State and change of state in Latin: A view from the lexicon-syntax interface*

Abstract
This paper offers a syntactic account of Haverling’s (1994ff.) descriptive insights regarding the formation of both stative verbs and –sco verbs expressing change in Early and Classical Latin. In particular, the formal distinction between incorporation and conflation (cfr. Haugen (2008, 2009) and Mateu (2012), i.a.) is shown to be useful when dealing with the formation of these verbs. Following Acedo-Matellán and Mateu’s (2013) formal account of Talmy’s (1991, 2000) typology of motion events, I also address the question of why aspectual resultative prefixation is a phenomenon that is expected to be found in a satellite-framed language like Latin (e.g., cfr. inarescere ‘to start becoming dry’) but not in verb-framed languages like Catalan or Spanish.

Keywords: state, change of state, argument structure, conflation, incorporation, lexicon-syntax interface, Talmy’s typology, Latin, -sco verbs

1. Introduction

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In this paper, I deal with the question on how state and change of state are expressed in Early and Classical Latin. In particular, for reasons of space, here I concentrate on providing a syntactic account of the formation of stative verbs that contain the -ē- suffix (e.g., see (1a)) and of unprefixed and prefixed verbs of change that involve the -sc- suffix (e.g., see (1b) and (1c), respectively).

(1) a.  
\textit{Ager} \quad \textit{aret}.
\text{ground.NOM.SG} \quad \text{be.dry.3SG}

‘The ground is dry.’

b.  
\text{Nihil enim lacrima citius arescit} \quad (\text{Rhet. Her. 2.50})
\text{nothing really tear.ABL.SG} \quad \text{quicker dries}

‘Nothing dries more quickly than a tear.’

c.  
\textit{fontes (…)} \quad \textit{celeriter aestibus exarescerent} \quad (\text{Caes. Civ. 3.49.4})
\text{spring.NOM.PL} \quad \text{quickly heat.ABL.PL} \quad \text{out-dry.IMPF.SUBJ.3PL}

‘The springs quickly dried up in the hot weather.’

The formation of triplets like the one exemplified in (1) is highly productive (e.g., see (2)), whereby the derivational process should not be conceived of as involving idiosyncratic structures projected by individual lexical items. As shown below, both the morphosyntactic processes and their associated semantic effects concerning event structure are quite regular.

(2) a.  
\textit{arere} ‘be dry’; \textit{arescere} ‘become drier’; \textit{exarescere} ‘become dry’.

b.  
\textit{calere} ‘be warm’; \textit{calescere} ‘become warmer’; \textit{concalescere} ‘become warm’.

c. **candere** ‘be white’; **candescere** ‘become whiter’; **excandescere** ‘become white’.

d. **rubere** ‘be red’; **rubescere** ‘grow red’; **erubescere** ‘turn red (from shame)’.

An excellent example to understand the meaning differences involved in the stative and change of state verbs that appear in (1) is the one found in the following text from Plautus, *apud* Haverling (2010: 314; ex. (59a)), which contains a stative verb (*aret* ‘(my hood) is dry’) and predicates of change that are expressed by atelic unprefixed verbs (*arescunt* ‘(the clothes) are drying’) and telic prefixed ones (*exarescent* ‘(the clothes) become totally dry’).

(3) Plaut. *Rud.*, 573-578: *da mihi vestimenti aliquid aridi / dum arescunt mea […] / Tegillum eccillud, mihi unum id aret; id si vis, dabo […] / Tu istaec mihi datō: exarescent faxo.*

‘Give me something to wear while my clothes are drying […] Look, here is my hood; that is the only thing which is dry that I have; if you want, I’ll give it to you […] Give me those things; I shall see to it that they get dry’ [Haverling’s (2010: 314) translation].

The structure of the paper is as follows: in Section 2, I provide a brief characterization of the data, which is based on Haverling’s (1994ff.) descriptively oriented works. I show that there is a great, though not exact, parallelism between Latin unprefixed –sco verbs and the Catalan –ejar verbs analyzed by Oltra-Massuet and Castroviejo (2013). In Section 3, where the theoretical framework is presented, I deal with the basic elements of a syntactic theory of argument structure like the one put forward by Hale and Keyser (1993, 2002) and revisited and

2. The data: -sco verbs in Early and Classical Latin

As pointed out by Lehmann (1995) and Haverling (2008; 2010), i.a., two basic structures are available for the formation of state predicates in Latin: i.e., the verbal structure formed by the Indo-European suffix *-eh₁- (e.g., see (4)) and the copular structure with an adjective (e.g., see (5)).

