the progressive started in the past tense and spread

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[7] This happens most notably in Kırmânšây, Qasıṛ Širin, Sanǰabi, Xâɫesa, Šahâbâd, Čamčamâl, and Harasam.

[8] In Kurdish, the past and present verbal stems are known to have different agreement affixes. Although the person-number affixes in the past-tense resemble the copula (except in the third person singular), they are considered separate. An examination of Middle Persian shows clearly that the copula augmented the verb stem:

	SG		PL	
1	uš an dīd ham	'he saw me'	uš amah dīd hēm	'he saw us'
2	uš to dīd hē	'he saw you (sg)'	uš ašmah dīd hēd	'he saw you (pl)'
3	uš ōy dīd	'he saw him/her/it'	uš ōy dīd hēnd	'he saw them (pl)'

to the present tense is supported only by the fact that the past tense stem was a participle and, therefore, part of the nominal system. As part of the nominal system, it could be part of a prepositional phrase. The Kurdish present tense-stem was never a verbal noun, and its agreement affixes should be considered fused to the verbal stem. This is exemplified by the fact that although many dialects allow clitics to come between the past stem and past agreement affixes (< copula), none allow them to intervene between the present stem and its agreement affixes.

When progressive marking was extended to the present tense, there was no post-verbal position for the locative postposition to occupy. The progressive proclitic was then attached to the present-tense stem (PRS). The present progressive in example (3) would still alternate with the bare present (4). This type of alternation is only synchronically productive in Malıkšây.[9]

(3)   de-   ke-m
         PROG- do.PRS-1SG
         'I am doing'

(4)   ke-m
         do.PRS-1SG
         'I do'

2.1.3 Generalized-progressive

The tendency for a specialized progressive marker to become a generalized imperfective marker is cross-linguistically common. For instance, Turkish *-iyor-* was a progressive marker that is now becoming a generalized imperfective marker in standard Turkish (Deo 2015; Comrie 1976). Another example of this type of change comes from the Leriki variety of Northern Talyshi spoken in Azerbaijan. Leriki recruited a locative marker for the act-in-progress reading and has subsequently generalized it as the only present-tense imperfective form. See example (5) where the locative postposition *-dæ* is marking the imperfective aspect (or general present tense). The locative post-

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[9] The alternation between bare stem and marked for progressive in Malıkšây is likely a later innovation and not a retention of this state (elaborated in §.2.3.4).

position is still synchronically part of the adpositional system of Leriki making the relationship between these forms clear.

(5) gæt-é-dæ=m
      take-INF-LOC=COP.1SG
      Leriki (N. Talyshi): 'I take' (Noorlander & Stilo 2015: 442)

Although nearly all Kurdish varieties have undergone this shift, there is at least one variety that may have preserved a distinction between imperfective and progressive. In Maɫıkšay (Xamis u Rasülawan), there is a distinction between the imperfective (6) and progressive (7), the latter being marked by the prefix *dı-*.

(6) dar= kar-ım
      PV= do.PRS-1SG
      Maɫıkšay (X.R.): 'I hunt' (Fattah 2000: 573)

(7) dar= dı-kar-ım
      PV= PROG-do.PRS-1SG
      Maɫıkšay (X.R.): 'I am hunting'. (Fattah 2000: 573)

The same distinction is absent in the past indicative forms where *dar=dı-kırd-ım* means both 'I used to hunt [PV=IPFV-do.PST-1SG]' and 'I was hunting [PV=PROG-do.PST-1SG]'. However, in the negative the distinction has been preserved (or more likely reinnovated); cf. *dar=nya-kırd-ım* 'I didn't used to hunt [PV=NEG.IPFV-do.PST-1SG]' and *dar=nya-dı-kırd-ım* 'I wasn't hunting [PV=NEG.IPFV-PROG-do.PST-1SG]' (Fattah 2000: 573).[10]

2.2 Morpho-phonological Changes

There are several morpho-phonological changes that I have identified in conjunction with the development of the imperfective markers in Kurdish varieties. Not all of them took place in every

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[10] The negative imperfective marker *nya* can be understood as a combination of *nı-* and *d(e)-* with the shift from *d* to *y* known as Zagros-d (see §.2.2.1). The addition of a second *dı-* marker is likely in analogy with the present progressive forms. See section 2.3.4 for a more detailed account.

variety. Many of them are reliant on the various semantic and phonological changes. At the core of tese changes is the Zagros *d* phenomenon which affected the outcomes of both the imperfective prefix *de-* and suffix *-da*.

2.2.1 Zagros *d*: *d* → *y, w* / V_

According to McCarus (2009), "As a widespread regional feature, termed the "Zagros d" (Windfuhr), postvocalic *d* is softened to glide-like *-i-*, or *-w-*, and contracts with adjacent high vowels: *a-da-m* ∼ *a-ia-m* 'I give'; *nadir* ∼ *nair* 'Nadir' (masc. proper name); *bad* ∼ *bai* 'bad'; *xwa* ∼ *xuwa* 'God' [< *xuda]."

This feature is concentrated in the Central and Southern Kurdish speaking areas, including languages that are not on the same branch of Iranian like Hewramî and its sisters. Zagros *d* is probably not a single phenomenon but rather a set of possible outcomes of *d* in the various languages/varieties. In some of the varieties *d*s are affected not just after vowels but sonorant consonants as well; compare *beɣdad* ∼ *beɣda* ∼ *beɣa*. Zagros *d* is variably realized as /y/ (/w/ after round vowels) or /ð̞[11]/. There were contexts in which the *d* of both imperfective markers were postvocalic. This sound change came to affect both the locative preposition *de* and the locative postposition *=da* both as the locative circumposition and as the imperfective marker. The form *ne-de-nûsî-da-Ø* NEG- '(S)he was not writing [IPFV-write.PST-IPFV-3SG]' would be pronounced *neyenûsya* with Zagros *d*.

It is important to note that although Zagros *d* is more complex in Central and Southern Kurdish varieties, it exists in Northern Kurdish. For instance, Kurdish verbs that end in long vowels *a, î,* and *û* were historically consonant final **ād, *īd,* and **ūd* (McCarus 2009: 604). The loss of *d* in these forms is pervasive among all Kurdish varieties. One way to conceptualize this difference is

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[11] The outcome /ð̞/ is generally limited to Hewramî (Gorani) and represents a lateralized alveolar approximate. This phoneme description is based on my perception and assurances from native speakers that my pronunciation is correct. However, this phoneme was described by MacKenzie (1966) as a non-syllabic schwa. To my knowledge, no ultrasound or FMRI study has ever been conducted to identify its manner of articulation. As this is limited to Hewramî, I do not discuss it further.

that Zagros *d* happened in stages (1) postvocalic, (2) post-sonorant, (3) sandhi variants extended to inapplicable environments. All Kurdish varieties have undergone stage (1); many varieties have undergone stage (2) concentrated in Central and Southern Kurdish; however, stage (3) seems to be limited to some but not all of the Central and Southern varieties. Stage (3) involves analogical leveling, and it is, therefore, not Sound Change in the strictest sense (physiological). As it is analogical, it can be applied piecemeal. It is this leveling that is relevant to the creation of the *e*-variant of the imperfective marker (§.2.2.4).

2.2.2 Gorani influence

The Gorani languages are a subbranch of the Iranian languages, distantly related to Kurdish but spoken in the heart of the Kurdish zone. MacKenzie (1961: II.86) has argued that the grammatical features that distinguish Southern Kurdish from Northern Kurdish (with Central Kurdish included in the former category) are due to a Gorani substratum. Leezenberg (2015) argues instead that prestige borrowing from the seventeenth and eighteenth centuries was the cause of the convergence between Gorani and Central and Southern Kurdish (see §.**??** for a full discussion). One borrowing that I propose here is directly related to the distinction between Southern Kurdish and Northern and Central Kurdish, the Gorani negative marker *ni-*.

Southern Kurdish can be understood both as the Kurdish varieties spoken at the southern-most part of the Kurdish zone and as the varieties spoken in the geographic area overlapping the Gorani speaking area. In the Gorani variety of Kandûla (Kandûla'î), located in the center of the Southern Kurdish speaking area, there are two negation markers. In the past tense, the negation marker *nä́-* (ex. (8)) is the same as the inherited Kurdish negation marker. However, in the present tense, there is a different form of the negative marker *ní-*[12] that precedes the imperfective prefix *mä-* (ex. (9)).

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[12] The vowel *i* here represents a reduced, schwa-like high vowel.

(8)   (=ish)   nā́-kärd
         (=3SG.A) NEG-do.PST.3SG
         Kandûla'î: '(he) didn't do it' (Hadank 1930: 208)

(9)   ní-mä-kär-û
         NEG-IPFV-do.PRS-1SG
         Kandûla'î: 'I don't do' (Hadank 1930: 139)

This negation marking pattern was borrowed from Gorani into Southern Kurdish varieties.[13] The combination of the Gorani marker *ni-* and the imperfective prefix *de-* creates the contexts by which Zagros *d* has two very different outcomes. The form *nede* became *neye*, while the form *nide* forms became *nye*. These two different outcomes represent only major split between Northern, Central, and Southern Kurdish. The forms in table 1 show the inherited negative past-tense marking system in Northern, Central, and Southern Kurdish side by side with the inherited Gorani system. Kurdish (S2 and S3) reflect the Southern Kurdish varieties that have borrowed the Gorani negation marker *ni-* with the additional change in Kurdish (S3) extending the negative marker to all imperfective constructions. This is not the case in most Gorani varieties, which have a separate past imperfective form.

pre-Kurdish	Gorani	Kurdish (S2)	Kurdish (S3)	Gloss
*ne-de-ke-m	ní-mä-kär-u	*ni-de-ke-m	*ni-de-ke-m	[NEG-IPFV-do.PRS-1SG]
*ne-de-kird-da	(—)[14]	*ne-de-kird-da	*ni-de-kird-da	[NEG-IPFV-do.PST]
*ne-kird	nä-kärd	*ne-kird	*ne-kird	[NEG-do.PST]

Table 1: Summary of changes under Gorani influence.

In the following sections, I show that all Kurdish varieties go through virtually the same set of changes. One small and seemingly innocuous detail, borrowing of the Gorani negative marker, provides the conditioning environments for differing outcomes seen in all the Kurdish varieties.

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[13] In some Southern Kurdish varieties the entire system of verbal prefixes was borrowed from Gorani (see §.2.3.5).

[14] There is no comparable form in any Gorani variety. There is a past imperfective form built upon the present stem (e.g. kær-ēnē 'I was going [do-1SG.IPFV]). This form is not similar either in morphological structure or syntax; like present tense constructions, it features nominative-accusative alignment.

    For an account of how the facts presented in this table may influence the genealogical categorization of Southern Kurdish varieties, see section A and the tree in figure 4.

2.2.3 Morpheme boundaries reanalysed

One consequence of Zagros *d* occurring at a morpheme boundary, or as a sandhi variant, is that it could be confused with the epenthetic glide *-y-* that is inserted to break vowel hiatus. The morpheme sequence *ne-ye-* could seen as the discrete morphemes *ne-* and *e-* separated by the epenthetic glide *-y- (ne-(y)-e-)*. The negative imperfective marker in Central and Northern Kurdish is *na-*, which seems to be a contraction of *ne-* and *e-*. This contraction is strange because it is not a synchronically explainable result. The fact that the past tense imperfective marker does not contract in the same way (e.g *ne-ʔ-e-*) adds to the confusion. However, when all varieties with this pattern are examined, it is clear that all stages *ne-ye-*, *ne-ʔe*, and *na-* are all attested. The contraction does not occur in the past tense due to the strong influence of other past tense forms, or more accurately, the contraction took place and was later replaced in analogy to the simple past (see §.2.2.5.2).

In contrast, the forms which borrowed the Gorani negation marker *ni-* (Kurdish (S2 and S3)) underwent the same changes but reached a different result. Just as with *xwa* 'god' from *xuda, the outcome of Zagros *d* combined with a preceding high vowel is a single glide *nye-* (< *ni-ye*). The result was a fusional form no longer separable into its constituent parts *nye-* [NEG.IPFV-]. The resulting suppletive forms *de-* [[IPFV-], and *ne-e* [[NEG-IPFV-] or *nye-Ø*-[[NEG-IPFV-] were highly susceptible to leveling perhaps motivated by Humboldt's Universal (von Humboldt 1836), a drive toward one form one meaning.

2.2.4 Paradigm leveling: in favor of one form one meaning

There are analogical changes within Central and Southern Kurdish by which the imperfective indicative forms are remade upon the model of the negative[15] imperfective forms that feature

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[15] Here, I focus on the negative forms as the sandhi environment that provided the analogical exemplar for this change. However, Kurdish varieties have a large set of relational preverbs and absolute prepositions (e.g. applicatives) that also provided the conditioning environment for Zagros *d*.

sandhi variants induced by the Zagros *d* phenomenon. The varieties that have the inherited Kurdish

negation marker (NC) undergo analogical leveling. As these forms are restricted to Central and

Southern Kurdish, I will refer to them as Kurdish (C) and Kurdish (S1) from here on. In Kurdish

(C) varieties, the sandhi variant of the imperfective in the negative influences the affirmative forms.

de- [IPFV-] is replaced by *e-* [IPFV-] in analogy to *ne-e-* [NEG-IPFV-] (exemplified by the forms in

table 2 with innovations in **bold**).

	original		leveled	
C/S1	de-PRS	ne-e-PRS	**e-**PRS	ne-e-PRS
	de-PST-ya	ne-e-PST-ya	**e-**PST-ya	ne-e-PST-ya

Table 2: Leveling of imperfective forms in Central and part of Southern Kurdish.

