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An applicative analysis of Soranî "absolute prepositions"

1 Introduction

Although only recently described as such (e.g. Karim and Salehi 2020), Soranî[1] possesses a rich system of applicative markers. In this study, we show how morphemes, known as "absolute prepositions" in traditional Soranî grammars (e.g. MacKenzie 1961; Thackston 2004), are better described as applicative markers. The basic facts of Soranî applicatives have been known to scholars for quite some time. In an early account of Soranî adpositions, Edmonds (1955) describes a set of adpositions that are non-compounds and can only host a pronominal affix or be indexed by verbal agreement inflection. Likewise, Haig (2008, 277-310) provides an in-depth description of these formatives and gives the first hints of the analysis we present here. He suggests that one possible analysis is that they can be analyzed as "emergent 'particle verb[s]' " with an additional object.

There have been many studies focusing on Soranî absolute prepositions (Edmonds 1955; Mohammadirad 2020; Salehi 2018; Samvelian 2007). Of particular interest was the way they combine with pronominal arguments. In this sense, there has been a great deal of disagreement. For instance, Thackston (2004) described them as prepositions with preposed pronominal prepositional complements, a label that is only applicable in restricted contexts. Samvelian (2007) classifies Soranî "(absolute) prepositions" along two lines: (1) the affixal realization of the complement, e.g. affixal versus non-affixal and (2) the complement's local versus non-local realization, e.g. whether or not it is adjacent to the preposition (applicative) in the linear order. The main theoretical benefit of Samvelian's (2007) linearization approach (adapted from Crysmann (2003) based on Kathol (2000)) is "that the relationship between word-level signs and the word order

1 The term Soranî is often used interchangeably with Central Kurdish. However, we use the term Soranî in a narrow sense to refer to the Central Kurdish variety of Suleymanî (Iraq) and Bane (Iran).

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domain object they contribute need not to be isomorphic and that word-level signs can contribute more than one domain object into syntax" (Samvelian 2007, 246). This analysis conflicts with our underlying assumption that both absolute prepositions (i.e. applicatives) and their complements are inherently morphological.

In this study, we provide an outline of Soranî alignment and argument indexing (§. 2). Then, we present Soranî applicatives in the context of the definition of applicatives following ch.1 this volume (§. 3). Essentially, because Soranî applicatives have developed diachronically from (pro)nominal-adposition combinations, there are near as many distinct applicative morphemes as complex adpositions. These formatives specify the semantic role of the applied argument. Soranî applicatives can be valence increasing or valence neutral, the unifying thread being that they have amongst their functions "the introduction of a non-Actor semantic argument into a main clause" (Pacchiarotti & Zúñiga, ch.1 this volume). They are valence-increasing when they replace adjunct phrases and valence-neutral when they replace mandatory PP arguments.

We show how in some cases, Soranî applicative markers have univerbated with simplex verbal stems deriving new lexemes. This lexicalization fits into known diachronic tendencies of applicative markers. Moreover, this is a process that has been repeated several times in the history of Kurdish (e.g. in Old Indo-Iranian, Gaedicke 1880, 91, etc.). For instance, Indo-European relational preverbs, a type of applicative following (Peterson 2007, 129), have lexicalized in the prehistory of Kurdish losing their valence increasing function in but a few persistent examples. Soranî has gone through several such rounds of applicative recruitment, lexicalization, and replacement (§§. 4 5).

In this study, we have sourced examples from studies of Central Kurdish (e.g. MacKenzie 1961), Central Kurdish grammars (e.g. Thackston 2004), and broader studies of Iranian (e.g. Mohammadirad 2020). Examples without citations correspond to hypothetical forms created by the current authors and confirmed by native speakers from Bane (Iran) and Suleymanî (Iraq).

2 An overview of Soranî grammar

The discussion of applicatives in Soranî is intrinsically related to the way that verbal arguments are indexed. There are two sets of morphemes traditionally described as agreement markers: clitic person markers (CPMs), which are etymologically oblique clitics, and affix person markers (APMs), which are etymologically verbal affixes or, in the past tense, the copula. In this study, we largely

eschew this etymologically oriented terminology, which is confined to this section, instead focusing on the function of the indexes.

The distribution of these formatives can be described as a tense-based split-ergative alignment, although mandatory agent indexing has led some scholars to refer to the Soranî system as post- or remnant-ergative (e.g. Jügel 2009). Note that Soranî nominals do not feature case marking. A summary of these markers is provided in table 1.

Tab. 1: Argument indexing in Soranî

	APM$_1$: A$_{.PRS}$/S$_{.PRS}$		**CPM: A$_{.PST}$/O$_{APPL.INTR}$/ P$_{.PRS}$/O$_{APPL.TR.PRS}$**		**APM$_2$: S$_{.PST}$/P$_{.PST}$/ O$_{APPL.TR.PST}$**	
	SG	PL	SG	PL	SG	PL
1	-im	-în	=(i)m	=man	-im	-în
2	-î(t)	-(i)n	=(i)t	=tan	-î(t)	-(i)n
3	-ê(t)/a(t)[2]	-(i)n	=î	=yan	-Ø	-(i)n

Here, we use the abbreviations S as the single argument of an intransitive verb, A as the agent of a transitive verb, P as the patient of a transitive verb, and O_{APPL}[3] as the applied object. The first set of person markers in table 1 (APM_1) are present-tense verbal suffixes used to index S and A arguments. The second set of person markers (CPM) are used in the present tense to index P and O_{APPL}, and they are used in the past tense to index A and O_{APPL} in intransitive clauses. The third set of person markers are past-tense verbal suffixes used to index A, P, and O_{APPL} in transitive clauses.

In the present tense, both S and A are indexed using a set of verbal affixes (APM_1). Compare examples (1) and (2). In example (1), the third-person singular verbal affix *-ê* agrees with S, *ba*ɬ*dareke* 'the bird.'

(1) ba**ɬ**dar-eke e-fř**-ê**
bird-DEF IPFV-fly.PRS-3SG.**S**
'The bird flies'

2 The two third-person singular APM_1 suffixes *-ê(t)* and *-a(t)* are lexically specified allomorphs; they represent two different conjugation classes.

3 Here we use O_{APPL} for applied object in contrast to Mohammadirad's (2020) use of R as the complement of an absolute preposition (i.e. applicative). This should be understood as any oblique semantic role, not just the recipient as indicated by the applicative allomorph.

Likewise, in example (2), the third-person singular verbal affix *-a* agrees with A, *ew pyawe* 'that man.'

(2) ew pyaw=e nan-eke e-xw**-a**
DEM.DIST man=DEM.POST bread-DEF.SG IPFV-eat.PRS-3SG.**A**
'That man is eating the bread.'

The split alignment pattern of Soranî is shown in the past tense where S is indexed by verbal affixes (APM_2), and A is indexed by markers that are affixed to the first verbal argument or morpheme (CPM). Compare examples (3) and (4). In example (3), the third-person plural verbal affix *-n* agrees with S, *baɬdarekan* 'the birds.'

(3) baɬdar-ek-an fŕî**-n**
bird-DEF-PL fly.PST-3PL.**S**
'The birds flew.'

In contrast, in example (4), the third-person singular marker *=î* agrees with A, *ew pyawe* 'that man.' Note that this morpheme is affixed to the patient in this sentence.

(4) ew pyaw=e nan-eke **=î** xward
DEM.DIST man=DEM.POST bread-DEF.SG =1SG.**A** eat.PST
'That man ate the bread.'

