

A Novel Aspect Split in Senaya*

Laura Kalin and Coppe van Urk
UCLA and MIT

ABSTRACT

This paper examines a novel type of aspect-based agreement split, found in Senaya (Neo-Aramaic; Iran). In the perfective, the verb hosts only one agreement morpheme, which agrees with the subject. In the imperfective, the verb can host two agreement morphemes: a unique series of suffixes surfaces to agree with the imperfective subject, while an imperfective object is marked like a perfective subject. We propose that this unusual pattern arises because there is an additional agreement probe in imperfective aspect, introduced by the imperfective Asp head itself. This analysis provides support for recent work on split ergativity which argues that aspect splits arise because the imperfective introduces additional structure (Laka, 2006; Coon, 2010).

1 Introduction

In this paper, we present novel data from Senaya (drawing on fieldwork by Laura McPherson and Kevin Ryan), a Neo-Aramaic language originally spoken in Iran, which reveal a unique type of aspect-based agreement split, illustrated in (1):

- (1) a. PERFECTIVE
axnii dmex-**lan**
we sleep.PERF-**1PL.L**
'We slept.'
- b. IMPERFECTIVE
ooya molp-**a-lan**
she teach.IMPF-**3FS.S-1PL.L**
'She teaches us.'

The morpheme that marks subject agreement in the perfective, (1a), *-lan* (3PL.L), marks object agreement in the imperfective, (1b). A unique series of agreement suffixes surfaces to mark subjects in the imperfective, *-a* (3FS.S) in (1b). Further, the perfective verb base is only able to host one agreement morpheme, while the imperfective verb base can host two.

*Thank you to Byron Ahn, Sabine Iatridou, Anoop Mahajan, David Pesetsky, Masha Polinsky, Omer Preminger, Norvin Richards, and Carson Schütze for helpful discussions about this research, as well as Laura McPherson and Kevin Ryan, whose fieldwork and morphological analysis of Senaya made this research possible. Our thanks also to the insightful audiences at GLOW 35 and CLS 48. Authors are listed alphabetically. The first author is supported by a National Science Foundation Graduate Research Fellowship. We make use of the following abbreviations: 1, 2, 3 = first, second, third person, AST-T = assertion time, EV-T = event time, F = female, IMPF = imperfective, L = L-suffix, M = male, PAST = past, PERF = perfective, PL = plural, S = S-suffix, S = singular, UT-T = utterance time.

for perfective or imperfective aspect. For example, ‘sleep’, *dmx*, appears as *dmex* in the perfective and *daamx* in the imperfective. Additional, concatenative morphology that is part of the verbal complex includes suffixal agreement marking and tense marking. There are no morphological case distinctions on DPs in Senaya, so most of our information about argument alignment comes from this agreement marking.

There are two paradigms of agreement morphemes — the so-called S-suffixes, (3a), and L-suffixes, (3b).

(3)	a.	S-SUFFIX SERIES		b.	L-SUFFIX SERIES	
		1MS -en	1PL -ox		1S -lii	1PL -lan
		1FS -an			2MS -lox	2PL -looxon
		2MS -et	2PL -iiton		2FS -lax	
		2FS -at			3MS -lee	3PL -luu/lun
		3MS -∅	3PL -ii		3FS -laa	
		3FS -a				

Agreement in Senaya tracks both subjects and definite objects obligatorily, and has a consistent (superficial, at least) accusative alignment in both the perfective and imperfective: the same set of suffixes marks both transitive and intransitive subjects, while objects are treated uniquely.

The aspect of the verb base determines which set of agreement markers — S-suffixes or L-suffixes — is used to cross-reference the subject and the object. In the perfective, there is only one slot for agreement, an L-suffix slot, which marks subject (transitive or intransitive) agreement, (4a–c):

(4)		PERFECTIVE	<i>No S-suffix; L-suffix = subject:</i>
	a.	axnii dmex- lan	
		we sleep.PERF- 1PL.L	
		‘We slept.’	
	b.	axnii pleq- lan	
		we leave.PERF- 1PL.L	
		‘We left.’	
	c.	axnii xa ksuuta ksuu- lan	
		we one book write.PERF- 1PL.L	
		‘We wrote a book(fem.).’	

The single argument of an unergative, (4a), or unaccusative, (4b), patterns with the transitive subject, (4c): all trigger agreement in the form of an L-suffix, *-lan* (1PL.L) above. Indefinite objects do not trigger agreement, (4c).

Since definite/pronominal objects require agreement and there is only one slot for agreement in the perfective, it follows that a definite/pronominal object cannot appear with a perfective base:²

² The way that a definite object is expressed in the perfective is with the imperfective base, which, unlike the perfective base, can host object agreement. A perfective interpretation of the imperfective base is achieved through the prefix *tm-*, which seems to indicate that the imperfective structure has been ‘hijacked’ by the perfective for its extra agreement slot, as shown in (i), cf. (6d):

- (5) *axnii oo ksuuta ksuu(-**laa/-a**)-**lan(-laa/-a)**
 we that book write.PERF(-**3FS.L/S**)-**1PL.L(-3FS.L/S)**
 ‘We wrote that book(fem.)’