The varieties that have borrowed the Gorani present imperfective negation marker *ni-* (Kurdish

(S2)) and the varieties that have further extended that form to all imperfective contexts have also

undergone analogical changes by which the imperfective indicative forms are remade upon the

model of the negative imperfective forms which feature sandhi variants induced by the Zagros *d*

phenomenon. The difference is that the contracted form *nye-* [NEG.IPFV-] cannot be broken down

into its constituent parts. The form of the imperfective indicative *de-* was remade to reflect this

alternation. *de-* [IPFV-] is replaced by *Ø-* [IPFV-] in analogy to *nye-Ø-* [NEG-IPFV-] (exemplified

by the forms in table 3). It is important to note that unlike Zagros *d* that is a regular phonological

change, the analogical change toward Humboldt's Universal (one form one meaning) need not

occur. About half of the Kurdish (S3) group do not undergo this analogy, maintaining the *d*-form

imperfective marker in the affirmative forms.[16] The analogy that brings the form *Ø-* [IPFV-] to

replace *de-* did not necessarily need to take place uniformly across varieties. However, the form

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[16] Note the dividing line between Kurdish (NC) and Kurdish (C) varieties is that the latter have leveled the imperfective markers to match their negative counterparts. I could equally divide Kurdish (S1), (S2), and (S3) to reflect the different evolutionary paths with and without this analogy. For ease of exposition, I will show the analogy free path in parenthesis. See figure 2 for a summary.

without leveling is not attested in Kurdish (S2). Such forms (e.g. ones with a *de-nye* correspon-
dence) are attested (see §.2.3.4).

	original			leveled	
S2	de-PRS	nye-PRS		Ø-PRS	nye-Ø-PRS
	de-PST-ya	ne-e-PST-ya		e-PST-ya	ne-e-PST-ya
S3	de-PRS	nye-PRS		Ø-PRS	nye-Ø-PRS
	de-PST-ya	nye-PST-ya		Ø-PST-ya	nye-Ø-PST-ya

Table 3: Leveling of imperfective forms in Southern Kurdish.

After this analogical leveling, there was an additional sound change that took place. The vowels
of the negative marker and the imperfective marker coalesce, producing a negative imperfective
marker with a long vowel *na-*. This form is synchronically attested in all the Northern Kurdish
varieties, nearly all the Central Kurdish varieties, and a minority of the Southern Kurdish varieties,
where (e.g. in Southern Kurdish) it is correlated with the imperfective prefix *e-*. The reason it is
not observed synchronically in the past imperfective forms in either Northern or Central Kurdish
is addressed in section 2.2.5.2.

2.2.5 Multiple exponence becomes single exponence

One consequence of developing a progressive/imperfective marker from a bipartite structure (*de
...=da*) is that the construction features multiple exponence. That is to say the single unit of
meaning [IPFV] corresponds to two units of form *(d)e-* and *-(d)a*. Multiple exponence is a cross-
linguistically common phenomenon, and it seems that it is just as likely to be generated as it is to
be lost. The draw toward the loss of multiple exponence is perhaps linked to the desirability of biu-
nique forms or the one-form-one-meaning correspondence (Humboldt's Universal). However, the
circumstances by which Kurdish varieties have eliminated multiple exponence seem to be divided
between analogical (categorical) loss and phonological loss. This distinction has major systemic
consequences and even constitutes a major division between Kurdish dialects; the maintenance

of the imperfective form built with the circumposition may be linked to the loss of ergativity in Southern Kurdish (see §.2.2.5.1).

In addition to the facts presented in the previous sections, there is another fact of Kurdish varieties that influenced the analogical processes that occurred. In the present tense, considered to be strictly the domain of the imperfective, the major alternation is between imperfective and subjunctive forms. Both are marked with a prefix imperfective indicative *de*-PRS and subjunctive *bi*-PRS. In contrast, built upon the past-tense stem, there is a more complex tense-aspect distinction between perfective/imperfective aspect and perfect/aorist tense. In the indicative mood, these are marked with a prefix only in the imperfective *(d)e*-PST-*ya*. In the perfective aspect, the past-tense stem is bare and is negated with just the plain negation marker *ne*-PST.

The Kurdish present-tense form IPFV-PRS-AGR remains unchanged. In contrast, the past-tense form, which features multiple exponence, is simplified to feature a one-to-one correspondence. In this regard, several outcomes are attested in the languages of the Kurdish zone: They can roughly be divided into loss of the prefix and loss of the suffix. However, a more clear distinction is categorical loss caused by analogical processes and phonological loss by which a formative was lost due to sound change alone. With sound change, traces can be (and have been) retained for phonologically motivated reasons.

2.2.5.1 The phonological loss of multiple exponence

Multiple exponence became a feature of the imperfective stem because the bipartite locative circumposition was recruited for the act-in-progress reading. Pre-Kurdish would have had a tense-based split ergative system; see examples (10) and (11) for an example of the tense-based split where the present-tense (10) features nominative-accusative alignment and the past-tense (11) features ergative-absolutive alignment.

(10) *(ez) ktêb xwên-im
       (I)   book read.PRS-1SG:A
       Pre-Kurdish (1): 'I read books/am reading a book.'

(11) *(min) ktêb =im   xwênd-Ø
       (I)   book =1SG:A read.PST-O[17]
       Pre-Kurdish (1): 'I read (pst) books/ was reading a book.'

One consequence of the recruitment of a locative for the emergent-prog is that the tense-based split-ergative alignment that the varieties must have had at the zero-prog stage would have shifted to an aspectual split with nominative-accusative alignment for the imperfective aspect (including the present-tense) and ergative-absolutive alignment for the perfective. I base this assertion partially on the fact that several Kurdish varieties have passed through the categorical-prog stage and have begun to innovate anew. Some of these varieties have chosen to recruit the current locative circumposition combined with the infinitive (the synchronic verbal noun) and the copula as the progressive marker. In these varieties, it is the copula that adds agent agreement to the periphrastic construction instead of the etymologically oblique agent marker (ex. (12)). As the periphrastic progressive grammaticalized this nominative-accusative form entered the past-tense system. This shift from ergative to accusative–as a consequence of the grammaticalization of aspectual periphrasis–is attested in many languages, and can be understood as one of several causal factors in the typological tendency for ergative systems to be split along either temporal or aspectual lines (Creissels 2006).

(12) le   nan-xward-ín =a   =bû-m
       LOC.PRE bread-eat-INF =LOC.POST =COP.PST-1SG
       Suleymanî: 'I was eating [lit. I was in bread-eating]'

There are no Kurdish varieties that have fully preserved such a system. In other words, all Kurdish varieties have adopted a form of the past imperfective that has lost one of the two imperfective

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[17] Central Kurdish uses the unmarked past-tense stem to signify third-person singular objects as well as the presence of an overt object regardless of number or gender.

markers. However, some/most Southern Kurdish varieties have retained both markers in restricted contexts. For example, in the varieties where the suffix was preserved robustly (Kurdish (S3)), the imperfective prefix was partially preserved in the negative. This can be understood generally as a reduction of multiple exponence as the prefix was lost in some contexts; the past imperfective is simplified from IPFV-PST-IPFV-AGR to PST-IPFV-AGR. However, once again, it was retained in restricted context NEG-IPFV-PST-IPFV-AGR became NEG.IPFV-PST-IPFV-AGR.

	AFF	NEG
PRS.IPFV	(d-)PRS	nye-PRS
PST.IPFV	(d-)PST(-ya)	nye-PST(-ya)
PST	PST	ne-PST

Table 4: Southern Kurdish (S3).

There are Kurdish (S3) varieties that did not analogically level the imperfective prefix *de-* to match that of the negative contexts (e.g. Ø-) to be treated in section 2.3.4. Additionally, some varieties lost the suffix *-ya* leaving the past imperfective and perfective identical and an unmarked present stem as well. These varieties only preserve imperfective marking with the negative prefix *nye-*.[18]

For the Kurdish (S3) forms that did not feature suffix loss, the imperfective suffix was preserved completely. In these varieties,the imperfective suffix *-ya* was retained as the only (past) imperfective marker in the language except for the remnant of the original imperfective prefix in the negative marker *nye-*.[19] These forms are summarized in table 4.

(13)   harru   gušt xwârd-yâ-n
        every.day meat eat.PST-IPFV-3PL
        Kırmânšây: 'They ate meat every day. (Fattah 2000: 376)

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[18] These varieties include Arkwâzi, Dušayx, Iwân, Kaprât, Mandıli, and Sarpol.

[19] The varieties that show this type are Kırmânšây, Qasırı Širin, Sanǰabi, Xâɫesa, Čamčamâl, Kolyây, Dinawâr, Harasam, and Šėrwân most often in the form *-ya* (ex. (13)).

	AFF	NEG
PRS.IPFV	PRS	nye-PRS
PST.IPFV	e-PST(-ya)	neye-/na-/ne-e-PST(-ya)
PST	PST	ne-PST

Table 5: Southern Kurdish (S2).

Additionally, the Kurdish (S1 and S2) varieties that have maintained the imperfective prefix have begun to loose the imperfective suffix. In these varieties, the past imperfective suffix has been preserved after high vowels where Zagros *d* turned the onset into a glide with vowel reduction. These bipartite forms can be found in S1[20] summarized in table 6, S2[21] summarized in table 5, and S3[22] summarized in table 4.

	AFF	NEG
PRS.IPFV	(d)e-PRS	(nê-)neye-/na-/ne-e-PRS
PST.IPFV	(d)e-PST(-ya)	(nê-)neye-/na-/ne-e-PST(-ya)
PST	PST	ne-PST

Table 6: Southern Kurdish (S1).

An additional feature of the Kurdish (S1 and S2) varieties is that all stages proposed for the outcome of the negative imperfective marker are attested: *ne-ye-* showing the reflex of Zagros *d*, *na-* reflecting the reinterpretation of the *-y-* in *ne-y-e* as an epenthetic glide and the eventual coalescence of the vowels, and *ne-e* reflecting a medial stage before said coalescence. Note the form *ne-e-* could also be interpreted as the eventual remaking of the negative past imperfective on the model of the form of the past imperfective. This is arguably the correct interpretation for Northern and Central Kurdish past imperfective forms (see §.2.2.5.2). However, it is not a good explanation for Southern Kurdish, which does not show parallel forms in closely related varieties that did not extend the negative imperfective marker *e-* to affirmative contexts. In other words, the form *ne-de-* does not occur in Southern Kurdish.

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[20] S1: Bilawâr, Dinawar, Kolyâi, Qorwa (Čahâr Dawli arbi), Bayray, Sahana, (Fattah 2000: 378).

[21] S2:Xânaqin, (Fattah 2000: 378).

[22] S3: Ilâm, Iwân, Kaprât, Kırmanšâhi, Mandıli, Mıhrân, Myaxâs, Qasırı Širin, Rikâ (Sarna), Sâleh Âbâd, Sanǰabi, Sarpol, Warmızyâr, Xâɬesa, and Zurbâtiya, (Fattah 2000: 378).

The main difference between Northern and Central Kurdish and Southern Kurdish is that the imperfective suffix is crucially preserved in specific environments only in Southern Kurdish. There is an additional point of divergence between the Kurdish (NC and C) and The Kurdish (S1, S2, and S3) varieties. All of the languages that have preserved the imperfective suffix (even partially) have lost ergative alignment in the past.[23] All of the Kurdish (NC and C) varieties have preserved ergativity.[24]

2.2.5.2   The categorical loss of multiple exponence

In the vast number of Kurdish varieties, including all Northern and Central Kurdish varieties, the past imperfective is built on the past tense stem with an imperfective prefix. The past-tense form is simplified from IPFV-PST-IPFV-AGR to IPFV-PST-AGR (ex. (14)).

(14)   (d)e- kird   =m
        IPFV- do.PST =1SG
        'was doing me'

This simplification seems to be the result not necessarily of a draw toward biuniqueness (Humboldt's Universal) but rather analogy. There was a problem inherent in the alignment system of Kurdish at this stage. The simple past tense built upon the past participle had the inherited ergative alignment (ex. (15)). In contrast, the form built upon a prepositional phrase had nominative-accusative alignment (ex. (16)).

(15)   kird   =Ø
        do.PTCP =COP.3SG
        'did it [lit. it is done]'

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[23] Note that there are varieties that have lost all trace of the suffix and have also lost ergative alignment. However, they are sufficiently closely related (i.e. have shared many changes with; e.g. a Ø: *nye-* correspondence) varieties that have preserved the suffix in restricted contexts to say that the loss of the suffix is due to phonological reduction and not a shift at the morphemic level (discussed in §.2.2.5.2).

[24] I say that they have preserved ergativity here in the broadest sense of the word. Some Northern Kurdish varieties, for instance, have switched to a double oblique marked system. Additionally, there is a theory that Central Kurdish is nominative-accusative with remnants of ergativity in the formatives that mark verbal agreement (Jügel 2009). This is not of importance here as there are no such remnants in Southern Kurdish hence a dichotomy.