The split alignment pattern of Soranî is also shown by the way that P is indexed. Note that in the previous transitive examples (2) and (4), there is an overt patient *naneke* 'the bread,' which is not indexed in the verbal morphology. In the absence of an overt noun phrase patient, P must be indexed in the verbal morphology, which is tense-sensitive. Compare examples (5) and (6). In example (5), the third-person plural *=yan*, indexes an anaphorically retrievable P, '(them).' Note that this morpheme is affixed to the first verbal morpheme in the absence of another verbal argument.

(5) e- **=yan** xw-a
IPFV- =3PL.**P** eat.PRS-3SG.A
'S/he is eating them.'

In contrast, in example (6), it is the third-person plural verbal affix *-in* that indexes the anaphorically retrievable P, '(them).'

(6) xward**-in** =î[4]
eat.PRS-3PL.**P** =3SG.A
'S/he (will) eat them.'

Another feature of Soranî grammar that affects the alignment pattern is that there are a wide range of complex predicates including light-verb constructions and verbs with preverbs. In Soranî light-verb constructions, it is the light verb stem that determines the formatives that index S, A, P, and O_{APPL}. For instance, the verb *kirdin* 'to do' (transitive) or the verb *bûn* 'to be(come)' (intransitive) dictate the inflectional pattern, while the nominal complement supplies the semantics. The lexeme PYASE_KIRDIN 'to walk' is semantically intransitive. However, S is indexed by the marker expected for A. Compare example (7), where a CPM marks S in the past tense, example (8), where an APM marks S in the present tense; they are conjugated like transitive verbs.

(7) pyase **=m** e-kird
walk =1SG.**S** IPFV-LV.PST
'I was walking.'

(8) pyase e-ke-**m**
walk IPFV-LV.PRS-1SG.**S**
'I was walking.'

The preverb-verb constructions behave similarly. A verb stem is accompanied by a relational element inducing a semantic derivation. The argument indexing strategy is dictated by the verb stem. For instance, the verb *girtin* 'to hold' combines with the preverb *wer* 'away' becoming *wergirtin* 'to take' and the verb *kewtin* 'to fall' combines with the preverb *ser* 'up, head' becoming *serkewtin* 'to climb.'

In Soranî, adjunct and peripheral arguments are introduced by means of adpositional phrases. The Soranî adpositional system consists of prepositions, which can combine with postpositions to form circumpositions. We define simplex adpositions as prepositions and circumpositions because they consist of only adpositional elements, e.g. *ta* 'untill,' *le ...=ewe* 'from,' etc. We define complex adpositions as adpositions that consist of both an adpositional element (or elements) and a nominal element, e.g. *lege~~l~~ ...(=a)* 'with (comitative, lit. in flock of),' *-e ser ...* 'on to (lit. to the head of).' Simplex adpositional phrases consist of a simplex adposition and an overt noun phrase, e.g. *le ma~~l~~=ewe* 'from home' (ex. (9)). Complex adpositional phrases may take an overt nominal complement, e.g. *lege~~l~~ ew pyawe* 'with that man.' However, they may also take a pronominal affix phonologically identical to the CPMs (see table 1), e.g. *lege~~l~~-î* 'with him/her.' Note that Soranî adpositional phrases can freely occur in any order before or after the verb, cf. example (9).

4 The third person-singular marker *=î* is unique among past-tense agent markers as it comes after the morpheme indexing the patient.

(9) a. [le maɬ-ewe]$_1$ ne-hat-in [legeɬ-î]$_2$
from house-from.POST NEG-come.PST-3PL.S with-3SG
b. [legeɬ-î]$_2$ [le maɬ-ewe]$_1$ nehatin
c. [le maɬ-ewe]$_1$ [legeɬ-î]$_2$ nehatin
d. [legeɬ-î]$_2$ nehatin [le maɬ-ewe]$_1$
'They didn't come from home with him' (a: MacKenzie 1961, 12.15)

In addition to the use of adpositional phrases to introduce peripheral and adjunct arguments, Soranî has the alternative strategy of using applicative constructions. Soranî applicatives fall into two categories based on their formation. One category consists of applicatives that differ from their simplex prepositional counterparts systematically. If there is a voiced but not spontaneously voiced consonant, the consonant of the preposition is devoiced, and the vowel /e/ is replaced by /ê/. The absolute prepositions *lê, tê,* and *pê* can be derived in this way from the simplex prepositions *le,* *de, and *be.* These forms can be understood diachronically as a contraction between simple prepositions *le,* *de, and *be* and the third-person singular (feminine) oblique pronoun *(e)wê* now defunct in Central Kurdish (see §. 4). The second category contains all complex adpositions, which consist of a simplex adposition and a nominal complement. These are identical in form, whether functioning as prepositions, as in *legeɬ em dêwe* 'with this demon' (ex. (10)) and *legeɬî* 'with him' or as an applicative, as in *zoranit legeɬ girtim* 'you wresteled with me' (ex. (11)).

(10) ew sê kuř=e ne-bê [legeɬ
DEM.DIST three boy=DEM.POST NEG-be.PRS.3SG:S with
em dêw=e] kes=î lê
DEM.PROX demon=DEM.POST person=3SG:O$_{APPL}$ LOC.APPL
ne-ma-w-e
NEG-remain.PST-PRF-3SG:S
'there was nobody left in it but those three brothers with this demon.' (MacKenzie 1961, 18.14)

(11) ħewt řoj zoran =it legeɬ- girt-im
seven day wrestle =2SG:A COM.APPL- LV.PST-1SG.O$_{APPL}$
'You wrestled with me for seven days.' (MacKenzie 1961, 24.3)

Soranî applicative markers are derivational morphemes, occurring on the verb that introduce a non-Actor semantic argument into a main clause. The applied phrase (O$_{APPL}$), the entity introduced and/or semantically/pragmatically manipulated by the applicative, is indexed in the same way as P. In other words, O$_{APPL}$ is indexed by the set of person markers not utilized to index S or A in a

given clause (see Pacchiarotti & Zúñiga, ch.1 this volume, for the definition of applicative).

In transitive clauses, there is a tense-sensitive split. In the present tense, O_{APPL} is indexed by the person marker (CPM) also used to index P, which attaches to the first verbal argument or morpheme. In example (12), the marker *=yan* attaches to the nominal complement of the light verb *eka*, and *eka* agrees with the agent. The applicative marker *lê-* attaches to the verb manipulating the applied object by assigning it a semantic role.

(12) su'al **=yan** lê- e-k-a
ask.LV =3PL.**O$_{APPL}$** ABL.APPL- IPFV-ask.LV.PRS-3SG.A
'he asks them (lit. he does a question from them)' (MacKenzie 1961, 8.1)

Likewise, in the past tense, the person marker (APM_2) used to index P, indexes O_{APPL}. In example (13), the marker *-in* attaches to the light verb, *kirdin*, and the person marker *=î* indexes the agent. Just as in the present tense counterpart (ex. (12)), the applicative marker *lê-* attaches to the verb manipulating the applied object by assigning it a semantic role.

(13) su'al =î lê- kird**-in**
ask.LV =3SG.A ABL.APPL- ask.LV.PST-3PL.**O$_{APPL}$**
'he asked them (lit. he does a question from them)' (MacKenzie 1961, 8.1)

In intransitive clauses, O_{APPL} is always indexed with the markers used to index present tense Ps (CPM). There is no tense sensitivity. In examples (14) and (15), the marker *=î* attaches to the first verbal argument and indexes O_{APPL}. the applicative marker *lê-* attaches to the verb manipulating the applied object by assigning it a semantic role.