(4) Ager aret. 
    ground.NOM.SG be.dry.3SG  
    ‘The ground is dry.’ 

(5) Ager aridus erat. 
    ground.NOM.SG dry.NOM.SG be.IMPF.IND.3SG
‘The ground was dry.’

It is the case that the stative suffix -e- in (4) disappears in Late Latin and Romance, whereby it can be said, along with Lehmann (1995: 4) and Haverling (2010: 321), that we move from a system where a state is expressed by a verbal suffix to one where it is often expressed by an adjective and the copular verb esse ‘be’: aret ‘it is dry’ > aridus est ‘it is dry’. Along with a decay of productivity of intransitive Latin –e- verbs, there is a productive way of deriving adjectives from these verbs via the suffix –id- (cf. Di Gennaro (2008) for further discussion).

As for the expression of change in Latin, both Lehmann (1995) and Haverling (1996ff.) claim that the affix –sc- adds dynamicity to the verb. The second author also emphasizes the atelicity of –sco verbs when they are unprefixed. For example, unprefixed verbs like siccescere ‘go drier’ (see (6)) are found to be compatible with the expression duos menses meaning ‘for two months’.

(6) Eaque, cum erit exstructa, relinquatur,
this.and when will.be.3SG built.PP.NOM.F.SG remain.PRES.SUBJ.PASS.3SG
ne minus duos menses ut siccescat. (Vitr. 5.12.4)
not less two.ACC.PL months.ACC.PL that dry.PRES.SUBJ.3SG
‘And this (block), when formed, is to be left to dry for at least two months.’

In contrast, as pointed out by Haverling (1996: 173), prefixed verbs like exarescere ‘become totally dry’ (lit. ‘out-dry’) are telic and are found with temporal adjuncts in ablative case, which express the amount of time in which the event is brought to its end: e.g., diebus quin-
decim exarescere ‘become dry in 15 days’ (Var. R. 1.32.1). Similarly, Devine and Stephens (2013: 198) conclude:

the unprefixed form <arescit ‘goes drier’> just denotes attainment of a scalar degree corresponding to a state that qualifies as aret, which is not necessarily the state of maximum possible dryness; the prefixed forms <exaruit ‘has dried out’ and perarescat ‘dry thoroughly’> not only induce the telic reading but also serve to indicate that a point at the high end of the scale of dryness is effectively attained.

According to Haverling (1996: 174; 2010: 302-303), another difference between unprefixed and prefixed sco-verbs is found in temporal subordinate clauses introduced by the conjunction dum, which can mean ‘while’ in (7a) (see the relevant context in the longer example in (3) above), but ‘until’ in (7b). As pointed out by Haverling (1996: 174), unprefixed –sco verbs can be found in dum-clauses “which describe the background to what is going on in the main clause (…) When such a clause does not describe the background but means ‘until’, we find prefixed verbs”.

(7) a. dum mea (vestimenta) arescunt (Plaut. Rud. 573)
while my.NOM.PL clothes.NOM.PL go.dry.PRES.IND.3PL
‘while my clothes are drying.’

b. nam iam aliquo aufugiam et me
for now somewhere away-run.FUT.IND.1SG and me.ACC.SG
occultabo aliquot dies, dum haec
hide.FUT.IND.1SG some day.ACC.PL until these.NOM.PL
consilescent turbae atque irae
calm.down.PRES.IND.3PL trouble.NOM.PL and ire.NOM.PL

leniunt (Plaut. Mil. 582–583)

be.mitigated.PRES.IND.3PL

‘I shall run away and hide somewhere, until these troubles calm down and their wrath subsides.’ [Haverling’s (2010: 303) translation]

In this section, which is devoted to describing the relevant data, it is also worth showing an interesting parallelism between Latin –sco verbs and Catalan –ejar verbs. The latter have been recently analyzed in an excellent work by Oltra-Massuet and Castroviejo (2013). A couple of examples (e.g., Cat. fosquejar ‘go dark’ and groguejar ‘go yellow’), which are taken from Oltra-Massuet and Castroviejo (2013: exs. (6b) and (13)), are given in (8):

(8) a. El dia fosqueja. (Catalan)
the day goes.dark

‘The day is going dark.’

b. Aquesta samarreta grogueja.
this t-shirt goes.yellow

‘This t-shirt is going yellow.’