We see in (5) that object agreement (as an L-suffix or S-suffix) cannot appear before or after subject agreement in the perfective. Further, it is not possible to simply omit object agreement when there is a definite object in the perfective. Instead, the perfective base is completely ungrammatical with a definite object.

In the imperfective, on the other hand, there are two slots for agreement, an S-suffix slot for subject agreement followed by an L-suffix slot for object agreement, as shown in (6a–d):

- (6) IMPERFECTIVE *S-suffix = subject; L-suffix = object:*
- a. axnii damx-**ox**
 we sleep.IMPF-**1PL.S**
 ‘We sleep.’
- b. axnii palq-**ox**
 we leave.IMPF-**1PL.S**
 ‘We leave.’
- c. axnii xa ksuuta kasw-**ox**
 we one book write.IMPF-**1PL.S**
 ‘We write a book(fem.)’
- d. axnii oo ksuuta kasw-**ox-laa**
 we that book write.IMPF-**1PL.S-3FS.L**
 ‘We write that book(fem.)’

Again, the single argument of an unergative, (6a), or unaccusative, (6b), patterns with the transitive subject, (6c–d): all trigger agreement in the form of an S-suffix, -*ox* (1PL.S) above (cf. subject agreement as the L-suffix -*lan* (1PL.L) in (4)). Indefinite objects do not trigger agreement, (6c), while definite objects trigger an L-suffix following subject agreement, -*laa* (3FS.L) in (6d).

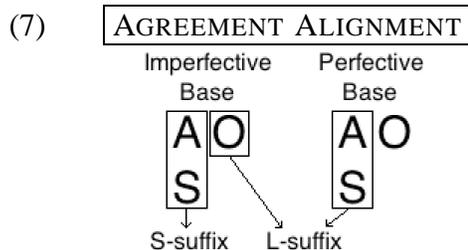
In sum, we observe the following aspect split in Senaya: L-suffixes mark subject agreement in the perfective but object agreement in the imperfective, while subjects in the imperfective are marked uniquely with S-suffixes. This is schematized in (7).^{3,4}

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- (i) axnii oo ksuuta tm-kasw-**ox-laa**
 we that book PERF-write.IMPF-**1PL.S-3FS.L**
 ‘We wrote that book(fem.)’

A discussion of this lies outside of the scope of this paper, but it is noted here for completeness.

³This figure was inspired by Kevin Ryan.

⁴The transitive perfective thus construed looks like an antipassive (since the object seems to be demoted, i.e., must be indefinite and cannot trigger agreement), while the transitive imperfective is the regular (non-antipassive) configuration. However, this cannot be so, for two main reasons. First, the agreement configuration changes from the imperfective to the perfective in intransitives, but intransitives should not be able to be antipassivized. Second, if the imperfective truly represents a regular transitive, then what we would expect in an antipassive is for the transitive (perfective) subject to be treated like an intransitive (imperfective) subject, namely, to be marked with an S-



This is an unusual aspect split since both sides of the split have a nominative-accusative alignment. This makes Senaya’s split different both from that of other closely related Neo-Aramaic languages and from canonical aspect-based split ergativity, in which the perfective is ergative (e.g. Basque, Hindi).

3 An additional φ -probe in the imperfective

In this section, we present our analysis of Senaya. We derive Senaya’s aspect-based split from one central assumption: imperfective Asp in Senaya carries a φ -probe. As such, there is an additional φ -probe in the imperfective that is absent in the perfective.

3.1 Agreement in the perfective

We begin with the perfective, which we take to have the more basic syntax. Recall that there is only one agreement marker in the perfective, the L-suffix, which always agrees with the subject (as seen in §2, (4)):

- (8) PERFECTIVE *No S-suffix; L-suffix = subject:*
 axnii dmex-**lan**
 we sleep.PERF-**1PL.L**
 ‘We slept.’

Since there is exactly one agreement slot, and agreement with a second argument is completely impossible, (5), we propose that there is a single φ -probe in the perfective; this φ -probe is located on T, and L-suffixes are the spell-out of agreement with T.⁵ In Senaya, then, v is inactive and does not assign Case or register agreement.

To reflect the fact that agreement is obligatory for subjects and definite or pronominal objects, we propose that arguments need to agree with a φ -probe to be licensed (for instance, because they need Case (Chomsky, 2000)). It follows that only one argument can be licensed in the perfective, since there is only one source for agreement — the φ -probe on T. Definite/prominal objects are therefore banned

suffix. This is not the case in the perfective (the subject is marked with an L-suffix), and so the perfective therefore cannot be an antipassive of the imperfective.

⁵One might wonder whether L-suffixes might be the result of agreement with v . This would work in the perfective, so long as we give v the ability to probe upwards if it fails to find a goal when probing downwards, such that v can agree both with unaccusative subjects (complement of V) and with transitive/unergative subjects (spec- v P), along the lines of Béjar and Rezac’s (2009) Cyclic Agree. However, such an approach would crucially fail in imperfective intransitives; see fn. 7.