(14) jin-êk **=î** lê- e-hat**-Ø**
woman-IND =3SG.**O$_{APPL}$** ABL.APPL- IPFV-come.PST-3SG.**S**
-e der
-outward
'A woman was coming out from it.' (Edmonds 1955, 498)

(15) jin-êk **=î** lê- **yêt**
woman-IND =3SG.**O$_{APPL}$** ABL.APPL- IPFV.come.PRS.3SG.**S**
-e der
-outward
'A woman is coming out from it.' (adapted from ex.(14))

There is an additional fact that sets transitive and intransitive clauses apart in term of O_{APPL} indexing. The S of an intransitive verb may host this marker, while A may never do so.

There are nearly as many applicative markers in Soranî as there are adpositions. In principle, new ones could be added to the system as new nominal elements are recruited in combination with simplex adpositions to create complex ones. For this reason, an exhaustive list is not possible. The most common applicatives and adpositions are included in table 2. Note that all the complex prepositions in the bottom portion of table 2 have corresponding applicative forms. However, the simplex prepositions in the top portion of the table do not always correspond to applicative markers and vice versa. For instance, the simplex prepositions *ta* 'until,' *bê* 'without,' and *wekû* 'like' never combine with the element /ê/ to form an applicative marker (see §. 4 for a diachronic explanation). Conversely, the malefactive applicative marker *lê-* does not correspond to any adposition; it is the only way to express a malefactive in Soranî. The current study examines Soranî applicatives, i.e. not adpositions with either nominal or pronominal complements.

Tab. 2: Adpositions, corresponding applicative markers and their case relations

Adposition	Gloss	Applicative	Gloss
be ...	'to'	-ê	-DAT.APPL
be ...	'by (experiencer)'	pê-	EXP.APPL-
be ...=a	'out of'	pya-	ELA.APPL-
be ...=ewe	'by (instrument)'	pêwe-	INS.APPL-
le ...	'from'	lê-	ABL.APPL-
—	—	lê-	MAL.APPL-
le (*de) ...	'on'	tê-	LOC.APPL-
le (*de) ...=a	'on'	tya-	LOC.APPL-
le ...=ewe	'from'	lêwe-	ABL.APPL-
-e ...	'to'	-ê	ALL.APPL-
ta ...	'until'	—	—
bê ...	'without'	—	—
wekû ...	'like'	—	—
be_des ...	'to (by hand)	be_des-	DAT.APPL-
bo[5]...	'for'	bo-	BEN.APPL-
le_des ...	'from (by hand)'	le_des-	ABL.APPL-
lege+ ...=a	'with'	lege+-	COM.APPL-
-e_ser ...	'on to'	-e_ser	-SUPE.APPL

3 The case for applicatives in Soranî

In this volume, applicatives are defined as "any derivational morphology occurring on a verb root/stem that has amongst its functions the introduction of a non-Actor semantic argument into a main clause. This non-Actor is usually mapped onto an applied phrase. The latter term, coined by Denis Creissels, refers to any morphosyntactic entity introduced and/or semantically/pragmatically manipulated by the applicative without any specifications about its syntactic category, argument status, and/or semantic role" (Pacchiarotti & Zúñiga, ch.1 this volume). This definition includes several points constituting essential properties of applicatives: (1) applicatives are derivational morphology; (2) applicatives tend to develop functions in addition to "the introduction of a non-Actor semantic argument into a main clause;" (3) applicatives manipulate applied phrases. Note that this definition does not specify the form the applied phrase must take. Applied phrases in the world's languages often take the form of noun phrases, morphologically indexed arguments, or even zero anaphora. Soranî applicatives satisfy these points in line with what is observed in other languages that possess applicative morphology.

Soranî applicatives are optional in the sense that in addition to the use of adpositional phrases, they are one way of introducing a non-Actor semantic argument into the verb phrase. They are derivational in the sense that they create a slot for an object which is not part of the argument structure of the root. Additionally, the applicatives are verbal morphemes, which hasn't been explicitly stated in the literature. In other words, the applicative marker induces a syntactic change, a semantic change, or both. The applicative construction in Soranî is a way of introducing a non-Actor semantic argument into a main clause when it is pronominal. Overt nominal non-Actor arguments are only expressed with adpositional phrases.

For verbs with an underlying phrase structure VP: V, the derived form is structured VP: NP_i V, i.e. valence increased by one. Note that the applied object must be morphologically indexed, represented here as NP_i. For instance, a syntactically intransitive verb such as *çûn* 'to go' takes only an S argument

5 Note that *bo* was described as a simple[x] preposition by Edmonds (1955). If this is correct, this would appear to be an exception to the rule that absolute preposition require a nominal element. However, it has been suggested that *bo* is actually a contraction of *be ew* 'with that,' perhaps a elipsed form of 'with this reason' (Karim 2020). This suggestion is ultimately based on its use as the interogative 'why' and similar strategies in other Iranian languages; e.g. New Persian: be īn sabab 'for this reason.'

and can combine with an optional adjunct adpositional phrase as in example (16).

(16) çû -n =e kurdistan
go.PST -3PL.S =to PN
'They went to Kurdistan.'

The same verb can appear in a construction with applicative *tê-*, and the location is expressed no longer as a adpositional phrase but indexed as a pronominal object, i.e., *=î* in example (17). Note that once the root combines with *tê-* the applied object *=î* cannot be omitted, i.e. *têmeco* is unacceptable.[6]

(17) tê- =î me-ç-o
LOC.APPL- =3SG.O_{APPL} PRH-go.PRS-2SG.S.PRH
'Do not go there (to it).' (Edmonds 1955, 498)

For verbs with an underlying phrase structure VP: NP V, the derived form is structured VP: NP NP_i V, i.e. valence increased by one. Note that the applied object must be morphologically indexed unlike the patient, which is only optionally indexed. For example, a syntactically transitive verb such as *xwêndin* 'to read/study' takes A and P arguments and can combine with an optional adjunct adpositional phrase as in example (18).

(18) ktêb-ek-an =m [lege-ł mina-ł-ek-an=a] xwênd
book-DEF-PL =1SG.A with child-DEF-PL=with.POST read.PST
'I read the books with the children.'

The same verb can appear in a construction with the comitative applicative *lege-ł-*, and the concommitant is expressed no longer as a adpositional phrase but indexed as an pronominal object, i.e. *-in* in example (19).

(19) ktêb-ek-an =m lege-ł- xwênd-in
book-DEF-PL =1SG.A COM.APPL= read.PST-3PL.O_{APPL}
'I read the books with them.'

In Soranî, an anaphorically retrievable patient may always be indexed in the absence of an overt noun phrase. The sentence from example (18) is adapted in example (20); here the patient *ktêbekan* 'the books' is replaced by the morpho-

6 The unacceptability of *têmeço* was hypothesized by us and confirmed by a native speaker from Bane. The form *têmeço* is easily mistaken for the correct *tê -î meço* due to the difficulty native speakers have distinguishing certain vowels and vowel-glide combinations, e.g. *ê, êî (= êy),* and *eî* (=*ey*) as well as o, ow, and ew .

logical index *-in* 'them.' Note that the agent marker *=im* attaches to the first verbal argument or morpheme, which is the verb stem *xwênd* not the adjunct adpositional phrase *lege-l mina-l-ekana*.

(20) [lege-l mina-l-ek-an=a] xwênd =m -in
with child-DEF-PL=with.POST read.PST =1SG.A -3PL.P
'I read them with the children.'

When the same verb occurs in a construction with the comitative applicative *lege-l*, both the patient and the concommitant are indexed as pronominal objects, i.e. *-in* and *-in* in example (21). Note that the agent marker *=im* attaches to the first verbal argument or morpheme, which is comitative applicative marker *lege-l-*.

(21) lege-l- =m xwênd -in -in
COM.APPL- =1SG.A read.PST -3PL.P -3PL.O_{APPL}
'I read them with them.'