Oltra-Massuet and Castroviejo (2013: 140) point out the following five properties of Catalan –ejar verbs: (i) they express a property that is interpreted as internally-caused; (ii) they cannot be causativized directly; (iii) they are atelic; (iv) they do not involve a final state; and (v) they are restricted to imperfective tenses. Interestingly, all these properties apply to Latin unprefix –sco verbs as well. As noted above, unprefix –sco verbs are also atelic (see (6)) and, like Catalan –ejar verbs, they do not involve a final state either, whereas prefixed ones are
clearly telic and do involve a final state. Moreover, -sco verbs express an internal process and cannot be causativized/transitivized via a null causative verb: e.g., unlike the English verb dry, which can have both unaccusative and transitive/causative uses, aresco ‘become drier’ / ‘grow dry’ cannot have a transitive/causative use (cf. *X_{subj} Y_{obj} arescit). Indirect causation or transitivization is possible if the verb facere ‘make’ is added, which forms the compound verb arefacio ‘make dry’ (e.g., see the data in (9), which are taken from Devine and Stephens (2013: 107; ex. (18)).

(9) a. Murtam nigram arfacito in umbra.
   myrtle.ACC.SG black.ACC.SG dry.make.FUT.IMP.2PL in shade.ABL.SG
   ‘Dry black myrtle in the shade’. (Cat. Agr.125.1)

b. (Dolium olearium novum) arfacito;
   jar.ACC.SG of.oil.ACC.SG new.ACC.SG dry.make.FUT.IMP.2PL
   ubi arebit…
   when be.dry.FUT.IND.3SG
   ‘Let the new oil jar dry. When it will be dry…’. (Cat. Agr. 69.2).

Another piece of evidence that Latin unprefixed –sco verbs behave like Catalan –ejar verbs is that both are restricted to imperfective tenses. According to Haverling (1994: 48-49; 2008: 74-75), the corresponding dynamic perfect tense forms of unprefixed –sco verbs are prefixed in Early and Classical Latin. For example, this Latinist scholar points out that in Classical Latin prose the perfect tense that corresponds to imperfective calesco ‘I go warmer’ is not calui: this perfect form cannot be interpreted dynamically but only statively (i.e., ‘I was
warm’). The prefixed form (e.g., *concalui* ‘I became warm’) is the only available form in Classical Latin prose to express dynamicity of \(-sco\) verbs in the perfect tense.\(^1\)

There are still some relevant differences between Catalan \(-ejar\) verbs and Latin \(-sco\) verbs. For example, Oltra-Massuet and Castroviejo (2013: 147) point out that Catalan \(-ejar\) verbs “are quite marginal with *parar de* ‘stop’, which is expected if they are not dynamic predicates” (see (10)). In contrast, Haverling (1994: 43; 1996: 176) states that Latin unprefixed –sco verbs are perfectly compatible with aspectual verbs like *desino* or *desist* ‘stop’ (e.g., see (11)).\(^2\)

\begin{equation}
(10) \quad ?? \text{Els camps de blat han parat de groguejar.} \quad \text{(Catalan)}
\end{equation}

\begin{itemize}
\item the fields of wheat have stopped of go.yellow
\end{itemize}

‘The wheat fields stopped going yellow’.

\begin{equation}
(11) \quad \text{donec sal desiverit tabescere biduum} \quad \text{(Cat. Agr. 88.1)}
\end{equation}

\begin{itemize}
\item until salt.NOM.SG stop.FUT.PERF.3SG. dissolve two-days.ACC.SG
\end{itemize}

‘until the salt ceases to dissolve for two days’.

\(^1\) However, in poetry some examples of unprefixed \(-sco\) verbs in perfect tense forms can be found in a dynamic function (see Haverling (2000: 209f; 2008: 75)).