(16)   de   kird   =da   =Ø
         in.PRE do.PTCP =in.POST =COP.3SG
         '(s)he was doing [lit. (s)he is in doing]'

As discussed in section 2.2.2, many of the differences between Northern Kurdish and Southern Kurdish are thought to be the result of Gorani influence (MacKenzie 1961a; Leezenberg 2015). It is already necessary for this account to propose that the Southern Kurdish varieties spoken in the heart of Gorani country have borrowed the Gorani present tense negative marker *ni-* which implies close contact. These varieties also had Gorani as a model that features a split-ergative system split on aspectual lines. I believe this influenced the preservation of the bipartite imperfective marker with nominative-accusative alignment in Southern Kurdish.

In contrast, Northern and Central Kurdish varieties did not have such a model. Many Northern and Central Kurdish varieties were spoken in the same villages, towns, and cities as Neo-Aramaic dialects with tense-based split ergative systems (themselves influenced by Iranian (Noorlander & Stilo 2015; Stilo & Noorlander 2015)). The Kurdish (NC and C) varieties seem to have remade their past imperfective on the simple past tense (ergative) stem with the present imperfective prefix, reinforcing the tense based alignment split (i.e. over an aspectual split). The remaking of the past imperfective form is supported by the imperfect marker's reintroduction, which had been contracted to *na-*. Note that Southern Kurdish varieties show various negative markers *nê* which corresponds to the imperfective prefix *di-*, *nye-* to *Ø-*, and *neye, ne e,* and *na-* to *e-*. The diversity of negative markers that correspond to *e-* in Southern Kurdish shows various stages in phonological change.

In contrast, all of Northern and Central Kurdish have the construction *ne-de-* or *ne-e* for expected *na-* which shows an analogical reinvention; this reinvention does not occur in the present tense. It is less obvious "on paper" that the form *ne-e* represents a reinvention. However, the form is pronounced *ne-ʔe* with a glottal stop, not the typical hiatus resolution consonant. A prosthetic

glottal stop is required for all vowel initial words. Because the only source of glottal stops in Soranî is epenthesis before word initial vowels (V → ʔV / #_; OCP). Additionally, a reinvention of the past imperfective based on the past tense (ergative) stem is supported by the fact that in the 87 varieties of Northern and Central Kurdish I examined here, none of them have preserved a trace of the imperfective suffix, the hallmark of the imperfective (nominative-accusative) stem (IPFV). In table 7, there is a summary of forms that show the negative imperfective remade on the suffixless past-tense forms with the imperfective prefix. It is important to note that this crucially does not happen in Southern Kurdish (S2), where there is no present tense imperfective prefix with which to remake the form.

	original		remade	
NC	de-PRS	na-PRS	de-PRS	na-PRS
	de-IPFV	na-IPFV	de-PST-**Ø**	ne-**de-PST-Ø**
	PST	ne-PST	PST	ne-PST
C	e-PRS	na-PRS	e-PRS	na-PRS
	e-IPFV	na-IPFV	e-PST-**Ø**	ne-**e-PST-Ø**
	PST	ne-PST	PST	ne-PST

Table 7: reintroduction of the past imperfective marker to the negative.

The resulting system has only one imperfective marker (IPFV.PRS = IPFV.PST). One might assume a preference for such a system. However, it seems as if the driving force in this change is maintenance of the same tense-based split observed in other regional languages (e.g. Neo-Aramaic, etc.). This pull may be seen not as a universal draw but as an areal one. Just as stated in section 2.2.2, the story of the development of the various imperfective marking strategies in Southern Kurdish is very much indebted to borrowing from Gorani. It is telling that Gorani features an ergative system split on aspectual lines.

I summarize the morpho-phonological changes discussed thus far in figure 2 with the following steps corresponding to the numbered rows and the columns corresponding to the language varieties NC, C, S1, S2, and S3. The steps are as follows: (1) the introduction of the periphrastic progressive

construction (§.2.1.1); (2) extension of the progressive prefix to the present tense (§.2.1.2); (3) Zagros *d* (§.2.2.1) at which point there are separate columns for the varieties that have adopted the Gorani negation marker (§.2.2.2); (4) reanalysis of the *-y-* (< *d*) as an epenthetic glide for hiatus resolution (§.2.2.3); (5) the progressive marker is remade in analogy to the negative sandhi variant; as this change is analogical, it is not applied uniformly and constitutes not just the major split between Kurdish (NC) ad (C) but also smaller sub-splits within (S1), and (S2) (§.2.2.4);[25] (6) additional phonological changes (e.g. *ne e-* > *na-* and *Vya* > Ø); (7) Kurdish (NC) and (C) remake their imperfective upon the past tense stem (§.2.2.5.2).

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2.3   Additional details

Several other changes have occurred in different Kurdish varieties that I discuss here to provide a complete picture. Additionally, a closer look at the Southern Kurdish varieties of Malıkšây, Bisıtun, Čıhr, Harsin, and Pâyrawand provides a complete picture of the diversity of imperfective marking in the Kurdish zone.

2.3.1   The loss of the locative circumposition

In (some) varieties where Zagros *d* was extended to sandhi contexts, the prepositional element of the locative circumposition *de* NP=*(d)a* became a variant of *e* NP=*(d)a*. This form is preserved in several Southern Kurdish varieties. However, it was replaced in many Kurdish varieties by the ablative preposition *le*. The postpositional element was retained. As the meaning of the postposition often can impart the whole meaning of the circumposition, there was no problem discerning the meaning. Compare *le* NP=*ewe* 'from NP' and *le* NP=*a* 'in NP'. The phonological reduction of the prepositional element could have been a motivating factor for the semantic merger of the

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[25] There is a similar split that takes place in the Kurdish (S3) group as well to be addressed in section 2.3.4.

[26] The form with leveling of the imperfective markers is also optional in the Kurdish (S3) varieties. See section 2.3.4 for this special case.
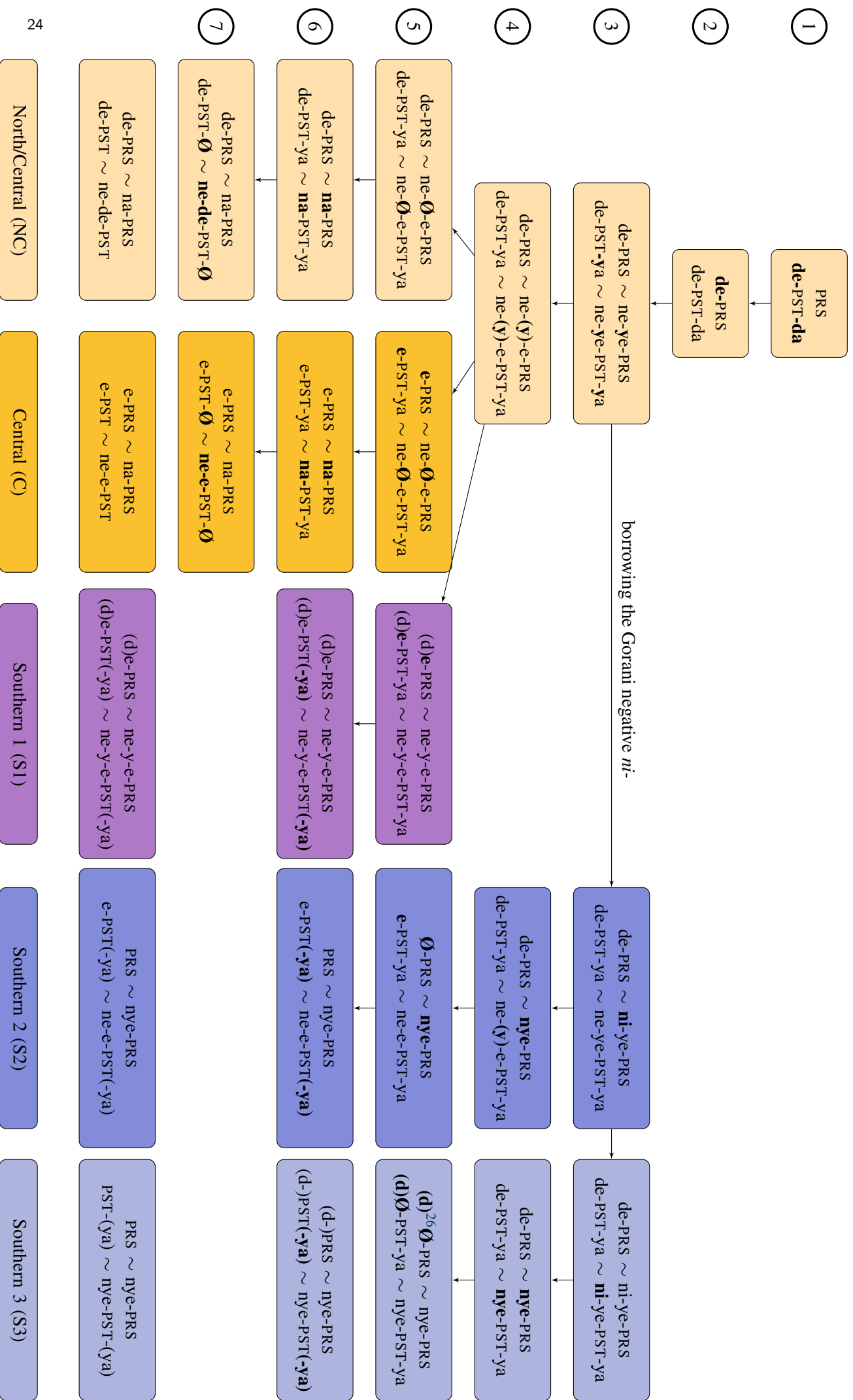
Figure 2: The development of imperfective markers in Kurdish.

Stages (1–7) across dialect groups: North/Central (NC), Central (C), Southern 1 (S1), Southern 2 (S2), Southern 3 (S3).

① North/Central (NC):
- PRS / **de**-PST-**da**

② North/Central (NC):
- **de**-PRS / de-PST-da

③ North/Central (NC):
- de-PRS ~ ne-ye-PRS / de-PST-**ya** ~ ne-ye-PST-**ya**

③ Southern 3 (S3): (borrowing the Gorani negative *ni-*)
- de-PRS ~ **ni**-ye-PRS / de-PST-ya ~ **ni**-ye-PST-ya

④ North/Central (NC):
- de-PRS ~ ne-(y)-e-PRS / de-PST-ya ~ ne-(y)-e-PST-ya

④ Southern 2 (S2):
- de-PRS ~ **nye**-PRS / de-PST-ya ~ ne-(y)-e-PST-ya

④ Southern 3 (S3):
- de-PRS ~ **nye**-PRS / de-PST-ya ~ **nye**-PST-ya

⑤ North/Central (NC):
- de-PRS ~ ne-Ø-e-PRS / de-PST-ya ~ ne-Ø-e-PST-ya

⑤ Central (C):
- e-PRS ~ ne-Ø-e-PRS / e-PST-ya ~ ne-Ø-e-PST-ya

⑤ Southern 1 (S1):
- (d)e-PRS ~ ne-y-e-PRS / (d)e-PST-ya ~ ne-y-e-PST-ya

⑤ Southern 2 (S2):
- Ø-PRS ~ **nye**-PRS / **e**-PST-ya ~ ne-e-PST-ya

⑤ Southern 3 (S3):
- (**d**)[26]Ø-PRS ~ nye-PRS / (**d**)Ø-PST-ya ~ nye-PST-ya

⑥ North/Central (NC):
- de-PRS ~ **na**-PRS / de-PST-ya ~ **na**-PST-ya

⑥ Central (C):
- e-PRS ~ **na**-PRS / e-PST-ya ~ **na**-PST-ya

⑥ Southern 1 (S1):
- (d)e-PRS ~ ne-y-e-PRS / (d)e-PST(-**ya**) ~ ne-y-e-PST(-**ya**)

⑥ Southern 2 (S2):
- PRS ~ nye-PRS / **e**-PST(-**ya**) ~ ne-e-PST(-**ya**)

⑥ Southern 3 (S3):
- (d-)PRS ~ nye-PRS / (d-)PST(-**ya**) ~ nye-PST(-**ya**)

⑦ North/Central (NC):
- de-PRS ~ **na**-PRS / de-PST-**Ø** ~ **ne-de**-PST-**Ø**

⑦ Central (C):
- e-PRS ~ **na**-PRS / e-PST-**Ø** ~ **ne-e**-PST-**Ø**

⑦ Southern 1 (S1):
- (d)e-PRS ~ ne-ye-PRS / (d)e-PST(-ya) ~ ne-y-e-PST(-ya)

⑦ Southern 2 (S2):
- PRS ~ nye-PRS / e-PST(-ya) ~ ne-e-PST(-ya)

⑦ Southern 3 (S3):
- PRS ~ nye-PRS / PST-(ya) ~ nye-PST(ya)

prepositions in Central Kurdish where the preposition *le* has taken over the semantic domains of the prepositions *de-* and *je-* (see Karim (2020) for a discussion of this phenomenon).