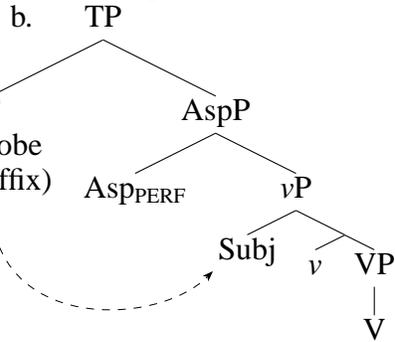
in the perfective, (5), since T will always probe the higher argument, the subject, and then be unavailable to license an object.

A question that arises here is how indefinite objects are licensed in the perfective, (4c), when definite/pronominal objects are not. We propose that indefinite objects are exempt from the licensing-via-agreement requirement because they pseudo-incorporate into the verb as NPs, along the lines of Massam (2001) and Dayal (2011). Accordingly, indefinite objects always occur adjacent to the verb and do not participate at all in the Case/agreement licensing system.

We turn now to the derivations. Perfective intransitives are derived as follows:

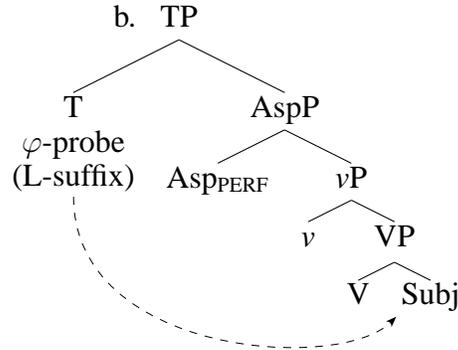
(9) **PERF. UNERGATIVE**

a. axnii dmex-**lan**
 we sleep.PERF-1PL.L
 ‘We slept.’



(10) **PERF. UNACCUSATIVE**

a. axnii pleq-**lan**
 we leave.PERF-1PL.L
 ‘We left.’

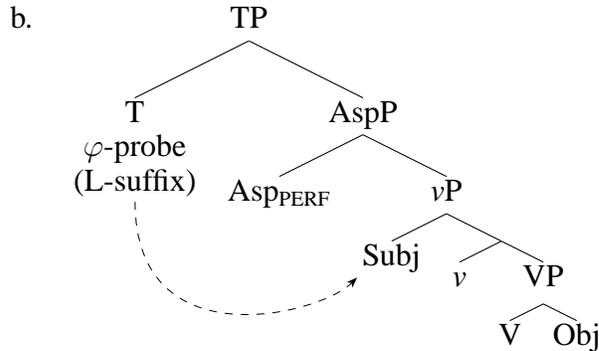


In both unaccusatives and unergatives, the single argument enters into an agree relation with the single φ -probe, which is on T and therefore spells out as an L-suffix.

The perfective transitive is derived in essentially the same way:

(11) **PERFECTIVE TRANSITIVE**

a. axnii xa ksuuta ksuu-**lan**
 we one book write.PERF-1PL.L
 ‘We wrote a book(fem.).’



The φ -probe on T agrees with the highest argument, the subject. The object, which must be indefinite, pseudo-incorporates into the verb (as discussed above), and so

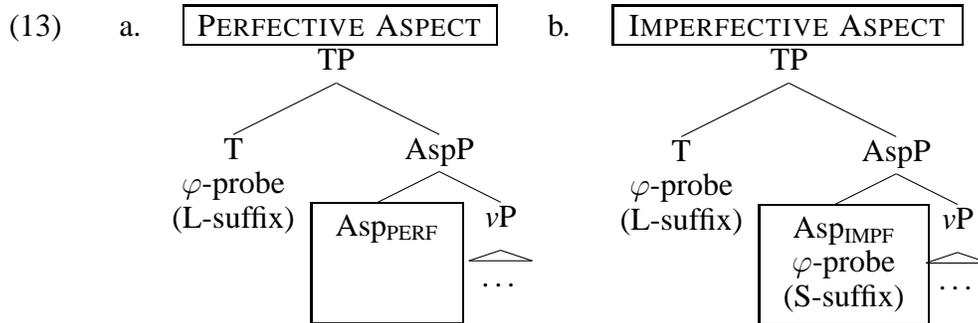
does not need to agree to be licensed. A definite object cannot be licensed in this structure because there is no φ -probe available to agree with it.

3.2 Agreement in the imperfective

The imperfective differs from the perfective in two crucial ways: (i) object agreement is possible, and (ii) object agreement in the imperfective takes the form of subject agreement in the perfective (L-suffixes), while subject agreement in the imperfective is marked uniquely (S-suffixes), (12):

- (12) IMPERFECTIVE *S-suffix = subject; L-suffix = object:*
 axnii oo ksuuta kasw-**ox-laa**
 we that book write.**IMPF-1PL.S-3FS.L**
 ‘We write that book(fem.)’