\(^2\) Haverling (1996: 1976) points out that unprefixed \(-sco\) verbs, compared to prefixed ones, are “a lot more common with expressions like *coepi* and *incipio* ‘begin’ and it is the rule with expressions like *desino* or *desisto*” (emphasis mine: JM).
Furthermore, the dynamicity of Latin –sco verbs seems indisputable. For example, as pointed out by Haverling (2010: 290-291), verbs like *senesco* ‘grow old’ are found to be compatible with adverbial expressions like *sensim* ‘gradually’, which are not found with stative -e- verbs.

(12) *Ita sensim sine sensu aetas senescit,*  
so gradually without sense.ABL.SG life.NOM.SG grows.old  
*nec subito frangitur,*  
not suddenly break.PRES.IND.PASS.3SG  
*sed diuturnitate extinguitur*  
but durability.ABL.SG extinguish-PRES.IND.PASS.3SG  
‘thus old age comes upon us gradually, and we are not suddenly broken but we are destroyed over a longer period of time.’ (Cic. *Cato* 38) [Haverling’s (2010) translation; ex. (7b), p. 291)]

Interestingly, Oltra-Massuet and Castroviejo’s (2013: 147) claim that Catalan –ejar verbs “are not dynamic predicates” is finally replaced by their more precise claim that these verbs are “Davidsonian states, i.e., dynamic stative verbs” (p. 148). As shown below in Section 4, while Oltra-Massuet and Castroviejo (2013, 2014) posit a stative structure for Catalan –ejar verbs (i.e., according to them, the verbal head is stative: vBE), I will claim that Latin –sco verbs like *arescere* ‘become drier’ or *seneseco* ‘grow old’ are not Davidsonian states but are indefinite change of state verbs (a.k.a. “degree achievements”), whereby they have a non-

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3 See Maienborn (2007), i.a., for relevant discussion on the distinction between two types of states, Davidsonian and Kimian. While the former have some shared properties with eventive predicates, the latter do not.

4 Notice that the fact that Latin –sco verbs are compatible with adverbials like *sensim* ‘gradually, slowly’ (cf. (ex. (12))) can be taken as evidence that these verbs do not behave like Davidsonian states, whereby they are clearly eventive.
statative structure headed by a truly dynamic unaccusative verb: \( \text{v}_{\text{GO}} \). In contrast, \( \text{v}_{\text{BE}} \) will only be posited for clearly stative verbs like *arere* ‘be dry’, which are lacking in Catalan.

To conclude this descriptive section, it is worth quoting Haverling’s (1996: 179) insightful conclusion regarding the behavior of \(-\text{sco}\) verbs in Early and Classical Latin.

In conclusion, in the texts from the earlier periods, verbs like *aresco*, *inaresco* and *exaresco* overlap only to some degree; the unprefixed verb *aresco* means ‘to grow more and more dry’ and it stresses the gradual character of the development, but it does not emphasize its beginning nor its end; the prefixed verb *exaresco* means ‘to turn dry, become totally dry’ and it stresses the fact that the development is brought to its final conclusion; and the prefixed verb *inaresco* means ‘to become dry’ or ‘to grow somewhat dry’ or ‘to grow more dry’, stressing the initial phase of the development.\(^5\)

It should be noticed that the behavior of \(-\text{sco}\) verbs summarized in the previous quote is the typical one of Early and Classical Latin. Interestingly, the subtle distinctions associated to their prefixal system became blurred in Late Latin (see Haverling (2003; 2008; 2010), for relevant discussion). As argued by Mateu (2015), this blurring can be claimed to have to do with the well-known typological change from a satellite-framed language like Classical Latin to verb-framed Romance (e.g., see Acedo-Matellán and Mateu (2013)). Late Latin is an intermediate stage (Stolova 2015): the resultative/path component is typically encoded in a prefix

\(^5\) According to Haverling (2008: 75), both *inaresco* and *exaresco* are telic verbs: “the different prefixes indicate focus on different parts of the process or change and sometimes they indicate whether a telic action is initio-transformative <e.g., *inaresco*> or fini-transformative <e.g., *exaresco*>” (p. 75).
in Classical Latin (see Acedo-Matellán (2010)), whereas it turns out to be typically encoded in the verbal root in Late Latin. In the last stage of this language the prefix has been claimed to become a mere marker of dynamicity associated to the verb (see Haverling (2003: 123ff; 2000)), which leads to the phenomenon known as “parasyntesis”. Although such a simultaneous combination of prefix and suffix is already attested in Latin, it has been shown to be more widespread in Romance languages (see Crocco-Galèas and Iacobini (1993), i.a.).