2.3.2 New material is recruited for the act-in-progress reading.

Nearly all the Kurdish varieties have gone through the entire imperfective cycle (zero-prog > emergent-prog > categorical-prog > generalized-prog), and they have begun to recruit material for a new emergent-prog. So, the process repeats itself, and the recruitment can be from any number of possible sources (see Bybee et al. (1994)). Here are a few examples from currently spoken varieties in the Kurdish zone: busy-EZ V-INF =COP: e.g, (17) and (18);

(17)　　xerîk-î　 xwendinewe-y kitêb =e
　　　　 busy-EZ read-INF-EZ　 book =COP.3SG
　　　　 Marivan: 'He is reading books [lit. he is busy of reading of books]' (Matras et al. 2016)

(18)　　xerik=e　　　 ktêb a-xwên-êt=ewe
　　　　 busy=COP.3SG book IPFV-read.PRS-3SG=POST
　　　　 Saqqez: 'He is reading books [lit. he is busy (he) reads books]' (Matras et al. 2016)

LOC.PRE V-INF =LOC.POST =COP (again!): e.g. (19) and (20);

(19)　　le　　　　 nan-xward-ín =a　　　　 =m
　　　　 LOC.PRE bread-eat-INF =LOC.POST =COP.1SG
　　　　 Suleymani: 'I am eating [lit. I am in bread-eating]'

(20)　　de　　　　 ħaɫikiye xwêndinewe-y kitêb =da=ye
　　　　 LOC.PRE state　　 read.INF-EZ　 book =LOC.POST=COP.3SG
　　　　 Oshnavieh: 'he is reading books (lit. in the state of reading books)' (Matras et al. 2016)

Reduplication (Hewramî): e.g. (21).

(21)　　nan　mi-war-ey　　mi-wer-u
　　　　 bread IPFV-eat-INF IPFV-eat.PRS-1SG
　　　　 'I am eating [I eat bread eating]'

Unsurprisingly, languages that have returned to a zero-prog state can then recruit new material for the act-in-progress reading. In Kurdish, there are apparent structural changes between the time of the original recruitment and the current one that may shed light on data from other Iranian languages, suggesting that they share forms cognate with the Kurdish construction. All the examples above that employ a verbal noun including the two that use a form of the locative construction (e.g. (17), (19), (20), and (21)) use the so-called infinitive. In Kurdish varieties, this is the only synchronic verbal noun.[27]

The first time a locative was recruited for the act-in-progress reading, the bare past-tense stem was recruited. This recruitment implies a stage when the past-tense stem must have still been a verbal noun. When comparing forms across languages and varieties, such patterns indicate the relative chronology of the recruitment. This relative chronology is an important tool for the historical linguist because every stage of this process is so cross-linguistically common that they could have taken place independently (see section 3.4). The question becomes not whether the changes happen in all relevant languages but did they happen simultaneously with the same material in the same geographic area. This can be said about the Kurdish varieties but not necessarily about Kurdish and its closely related sisters/cousins.

2.3.3   *d*-(h)V > *t*V

Two phonological changes have played a role in the development of the various imperfective markers found in Kurdish varieties. At the core of this discussion, the first is the loss of *d*, which is part of the phenomenon known as Zagros *d*. Another is is the devoicing of *d* (to *t*). As both these phenomena affect the consonant *d* in the imperfective prefix *d(e)-*, they are important to this discussion. However, the shift from *d* to *t*, happens in restricted environments (i.e. when voicing

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[27] The function of the infinitive in Kurdish varieties, and most other New Iranian languages, is that of the verbal noun equivalent to the English *-ing* forms.

assimilation is possible). This change can happen at any time in varieties that have maintained a

d-form imperfective marker. They cannot, therefore, be used to sub-categorize Kurdish varieties.

There are a few verbs where the past-tense stem begins with the sound *h*. They are generally

thought of as having suppletive present tense stems. For instance, the Soranî (CK) present-tense

stem of HÊNAN 'to bring' is Ê-N. This loss of *h* is predicted intervocalically, and it surfaces in

certain contexts. Compare example (22), which features the present-tense stem of HÊNAN without

its *h*, with example (23), which retains its *h* due to the presence of an intervening clitic which ends

the phonological word at the clitic boundary.

(22)   pirtûk-eke b-ên-e
        book-DEF IMP-bring.PRS-IMP.2SG
        'Bring the book!'

(23)   b-   =î   hên-e
        IMP- =3SG bring.PRS-IMP.2SG
        'Bring it!'

In some Kurdish varieties, the *d*- of the imperfective marker (as well as the *b* of the subjunctive

marker) is devoiced before voiceless consonants. For instance, Kerkuk: *çî bikem* 'what shall I do'

is pronounced [tʃiːpkəm].

In some varieties where the imperfective marker *d*- became *t*- before *h* (and probably other

voiceless consonants), the sandhi variant *t*- was generalized as the only imperfective marker. This

variant is found in a small number of varieties of the Northern Kurdish group Beroj, Sewîdiyê,

Kelhê, and Tepkê. Although, the devoicing of *d* before voiceless consonant is more widespread,

the generalization of *t*- '[IPFV-] seems to be a limited phenomenon.

In a few Southern Kurdish varieties where this phenomenon created suppletive forms (e.g. *tê-n*

'they come [come.PRS.IPFV-3PL]') side by side with a leveled imperfective marker (e.g. e-ke-

m 'I do [IPFV-do.PRS-1SG]'), the suppletive form was reanalyzed as the stem and the regular

imperfective marker was applied (e.g. *e-tê-n* 'they come [IPFV-come.PRS-3PL]'). These forms
are not relevant to the wider discussion. However they may be relevant to the what is observed in
Baluchi (§.3.2).

2.3.4 The case of Malıkšây

One dialect of the Southern Kurdish group has preserved an inherited progressive imperfective
distinction Malıkšây. Malıkšây and its closely related sisters represent (S3) varieties that had
broken off before the analogical extension of the sandhi variant of the imperfective prefix, Ø-,
from negative to affirmative environments. These dialects and Malıkšây, in particular, give us
some insight into precisely when Kurdish varieties shifted from categorical-prog to generalized-
prog.

In Malıkšây, instead of the progressive prefix becoming Ø- in analogy to the negative *nye-*, such
a form was innovated alongside the *de-* (table 8). The *de-* form remained in the system and the

C	original		leveled		
	de-PRS	nye-Ø-PRS	de-PRS	Ø-PRS	nye-Ø-PRS
	de-PST-ya	nye-Ø-PST-ya	de-PST-ya	—	nye-Ø-PST-ya

Table 8: Leveling of progressive forms in Malıkšây (S3).

imperfective suffix was lost. These two points mark a strong divergence from the (S3) path which
lost the prefixes in favor of the suffix. However, this split is akin to the *de-/e-* split that characterizes
the split between Kurdish (NC) and (C) and smaller sub-splits between the Southern varieties.
Additionally, Malıkšây extended this progressive/imperfective distinction into the past tense where
a zero-prefix would make the imperfective and perfective identical (table 9. In the negative forms,

	PROG	IPFV	PRFV	NEG.PROG	NEG.IPFV	NEG.PRFV
PRS	di-PRS	Ø-PRS	—	nye-di-PRS	nye-PRS	—
PST	di-PST	di-PST	PST	nye-di-PST	nye-PST	ne-PST

Table 9: Malıkšây conjugation.

it is explicitly clear that an analogical change must have taken place. The form of the negative imperfective marker *nye-* represents a contraction of *ni-* and *de-*. Therefore, the Malıkšây negative progressive must be a re-introduction of the marker *di-* into negative contexts. There are additional dialects that show the *di-* : *nye* correspondence but which have reached a generalized-prog phase before such analogical extension/leveling took place. These varieties include Ilâm, Mıhrân, Rikâ (Sarna), Sâleh Âbâd, Warmızyâr, Zurbâtiya, and Kordali. Unsurprisingly all these varieties are spoken in the same region in close proximity to Malıkšây.

Although it is difficult to generalize across all Kurdish dialects, based on the data from Malıkšây and her sisters, I tentatively propose that Kurdish shifted to a generalized progressive before the extension of sandhi forms from the negative imperfective to affirmative contexts but after Zagros *d*. Of course, this analogical extension did not occur in all varieties, and the primary split between Malıkšây and the rest of Kurdish (S3) is the fact that this extension did not take place.

2.3.5 Bisıtun, Čıhr, Harsin, and Pâyrawand

The southern Kurdish varieties from Bisıtun, Čıhr, Harsin, and Pâyrawand present a special case. These varieties are spoken at the far southeast of the Southern Kurdish zone. They represent the rough border between the S1 and S2/3 varieties and are spoken at the edge of the Gorani speaking region. Kurdish (S1) represent the Southern Kurdish varieties that did not borrow the Gorani negation marker *ni-*, while Kurdish (S2/3) are the varieties that have borrowed the marker for present/imperfective contexts. The four varieties Bisıtun, Čıhr, Harsin, and Pâyrawand appear to have followed the Kurdish (S1) path through the first five steps: (1) the introduction of the periphrastic progressive construction; (2) extension of the progressive prefix to the present tense; (3) Zagros *d*—at which point the S1 and S2/3 varieties diverge the latter having adopted the Gorani negation marker—(4) reanalysis of the *-y-* (< *d*) as an epenthetic glide for hiatus resolution; and (5) the progressive marker is remade in analogy to the negative sandhi variant. The result was that

these four varieties were identical to S1 varieties with the leveled imperfective marker *e-*. At this point, there was a divergence. These four varieties borrowed the present tense negative marker *ni-* from Gorani alongside the Gorani imperfective marker *me-* in addition to the already existing imperfective marker *e-* leading to a discontinuous verbal complex where the first imperfective marker *=e* is enclitic to the nearest preverbal matter (see table 10).

	IPFV	PRFV	NEG.IPFV	NEG.PRFV
PRS	=e me-PRS	—	=e ni-me-PRS	—
PST	=e me-PST(-ya)	PST	=e ni-me-PST(-ya)	ne-PST

Table 10: Kurdish (S1) conjugation with Gorani imperfective.

The forms of the imperfective must have been borrowed from Gorani after the leveling of the imperfective forms across the paradigm (*de-* $\rightarrow$ *e-*). However, the forms are interesting as they show proof of concept for borrowing the Gorani present tense (imperfective) negative marker and its use with all imperfective forms regardless of tense (not observed in Gorani). This borrowing is a necessary step for the imperfective forms in Kurdish (S2/3) that can only be inferred. It is interesting that the same borrowing happened independently among another Southern Kurdish subgroup and that those Kurdish (S1) varieties are spoken directly between the rest of Kurdish (S1) and Kurdish (S2/3) (see figure 1 in §.2).

3   Discussions

In this section, I address the various claims made about imperfective markers in the Iranian languages. Of perhaps the highest importance is MacKenzie's (1961a) account, which established the claim that the imperfective markers *e-* and *de-* must have come from separate etymological sources. Taking this for granted, Paul (2003) proposed that the Baluchi imperfective marker *a-* may be from the same source as *e-* but not *de-*. Additionally, Windfuhr (1989a,1991) and Stilo (2007a) have proposed etymologies for *d-*form imperfective markers in other Iranian languages

without weighing in on the issue of similar markers in Kurdish. I examine these claims in comparison with what I propose here for Kurdish showing how the same (or similar) facts in these languages led these scholars to develop differing conclusions. However, these conclusions were built upon erroneous foundational assumptions: the Kurdish imperfective markers are not from separate etymological sources, and the imperfective markers in the Central Plateau Dialects (for instance) are not from an adverbial source like Persian (following Windfuhr (1989b)).

3.1 MacKenzie's (1961a) assertion

In MacKenzie's (1961a) "Kurdish dialect studies," he asserts that *d(e)-* and *e-* must have different etyma because there are dialects that do not loose *d*s that feature the imperfective prefix *e-*. He specifically cites evidence from the Central Kurdish variety spoken in Rewandiz (MacKenzie 1961a: 223). Taking Rewandiz as an example, MacKenzie's (1961a) observation that it retains *d*s is not precisely correct. As discussed briefly in section 2.2.1, the Zagros *d* phenomenon is something that effects all Kurdish varieties albeit to different extents. Some varieties loose *d*s (1) postvocalically, some after (2) sonorant consonants, and some have (3) extended these sandhi variants to inapplicable consonants. The Kurdish variety of Rewandiz has undergone phase (1) of the Zagros *d* phenomenon as exemplified by the forms *čû*[28] 'he went' (< *čud see McCarus (2009)) and *nakem* 'I don't do' (< *nedekem). This variety did not go through phase (2) of Zagros *d* as exemplified by the form *mindar* 'child' (cf. Suleymanî: minaɫ 'id.').

   The Kurdish variety of Rewandiz shows the form *ekem* (< *dekem). This form comes about for the extension (phase (3)) of the negative sandhi variant to the affirmative context, perhaps motivated by Humboldt's Universal (i.e. toward biunique forms). The issue that bothered MacKenzie (1961a) is essentially that phase (1) and phase (3) have occurred without phase (2). However, phases (1) and (2) are phonological changes; if they occur, they must regularly affect the entire

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[28] All data on the Rewandiz variety is from Matras et al. (2016).

inherited lexicon. In contrast, phase (3) is an analogical process and need not occur uniformly throughout the language or at all. Within each group of Kurdish varieties, whether or not this extension takes place constitutes a major sub-split.

In figure 3, I list the languages considered here by traditional classification (Northern, Central, and Southern) and by whether or not they generalized the negative sandhi form of the imperfective marker. The Northern group does not feature any varieties that have extended the negative forms to affirmative contexts; the Central group is split roughly in half; and the Southern group strongly favors the leveled forms regardless of the starting material (S1, S2, or S3). Despite a preference toward biunique forms in the Southern Group and its occurrence in the Central group, forms that have not undergone analogy are found in each group. This is unsurprising as analogy is an irregular process that need not occur at all, and no change is a default that is uninformative to the diachronic linguist.

I reject MacKenzie's (1961a) assertion that these formatives need separate etyma for two reasons: (1) the one sound change that needed to take place for *de-* to become *e-*, Zagros *s* (phase (1)): $d \rightarrow y$ / V_, took place in all Kurdish varieties; (2) the extension of the negative sandhi variant necessary for *de-* to become *e-* is analogical and need not have occurred at all.