To derive the differences between the perfective and imperfective, we propose that an additional φ -probe is introduced on the imperfective Asp head, and that agreement with Asp spells out as an S-suffix; this is represented as follows:

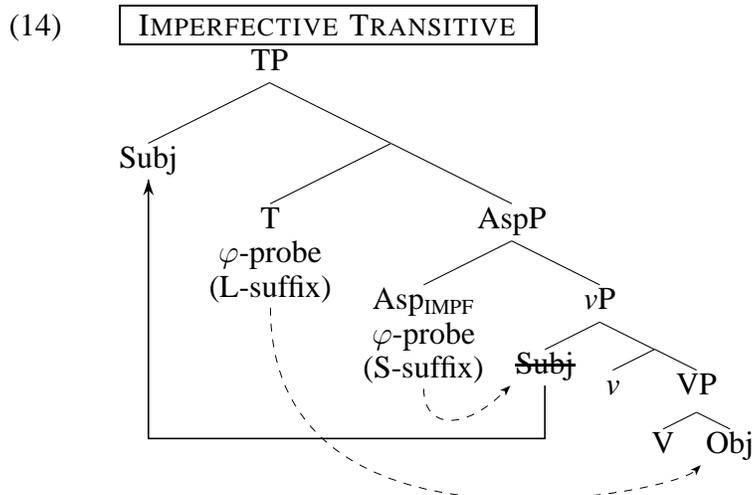


There is a φ -probe on T in both the perfective and the imperfective. However, while Asp_{PERF} in (13a) is empty, Asp_{IMPF} in (13b) carries a φ -probe.

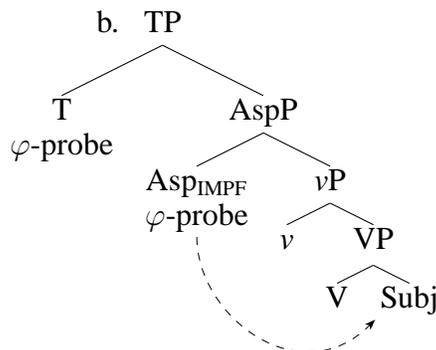
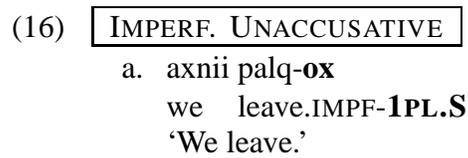
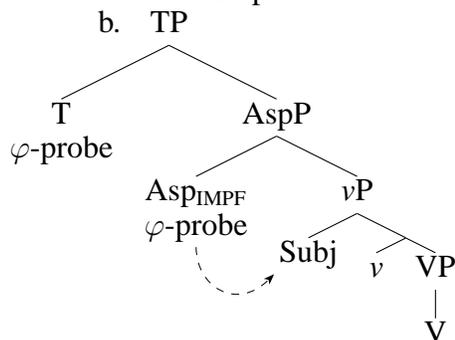
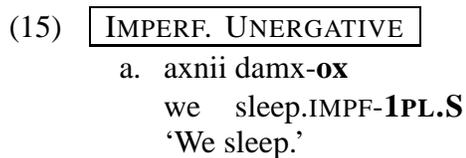
Crucially, since Asp is a structurally closer c-commander of the subject than T, the imperfective subject is targeted by the φ -probe on Asp instead of the φ -probe on T. This explains why agreement with the imperfective subject spells out with a unique agreement series, S-suffixes. Further, since the subject agrees with Asp, the φ -probe on T is then free to target a different argument, which is exactly what we see empirically: the L-suffix in the imperfective agrees with the object.

Let us begin, then, with the derivation of an imperfective transitive, like that in (12). As discussed above, Asp merges before T and therefore agrees with the subject before T can, resulting in an S-suffix agreeing with the subject. When T merges, it probes, but the already-licensed subject is in the way of T’s probing, which should block T from agreeing with the object. To get around this potential intervention (which is not attested empirically, since the object successfully agrees with T), we propose that the subject moves around the φ -probe on T, to spec-TP, before T probes;⁶ this is illustrated in (14).

⁶The idea that interveners can move out of the way of a probe, circumventing an intervention effect, has been used in a number of ways in recent literature: (i) to get the ERG subject out of the



With the subject in spec-TP, T can then successfully probe the object.
 Finally, imperfective intransitives are derived as follows:



In both unaccusatives and unergatives, the single argument enters into an agree relation with the lowest/closest φ -probe, which is on Asp and therefore spells out as an S-suffix.⁷ When T probes, it does not find an appropriate goal, since the

way in ergative languages in which ABS comes from T (Anand & Nevins, 2006; Legate, 2008); (ii) to alleviate various types of intervention in Icelandic (Holmberg & Hróarsdóttir, 2003; Sigurðsson & Holmberg, 2008); and (iii) to account for the conjoint/disjoint alternation in Zulu (Halpert 2012). We thus believe there to be widespread empirical motivation for some such mechanism.