Before providing a syntactic analysis of the formation of stative verbs and change –sco verbs in Early and Classical Latin (see Section 4), next it will be useful to give some relevant theoretical background: Section 3 contains a brief review of the syntactic approach to argument structure I adopt in this paper.

3. The theoretical framework

I assume a syntactic theory of argument structure like the one developed by Harley (2011) and Marantz (2013) (after Hale and Keyser (1993, 2002)), whose main tenet is that argument structure configurations and argument structure alternations can be, and should be, treated entirely within the syntactic component, via the same formal operations (i.e., External Merge and Internal Merge/Move) which construct any syntactic constituent. Marantz (2013) and Mateu (2014), as proponents of a configurational approach to argument structure like that of Hale and Keyser’s (1993, 2002), have pointed out the theoretical advantages of reducing all verbal argument structure types to two basic ones: i.e., the verbal configurations that have a “nominal” complement and the ones that have a sort of “propositional”/predicational complement, which is sometimes called Predicative Phrase (PredP: e.g., see Bowers (2000), among others)
or Small Clause (SC: e.g., see Stowell (1981) and Hoekstra (2004), among many others), whose members are characterized by the appearance of an internal predication and therefore an internal subject (e.g., the steadfastly transitive locative verbs -e.g., *shelve* and *saddle* verbs- and the alternating deadjectival causative/inchoative verbs -e.g., *clear* verbs). At first sight it seems that this syntactic theory only deals with a very small fraction of the total range of verb types. However, as pointed out by the abovementioned authors, this apparent lack of coverage should not prevent one from realizing that, at an abstract level, most of descriptive verb types can be claimed to be reduced to the two basic ones in (13): the ones that consist of verbal head (v) plus a nominal (NP/DP) complement (see (13a)) and the ones that consist of verbal head plus a predicative (e.g., PP or AdjP) complement (see (13b)). Beyond the two basic argument structures in (13), additional arguments enter the syntactic derivation via particular functional heads like Voice, which introduces the external argument (e.g., cfr. Harley (2013) and Marantz (2013), i.a., after Kratzer (1996)): see (14).6

\[
\text{(13) } \begin{align*}
\text{a. } & vP \\
& v \\
& N/DP \\
\text{b. } & vP \\
& v \\
& XP (XP = \text{PredP/SC}) \\
& \quad DP \\
& \quad X' \\
& \quad X \\
& \quad Y(P)
\end{align*}
\]

6 Other additional arguments are introduced by so-called Applicative heads, which are claimed to be involved in dative structures of different sorts (e.g., see Cuervo (2003), Pylkkänen (2008), and Marantz (2013), i.a).
A crucial insight of Hale and Keyser’s (1993, 2002) work is their claim that verbs always take a complement. Another important claim of their configurational approach is that the structural semantics of argument structure can be claimed to be read off from syntactic structures. Four theta roles can be read off from the syntactic argument structures (cfr. Mateu (2002), Harley (2011), and Acedo-Matellán and Mateu (2014), i.a.): Originator is the specifier of the relevant functional projection that introduces the external argument (e.g., Voice); Figure is the specifier of the inner predication, headed by P or Adj; Ground is the complement of P, and Incremental Theme is the nominal complement of v.

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7 An anonymous reviewer casts doubt on the status of unergative verbs (e.g., monoargumental ones like sleep or zero-argumental ones like rain) with respect to this generalization. When confronted with this reasonable objection, Hale and Keyser (1993, 2002) claim that English unergative verbs like sleep, rain, smile, work, cry, speak, play, snore, etc. are hidden transitives. According to them, evidence for this proposal can be found in languages like Basque (see (i)) and Jemez (see (ii)). Typically, English unergatives involve incorporated variants, whereas Basque ones involve non-incorporated (i.e., analytical) variants. Hale and Keyser’s bimorphemic analysis of unergatives is supported by Jemez, where the nominal root incorporates into a visible light verb ‘do’.