The first object marker is the patient and the second is the applied object, e.g. the one manipulated by the applicative. This is unclear in example (21), where both P and O_{APPL} are third-person plural. Example (22) shows that the second object index *-im* is manipulated by the applicative *lege-l-* assigning it the commitative role.

(22) lege-l- =yan xwênd -in -im
COM.APPL- =3PL.A read.PST -3PL.P -1SG.O_{APPL}
'They read them with me.'

In Soranî, semantically ditransitive verbs have the underlying phrase structure VP: NP PP V. In these constructions, the adpositional phrases (PP) are core verbal arguments. For a ditransitive verb with the structure VP: NP PP V, the derived form is structured VP: NP NP_i V, i.e. valence neutral. For example, a ditransitive verb like *dan* 'to give' that has A and P arguments, as well as a mandatory adpositional phrase with the preposition *be* marking the recipient (R) as in example (23).

(23) kitêb-ek-an =im [be mamosta-k-an] da
book-DEF-PL =1SG.A to teacher-DEF-PL give.PST
'I gave the books to the teachers.'

The same verb can occur in a construction with the dative applicative *-ê*, and the recipient is expressed no longer as an adpositional phrase but indexed as a pronominal object, i.e. *-(i)n* in example (24). Note that the verb *dan* 'to give' is

ditransitive; the sentence **kitêbêkim da* 'I gave a book' is infelicitous because it lacks an applied phrase or a peripheral recipient.

(24) kitêb-ek-an =im da -n -ê
book-DEF-PL =1SG.A give.PST -3PL.O_{APPL} -DAT.APPL
'I gave them the books.'

When an anaphorically retrievable patient is indexed in the absence of an overt noun phrase, the agent marker may occur on the core prepositional argument. In example (25), the first-person singular agent marker *=im* attaches to the adpositional phrase encoding the recipient *be mamostakan* 'to the teachers.' The verb carries the third-person plural patient marker *-(i)n*.

(25) [be mamosta-k-an] =im da-n
to teacher-DEF-PL =1SG.A give.PST-3PL.P
'I gave them to the teachers.'

When the same verb occurs in a construction with the dative applicative, both the patient and the recipient are indexed as pronominal objects. In example (26), the agent marker *=(i)m* attaches to the first verbal morpheme, the stem in this case, and *-in* and *-in* mark the patient and applied object. Note that the first object marker is the patient and the second is the one manipulated by the applicative marker.

(26) da =m -in -in -ê
give.PST =1SG.A -3PL.P -3PL.O_{APPL} -DAT.APPL
'I gave them to the teachers.'

Past work on Soranî applicatives (Edmonds 1955; Samvelian 2007, etc) have begun with the foundational assumption that these formatives are actually prepositions albeit with complements that are often displaced. Their status as verbal morphemes is therefore integral to our analysis here. In section 2, we described the placement of adpositional phrases as mobile. Despite their phonological similarity and etymological unity, applicatives cannot be understood as adpositions. Adpositional phrases may occur initially before a noun phrase P, medially after a noun phrase P, and finally after the verb phrase. In contrast applicative markers are in a fixed position and only other verbal morphemes may intervene between the applicative and the verbal stem, e.g. (APPL-)(PV-)(NEG-)(TAM-)STEM.

The examples in (27) show an adjunct adpositional phrase with either a enclitic pronominal complement, *lege-t-it* 'with you,' or an overt nominal complement, *lege-t kiçeke* 'with the girl', is mobile. The adpositional phrase can be

placed anywhere in the sentence except immediately before the verb, cf. the ungrammaticality of (27-d).

(27) a. fîlm-êk =im [lege*ɬ* -it/kiç-eke] temaşa kird
movie-INDF =1SG.A [with -you/girl-DEF.SG] watch LV.PST

b. fîlm-êk =im temaşa kird [lege*ɬ* -it/kiç-eke]
movie-INDF =1SG.A watch LV.PST [with -you/girl-DEF.SG]

c. [lege*ɬ* -it//kiç-eke] fîlm-êk =im temaşa kird
[with -you/girl-DEF.SG] movie-INDF =1SG.A watch LV.PST

d. *fîlm-êk =im temaşa [lege*ɬ* -it/kiç-eke] kird
movie-INDF =1SG.A watch [with -you/girl-DEF.SG] LV.PST
'I watched a movie with you/the girl.'

This is in sharp contrast with the bound applicative marker *lege*ɬ-, which occurs as a prefix on the verb form. The examples in (28) show that unlike the preposition from which it derives, the applicative *lege*ɬ- is a morphologically bound form with a fixed slot within the verb template which cannot occur in any other position within the clause. If one were to prepose or postpose the applicative as is possible with adpositional phrases, the person marker indexing O_{APPL} can no longer be manipulated by the applicative.

(28) a. fîlm-êk =im temaşa lege*ɬ*- kird-î
movie-INDF =1SG.A watch COM.APPL- LV.PST-2SG.O_{APPL}

b. *fîlm-êk =im temaşa kird-î lege*ɬ*
movie-INDF =1SG.A watch LV.PST-2SG.O_{APPL} COM.APPL

c. *lege*ɬ* fîlm-êk =im temaşa kird-î
COM.APPL movie-INDF =1SG.A watch LV.PST-2SG.O_{APPL}
'I watched a movie with you.'

Likewise, in the present tense, where O_{APPL} is encoded on the first verbal argument or morpheme, the applicative must be in the same fixed position as in past tense clauses. If one were to prepose or postpose the applicative as is possible with adpositional phrases, the person marker indexing O_{APPL} can no longer be manipulated by the applicative. The examples in (29) show further proof that the applicative *lege*ɬ- is a morphologically bound form with a fixed slot within the verb template. Only in preverbal position does it semantically manipulate the second-person singular applied object *=it*. Note that the participation in tense- and transitivity-sensitive argument indexing is one feature that sets Soranî applicatives apart from similar systems in the word's languages.

(29) a. fîlm-êk =it temaşa legeɬ- e-ke-m
movie-INDF =2SG.O_{APPL} watch COM.APPL- LV.PRS-1SG.A

b. *fîlm-êk =it temaşa e-ke-m legeɬ
movie-INDF =2SG.O_{APPL} watch LV.PRS-1SG.A COM.APPL

c. *legeɬ fîlm-êk =it temaşa e-ke-m
COM.APPL movie-INDF =2SG.O_{APPL} watch LV.PRS-1SG.A
'I will watch a movie with you.'

An additional fact that separates applicative morphemes from adpositions is that the lexical stress of the verb falls on the applicative marker in affirmative clauses just as described by Thackston (2004) for preverbs (Thackston 2004, 3). When used adpositionally, they are not part of the verbal morphology, and the verb has its own lexical stress.

It is common in many languages for applicative markers to develop secondary functions. One need not go further than older stages of Indo-Iranian to see such an example. For instance, the preverbs in Kurdish, which are elements that combine with verbs to create new lexemes are though to have originated as verbal morphemes that added an additional non-Actor argument to a verb phrase (following Gaedicke 1880, 91, etc.). These applicative markers in many cases began as adpositional elements (see §.5). However, synchronically in Kurdish, they no longer function as applicatives.