3.2 Thoughts on the Baluchi imperfective prefixes

Paul (2003) suggested that the Baluchi imperfective prefix =*a/a-* is possibly related to the Central Kurdish imperfective marker *e-*. There are a few facts of Baluchi that lead me to believe that this is not the case. Baluchi is a Northwestern Iranian language related to Kurdish. Their nomadic history has led to their current location in the far southeast of the Iranian speaking zone. However, there have been several waves of contact with and borrowing from other (North)western Iranian languages. Among the grammatical convergences observed between Baluchi and Caspian languages (e.g. Gilaki) was a convergence of the case system (Korn 2019). Among the Caspian
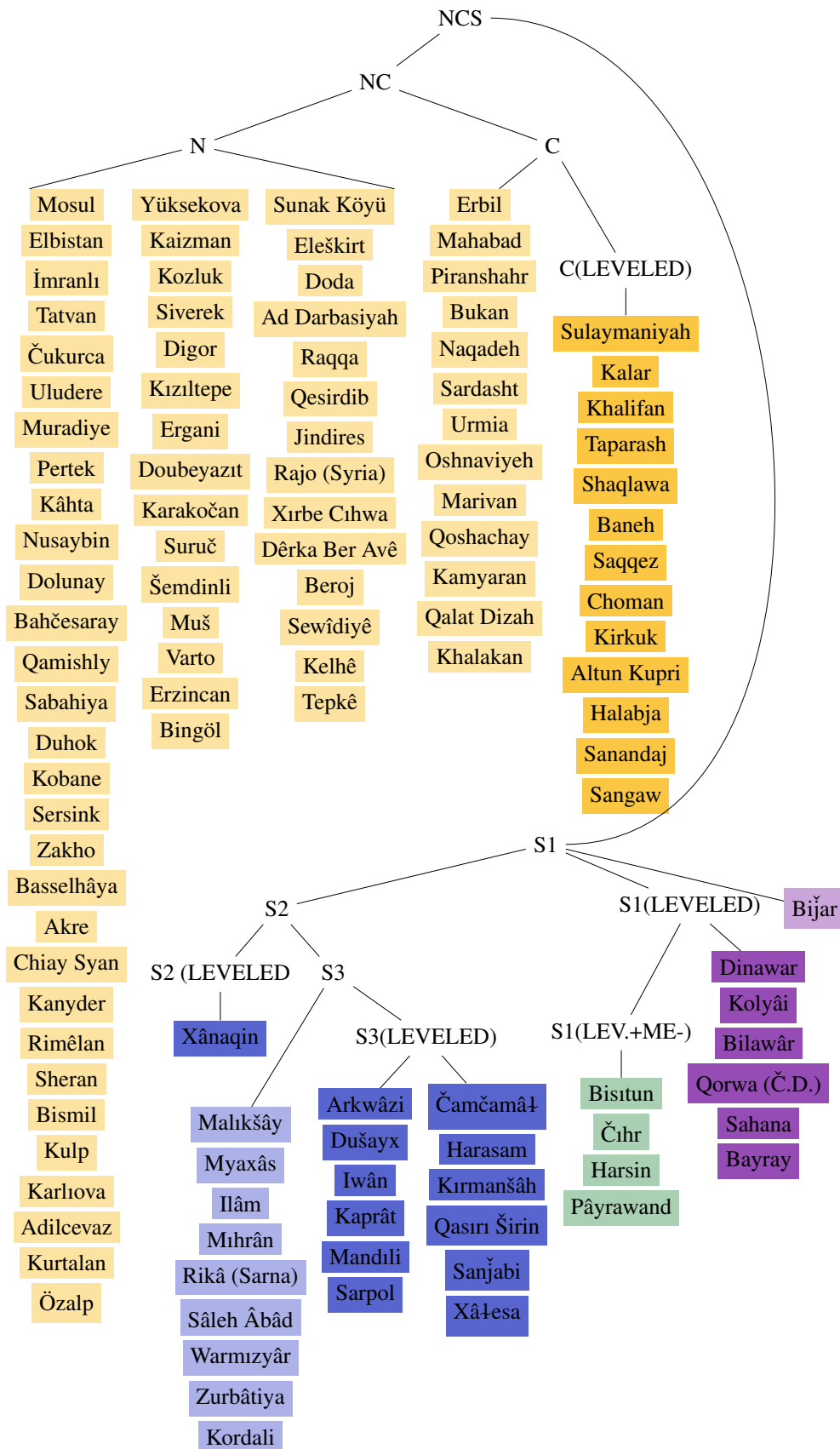
Figure 3: Tree of Kurdish Imperfective Marking.

languages, there are two common patterns for marking progressive and imperfective aspect (as well as proximative) the DAR and KAR constructions (Vafaeian 2018). The DAR construction is from the locative marker (not dissimilar from what I describe for Kurdish), and KAR construction is from the verb 'to do.' According to Stilo (2001), different Gilaki varieties form their progressive aspect with various strategies: a locative suffix (e.g. (24) and (27)), an invariable prefix *kara* (ex. (25)), and a compound formation consisting of both (e.g. (26) and (28)).

(24)   gift-ə́n-dər-əm
        take-INF-LOC-1SG
        Western Gilaki: 'I am taking' (Stilo 2001)

(25)   kəra gir-ə́m
        KAR take.PRS-1SG
        'Western Gilaki: 'I am taking' (Stilo 2001)

(26)   kəra gift-ə́n-dər-əm
        KAR take-INF-LOC-1SG
        'Western Gilaki: 'I am taking' (Stilo 2001)

(27)   git-é-dər-əm
        take-INF-LOC-1SG
        Eastern Gilaki: 'I am taking' (Stilo 2001)

(28)   git-e-ká-dər-əm
        take-INF-KAR-LOC-1SG
        Eastern Gilaki: 'I am taking' (Stilo 2001)

This Purpose of introducing the Gilaki forms is both to introduce a possible etymon *ka* (< *kṛ(n)/kar* 'to do'), and to introduce known contact languages from which Baluchi may have copied the pattern. There are a couple of similarities between the Baluchi forms and the Kurdish forms: (1) Although there is an imperfective aspect marker (=*a/a-*) that is used widely in both the past and present tenses, with a minority of verbs, there is an additional imperfective marker *k-* that cooccurs with the common marker. The Baluchi verbs that commonly take the *k*-type imperfective

marker are *(k)ayəg* 'to come,' *(k)arəg* 'to bring,' *(k)ylləg* 'to leave, abandon, let go,' *(k)oštəg* 'to stand,' *(k)əndəg* 'to laugh,' and *(k)wškynəg* 'to listen, hear' (Barker & Mengal 2014: 133-134). A subset of these verbs in Baluchi corresponds nicely to the set of verbs in Kurdish that have developed suppletive imperfective forms (as discussed in §.2.3.3). These verbs in Kurdish have had the *d-* of the imperfective marker assimilated to the *h* in the stem only to have the *h* lost. This is true of *hatin/tê-* 'to come,' and *hawirdin/têr-* 'to bring' but not *hênan/ehên-* 'id.,' or *hêştin/ehêɬ-* 'to permit, allow,' which is cognate with Baluchi *(k)ylləg*. The reason why some Kurdish verbs with an initial *h* have developed these suppletive imperfective markers and others haven't is likely the result of several different phenomena. One is word frequency; several *h-*initial words are part of the inherited lexicon such as *hařîn/ehař-* 'to grind with a millstone' that may not be frequent enough to support suppletion.[29] Another likely source for this discrepancy in Kurdish is paradigmatic. The Kurdish varieties that use *hawirdin/têr-* 'to bring' have object agreement clitics that cannot break the morphological structure of the verb (e.g. Kirind: *têr-im=î* 'I (will) bring it [bring.PRS.IPFV-1SG:A=3SG:O]'). In contrast, the Kurdish varieties that use the verb *hênan/ehên-* 'to bring' have object agreement Wackernagel affixes (following Nevis & Joseph (1993)) that fall in verb-phrase second position whether the host matter is a core verbal argument or part of the morphemic structure of the verb (e.g. Kerkuk: *e-=î hên-im* 'I (will) bring it [IPFV-=3SG:O bring.PRS-1SG:A]'). As there would never be intervening matter between the imperfective marker in the former, the sandhi variant would always occur. In the latter case, the sandhi variant would occur only with an overt (non-pronominal) direct object maintaining the initial *h* often enough for it to be regularized. The verb *hatin/tê-* 'to come' is the most likely to feature this kind of irregularity among all Kurdish varieties. It is both high-frequency, meaning it can support suppletion and intransitive, meaning it will not host a direct object pronoun eliminating the paradigmatic irregularity of sandhi variants.

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[29] I refer to the increased likelihood for words and paradigm cells with high token frequency to be irregular. See Bybee (2003); Corbett et al. (2001) for a discussion of the role of type/token frequency in preserving suppletion.

The other four do not match up to cognates in Kurdish. The Kurdish verb *standin/sta-* does not have a suppletive present-tense form, and the past-tense does not begin with an *h*. According to Korn (2005) and Cheung (2007) *aua-staH is the root of Baluchi *ōšt-*. The preverb *aua ultimately goes back to PIE *H_2eu (Beekes 2011: 247). This works out nicely as Kümmel (2014) has *h* as the baluchi reflex of PIE *H_2 initial position (e.g. Baluchi: *hīz* 'leather' *H_2iĝ-). Also, Baluchi *(k)əndəg* 'to laugh' corresponds to Kurdish *kenîn* and Persian *xandan* (Cheung 2007: 443). From this comparative evidence, it is unlikely that the Baluchi form would feature an etymological *h*. If this line of reasoning is sound, it is possible that a verb with an inherited initial *k-* could be reanalyzed in this class of verbs. Korn (2005) has both *kand* and and *hand* as variants which points to this type of reanalysis. As for Baluchi *(k)wškynəg* 'to listen, hear,' Korn (2005) suggests that the verb is built from the word for 'ear' Av. *us* (Korn 2005: 350). This word ultimately goes back to *H_2us-; the laryngeal consonant corresponds to an *h* in both Baluchi and Kurdish (Kümmel 2014). The Baluchi *k*-stems include initial *h* roots, while the Kurdish forms that feature the suppletive *t*-stems seem to be more restricted.

Additionally, there are some Baluchi varieties that feature the imperfective marker *ar=* that is employed in a minority of constructions usually before verbs that begin with *r* (e.g. *ar=r-ant* 'they go [IPFV=GO.PRS-3PL][30]') (Nourzaei & Jahani 2012: 175). This could be a retention of part of an original proclitic *kar=* that reanalyzed its *-r* to be part of or conditioned by the following word leaving a marker *ka=* in its place. It seems possible that the Baluchi imperfective marker *ka=* was assimilated to *h* initial verbs just as Kurdish *de-* was assimilated to a subset of the same verbs. In Kurdish, there was a sandhi variant of *de* which appeared as *(y)e-* after the negative marker or even vowels more broadly. This sandhi variant was extended to non-applicable contexts. This is not a clear possibility as such for Baluchi. One reason is that the negative marker does not precede the imperfective marker (e.g. *a=na-twān-t* 'it cannot [IPFV=NEG-can.PRS-3SG]) (Nourzaei & Jahani

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[30] All glossing has been altered to reflect the grammatical terminology used in this paper.

2012: 175). This word order is consistent with with what is observed in Gilaki (e.g. *kə́ra bišt-ə́n-deí-yə* 'he is frying [ʜipfv fry-INF-LOC-NEG-COP.3SG]') (Stilo 2001). However, it is a possibility that there is a sandhi variant of *ka=* that surfaced as *a=* before it was generalized. Although, I'm unsure what the conditioning environment would have been.[31] It is not clear if there is a context that would result in the loss of *k-*. According to Korn (2005), *k* in post vocalic positions shoes up variably as *k* or *g* and in suffixes as *k, g* or *Ø*. Another possibility is a reanalysis of morpheme boundaries much like in English were *a napron* was reanalysed as *an apron*.

(2) Multiple markers can cooccur? In some most Kurdish varieties that have developed the imperfective marker *e-* and feature forms like *tê-* 'to come,' *t-ê-* can be parsed as [IPFV-COME.PRS-] with a suppletive imperfective prefix. However, certain Southern Kurdish varieties have reanalyzed *tê-* as the stem of the verb and have reintroduced the regular(ized) imperfective marker *e-tê-* (e.g. Qorwa: etêm 'I come'). Such a development is possible for the Baluchi imperfective marker(s) *=a k-*. If this is the case, it would be unsurprising to find that in some dialects *=a* and *k-* could not cooccur (further research necessary).

(3) the Baluchi imperfective marker is—at least in some dialects—a discontinuous morpheme. Paul (2003) shows the imperfective marker as the prefix *a-* while Barker & Mengal (2014) and Korn (2005) have the preposed enclitic *=a*. This is not an issue per se as there are Southern Kurdish varieties that feature the discontinuous imperfective construction *=e me*. However, in Kurdish, there are only a small number of varieties in which the *=a* is a preposed enclitic (4/131 examined here). Nourzaei & Jahani (2012) show that the proclitic is more common in Baluchi, with the enclitic becoming more common as the varieties move eastward.

The extant clues to the origin of the Baluchi construction are few. Based on the *k-/ar-* variants alongside the discontinuous *=a* marker, it seems that a locative origin may not work for Baluchi.