(i) lo egin ‘sleep do’; euria egin ‘rain do’ barre egin ‘smile do’; lan egin ‘work do’; negar egin ‘cry do’; hitz egin ‘word do’; iolas egin ‘play do’; zurruna egin ‘snore do’, etc. (Basque)

(ii) hiil-’a ‘laugh-do’; sae-’a ‘work-do’; shil-’a ‘cry-do’; se-’a ‘speech-do’, etc. (Jemez)

8 The Figure, in Talmy’s (2000) terms, is the entity which is located or moving with respect to some other entity, which is the Ground. In the (change of) state domain, the relation between Figure and Ground can be metaphori-
Concerning the semantic functions associated to the eventive element (i.e., \( v \)), binary (i.e., dynamic/static) values can be posited. For example, \( DO \) is the dynamic eventive value associated to unergative \( v \);\(^9\) \( CAUSE \) can be read off from transitive verbal configurations where \( V_{DO} \) subcategorizes for an inner predicative (SC: PP/AP) complement. Dynamic/static values can be associated to unaccusative \( v \) (\( GO \) and \( BE \), respectively), which also selects a SC complement but lacks external argument.\(^{10}\)

As pointed out by Harley (2005; 2011) and Mateu (2014), one important advantage of Hale and Keyser’s program is that it sheds light on the syntactic argument structure commonalities that can be found in apparently different lexical semantic classes of verbs: for example, creation verbs (e.g., (15a)) and consumption verbs (e.g., (15b)) can be argued to be assigned the transitive structure in (13a). Since these verbs can incorporate their complement (as emphasized by Hale and Keyser (2002), all unergative structures can be reduced to the one in (13a)), it is predicted that their object can be null, as shown in (15a)-(15b). See Volpe (2004) for the claim that consumption verbs are basically unergative. In contrast, the inner subject/specifier

\[ [V_{VoiceP} \text{DP} \ldots [v \text{V} \text{N}]] \]

See Hale and Keyser (1993, 2002) for the claim that unergative verbs typically express creation or production (cfr. [\( V_{VoiceP} \text{DP} \ldots [v \text{V} \text{N}]] \)). See footnote 7.

\(^{10}\) Cfr. Marantz (2005: 5) for the claim that one does not have to posit “\( cause, become \) or \( be \) heads in the syntax (…). Under the strong constraints of the theoretical framework, whatever meanings are represented via syntactic heads and relations must be so constructed and represented, these meanings should always arise structurally”.

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\(^9\) See Hale and Keyser (1993, 2002) for the claim that unergative verbs typically express creation or production (cfr. [\( V_{VoiceP} \text{DP} \ldots [v \text{V} \text{N}]] \)). See footnote 7.
of change of \{location/state\} verbs cannot be easily omitted: see (15c)-(15d). Accordingly, a crucial syntactic difference can be established between Incremental Theme (i.e., the complement of \(v\) in (13a)) and Figure (i.e., the specifier/subject of an inner Locative (Prep) or Property (Adj) predication in (13b)).

(15)  
   a. They sang (a beautiful song/aria).
   b. Mary ate (a pizza).
   c. John shelved/saddled *(\{the books/the horse\})
   d. The strong winds cleared *(the sky).

Assuming that all verbal heads in syntactic argument structures are underlingly light (e.g., cfr. Hale and Keyser (1993), Mateu (2002), Acedo-Matellán (2010), den Dikken (2010), Acedo-Matellán and Mateu (2014), among others), it is indeed desirable to have a restrictive theory of how these verbs can acquire phonological content. Assuming Chomsky’s (2001f.) well-known distinction between Internal Merge and External Merge, two options turn out to be available: despite claims like Haugen’s (2009: 260) one quoted in (16), I argue that no primitive theoretical status should be attributed to Incorporation and Conflation, because these two operations can be argued to follow from the distinction between Internal Merge (\(\rightarrow\) incorporation via Copy/Move) and External Merge (\(\rightarrow\) conflation).