The Soranî applicatives described thus far are primarily used to introduce a non-Actor semantic argument into the main clause. However, just like the preverbs of Old Iranian, they have begun to lexicalize with certain verbs forming derived lexemes. Note that these forms are not applicatives although they are functionally identical to them. There are copious examples of lexicalization by which particular applicative-verb combinations have become derived lexemes with a semantic but not necessarily a syntactic shift. These derived forms can simply have a different meaning than their simplex counterparts, e.g. *geyştin* 'to arrive' [VP: V] ∼ *pêgeyştin* 'to ripen' [VP: V]. They can have a different meaning and the corresponding valence increase, e.g. *biřîn* 'to cut' [VP: NP V] ∼ *lêbiřîn* 'to deduct (X from Y)' [VP: NP NP V]. Additionally, they can have a paradoxical decrease in valence compared to their simplex counterparts, e.g. *dan* 'to give' [VP: NP PP V] ∼ *lêdan* 'to hit' [VP: NP V].

The nature of the applied phrase is the area where the Soranî data is most divergent from what is observed in other languages. Although there are aspects of the system that are unique, systematic parallels suggest this is but an idiosyncratic variation of what is common among applicative systems, particularly those that have developed from adpositional constructions. Many aspects of applicative morphology could be used to develop a typology, allomorphy, noncanonical

functionality, etc. Among these is the morpho-syntactic realization of the applied object. There are languages in which the applied object is encoded as a noun phrase (or a prepositional phrase). In example (30) from Nadëb (Nadahupan), the applied object is the full syntactic (NP) argument *bxaah* 'tree', and the applicative marker *ya* encodes the superessive relationship of the applied object. Note that Nadëb does not feature argument indexing, and it is, therefore, impossible as a means of encoding the applied object.

(30) bxaah kalapéé ya-sooh
tree child SUPE-be.sitting
Nadëb: 'The child is sitting on the tree.'
(Lit., 'The child is on-sitting the tree'.) (Weir 1987, 300)

There are languages in which the applied object is indexed morphologically. In Bukusu, there are several different types of applicative markers. Example (31) shows one of the locative applicatives *=xo*, which manipulates the applied object necessitating a locative/dative reading. Unlike the Nadëb example, the applicative *=xo* only allows the morphological indexing of the applied object *-n* [1SG.O_{APPL}]. The syntactically expressed equivalent is impossible. See example (32), where the applied object *lukaratasi* 'the paper' is infelicitously expressed syntactically.

(31) a-xu-n-der-a=xo
3SG.S-2SG.P-1SG.O_{APPL}-bring-IND=APPL
Bukusu: 'He brought you to me.' (Peterson 2007, 12)

(32) *n-a-mwaat-a=xo lu-karatasi sii-tabu
1SG.S-TAM-toss-IND=APPL CL11-paper CL7-book
Bukusu: 'I tossed the book on the paper.' (Peterson 2007, 14)

Additionally, there are languages where both syntactic and morphological applied objects are possible though not simultaneously. The Bantu *-ɪd applicative is just such a marker. The Bukusu reflex of which takes the form *-il* in examples (33) and (34). Example (33) shows the applied object encoded as the (syntactic) NP *omuxasi* 'woman,' while example (34) shows the applied object indexed morphologically *mu-* [CL10].

(33) wanjala a-a-kul-il-a omu-xasi sii-tabu
Wanjala CL3:S-PST-buy-APPL-IND CL1-woman CL7-book
Bukusu: 'Wanjala bought the book for the woman.' (Peterson 2007, 7)

(34) wanjala a-mu-kul-il-a sii-tabu
Wanjala 3SG.S-CL10-buy-APPL-FV CL7-book

Bukusu: 'Wanjala bought her the book.' (Peterson 2007, 8)

Let us assume the traditional analysis that the Soranî O_{APPL} markers are clitics and therefore syntactic entities in the present tense and affixes and therefore morphemes in the past. Given this state, Soranî applicatives pattern with languages like Rama and Nadëb, only allowing a syntactic applied object, most of the time and with Bukusu locative applicatives, only allowing a morphologically-indexed applied object with past-tense transitive verbs. This system is parallel to the encoding of direct objects in Soranî and therefore serves to reinforce the status of these markers as applicatives, which tend to share some properties of objects in the languages in which they occur (Peterson 2007, ch.3). This argument is something that is relevant to Kurdish studies, which has only recently begun to look at these morphemes as applicatives. However, it is largely irrelevant in to the study of applicative markers. The definition of applicative following Pacchiarotti and Zúñiga (ch.1 this volume) does not specify the morphosyntactic nature of the entity introduced by the applicative. This is an area where there is much variability among the applicative systems observed in the world's languages.

4 The development of applicatives out of prepositional phrases

We can say with a high level of certainty the exact source and diachronic trajectory of Soranî applicatives because of the closely related Kurmancî (Northern Kurdish) language. Soranî and Kurmancî diverge from each other in many ways. Their divergence is due to innovations in both languages not necessarily the conservatism of either one. Soranî is arguably a post-ergative language, while Kurmancî features a tense-based split ergative alignment.[7] Kurmancî has two cases direct (DIR) and oblique (OBL). It uses the direct case to mark all S arguments regardless of tense, past-tense objects (P), and present-tense agents (A). It uses the oblique case to mark present-tense objects, past tense agents, and nominal complements of prepositions. The applicatives were formed by the combination of simple prepositions and either oblique pronominals or nominals.

7 We describe Kurmancî as a split ergative (i.e. $S = P \neq A$) language based on the standard variety. It should be noted that some varieties have developed other marking systems (e.g. transitive alignment: $A = P \neq S$).

Nominal/pronominal complements of Kurmancî prepositions appear in the oblique[8] case. In example (35), the prepositional phrase occurs as the circumposition *ji* NP *=re*, which combines with the first-person singular oblique pronoun *min* [1SG.OBL] to form the phrase *ji min re* 'to me.'

(35) [ew] çîrok-ek ji min re got
she story-INDF.SG.DIR to 1SG.OBL to.POST said.PST.3SG
Kurmancî: '[she] told me a story' (adapted from (Thackston 2002, 139))

When the pronominal complement of a preposition is third-person singular, the form of the prepositional phrase is contracted. For instance, *lê* 'to her' can be understood as a contraction of *li* 'to' and *wê* 'her' (ex. (36)).

(36) te lê ve-gerand
2SG.OBL to.3.SG.OBL PV-reply.PST.3SG
Kurmancî: 'You replied to him/her.' (adapted from Thackston (2002))

The contracted forms feature two additional idiosyncrasies: (1) the onset consonants in the prepositions *bi* and *di* are devoiced in the contracted form; and (2) the gender distinction is lost. The simple prepositions *li, ji, bi,* and *di* correspond to the forms *lê, jê, pê,* and *tê* when contracted with third-person singular oblique pronouns *wî* and *wê*. Despite the loss of case and gender marking on nominals, these contracted forms preserving the oblique-case markers have persisted in Soranî as applicative markers.

It is clear from Kurmancî how the phonetic forms of the applicatives developed. However, the shift from prepositional phrase to a bound verbal morpheme required an additional step. The Kurmancî contracted prepositional forms carry both the case relations assigned by the prepositions and the third-person singular pronominal. In contrast, the Soranî forms carry only the role assigned to the applied phrase. The pronominal is, instead, indexed in the verbal morphology. These changes, the bleaching of one morpheme and its replacement by another, require some explanation. There is an idiosyncrasy of the verbal morphology of New Iranian languages that was the bridging context for this change.

8 Oblique case is a term used in the Iranist literature to refer to the marked case form in the bicasual nominal systems common in Iranian languages. These forms are most often the reflexes of the Old Iranian genitive case but are sometimes from the accusative (following Korn 2016). The term oblique only serves as a contrast to the direct case and not necessarily to its marking of non-core syntactic arguments.