Technically, movement of the subject to spec-TP can be accomplished by putting an EPP feature on T that is freely ordered with respect to the unvalued φ -features on T. In an imperfective transitive, the EPP feature must be activated first, allowing movement to spec-TP to happen before φ -agreement, such that the object DP can be licensed; if φ -agreement were to happen first, the object would not be able to be licensed (because the subject would block T’s probing), and the derivation would crash. In the perfective, on the other hand, the EPP cannot be activated first, because this would bleed licensing of the subject, resulting in a crash. As such, movement to spec-TP must be ordered after agreement in the perfective.

⁷Fn. 5 mentioned the logical possibility that v is the locus of L-suffixes in Senaya. As noted, in

subject has already agreed (with Asp). We assume here that a failure of agreement does not give rise to ungrammaticality, following Preminger (2011). Preminger argues that a probe must attempt to agree, but that the derivation does not crash if agreement is impossible (contra Chomsky (2000), for example).⁸

To conclude this section, we turn to a piece of empirical support for our proposal: the order of morphemes in the verbal complex. First, L-suffixes appear outside of S-suffixes, a fact that our analysis captures naturally since L-suffixes spell out agreement on a higher head (T) than S-suffixes do (Asp). Further, S-suffixes appear before the past tense marker (-*waa*, boxed below), whereas L-suffixes appear outside of the past tense marker:

- (17) ooya kaxl-**aa**-waa-**lee**
 she eat.IMPF-**3FS.S**-PAST-**3MS.L**
 ‘She used to eat it.’

Again, if agreement with the subject takes place below T, then we expect it to appear closer to the verb root than a tense morpheme, which is precisely what we find.

In this section, we have proposed that the imperfective in Senaya introduces an additional φ -probe on Asp, as compared to the perfective, whose only φ -probe is on T. Due to the position of AspP in the clause, this φ -probe disrupts the way arguments are licensed and results in Senaya’s unusual aspect split, where imperfective objects and perfective subjects are marked alike — both are probed by T.

4 Accounting for aspect-based split ergativity

In this section, we address the question of why imperfective aspect introduces an additional φ -probe. Our answer to this question draws crucially on recent work on aspect-based split ergativity that explores the hypothesis that nonperfective aspects may be associated with additional structure (Laka 2006; Coon 2010; Coon and Preminger 2011). Specifically, we adopt the hypothesis developed by Coon (2010) that aspect splits arise because nonperfective aspects introduce additional prepositional structure. We propose that, in Senaya, the reflex of this is that the prepositional predicate associated with the imperfective retains a φ -probe.

order to make this work in the perfective, we needed to add the stipulation that v has the ability to probe upwards if it fails to find a goal when probing downwards. However, in the imperfective, this proposal would fail outright. In particular, having a v that is endowed with Cyclic Agree properties (Béjar & Rezac, 2009), and whose φ -probe spells out as an L-suffix, would predict intransitive subjects to be marked with an L-suffix in the imperfective, since v is a lower head than Asp. This is false empirically — intransitive subjects in the imperfective are marked with an S-suffix. We thus reject the hypothesis that L-suffixes are the result of agreement with v .

⁸A potential problem here is that we do not see a 3rd person singular L-suffix appear in imperfective intransitives (as default agreement due to T’s agreement failure); instead, no L-suffix appears at all. To explain this, we assume that agreement failure can be spelled out with a distinct morpheme, which is null in Senaya (see Preminger (2011) for evidence that this is possible from Basque and Halpert (2012) for use of this idea in Zulu). Another option is that we adopt Rezac’s (2011) proposal that some φ -probes are only inserted when a crash would otherwise result. We could then say that T is such a probe in Senaya (though, crucially, v could not be); T would then simply be absent in imperfective intransitives, since it is not necessary for licensing.

The hypothesis that nonperfective aspects may be structurally more complex is motivated by Dixon’s (1994) observation that splits have a consistent directionality:

- (18) DIXON’S OBSERVATION:
 “... If a split is conditioned by... aspect, the ergative marking is *always* found... in perfective aspect” (Dixon 1994:99).

This observation can be represented as follows:

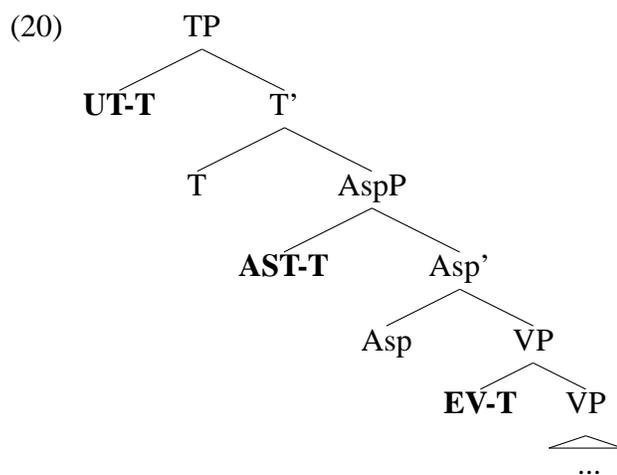
- (19) (ERG/ABS) perfective < imperfective < progressive (NOM/ACC)

If a language has aspect-based split ergativity, it is in the perfective that ergative patterning will surface, while this patterning is lost in the progressive (resulting in either accusative or neutral patterning); the imperfective may pattern either with the perfective or the progressive.