(16)  
   Haugen (2009: 260): (…) we slightly revised the operations proposed by Hale and Keyser (2002). Incorporation is conceived of as head-movement (as in Baker 1988; Hale and Keyser 1993), and is instantiated through the syntactic operation of Copy, whereas Conflation is instantiated directly through Merge (compounding). These two syntactic operations are sufficient to account for
much of the cross-linguistic variation that we have seen in N<ou>n I<ncorporation> and denominal verb constructions.

Following Haugen’s (2009) distinction in (16), incorporation is involved in the formation of examples like (17) and (18), since the nominal and adjectival roots can be claimed to come from the innermost complement position of the syntactic argument structure (e.g., cfr. Hale and Keyser’s (2002) l(exical)-syntactic analyses in (19)):

(17) a. John shelved the books.
    b. John saddled the horse.

(18) a. The strong winds cleared the sky.
    b. The cook thinned the sauce.

(19) a. John … [V<PUT> [the books ON SHELF]]
    b. The strong winds … [V<CAUSE> [the sky V<BECOME> CLEAR]]

Similarly, when dealing with motion events and resultative constructions, Mateu (2012) claims that null light verbs can be saturated via incorporation (e.g., see (20a) and (20b)) or via conflation (e.g., see (21a) and (21b)). Incorporation is involved in (20) since the result root can be claimed to come from an inner complement/predicate position, whereas conflation is involved in (21) since the manner root is claimed to be directly adjoined to the null verbal head (cfr. Mateu and Rigau (2002, 2010), Harley (2005, 2011), Embick (2004), McIntyre (2004), Zubizarreta and Oh (2007), Mateu (2008, 2012), and Acedo-Matellán (2010, 2013), i.a., for further discussion on conflation structures).
(20)  a. He entered the room. \([vP \text{ enter } (= \sqrt{\text{IN-VO}}}]) \ [sc \text{ he } \ni \text{ the room}]]
    b. He flattened the metal with a hammer. \([He \ldots [vP \text{ flat-en } [sc \text{ the metal flat}]])]

(21)  a. He danced into the room. \([vP \sqrt{\text{DANCE-VO}}] \ [sc \text{ he into the room}])
    b. He hammered the metal flat. \([He\ldots [vP \sqrt{\text{HAMMER-VO}}][sc \text{ the metal flat}])\]

With the previous sketchy background in mind, next I concentrate on the syntax of the Latin stative and change of state constructions presented in Section 2. Given their morphosyntactic transparency, their formation can be shown to be taken as evidence for the present syntactic approach to argument structure.

4. A syntactic analysis of state and change of state verbs in Latin

Let us start with the stative verbal argument structure of examples like (1a), repeated in (22).

\[
\begin{align*}
\text{(22)} & \quad \text{Ager} & \quad \text{aret}. \\
& \quad \text{ground.} & \quad \text{be.dry.} & \quad \text{Col. 2.8.5} \\
& \quad \text{NOM.SG} & \quad \text{PRES.IND.3SG} \\
& \quad \text{‘The ground is dry.’}
\end{align*}
\]

\[\text{The event operator corresponding to the light verb in complex resultatives is better understood as } DO \text{ rather than as } \text{CAUSE}. \text{ The latter could be claimed to arise } \text{structurally} \text{ from merging } v_{\text{do}} \text{ with a Small Clause Result (see also } \text{Marantz (2005) and Zubizarreta and Oh (2007), i.a., for similar remarks). See footnote 10.}\]
The example in (22) is analyzed in (23) and can be paraphrased as follows: ‘The ground is centrally located in the property of dryness’. In (23) the root \textit{AR}– ‘dry’ is incorporated into a null relational head \textit{X} en route to the \textit{v}erbal head expressed by the stative suffix \textit{-e-}. The \textit{X} head in (23) expresses what Hale and Keyser (1993, 2002) call a “Central Coincidence Relation” (CCR), which involves a coincidence between the center of a Figure (the DP \textit{ager} ‘the ground’) and the center of a Ground (the root \textit{AR}-, which encodes the property of dryness).