In Soranî, past-tense transitive verbs can take a direct object expressed as an overt NP or can index their direct object pronominally on the verb itself. This construction is formed with the past-tense verb stem and person markers. Unlike all other person-number combinations, third-person singular objects have no overt morphological marker (e.g. *dît-im* [see.PST-1SG.P] 'saw me,' *dît-î* [see.PST-2SG.P] 'saw you(sg),' *dî(t)-Ø* [see.PST-3SG.O] 'saw him,' etc). This leaves the meaning of *dî(t)* ambiguous; it could be parsed as *dî(t)-Ø* [see.PST-3SG.P] or alternatively as *dî(t)* [see.PST]. The latter would require a syntactic direct object to be well formed; Soranî does not allow zero anaphora.

Soranî, along with most varieties of Central Kurdish,[9] have lost oblique marking both on nominals and pronominals. However, there are remnants of the oblique forms, the applicatives. Although it is not the case synchronically, Soranî had oblique pronouns that would have been used as the complements of prepositions. Just like Kurmancî, the oblique pronouns had contracted forms in the third-person singular that would have been parsed as [PREP-3SG.OBL] just as in ex. (37).

(37) ktêb =im *l-**ê**[10] wer- girt
book =1SG.A from-3SG RPV- hold.PST
Soranî: 'I took the book from him.'

Once the third-person singular oblique (feminine) pronoun was lost in Soranî, the Kurmancî parsing was no longer possible. However, the bare verb stem could alternatively be parsed as [STEM.PST] or [STEM.PST.3SG.P] (ex. (38)). The sentence is identical in examples (37) and (38). The only difference is the way that it is parsed.

(38) ktêb =im lê- wer- girt-**Ø**
book =1SG.A ABL.APPL- PV- hold.PST-3SG.O_{APPL}
Soranî: 'I took the book from him.'

This reanalysis is confirmed by the extension of the verbal object index to the applied object. See ex. (39) where the verb indexes the second person singular object, and the applicative marker indicates how to interpret the applicative object's semantics.

9 Some varieties of Central Kurdish (e.g. Mukriyanî Öpengin, 2016) have preserved oblique marking on (pro)nominals.

10 The asterisk marks a reconstruction based on the Kurmancî way of parsing the morphemes, which is synchronically impossible in Soranî.

(39) ktêb =im lê- wer- girt-î
book =1SG ABL.APPL- PV- hold.PST-2SG.O_{APPL}
Soranî: 'I took the book from you.'

It is a coincidence that the third-person singular pronouns would contract with prepositions yielding fused forms and that Iranian verbs were zero-marked in the third-person singular. This coincidence provided the bridging context by which the pro-index was integrated into the verbal morphology. This trajectory and the resultant state set Soranî applicatives apart from other de-adpositional applicative markers. However, some languages have also incorporated whole adpositional phrases into the verbal morphology forming applicatives (e.g. Navajo Mithun 2001, §.4).

The ambiguity that made third-person singular the bridging context for argument indexing on the verb only occurred in the past-tense transitive constructions. However, applicatives occur in all tense-aspect-mood combinations on transitive and intransitive verbs. Past-tense transitive clauses provided the bridging context for oblique arguments to be incorporated into the verbal morphology. Then, this pattern was extended by analogy into all tense-transitivity combinations. This must have been the case because there is no reason that an oblique argument would have been encoded with the formatives originally used to index a patient in the nominative case in an ergative construction. Additionally, there is no historical reason why two oblique pronominals would occur in the same clause encoding the same argument in present-tense transitive clauses. For example, (40) is imparsable assuming the reconstructed meaning of the applicative *=ê* as a pronoun.

(40) *ktêb-êk =î e-de-m =ê
book-INDF =3SG.O_{APPL} IPFV-give.PRS-1SG.A =3SG.O_{APPL}
'I gave her a book her'

There is another set of applicatives, characterized by near identity with the corresponding simple prepositions. They bear primary verbal stress when used as applicatives. Just like the other applicative constructions, there was an ambiguity in the third-person singular. This ambiguity was between an unmarked verb stem and one indexing a third-person singular object in the case of the applicative markers described in section 4. In the case of applicatives derived from compound prepositions (i.e. prepositions consisting of a preposition and a noun), the likely path by which their complements were integrated into the ap-

plicative system was by indexing an implicit genitive argument.[11] The genitive reading is always possible even without an applicative. See example (41), where the verb *krîn* has the first person singular marker *-m*. Because there is an overt object, the only possible interpretation is that the first person singular marker is *ktêbeke* 'the book' (the direct object)'s genitival possessor.

(41) ktêb-eke =î krî-m
book-DEF.SG 3SG.A buy.PST-1SG.GEN
Soranî: 'He/She bought my book.'

When there is a compound preposition built from a simple preposition and a noun like *legeł*, there are two possible interpretations: (1) the nominal element *geł* 'flock/group' is the complement of the simple preposition (ex. (42)); or (2) *legeł* is a complex form that traditionally hosted a genitival complement yielding the meaning 'with him/her' (lit. 'in a his/her group') (ex. (43)). Just as in the third-person singular bridging context proposed for the *lê=* type applicative markers, examples (42) and (43) are phonetically identical. Only the grammatical parsing has changed.

(42) ktêb =î le geł krî
book 3SG.A in group buy.PST
Soranî: 'He/She bought a book in a group.'

(43) ktêb =î legeł- krî-Ø
book 3SG.A COM.APPL- buy.PST-3SG.O_{APPL}
Soranî: 'He/She bought a book with him/her.'

One might legitimately argue that once a form like *lê* was recruited as an applicative, it could be the analogical exemplar for other prepositions or prepositional phrases (e.g. *legeł, le ser,* etc.) to become applicative markers. However, we must assume that these compound prepositions were not inducted into the applicative system by analogy alone because not all prepositions have been recruited as applicative markers. For instance, *bê* 'without' and *ta* 'until' cannot be used as "absolute prepositions" (applicatives) (Mohammadirad 2020, 74). The difference between *bê* and *ta* and the prepositions that have applicative forms is that *bê* and *ta* are truly simplex; they neither bear the *-ê* from the third-person singular oblique pronoun nor a nominal element like *geł*, or *ser*. This gap implies that it was the (pro)nominal element in combination with the ambiguously marked

11 The tendency for new adpositions to develop from nouns with genitival complements is robustly attested in the languages of the world, including for English, Bantu, and Amharic; see Givón (1971).

verb (3SG) that provided the bridging context for the development of verbal argument indexing.

5 The spiral of applicative recruitment

The Soranî applicatives previously introduced represent the most recent of recurring layers applicative recruitment. From Indo-European origins through Old and Middle Iranian to Soranî (Central Kurdish) as we know it, there have been as many as four separate instances of adpositions being recruited and grammaticalizing as applicatives. A series of adpositions, nominals, and adverbials, going back perhaps as far as pre-Proto-Indo-European, became relational preverbs. When of adpositional origin, they went from being syntactic constituents, part of adpositional phrases, to verbal morphemes that added an additional non-Actor argument to a verb phrase (following Gaedicke 1880, 91, etc.).[12] In the old (Indo-)Iranian period, many preverbs could still function as adpositions governing an oblique noun.

In the Iranian daughter languages, the inherited adpositions and preverbs had solidified their roles as either relational preverbs or adpositions with little to no crossover. By the Middle Iranian period, these preverbs were no longer productive applicative markers. However, it was in this period that the core inventory of prepositions and the third-person singular oblique pronominals univerbated to form applicatives (described in §. 4), which were integrated into the verbal morphology due to a morphological idiosyncrasy that featured an ambiguity between a verb marked for third-person singular object indexing and no marking at all. The recruitment of these applicatives can be described as a spiral because there is evidence that as new material is recruited to form new adpositions, they are then recruited as new applicative markers.