The question of why there should be this universal directionality to aspect-based split ergativity is taken up by Coon (2010), who appeals to work on tense and aspect by Demirdache and Uribe-Etxebarria (2000; henceforth D&U-E). In §4.1, we give a brief overview of D&U-E. This lays the groundwork for understanding Coon’s (2010) account of aspect-based split ergativity, which we discuss in §4.2. In §4.3, we return to Senaya, discussing the implications for our account.

4.1 A universal structure for tense and aspect

D&U-E propose that tense and aspect are universally encoded using prepositional, spatiotemporal relations — namely, BEFORE, AFTER, and WITHIN — and provide a universal syntactic structure for establishing these relations, (20).



The crucial heads in (20) are T and Asp, which may contain one predicate each (BEFORE, AFTER, or WITHIN). There are three relevant times, which are introduced as temporal arguments in (20): (i) the Utterance Time (UT-T) in spec-TP, encoding the time at which the proposition is uttered; (ii) the Event-Time (EV-T) adjoined to VP, encoding the time of the event (or state) in the proposition; and (iii) the Assertion Time (AST-T) in spec-AspP, encoding “the time for which ...[an] assertion is

confined; for which the speaker makes a statement” (Klein 1995:687).⁹ The AST-T can be thought of as acting like a camera lens, mediating between the UT-T (the camera itself) and the EV-T (the object/scene at which the camera is pointed); the AST-T focuses some part of the event or state in the proposition, e.g., a subpart of the event in the progressive (D&U-E:160–161).

The tense of an utterance is established by the predicate on T, which relates T’s external argument (UT-T) to Asp’s external argument (AST-T). For example, the relation BEFORE on T establishes future tense:

$$(21) \quad \text{---|}_{\text{UT-T}}\text{---}[\text{---}]_{\text{AST-T}}\text{---} \longrightarrow$$

The UT-T temporally precedes the AST-T, picking out a time before the time focused by the proposition.

The aspect of an utterance is established by the predicate on Asp, which relates Asp’s external argument (AST-T) to the time of the event (EV-T). For example, the relation BEFORE on Asp establishes prospective aspect:

$$(22) \quad \text{---}[\text{---}]_{\text{AST-T}}\text{---}[\text{---}]_{\text{EV-T}}\text{---} \longrightarrow$$

The AST-T precedes the EV-T, picking out a time at which the event has not begun.

The most important relation for our purposes is the one that establishes imperfective and progressive aspect: WITHIN. When Asp contains the prepositional predicate WITHIN, the AST-T picks out a subpart of the EV-T, with the temporal boundaries of the event outside of the AST-T, as seen in (23):

$$(23) \quad \text{---}[\text{---}]_{\text{EV-T}}\text{---}[\text{---}]_{\text{AST-T}}\text{---} \longrightarrow$$

That this is the correct relation for imperfective and progressive is supported by the felicity of adding (24b) to the past progressive utterance in (24a) (D&U-E:166):

- (24) a. Henry was building a house last summer.
b. . . . but he never finished it.

(24b) is felicitous because the past progressive in (24a) does not assert anything about the temporal endpoint of the event, not even its existence. In the progressive and imperfective, the AST-T is contained wholly WITHIN the EV-T.

Relationally, this is what perfective aspect looks like:

$$(25) \quad \text{---}[\text{---}]_{\text{AST-T}}\text{---}[\text{---}]_{\text{EV-T}}\text{---} \longrightarrow$$

The event time (EVT-T) is contained wholly within the assertion time (AST-T), since the event (including the fact that it began and ended) is viewed as a whole. The relation in (25) is the exact inverse of the progressive/imperfective, (23). In this case, following the past perfective utterance in (26a) with (26b) is infelicitous:

- (26) a. Henry built a house last summer.
b. # . . . but he never finished it.

⁹D&U-E’s Assertion Time corresponds to Klein’s (1994) Topic-Time and Reichenbach’s (1947) Reference-Time.

The past perfective in (26a) asserts that Henry began a house-building event and ended a house-building event last summer; (26b) is infelicitous because it contradicts part of this assertion by saying that there was no successful event endpoint.

We are now in a position to examine Coon's (2010) argument that progressive and imperfective aspects are established with prepositional predicates, while perfective aspect is not.

4.2 Nonperfective aspects are prepositional

Coon (2010) adopts D&U-E's proposal and makes a crucial observation about perfective aspect. On the one hand, as noted in the previous section, nonperfective aspects (imperfective and progressive) can be established relationally in (20) with WITHIN on Asp, such that we have AST-T WITHIN EV-T. On the other hand, none of the universal spatiotemporal prepositional predicates proposed by D&U-E (BEFORE, AFTER, WITHIN) is able to establish perfective aspect relationally, as it is represented in (25).