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[31] See (Brown 2013) for a discussion of how word classes and frequency play a role in variable sound changes (cf. Bybee (2002)). It should be noted that I don't mean to imply that sound change can in fact be variable. Rather, regular sound changes that occur as sandhi variants can variably be extended to inapplicable contexts.

Assuming that a *k* initial prefix is the ultimate root of both parts of the Baluchi imperfective construction, some version of the KAR construction found in the Caspian languages like Gilaki is a good possibility. However, whether a sandhi variant that ultimately deletes the *k* in some contexts is legitimately possible for Baluchi is at best unclear. There is no clear evidence for an etymological link between the Kurdish and Baluchi constructions. However, it is an interesting coincidence that the Kurdish verbs that broadly bear the suppletive imperfective marker *t-* are cognate with a subset of the Baluchi verbs that bear the suppletive imperfective marker *k-*. This is likely a phonological phenomenon and a coincidence. Although, this coincidence could be the only clue to the ultimate origins of the construction.

3.3   Thoughts on imperfective markers across Iranian

In addition to what is observed in Kurdish and Baluchi, there are many similar imperfective markers across the Iranian world. According to Stilo (2007a), "This tense formant with the variants *e-* ~ *a-* ~ *et-* ~ *at-* ~ *ed-* ~ *to-* ~*ti-* ~ *i-* and possibly even *di-* ~ *da-* ~ *t-* thus seems to be an isogloss extending northwards from Kumzari and Bandari on both sides of the Persian Gulf in an almost unbroken chain all the way to Hamadāni Jewish and Vafsi, the southernmost Tāti language located just to the east of Hamadān. In addition, it extends to the west along the Persian Gulf to the Bušehr area, and possibly even to Northern and Central Kurdish in the northwest." For these markers, Windfuhr has suggested the etymologies *aiwa-da "at the same time, all the time" (Windfuhr 1991) and hadā 'same time/place' (Windfuhr 1989b). Windfuhr's (1989b) proposed etyma appear to be based primarily on the fact that Persian has recruited its imperfective marker from a similar adverbial source (e.g. *mi-* < *hamē* *ham-ayawa- 'always'). However, the assumption that all the imperfective aspect markers across Iranian are from some compound involving *ham 'same' or even an adverbial source is speculative at best as there is no record of these languages before the modern period. We can assume that lexemes present in Old Iranian were present in

Proto-Iranian-language-X. Still, it is a stretch to make assumptions about the function of these formatives that deviate drastically from what was observed in Old Iranian. Stilo (2007a) provides more compelling support for (Windfuhr 1989b) hypothesis. Although Stilo (2007a) concedes that "[t]here is no way of documenting the emergence of this morpheme," he provides several reasons to assume the *et*-type imperfective marker developed from a similar source as did the New Persian marker *mi-*: "*hamē*, which was at first a mobile independent word appearing before or after the verb and even at a distance from it. It then became permanently prefixed as *ham=*, which then changed to *mē-*, then to *mi-* (Stilo 2007a). Stilo (2007a) proposes that "like *hamē*, *e(t)-* may derive from some adverbial word." As observed in New Persian and confirmed by Bybee et al. (1994), Heine & Kuteva (2002), and many others, this is a possible source for an imperfective marker. Stilo (2007a) takes the variably proclitic/enclitic placement of the imperfective marker in certain central dialects to be the result of the type of variable placement that *hamē* had in the early period. However, it is not necessarily clear that the proclitic and the enclitic forms are the same or if the variable placement is not explainable for some other reason. If the markers in the Central Plateau Dialects are related to those in Kurdish, the enclitic and proclitic markers must be seen as different exponents that can coexist.

The mobility that Stilo (2007a) refers to is robust in Yazdi (Zoroastrian but not Jewish). The imperfective marker precedes the verb root in the affirmative *e-vaj-i* 'you say [IPFV-say.*prs-2sg*]' but *na-vaj-i-e* 'you don't say [NEG-say.*prs-2sg-ipfv*].' This positioning of the morpheme could, in principle, be a sign of an older mobile placement of the morpheme. However, there is another possibility. Based on what I have observed in Kurdish, where there are phonologically different pre- and postpositive elements, I have proposed a circumpositional origin still attested in Kurdish. It is not possible based on the formative(s) alone in Yazdi (Zoroastrian) to make such a distinction as both the pre- and postpositive forms are identical. In Kurdish, there is reason to believe that the circumposition started with the past-tense stem and was then extended to be used with the present.

This is supported by the fact that there are (Southern Kurdish) varieties that have preserved both pre- and postpositive elements in the past tense. However, there are no varieties that have a postpositive element in the present tense. There is no reason to assume that the postpositive element could have been generalized in another language, especially in cases like the negative where there was another marker in word-initial position. Like in Kurdish, past imperfective forms may be the key to their markers' ultimate origin. Just like in Kurdish, Yazdi (Zoroastrian) shows both pre- and postpositive elements; e.g. m-et-ort(-e)[32] 'I was bringing [1SG:A-IPFV-bring.PST(-IPFV)]' (Windfuhr 1989a). It seems that a previous stage with mobile placement of the imperfective marker and or bipartite origin could explain the facts of Yazdi. However, the same marker's cooccurrence in both positions simultaneously cannot be explained by mobile placement alone.

Other evidence for mobile placement of the imperfective marker put forth by Stilo (2007a) comes from the postpositive placement of imperfective marker in languages such as the Gazi dialect of Isfahan. This language features forms like *yuz-ān-ež-e* 'Ill find him [find.PRS-1SG-3SG-IPFV],' and xorté-m-e 'I used to eat [eat.PTCP-1sg-ipfv]' (Stilo 2007a). However, it is not clear that this is the same phenomenon. Compare the preterite *bé-m-xunt* 'I read(pst) [PFV-1SG-read.PST]' with the imperfective *xunté-m-e* 'I would read [read.PTCP-1sg-ipfv]' (Stilo 2007b). The preterite form is built upon the past tense stem just as it is in Kurdish and most other Iranian languages. However, the imperfective form is built upon a secondary participial form. This development seems to be closer to languages such as Leriki (N. Talyshi) that have developed an imperfective marker from a locative construction after the development of the innovative participle (cf. Leriki: *gæt-é-dæ=m* 'I take [take-INF-LOC=COP.1SG]' (Noorlander & Stilo 2015: 442)) with an originally progressive meaning (cf. Rashti (Gilaki): *gift-ə́n=dər-əm* [take-INF=LOC.BE-1SG] (Noorlander & Stilo 2015: 442)). In the Gazi dialect, the postposition *de* 'in, from' is used to mark locations, and the position of =de after the participial suffix -é (without an intervening clitic) likely provides the conditioning

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[32] According to Windfuhr (1989a), the second imperfective marker is optional. However, he does not explain the precise conditions for its inclusion.

environment for the lenition of *d*, which may have a remnant in the forms with a fronted agent clitic; e.g. *-ām xunté-yy-e* 'I would read [-1SG read.PTCP-ipfv].' Stilo (2007b) does not mention what consonants are typically inserted to resolve vowel hiatus. If the sequence *-yy-* contains some allophonic trace of the *d* of the locative suffix, that would confirm my observation that this is one of many examples of new progressive/imperfective constructions that have come about among the Iranian languages from a locative source. These forms are etymologically related to the other imperfective markers but represent a repurposing of the same materials in a subsequent diachronic stage. Because this likely happened later, one could in principle imagine that the Gazi dialect began with the same innovative, progressive form that was the predecessor of the *et-* marker. The *et-* marker made it to the generalized-prog stage. A new progressive marker was then recruited from the same locative marker that was still part of the language but with a newly created verbal noun (e.g. with the suffix *-é*). It should be noted that all of the stages are attested in several Kurdish varieties. However, the Gazi dialect continued along the imperfective cycle and reached a new generalized-prog state. If this were the case, one would expect to find traces of the original form. Stilo (2007a) suggests that there are such traces in the closely related Jewish dialect of Isfahan. For instance, the form *tanj-/tanjā* 'to drink' shows an unetymological *t*, which he takes to be a remnant of the earlier prefix. Of course, the *t-* occurs with all TAM categories and cannot be seen as an imperfective marker synchronically (e.g. *tanj-uv-e* 'he drinks,' *be-š-tanj(en)ā* 'he drank,' etc.). Although the *et-* form may be reconstructible for both the Gazi and Jewish dialects of Isfahan, I assert that the form of the imperfective marker with the postposition should not be taken as proof of a time when said affix had greater mobility.

Furthermore, this placement casts some doubt on the status of postpositive formatives in other dialects. For instance, the forms observed in Yazdi (Zoroastrian) may be from two different grammaticalizations. The first created the prefix, and the second the suffix. The prefix was then lost after the negative marker. Of course, this is highly speculative. However, it can be seen as a

concise solution consisting of only changes attested in other Iranian languages and sound change.

Stilo (2007a) account processes facts that are approximately parallel to what is observed in Kurdish. However, he came to wildly different conclusions starting from a reconstructed form *at-. This form is reconstructed based on the fact that many Iranian varieties feature *at*-like forms before vowels and *a*-like forms broadly. As I mention in section 2.3.3, there are Southern Kurdish varieties that have adopted such a form particularly before the present-tense stems of *hatin* 'to come' and *hawirdin* 'to bring' (e.g. Qorwe: *etèm* 'I come' and Šèrwan Züri: *etyerim* 'I bring'). In Kurdish, it is clear that *at*-like forms forms do not represent a phonetic variant that occurs before vowels but rather a form built upon a suppletive present tense stem that has preserved an earlier *d* variant. The suppletive stems are robustly attested. However, most dialects have not extended the regular imperfective marker to those stems (e.g. Kerend: *têm* 'I come' ~ *e-çim*[33] 'I go;' Kerkûk: *dêm* 'I come' ~ *e-çim* 'I go'). Stilo (2007a) shows that some of the languages have generalized the *t*-formative as part of the stem as best illustrated by the subjunctive form Qohrudi: *bá-tengis-un* 'that I look' where the stem is *tengis*. However, the *t* in this stem is not etymological; compare Soi: *at-angis-om* and Qohrudi: *a-tengis-un* 'I look' which are identical except for the fact that the Soi imperfective marker bears the *t* not the stem. These observations are precisely in line with what is observed in Southern Kurdish except that the conservatism of Northern and Central Kurdish

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[33] The word *çûn* 'to go' may also be an example of the phenomenon described in this section where a suppletive stem was created by a boundary reanalysis of a sandhi form, and that form was extended to all other TAM categories. The *ç* [ᴅʌtʃ] in *çûn* corresponds to š [ʃ]in other so-called New Western Iranian Languages e.g. New Persian: *šudan/šav-* 'to become; [obs.] go', Baluchi: *šut-/* (supplet. *raw-*) 'to go', Zazaki: *šīyāyiš/šin-*, Abyan. *šö/š-*, Anar. *ši/š-*, Ard. *šo/š-*, Gil. (Rsht.) *šoån/š-* (Cheung 2007: 41). This unexpected correspondence is easily explained by the fact that devoicing of the *di-* prefix before voiceless consonants seems to be a common phenomenon among the Kurdish varieties that have preserved the *d*-form imperfective marker. Assuming an original root *şun/*ş-, the resulting form would have been something like imperfective *di-ş-im [t-ʃ-ɪm] 'I go' vs. subjunctive *bi-ş-im [p-ʃ-ɪm] 'that I go.' The phonetic form [t-ʃ-ɪm] then lost parsability as the [t] and [ʃ] merged into the affricate *ç*[ᴅʌtʃ]. This form then became reanalysed as the stem, and it was extended. There have been other theories about the discrepancy between this stem in Kurdish and the rest of Western Iranian. MacKenzie (1961b) proposed that Kurdish actually has preserved a much older form of this root thought to have originally contained an affricate. He suggests that this is clear from evidence from eastern Iranian languages Pashto *j-*, Wakhi *čāw-*, parachi *čh-*, Ormuri *caw-*, Ossetic *cæu-*. I do not contest the ultimate etymology of this word containing an affricate as observed in the Sanskrit form *cyav* 'to set (oneself) in motion'(Morgenstierne et al. 2003: 78). However, it is possible that this form is a latter innovation within Kurdish not a retention from Proto-Indo-Iranian. Sound Change is a regular process that affects all instances of a particular phoneme throughout a language. However, there are no other convincing examples that show the reflex of PIE $*k^{(w)}i$ in Kurdish. One possibility is *şad* 'happy' (< PIE $*k^w ieH_1$), which supports my proposal that this is a latter Kurdish innovation. However, *şad* is by no means basic vocabulary and could easily be a borrowing from New Persian (also *šad* 'happy') (Cheung 2007: 38).

show that the formation of a suppletive stem with the *t* formative is a much broader phenomenon and a necessary precursor to the extension of the regular imperfective marker to the suppletive imperfective stem. The additional step observed by Stilo (2007a) of the imperfective stem being generalized to other TAM categories in Qohrudi is something that is not observed in any Kurdish variety. For instance Qorwe has added the regular marker *e-* to the suppletive present-tense imperfective stem of to come (e.g. *tèm* 'I come') but there is a separate subjunctive stem (e.g. *bam* 'that I come'). The view of the *t*-forms as suppletive stems is supported by the Kurdish varieties that have lost the imperfective marker (Kurdish S2 and S3) but have retained the *t*-initial suppletive stems (e.g. Xaneqîn: *têm* 'I come' ∼ *Ø-çim* 'I go'). The same situation is observed in some of the Central Plateau Dialects; e.g. present *tāri, tār-ém* 'I, we bring' vs. subjunctive *yāri* 'that I bring' (Stilo 2007a). For several of these languages the suppletive stem occurs with all (or most?) vowel-initial stems, but for others, the suppletive stem is restricted to 'to come' (Stilo 2007a). This latter strategy is what is employed most broadly in Kurdish.