The (Indo-)Iranian branch of the Indo-European language family (including Soranî) inherited a series of relational preverbs. These formatives have long been known for their derivational effects (e.g. Avestan[13]: GAM 'to go' ∼ APAGAM 'to

12 Note that most if not all preverbs in early Vedic, which show an increase in valence, also contribute some semantic content. This, in combination with what Kulikov (2012) refers to as a "weak transitivizing force," led him to the conclusion that these "verbal prefixes belong to the very periphery of the Vedic valency-changing markers" (739). Vedic is thought to preserve an early stage of what becomes "complete transitivization" (and univerbation) "in many other ancient Indo-European languages" (739).

13 Avestan is the oldest extant member of the Iranian branch of the Indo-Iranian languages. Examples from Avestan are employed here as an imperfect exemplar of what

go away' (Cheung 2007, 98)) as well as their transitivizing properties (i.e. as applicatives) (Kulikov 2012, 725). For instance, the Avestan verb STĀ 'to stand' is intransitive. In example (44), *hištaiti* 'he stands' has but one argument, which is the subject *srīrō* 'beautiful (one)' referring to Tištriya, the star Sirius.

(44) srīrō hištaiti rāmanivå
beautiful.NOM.SG.M stand.3SG.PRS.IND joy-spreading.NOM.SG.M
'he, beautiful and joy-spreading, stands' (Yt.8.59, apud Avesta.org)

When the verb STĀ combines with the preverb *auua* 'down,' the result is a verb meaning to touch. AUUA-STĀ is transitive as exemplified by the direct object in the accusative case *nasāum 'corpse'* (ex. (45)).

(45) nasāum auua hištāt
corpse.ACC PV stand.PRF.3SG
's/he has touched a corpse' (Vd.8.33, apud Avesta.org)

Some Old Iranian preverbs were derivational and valence changing and also functioned as adpositions taking complements in oblique cases; e.g. *ā* +ACC 'towards,' +LOC 'around,' *upa* 'into,' +LOC 'in,' etc. (de Vaan and Martínez García 2014, 77). It is impossible to say for sure what path adpositions took on their way to become relational preverbs because this change happened before the oldest extant texts. However, the diachronic development of adpositions into preverbs in other languages such as Rama (Chibchan) by Craig and Hale (1988) and for Nadëb (Nadahupan) by Weir (1987) works for the predecessor of Old Indo-Iranian. For instance, I hypothetical sentence like example (46) carries an adjunct adpositional phrase marking the recipient *ā Yimam* 'to Yima.'

(46) yānam ā Yimam barati
gift.ACC.SG.N to 1SG.ACC bring.3SG.PRS.IND
PIr. "He caries a gift to me." (hypothetical)

When subject to zero anaphora, the adpositional phrase appeared as a stranded adposition, in this case *ā* (see ex. (47)).

(47) yānam ā barati
gift.ACC.SG.N to 1SG.ACC bring.3SG.PRS.IND
PIr. "He caries a gift to (him)." (hypothetical)

Soranî might have looked like in the Old Iranian period, although Avestan is not a direct ancestor of Soranî.

The stranded adposition then univerbated with the verbal stem creating a newly derived lexeme with an additional applied object, e.g. *ābarati* 'he brings.' Note that this form was not fully grammaticalized in Old Iranian but is the etymological source of Kurdish *hawirdin* 'to bring.'

Many of the Old Iranian preverbs still exist in Soranî (and other New Iranian languages). They can be divided into two groups: (1) there are preverbs that have univerbated with the associated stem and are no longer separable. These forms are not synchronically understood as preverbs (e.g. *ha* (cf. Av. *ā* 'toward'): *hatin* 'to come' (< OIr. *(H₂)ā*GAM), *hawirdin* 'to bring' (< OIr. *(H₂)ā*BAR); *we* (< *awa*): *westan* 'to stop' (< *awa*STĀ)). (2) There are preverbs that have maintained their separability. They are synchronically preverbs in Soranî just as they were in Old Iranian; e.g. *řa-bînîn* 'to expect' (< *řa* 'forth' + *bînîn* 'to see' (cf. Av. *fra* 'forth').

After the Old Iranian period, as old adpositions grammaticalized as derivational elements, new adpositions were recruited from the nominal system. These forms could be used adpositionally in Old Iranian albeit with persistent aspects of their nominal origin, e.g. their complements were in the genitive case. For example, the nominal *pasca* 'behind (portion)' (cf. Soranî: *paş* 'behind'), after could be used adpositionally in Avestan with the genitival complement *hū* 'sun[GEN]' to form the phrase *pasca hū* 'after the sun (Yašt V.94).' Additionally, there are several new prepositions of denominal origins extant in Middle Iranian languages that had no such function in Old Iranian e.g. Av.: *ərəzu-* 'right, straight (< PIE *reĝ) ∼ So.: *heł* 'PV (up)' (Hasandust 2011, 111). The Middle Persian cognate *ul* 'up' was in use both as a relational preverb and as part of a compound preposition (e.g. *ul ō* 'up to' in *ul ō wahištāw* 'up to paradise' Boyce 1975, y.8.1). Although these preverbs are not synchronically applicatives in Soranî, we tentatively assume a stage when they were applicative based on the behavior of similar formative like *ser*.

The word *ser* 'head, up' has replaced the adpositional functions of *heł*, and it can also occur as a relational preverb (e.g. *serkewtin* 'to climb'). The three uses as noun 'head,' a compound preposition, and a relational preverb, compared to *heł*'s use only as a preverb, points to multiple waves of recruitment. Both *heł* had and *ser* have the meaning 'up.' Using the Middle Persian data as an exemplar for what Soranî might have been like in the Middle Iranian period, *heł* was likely used both adpositionally and as a preverb. As *heł* lexicalized with particular verbs becoming derivational (i.e. not productive applicatives), new material was recruited for the adpositional function (i.e. *ser*). Once *ser* took on the adpositional functions, it was then used as a more transparent relational preverb.

This line of reasoning is reminiscent of Kuryłowicz's fourth law of analogy: "Quand à la suite d'une transformation morphologique une forme subit la differenciation, la forme nouvelle correspond à sa fonction primaire (de fondation), la forme ancienne est reservee pour la fonction secondaire (fondèe). [When as a consequence of a morphological change, a form undergoes differentiation, the new form takes over its primary ('basic') function, the old form remains only in secondary ('derived') function]" (Kuryłowicz (1947) translation by Hock (1991)). This is exemplified by the twin complex verbs HEŁKEWTIN and SERKEWTIN. They both could be translated based on their etyma as 'to up-fall.' However, in Soranî, HEŁKEWTIN, representing the older layer of recruitment, has the restricted (lexicalized) meaning 'to happen by chance;' this meaning is not synchronically derivable from its constituent parts. In contrast, SERKEWTIN has the more transparent meaning 'to climb' as well as a few derived (metaphorical) meanings 'to elevate, advance, etc.' Essentially *ser* has replaced *he~~ł~~* carrying the transparent meaning 'up(ward).'

Additionally, SERKEWTIN maintains the valence increasing property of a relational preverb. The simplex verb *kewtin* (ex. (48)) can always occur with an optional adjunct phrase like *le ser şaxekeya* 'on the mountain' (ex. (49)).

(48) befir kewt
snow fall.PST.3SG
'Snow fell'

(49) befir [le_ser şax-eke=ya] kewt
snow [on mountain-DEF.SG=on] fall.PST.3SG
'Snow fell [on the mountain]'

However, *serkewtin* must occur with a locative argument marking the thing that is climbed (**ew serkewt*). This valence increasing function can be understood as an example of persistence (following Hopper 1991), the tendency of formatives to retain elements of their etymon. In other words, *ser* marks a semantic derivation forming a new lexeme from a simplex verbal stem. The new derived verb has higher valence than its simplex counterpart, although *ser* cannot be synchronically understood to be an applicative marker.