Given that the merge positions of the temporal arguments in (20) are fixed,¹⁰ what is needed for perfective aspect is something like AST-T PROPERLY CONTAINS EV-T. However, Coon notes that even if we expand our inventory of prepositional predicates beyond D&U-E's, to all natural language prepositions, there is none that encodes the relation "superset of"/"properly containing", and so perfective aspect can still not be established relationally in (20).¹¹ Rather, perfective arises when Asp is empty,¹² as a default interpretation: "An event is viewed as a whole, unless otherwise specified" (Coon 2010:177), as D&U-E also assume.¹³

Returning finally to Dixon's observation — that aspect-based splits always go in the same direction, (19) — Coon proposes that this can be explained if nonperfective aspects are indeed able to introduce additional complexity in the form of a prepositional/locative predicate, while perfective aspect never can, as argued above.

The idea here is that an additional predicate in nonperfective aspects can disrupt a language's underlying, canonical Case/agreement pattern, shifting the language into a system where transitive and intransitive subjects pattern alike. In an underlyingly accusative language, transitive and intransitive subjects already pattern alike, so an additional predicate in the imperfective/progressive would not alter this. In an underlyingly ergative language, however, an additional predicate in the imperfective/progressive could fundamentally alter the patterning of arguments, shifting the language from its underlying pattern to a neutral or accusative pattern, perfectly in line with Dixon's observation, (19). Split ergative languages are then really ergative throughout, but this ergativity is disrupted by the presence of an extra predicate.

¹⁰This corresponds to the hypothesis that the universal structure of prepositions is [Figure [P Ground]] (e.g., Svenonius 2007), taking the AST-T to be the Figure and the EV-T to be the Ground.

¹¹Note that Ps *around*, *outside*, and *with* do not truly convey a superset (Coon 2010:174-5).

¹²This is not to say that there can be no special morphology associated with the perfective, which is certainly empirically false, just that there is no preposition-like relation present to achieve perfective aspect.

¹³A different mechanism, in which perfective aspect arises when temporal arguments undergo a process of covaluation, is explored in Demirdache and Uribe-Etxebarria (2007). For our purposes, nothing hinges on the choice between these proposals, since in both accounts there is no prepositional predicate in perfective aspect.

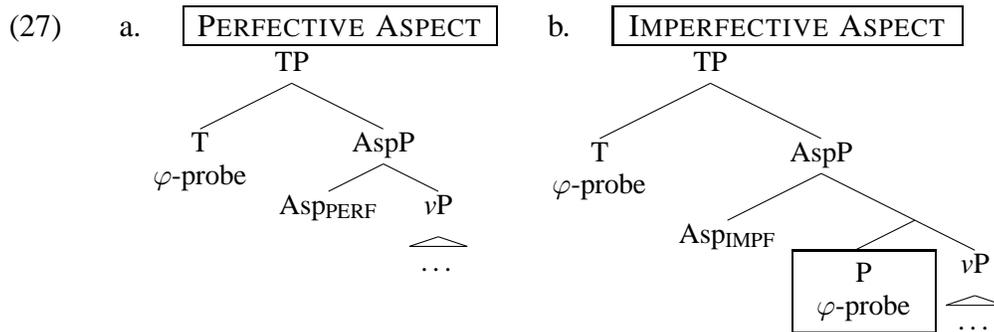
4.3 Implications for Senaya

What we have seen in this section so far is that nonperfective aspects have the potential to be syntactically more complex than perfective aspect, since they may involve a predicate absent in the perfective. This approach to split ergativity has been implemented in two ways in recent literature. First, for Basque and Chol, it has been argued that the extra predicate in the progressive and/or imperfective is expressed as an independent verb, such that nonperfective aspects are actually biclausal (Laka 2006; Coon 2010). Second, the prepositional predicate introduced by nonperfective aspects has been taken to introduce an additional phase boundary (Coon & Preminger 2011), disrupting a Marantzian assignment of ergative Case.

Both of these implementations involve natural properties of prepositions. Since prepositions are predicates, it is natural to think that the prepositional predicate in nonperfective aspects may be expressed as a verb. In addition, prepositions are phase heads, so it would be natural for this property to be preserved as well.

Another property of prepositions is that they can introduce φ -probes and assign Case. If we take the above view of split ergativity seriously, we might imagine that these properties too can effect an aspect split. We propose that it is precisely this that lies behind the additional φ -probe in the imperfective in Senaya. What distinguishes Senaya's aspect split from canonical aspect splits is that (aside from Senaya not being underlyingly ergative), in order to express aspect, Senaya makes use of a prepositional predicate that retains a φ -probe; however, this prepositional predicate does not have the status of a verb (as it does in Chol and Basque), or introduce a phase boundary.

We can thus represent the perfective and imperfective in Senaya as follows, with an abstract prepositional element, selected by imperfective Asp, introducing a φ -probe:



On a theoretical level, then, we can unify Senaya's unusual aspect split with Coon's (2010) account of canonical aspect-based split-ergativity: the aspect split in Senaya arises from an additional prepositional predicate in the imperfective that is absent in the perfective.