Another justification for Stilo (2007a) to reconstruct the phoneme *t* as an integral part of the imperfective marker is that many languages have a *d* or *t* in all contexts; e.g. Kāns. *it-xusān* 'I hit,' *id-vāzān* 'I say,' *ít-ārān* 'I bring'; Mahll. *at-keron* 'I do,' *ad-vojon* 'I say,' *at-iyon* 'I come' (Stilo 2007a). From a Kurdish perspective, this is unsurprising. One place of agreement between Stilo's (2007a) account and what I propose for Kurdish is that the *d* is an integral part of the morpheme that was lost in some languages/dialects/varieties. Stilo (2007a) also references data from Vafsi (a Southern Tatic language), which shows imperfective markers *at-, ad-, ar-, an-,* etc. (e.g. *at-ārom* 'I bring,' *ar-vinom* 'I see,' *ar-karom* 'I do,' *an-nevisom* 'I see'). Stilo (2007a) uses these examples to illustrate that the *t* is retained in most cases except where it assimilates to the following consonant. Without knowing more about the phonology of Vafsi, it is hard to interact with Stilo (2007a) claim. However, it seems clear from the form *ar-vinom* that this phenomenon is more complex that assimilation. The ultimate source of the imperfective marker in Kurdish (i.e.

the locative) would be Old Iranian *antar* (c.f. Persian dær 'in'), which could account for the *r* in the Vafsi form.

It seems to be the case that given the same (or similar) facts, opposite conclusions can be made. The conditions that favor one conclusion over the other is the hypothesized etymon. Based on the locative marker, all the attested diversity is explained, including things like the loss of ergativity or the shift from a tense-based split to an aspectual split (not discussed in this section). One of the factors that contribute to Stilo (2007a) suggesting an adverbial source (affirming Windfuhr (1989b)) was the mobility observed in several languages. However, this mobility is highly suspect in the Gazi and Jewish dialects of Isfahan. The forms observed in Yazdi (Zoroastrian) are more compelling but by no means confirm a prior state where the imperfective marker was an independent adverb. We have seen that these markers likely represent layers of changes that happen as a cycle of semantic change continually renews the need to recruit a new imperfective marker (see Deo (2015) summarized in section 2.1). Due to this cycle, it may be necessary to see each morpheme in each language as a potentially independent development with multiple etyma.

3.4 Relationships with similar constructions in other Iranian languages

A study of at least this length would easily be necessary to explain the development of the imperfective marking systems among any of the other Iranian languages. To go into detail about any one of them is beyond what is possible in this paper. In the previous two sections 3.3 and 3.2, I discussed some of these forms. In addition to Baluchi =*a/a-* and the various forms in the Central Plateau Dialects, there is a similar marker in Lari, Bashkardi, Bakhtiari, and Vafsi. There is a wide range of forms some with *a-*, some with *at-* and even some with circumpositional imperfective forms (e.g. Laristani progressive *a*-PST-*ā* (Windfuhr 1989b: 256)). Establishing the origins of these forms and evaluating their weight on areal and genealogical connections is the focus of further work.

In exploring areal and genealogical relationships, one may seek to use evidence from the Iranian imperfective markers. This is a difficult task. In historical-comparative linguistics, the gold standard is significant shared innovations. None of the changes described in this paper are significant because they are known to have taken place independently in languages across the world with or without genetic affiliation. Movement through the imperfective cycle, recruitment of a locative as a progressive-aspect marker, lenition of voiced consonants in post-vocalic position, boundary reanalysis, and paradigm leveling are all typologically common changes. These changes are so common that they are sometimes repeated in the same language (e.g. Suleymanî Kurdish §.2.3.2). Furthermore, the same set of changes can produce superficially similar formatives from etymologically divergent material, as illustrated by my cursory look at the imperfective forms in Baluchi. There is, however, something to be said for the same changes happening with the same formatives at the same time in the same place. If this type of convergence lines up with other relatedness cues, perhaps a group of insignificant shared innovations can gain an ere of significance.

The ability to confirm the locus of change diachronically has its foundation in what can be gleaned from the relative chronology of these changes. Several points should be considered in future work: (1) The stem of the imperfective construction: As shown for Kurdish, the imperfective was built upon the bare past tense stem of the verb that was a verbal noun in a prior state and has since left the nominal system. Other languages (e.g. Gilaki) have built their imperfective construction on the infinitive, a later innovation. This suggests different diachronic stages when a locative was recruited as an emergent-prog, at least in Kurdish and Gilaki. (2) Attachment of the imperfective morpheme: In the Old Iranian period, there was relatively free placement of adpositions (Beekes 1988). They could be prepositions or postpositions. However, the New Iranian languages have developed tendencies toward either prepositions or postpositions.[34] Although, many have developed the hybrid strategy as has Kurdish of employing circumpositions. If an imperfective

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[34] Stilo (2005) discusses these data as they pertain to his view of the Iranian languages as a transition ("buffer") zone between Turkic and Semitic languages that favor postpositions and prepositions respectively.

marker of clear locative origin surfaces in one of these languages, is the adposition currently available in the language, or is it a relic of a prior state? Do the formatives comply with the placement expected from the current state of the language? (3) Alignment pattern: One feature of the locative recruitment path is the loss of ergative alignment. As I have shown for Northern and Central Kurdish, ergativity can be revived to preserve tense based alignment, or like in most Southern Kurdish, the loss of ergativity in the past imperfect can give way to the total loss of ergativity (not discussed in detail here). The KAR construction (Vafaeian 2018) and the de-adverbial (e.g. *hamē* 'always') do not necessitate such a loss of ergative alignment. The ultimate result of an alignment shift may provide one of many clues to the ultimate source of the emergent-prog in a language. Only a full accounting of these facts could illuminate the significance of these changes on the genealogy of Iranian.

4 Closing remarks

For the first time, I have provided a novel account of the development of the imperfective prefix in Kurdish. This account is of the development of a constellation of imperfective marking strategies among Kurdish varieties, all with a single etymological source. This source, the locative circumposition, is, in hindsight, a clear and obvious candidate. The locative origin has been well documented in diverse languages as well as among the Iranian languages. From the point of locative recruitment, only well-documented sound changes (e.g. Zagros *d*) were necessary to transform the *de*-PST-*da* construction into what is observed in all Kurdish varieties. What I have added to this discussion of the phonological phenomena is that the so-called Zagros *d* is multiple separate phenomena: (1) the post-vocalic lenition of *d*, (2) the post sonorant lenition of *d*, and (3) the extension of sandhi forms. This extension of sandhi forms has created the diversity of forms throughout Central and Southern Kurdish, which either feature *d*- forms or the leveled *e-/Ø*- forms. Whether or not the leveling has occurred is not predictable based on subgrouping or geographi-

cal position. That is except to say that it does not occur in the Northern group. The first change happened across the board in all Kurdish varieties; the second and third are restricted to parts of Central and Southern Kurdish. However, the third is unique as it is analogical. It is this analogical form of the imperfective marker *e-* that became a problem for MacKenzie (1961a). It should be clear that this form is not a sound change in the strict physiological sense and need not be uniform in all varieties, which is exactly what the areal distribution shows.

One thing that is predictable based on geography is that the varieties of Southern Kurdish that are spoken south of the Gorani speaking area are the ones that possess the Gorani present-tense (imperfective) negative marker. This form marks one of the major splits in the outcomes of the imperfective marker (e.g. the *Ø- : nye-* forms). This erosion or perceived loss of the imperfective marker in affirmative contexts may have played a role in preserving the postpositive imperfective marker. I mention this because it is only within this group that there are varieties that have preserved the marker with all verbs. Although, I ere on the side of caution with such a proposal that implies that somehow the perceived functionality of a morpheme can supersede the forces of regular sound change. Some Kurdish (S3) varieties have lost the prefix and the suffix except when marked as negative. This suggests that it is merely a coincidence that many of the varieties that lost prefixes retained suffixes. One thing of merit can be said about the loss of suffixes; there is a clear difference between the Southern varieties that have lost or retained suffixes due to sound change and show variation between closely related varieties on this point and the Northern and Central groups that show a categorical loss of the suffix without a trace. The latter have likely rebuilt their imperfective forms on the verbal prefix and the past-tense ergative stem. This is supported by three facts: (1) the categorical loss of the *-ya* suffix; (2) the Northern and Central groups have retained ergativity, which is a property of the past tense stem, while the Southern group has not; and (3) in the Northern and Central groups the past-tense imperfective negative marker consists of the past-tense negative marker *ne-* combined with the present tense imperfective marker regularized

e- or not *d(e)-*. The resulting forms *nede/ne[ʔ]e* do not feature the lenition or the contraction that would result from regular sound changes, including Zagros *d*. All Northern and Central Kurdish varieties show the expected form *na-* in the present tense.

It is safe to say the Kurdish imperfective markers and similar ones found in other regional languages could be related. This relationship could take several forms: superficial similarity (e.g. Baluchi), similarity due to a common etymon (e.g. Leriki: imperfective from the Iranian locative marker), or they developed the same marker from the same material in the same geographic space at the same time as Kurdish. Only this final type of similarity is possible of interest in a genealogical account of the Iranian languages. As all Kurdish varieties have an imperfective marker ultimately from the locative circumposition, this must be reconstructed for pre-Kurdish. I can confidently say this because even those varieties that show no imperfective marker in the past or present tenses have preserved relics of said markers in the allomorphs of the negative marker (e.g. *nye-*). This paper represents the first account not just to link *de-* and *e-* etymologically but also the Ø- variant of the imperfective marker found in Southern Kurdish varieties. The Kurdish emergent-prog stage was built from the past-tense stem and the locative circumposition, and Zagros *d* lenited *d*s after vowels. All subsequent morphological, phonological, syntactic, and semantic changes involved happened after the pre-Kurdish period. In the search for Kurdish's closely related sisters, a progressive circumfix that attaches to the bare past-tense stem with an affinity to native locative constructions is a good candidate for mutual inheritance. With any number of possible sequential changes, it may require a large dialect study to find such possible languages. One possible candidate is the Laristani progressive *a*-PST-*ā* mentioned by Windfuhr (1989b). Inquiry into these types of relationships will have to be treated in a much more comprehensive study of imperfective systems throughout Iranian.

A The classification of Southern Kurdish

In addition to the pan-Iranian significance of the development of imperfective markers proposed here, these data bear on our understanding of Kurdish dialectology. The highest level of diversity among Kurdish varieties, as far as imperfective marking is concerned, is among those classified as Southern Kurdish. However, there are many varieties that appear to be very different (e.g. Malıkšy and Kırmanšay) but are actually more closely related. This section represents a tangential discussion of how these facts may be interpreted in the context of what has been discussed in the literature previously.

Fattah (2000) proposes seven sub-branches/dialect groups of Southern Kurdish: (1) Biǰāri, (2) Kolyā'i (3) Laki-Kirmānshāhi, (4) Kalhori-Sanǰābi-Zangane, (5) Malekshāhi, (6) Badre'i, and (7) Kordali (apud Belilli 2019, 79). Belilli (2019) argues that this classification of Southern Kurdish dialect groups is probably more geographical than anything else. Fattah (2000) proposes these groups without necessarily supporting the subdivisions based on shared innovations. Belilli (2019) provides some of the specific traits that could, in principle, be used as the basis for the demarcation of the Southern Kurdish dialects. She did so without the expressed goal of solving the issue as to what the dialect groups are, which is to be the topic of further research. Like Belilli (2019), I do not propose such a conclusion here. However, I have evaluated Fattah's (2000) dialect groups in the context of the groups I have proposed for Southern Kurdish based on imperfective markers.