(50) ew be_ser şax-eke=ya ser-kewt
(s)he onto mountain-DEF.SG=on up-fall.PST.3SG
'(S)he climbed up the mountain'

The more restricted and less transparent function of *he~~ł~~* points to its older age as a preverb compared to *ser*. This, coupled with the retention of the earlier nominal and adpositional functions of *ser* beside the innovative function as a

preverb, leads to the conclusion that there were at least three different stages when preverbs were recruited from before PIE up to Soranî: (1) the stage(s) that led to the system of preverbs inherited into the attested ancient Indo-European languages (e.g. in Avestan), (2) the stage before the Middle Iranian period when nominals like Av. *ərəz-* 'right, upward' (> So. *heł* MP. *ul*) were recruited as adpositions and then as preverbs, and (3) the stage before the New Iranian period when a new set of nominals (e.g. So. *ser*) were recruited as adpositions and then as preverbs. Note that the difference between stages (2) and (3) is only their time depth relative to eachother.

In Soranî, there are stage-one preverbs that have survived as preverbs; e.g. Av. *fra* 'forth' ∼ So. *ra.* Although, some stage-one preverbs have phonologically survived but are not morphologically separable units; e.g. Av. *ā* 'to' ∼ So. *ha* of *hatin* 'to come.' There are stage-two preverbs that have survived only as preverbs and are derivational (with or without a valence increase); e.g. *heł* and *wer.* Finally, there are stage-three relational preverbs that have transparent usage; these are best represented by *ser* 'head, up.' Only this last type may surface in Soranî as relational preverbs or as formatives constituting part of applicative markers.

6 Discussion/Conclusion

Soranî applicative markers have most often been called absolute prepositions following MacKenzie's (1961) original terminology. This and other epithets have missed that these formatives have developed from the same types of material and carry a subset of the range of functions of applicatives in the world's languages. In this chapter we showed that the label applicative accurately describes these formatives. The original term 'absolute preposition' reflects the prepositional source of these formatives but crucially misses aspects of the morphosyntax.

The applicative construction in Soranî is similar to what is observed cross-linguistically. Features of Soranî applicatives include: (1) there are more than one formally and functionally distinct applicative morphemes in the language. Applicative affixes are semantically specified, i.e. each can introduce a specific, close set of semantic roles.

(2) The set of semantic roles expressible by applicative constructions is a proper subset of the semantic roles expressible by prepositional phrases. All semantic roles except for equative, privative, and limitative, expressed by the prepositions *wekû, bê,* and *ta* respectively, have corresponding applicative markers. Additionally, patients are never expressed by an applied object, although

pronominal patients are indexed by the same formatives in the same position as applied objects.

(3) The applied phrases are optional in the sense that they are an alternative to a full adpositional phrase. However, they are mandatory when the referent is anaphorically retrievable but not topicalized or contrastive.

(4) The applied phrase introduced by the applicative is always indexed morphologically. In this sense, applied phrases always behave like pronominal objects. However, the adpositional phrases that they replace can be either peripheral (syntactic constituents) or adjuncts.

(5) The combination of applicative marker and verb has lexicalized in some instances. These new lexemes have developed derived meanings with or without the corresponding valence increase. In addition to the core applicative markers, there are a series of relational preverbs dating back to every stage in the development of Soranî. These markers were applicatives that have lexicalized, inducing a semantic change in the verb roots with which they combine. However, unlike the current productive applicatives, these have lost their valence increasing function in all but a few persistent examples.

(6) From Proto-Indo-European through its Middle and Old Iranian ancestors, Soranî has gone through many cycles of applicative recruitment. Based on comparative historical evidence, we claim that there were at least five historical stages of applicative recruitment, (i) the recruitment(s) that led to the system of preverbs in Old Iranian/PIE, (ii) the recruitment before the Middle Iranian period that resulted in the preverbs *he-l* and *wer*, which were nominals in Old Iranian, (iii) the recruitment that resulted in the preverbs like *ser*, which were nominals in Middle Iranian, (iv) the recruitment that brought pronominal prepositional phrases into the verbal structure (e.g. *pê, tê, lê*, and =ê), and (v) the recruitment that brought nominal prepositional phrases into the verbal structure (e.g. *lege-l, le ser,* and *=eser*).[14] As for why some relational preverbs have such longevity while others are fully absorbed by the verbs that they complement, there are a variety of likely factors. Following Bybee (2002), frequency of occurrence with and without the verbal stems with which they pair may play a role. Essentially, as the adpositions leave the adpositional system and become used exclusively with verbs, they become verbal morphemes. If the prefix only occurs with a few verbs, and the combined forms are more common than the verbs

14 See Karim (2020) for a more complete explanation of all the forms of the absolute prepositions. Of particular interest are the forms *=ê*, which came from a pronoun alone (i.e. without a preposition), and *bo*, which belongs to the second group. However, its constituent parts are not transparent like other absolute prepositions in its class (< *be ew*).

alone, they may be reanalyzed as morphologically simplex. This certainly is the case of *hatin* 'to come' from Old Iranian *ā*GAM 'idem.' Soranî has no reflex of the simplex counterpart GAM 'to go.' Additionally, following Elsner et al. (2020), the phonological shape of the morphemes could affect whether or not sound changes render the prefix-verbal-stem combinations imparsable (fusional).

There have been many studies focusing on Soranî absolute prepositions (Edmonds 1955; Mohammadirad 2020; Salehi 2018; Samvelian 2007). The present study represents the first description of these formatives to place them accurately under the umbrella of applicative markers. Soranî shows how throughout history, applicatives develop. Perhaps the most unique characteristic of Soranî applicatives is that the applied object has been integrated into the remnant ergative alignment. Additionally, applicatives develop idiosyncratic lexicalized functions as they univerbate with verb stems, and those functions eventually replace the original applicative functions. At the point when their productive relational functions are lost, they cease to be applicative markers synchronically. This process has proven to be cyclical throught the history of the language.

Abreviations

VP:	verb phrase;	NP:	noun phrase;	V:	verb;
PP:	adpositional (prepositional) phrase;	NP_i:	NP indexed in the verbal morphology;	S:	single argument of an intransitive verb;
APM:	affix person marker;	CPM:	clitic person marker;	A:	agent;
P:	patient;	O_{APPL}:	applied object;	CL:	Bantu noun class;
FV:	final vowel;	DIR:	direct case;	OBL:	oblique case;
NOM:	nominative;	M:	masculine;	F:	feminine;
N:	neutral gender;	ACC:	accusative;	GEN:	genitive;
OIr.:	old Iranian;	Av.:	Avestan;	PIE:	*Indo-European;
So.:	Soranî;	SG:	singular;	PL:	plural;
1:	first person;	2:	second person;	3:	third person;
DEF:	definite;	INDF:	indefinite;	APPL:	applicative;
COM:	comitative;	ABL:	ablative;	DAT:	dative;
EXP:	experiencer;	ELA:	elative;	INS:	instrumental;
MAL:	malefactive;	LOC:	locative;	ALL:	allative;
BEN:	benefactive;	SUPE:	superessive;	NEG:	negative;
IND:	indicative;	PRH:	prohibitive;	TAM:	tense, aspect, mood;
IPFV:	imperfective;	PRF:	perfect;	PRS:	present tense;
PST:	past tense;	DEM:	demonstrative;	DIST:	distal;
PROX:	proximal;	POST:	postposition;	LV:	light-verb stem;
PV:	preverb;				

Tab. 3: List of abbreviations

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