5 Concluding remarks

In this paper, we have proposed that the unusual aspect-based agreement split in Senaya arises because imperfective Asp introduces a φ -probe. This φ -probe disrupts the language's ordinary agreement pattern and causes the imperfective object

and the perfective subject to be marked alike. This analysis provides support for recent work on aspect-based split ergativity (Laka 2006; Coon 2010; Coon & Preminger 2011) as well as for the structural decomposition of tense and aspect in Demirdache and Uribe-Etxebarria (2000, 2007). In particular, Senaya's aspect split shows directly that imperfective aspects can add complexity that interferes with the Case/agreement system of a language, lending credence to the hypothesis that this is how aspect splits come about.

More work on the details of Senaya syntax can be found in Kalin and McPherson (2012), which discusses some complex patterns that arise with ditransitives and progressives. In addition, we apply the analysis developed here to a group of other Neo-Aramaic languages, which display another type of aspect split that does not involve ergativity, in Kalin and van Urk (2012).

References

- Anand, Pranav, & Andrew Nevins. 2006. The locus of ergative Case assignment: Evidence from scope. In *Ergativity: Emerging Issues*, ed. by Alana Johns, Diane Massam, & Juvénal Ndayiragije, 3–25. Dordrecht: Kluwer.
- Béjar, Susana, & Milan Rezac. 2009. Cyclic Agree. *Linguistic Inquiry* 40.35–73.
- Chomsky, Noam. 2000. Minimalist inquiries: the framework. In *Step by Step: essays on minimalist syntax in honor of Howard Lasnik*, ed. by Roger Martin, David Michaels, & Juan Uriagereka, 89–155. Cambridge, MA: MIT Press.
- Coon, Jessica, 2010. *Complementation in Chol (Mayan): A Theory of Split Ergativity*. Cambridge, MA: Massachusetts Institute of Technology dissertation.
- , & Omer Preminger. 2011. Towards a unified account of person splits. In *Proceedings of the 29th West Coast Conference on Formal Linguistics (WCCFL 29)*, Somerville, MA. Cascadia Press.
- Dayal, Veneeta. 2011. Hindi pseudo-incorporation. *Natural Language and Linguistic Theory* 29.123–167.
- Demirdache, Hamida, & Myriam Uribe-Etxebarria. 2000. The primitives of temporal relations. In *Step by Step*, ed. by Roger Martin, David Michaels, & Juan Uriagereka, 157–186. Cambridge, MA: MIT Press.
- , & ———. 2007. The syntax of time arguments. *Lingua* 117.330–366.
- Dixon, R. M. W. 1994. *Ergativity*. Cambridge University Press.
- Doron, Edit, & Geoffrey Khan. 2012. The typology of morphological ergativity in Neo-Aramaic. *Lingua* 122.225–240.
- Halpert, Claire, 2012. Structural case and nominal licensing in Zulu. Presented at GLOW 35, University of Potsdam.

- Holmberg, Anders, & Thorbjörg Hróarsdóttir. 2003. Agreement and movement in Icelandic raising constructions. *Lingua* 113.997–1019.
- Kalin, Laura, & Laura McPherson, 2012. Senaya (Neo-Aramaic): Structural PCC effects in progressives. Poster presented at WCCFL 30, UC Santa Cruz.
- , & Coppe van Urk, 2012. Aspect-based agreement reversal in Neo-Aramaic. Talk at WCCFL 30, UC Santa Cruz.
- Klein, Wolfgang. 1994. *Time in Language*. London: Routledge.
- Laka, Itziar. 2006. Deriving split ergativity in the progressive: the case of Basque. In *Ergativity: Emerging Issues*, ed. by Alana Johns, Diane Massam, & Juvenal Ndayiragije, 173–195. Dordrecht: Springer.
- Legate, Julie Anne. 2008. Morphological and abstract case. *Linguistic Inquiry* 39.55–101.
- Massam, Diane. 2001. Pseudo noun incorporation in Niuean. *NLLT* 19.153–197.
- Preminger, Omer, 2011. *Agreement as a fallible operation*. Cambridge, MA: Massachusetts Institute of Technology dissertation.
- Reichenbach, Hans. 1947. *Elements of symbolic logic*. New York: The Free Press.
- Rezac, Milan. 2011. *Phi-features and the Modular Architecture of Language*, volume 81 of *Studies in Natural Language and Linguistic Theory*. Springer.
- Sigurðsson, Halldór Ármann, & Anders Holmberg. 2008. Icelandic dative intervention: Person and Number are separate probes. In *Agreement restrictions*, ed. by Gunnar H. Hrafnbjargarson Roberta D’Alessandro & Susann Fischer, 251–280. Berlin: Mouton de Gruyter.
- Svenonius, Peter. 2007. Adpositions, particles, and the arguments they introduce. In *Argument structure*, ed. by Eric Reuland, Tanmoy Bhattacharya, & Giorgos Spathas, 63–104. Amsterdam: John Benjamins.