Belilli (2019) remarked that the forms of the imperfective markers in Southern Kurdish are "particularly illustrative." Presumably, this means that they may be of use in deciding the dialect groupings. The changes that took place in order to create the various imperfective marking strategies are too common to be deemed significant on their own, and I cation using them alone to group dialects. If this was used as the sole basis for proposing the genealogical relationship between varieties, the tree would look like figure 4. Just as in the flowchart above (fig. 2), all Southern Kurdish varieties follow the same evolutionary path–in regard to the imperfective markers–up to
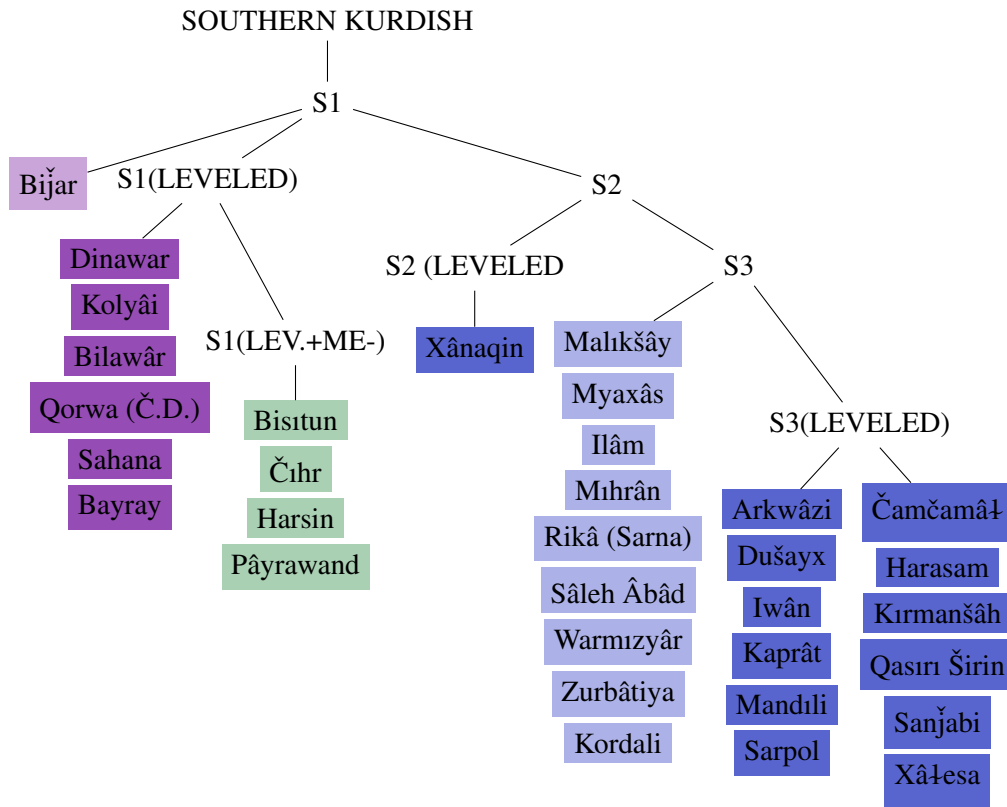
SOUTHERN KURDISH

S1

Biǰar   S1(LEVELED)   S2

Dinawar
Kolyâi
Bilawâr
Qorwa (Č.D.)
Sahana
Bayray

S1(LEV.+ME-)

Bisıtun
Čıhr
Harsin
Pâyrawand

S2 (LEVELED   S3

Xânaqin   Malıkšây
Myaxâs
Ilâm
Mıhrân
Rikâ (Sarna)
Sâleh Âbâd
Warmızyâr
Zurbâtiya
Kordali

S3(LEVELED)

Arkwâzi
Dušayx
Iwân
Kaprât
Mandıli
Sarpol

Čamčamâł
Harasam
Kırmanšâh
Qasırı Širin
Sanǰabi
Xâłesa

Figure 4: Southern Kurdish Tree considering Imperfective marking Only.

the borrowing of the Gorani Negation marker. At that point, two new categories were born the Kurdish (S2) with the marker only in the present and the Kurdish (S3) with the marker in all imperfective contexts. Then, some of varieties from each of the Southern Kurdish groups (S1, S2, and S3), leveled the affirmative imperfective markers to match the negative allomorphs. In figure 4, I have color coded the languages to match the schema in figure 2. The dark colors have been leveled, and the corresponding light colors have not. The light green are the leveled Kurdish (S1) varieties that have also borrowed the Gorani imperfective marker *me-*. The Kurdish (S3) leveled forms are broken into two columns: the fist column have lost the suffix *-ya* causing the appearance of no imperfective markers except in certain circumstances (e.g. the negative).

Fattah's (2000) seven dialect groups are not necessarily coherent in regard to the divisions proposed on the basis of imperfective markers alone. His first three distinctions (1) Biǰāri, (2) Kolyā'i, and (3) Laki-Kirmānshāhi correspond to Kurdish (S1), Kurdish (S1) leveled, and Kurdish (S1)

leveled with the Gorani imperfective marker *me-*. (4) Kalhori-Sanǰābi-Zangane corresponds to Kurdish (S2) leveled and Kurdish (S3) leveled, and (5) Malekshāhi, (6) Badre'i, and (7) Kordali all refer to Kurdish (S3). With the exception of Xânaqin being grouped in with the leveled Kurdish (S3) forms. Fattah (2000) seems to overgenerate dialect groupings. This, coupled with Belilli's (2019) assertion that Fattah's (2000) groupings were not necessarily supported by isoglosses, leads me to believe that despite much diversity between Southern Kurdish varieties, the relationship between these varieties may be very close with with much mutual independant innovation.

References

Bailey, Denise. 2016. *A grammar of Gawraju Gurani*: Georg-August-Universität Göttingen dissertation.

Barker, Muhammad Abd-al-Rahman & Aquil Khan Mengal. 2014. *A course in Baluchi*. Toronto: McGill University Institute of Islamic Studies.

Beekes, Robert S. P. 1988. *A Grammar of Gatha-Avestan*. Leiden; New York: Brill.

Beekes, Robert S. P. 2011. *Comparative Indo-European Linguistics*. Amsterdam: John Benjamins.

Belilli, Sara. 2019. Towards a dialectology of Southern Kurdish: Where to begin? In Songul Gundogdu, Ergin Opengin, Geoffrey Haig & Erik Anonby (eds.), *Current issues in kurdish linguistics*, 73–92. Bamberg: University of Bamberg Press.

Brown, Esther L. 2013. Word Classes in Studies of Phonological Variation: Conditioning Factors or Epiphenomena? In Chad Howe, Sarah E. Blackwell & Margaret Lubbers Quesada (eds.), *Selected proceedings of the 15th hispanic linguistics symposium*. 179–186. Summerville, MA: Cascadilla Proceedings Project.

Bybee, Joan. 2002. Word frequency and context of use in the lexical diffusion of phonetically conditioned sound change. *Language Variation and Change* 14(3). 261–290.

Bybee, Joan L. 2003. Mechanisms of change in grammaticization: The role of frequency. In Brian D. Joseph & Richard D. Janda (eds.), *The handbook of historical linguistics*, 602–623. Malden, MA: Blackwell.

Bybee, Joan L, Revere D Perkins & William. Pagliuca. 1994. *The evolution of grammar: tense, aspect, and modality in the languages of the world.* Chicago: University of Chicago Press.

Cheung, Johnny. 2007. *Etymological dictionary of the Iranian verb*. Leiden: Brill.

Comrie, Bernard. 1976. *Aspect: An introduction to the study ofverbal aspect and related problems*. Cambridge: Cambridge University Press.

Condoravdi, Cleo & Ashwini Deo. 2014. Aspect shifts in Indo-Aryan and trajectories of semantic change. In Chiara Gianollo, Agnes Jäger & Doris Penka (eds.), *Language change at the syntax-semantics interface*, chap. 9, 261–291. Berlin/Munich/Boston: Walter De Gruyter. https://doi.org/10.1515/9783110352306.261.

Corbett, Greville G., Andrew Hippisley, Dunstan Brown & Paul Marriott. 2001. Frequency, regularity and the paradigm: A perspective from {R}ussian on a complex relation. In Joan Bybee & Paul J. Hopper (eds.), *Frequency and the emergence of linguistic structure*, 201–226. John Benjamins.

Creissels, Denis. 2006. Direct and indirect explanations of typological regularities: the case of alignment variations. Revised and extended and version of a paper presented at SLE 2006, Bremen, August 30 September 02 2006.

Deo, Ashwini. 2015. The semantic and pragmatic underpinnings of grammaticalization paths: The progressive to imperfective shift. *S&P Semantics and Pragmatics* 8(14). 1–52. https://doi.org/10.3765/sp.8.14.

Edelman, Džoy I & Leila R Dodykhudoeva. 2009. Shughni. In Gernot Windfuhr (ed.), *The iranian languages*, 787–824. New York, NY: Routledge. https://doi.org/10.2307/414324.

Fattah, Ismaïl Kamandâr. 2000. *Les dialectes kurdes méridionaux: étude linguistique et dialectologique (Iranica 37)*. Leuven: Peeters.

Hadank, Karl. 1930. *Mundarten der Guran : besonders das Kandulai, Auramani und Badschalani*. Berlin: Verlag der Preussischen Akademie der Wissenschaften.

Haig, Geoffrey & Ergin Opengin. 2018. Kurmanji Kurdish in Turkey: structure, varieties, and status. In Christiane Bulut (ed.), *Linguistic minorities in turkey and turkic speaking minorities of the peripheries*, 157–230. Wiesbaden: Harrassowitz.

Heine, Bernd & Tania Kuteva. 2002. *World Lexicon of Grammaticalization*. Cambridge; New York: Cambridge University Press.

Jügel, Thomas. 2009. Ergative Remnants in Sorani Kurdish? *Orientalia Suecana* LVIII.

Karim, Shuan Osman. 2020. *From phrases to formatives: the diachrony of Soranî (Central Kurdish) applicative markers*. Columbus, OH: (under review).

Korn, Agnes. 2005. *Towards a Historical Grammar of Balochi: studies in Balochi historical phonology and vocabulary*. Wiesbaden: Reichert.

Korn, Agnes. 2019. Digging through Layers of Language Contact: Elements of Diglossia and Multilingualism in Balochi. Presented at the 2nd North American Conference on Iranian Linguistics.

Kümmel, Martin Joachim. 2014. The development of laryngeals in Indo-Iranian. In *The sound of indo-european*. Opava.

Leezenberg, Michiel. 2015. Gorani influence on central Kurdish: Substratum or prestige borrowing. sity of Amsterdam, ILLC - Department of Philosophy.

MacKenzie, D N. 1961a. *Kurdish dialect, studies 1-2. studies 1-2*. London; New York: Oxford University Press.

MacKenzie, D N. 1961b. The Origins of Kurdish. *Transactions of the Philological Society* 60(1). 69–86. https://doi.org/10.1111/j.1467-968X.1961.tb00987.x.

MacKenzie, D N. 1966. *The dialect of Awroman (Hawraman-i Luhon) : Grammatical sketch, texts, and vocabulary*. Kobenhavn: Kommissionaer : Munksgaard.

Matras, Yaron, et al. 2016. The dialects of Kurdish. http://kurdish.humanities.manchester.ac.uk/.

McCarus, Ernest. 2009. Kurdish. In Gernot Windfuhr (ed.), *The iranian languages*, 587–633. London and New York: Routledge.

Morgenstierne, Georg, J H Elfenbein, David N MacKenzie & Nicholas. Sims-Williams. 2003. *A new etymological vocabulary of Pashto*. Wiesbaden: Reichert.

Nevis, Joel A & Brian Joseph. 1993. Wackernagel affixes: evidence from Balto-Slavic. In Geert Booij & Jaap van Marle (eds.), *Yearbook of morphology 1992*, 93–111. Dordrecht: Springer.

Noorlander, Paul M & Donald Stilo. 2015. On the Covergence of Verbal Systems of Aramaic and its Neighbours. Part I: Present-Based Paradigms. In Geoffrey Khan & Lidia Napiorkowska (eds.), *Neo-aramaic in its linguistic context*, Piscataway, NJ: Gorgias Press.

Nourzaei, Maryam & Carina Jahani. 2012. The Distribution and Role of the Verb Clitic =a/a=in Different Balochi Dialects. *Orientalia Suecana* 61. 170–186.

Paul, Ludwig. 2003. The Position of Balochi Among the Western Iranian Languages: The Verbal System. In Carina Jahani, Agnes Korn & Paul Titus (eds.), *The balochi and their neighbors*, 61–71. Wiesbaden: Reichert.

Rawlinson, Major. 1839. Notes on a march from Zoháb, at the foot of Zagros, along the mountains to Khúzistán (Susiana), and from thence through the province of Luristan to Kirmánsháh, in the year 1836. *Journal of the Royal Geographical Society of London* 9. 26–116.

Stilo, Donald. 2001. Gilan x. Languages. *Encyclopædia Iranica* X(Fasc. 6). 660–668.

Stilo, Donald. 2005. Iranian as a Buffer Zone between Turkic and Semitic. In Éva Csató, Bo Isaksson & Carina Jahani (eds.), *Linguistic convergence and areal diffusion. case studies from iranian, semitic and turkic*, 35–63. London: Routledge Curzon.

Stilo, Donald. 2007a. Isfahan xxi. PROVINCIAL DIALECTS. https://iranicaonline.org/articles/isfahan-xxi-provincial-dialects.

Stilo, Donald. 2007b. Isfahan xxii. GAZI DIALECT. https://iranicaonline.org/articles/isfahan-xxii-gazi-dialect.

Stilo, Donald & Paul M Noorlander. 2015. On the Convergence of Verbal Systems or Aramaic and its Neighbors. Part II: Past Paradigms Derived from Present Equivalents. In Geoffrey Khan & Lidia Napiorkowska (eds.), *Neo-aramaic in its linguistic context*, Piscataway, NJ: Gorgias Press.

Thackston, Wheeler M. 2006. *Sorani Kurdish: A Reference Grammar with Selected Readings*. Cambridge, MA: Harvard University. https://sites.fas.harvard.edu/{~}Iranian/Sorani.

Vafaeian, Ghazaleh. 2018. *Progressives in use and contact: A descriptive, areal and typological study with special focus on selected Iranian languages*. Stockholm: Stockholm University.

von Humboldt, Wilhelm. 1836. *Über die Verschiedenheit des menschlichen Sprachbaues und ihren Einfluss auf die geistige Entwickelung des Menschengeschlechts*. Berlin: Druckerei der königlichen Akademie der Wissenschaften.

Windfuhr, Gernot. 1989a. Behdinn Dialect. www.iranicaonline.org/articles/behdinan-dialect.

Windfuhr, Gernot. 1989b. New West Iranian. In Rüdiger Schmitt (ed.), *Compendium linguarum iranicarum*, 251–262. Weisbaden: Reichert Verlag.

Windfuhr, Gernot. 1991. CENTRAL DIALECTS. https://www.iranicaonline.org/articles/central-dialects.