Following Hale and Keyser (2002), a prepositional-like CCR can be claimed to be built upon a relational projection that associates a Figure (specifier of CCR) with a Ground (complement of CCR). The root \textit{AR}- expresses an abstract Ground which is related to the Figure (\textit{ager} ‘the ground’) via a CCR. As noted above, the complement of \textit{v}, i.e., the \textit{XP} in (23), can also be understood as a Predicative Phrase (PredP) or Small Clause (SC): initially \textit{ager} ‘the ground’ is the inner subject/specifier of a non-eventive predication and then moves up to specifier of TenseP to check nominative case. The syntactic structure in (23) is not associated to any external argument whereby it is unaccusative (cfr. Hale and Keyser (2002), Mateu (2002), and Harley (2011), i.a., for some l-syntactic implementations of Perlmutter’s (1978) original hypothesis of unaccusativity).
As pointed out above, two basic structures are available for the formation of state predicates in Latin: i.e., the verbal structure formed by the Indo-European suffix *-eh₁- (e.g., see (22)) and the copular structure with an Adjective (e.g., see (24)).

(24) Ager    aridus    erat.  \(\text{(Sal. Iug. 90)}\)

\[\begin{array}{c}
ground.\text{NOM.SG} \quad \text{dry.}\text{NOM.SG} \quad \text{be.IMPF.IND.3SG}
\end{array}\]

‘The ground was dry.’

From our present perspective, the stative constructions in (22) and (24) can both be provided with the same unaccusative argument structure. Along with some researchers (Mateu (2002), Amritavalli and Jayaseelan (2003), and Kayne (2009)) and unlike others (Baker 2003), I assume that Adjective is not a primitive category but involves an adpositional-like head \(X\) in (25)) to which a Ground element (\(AR\)- ‘dry’) is incorporated.

(25) \[\begin{array}{c}
vP \\
v_{\text{BE}} \\
is \\
\text{DP} \\
\text{Ager (Figure)} \\
\text{XCR} \\
\text{-id-} \\
\text{AR- (Ground)}
\end{array}\]

Next let us deal with the syntactic argument structure of –sco verbs in Latin. As noted above, the affix –sc- has been said to add dynamicity to the verb (e.g., see (1b), repeated in (26)), which is atelic when unprefixesd.
(26) Nihil enim lacrima citius arescit  
nothing really tear.ABL.SG quicker dries

‘Nothing dries more quickly than a tear.’

An appropriate analysis of indefinite/atelic verbs of change of state like (26) (cfr. so-called degree achievements in the literature: e.g., Dowty (1979), Hay et al. (1999), Fábregas (2003), Pérez Jiménez (2003), i.a.) is the one in (27), where the verb expresses process or change but no final result is achieved.

In our present Hale-and-Keyserian system, an adpositional-like projection XP that expresses a Central Coincidence Relation (CCR) seems to be more convenient for capturing the fact that atelic verbs like arescere in (26) lack a terminus or final result (cfr. Hale and Keyser’s “Terminal Coincidence Relation” (TCR)).

My analysis of Latin unprefixed –sco verbs in (27) is similar to the one posited by Ramchand (2008) for those English unaccusative verbs that express a process but lack a Result. In contrast, my positing two different syntactic event structures (see (23) and (27): cf. v_{ne} and v_{go}, respectively) is not compatible with Acedo-Matellán’s (2010: 56/61) attempt to reduce atelic unaccusative structures to stative ones. According to this author, atelic verbs like The soup cooled for hours and Dinosaurs existed have the very same stative unaccusative argument.
In contrast, prefixed verbs like *exarescere* ‘to become totally dry’ like the one in (1c), repeated in (28), do have a strong resultative character, whereby a final result or, to put in Hale and Keyser’s (1993, 2002) terms, a Terminal Coincidence Relation (TCR), can be argued to be involved in the syntactic representation of (29). The Small Clause analysis of resultative predications has already been argued to be valid for telic prefixed verbs in Dutch, German, and Latin (e.g., see Hoekstra’s so-called *Small Clause Results* (1988; 2004); cfr. also Mulder (1992); Mateu (2008); Acedo-Matellán (2010); Acedo-Matellán and Mateu (2013), i.a.).

Moreover, it is worth noting that the presence of a resultative predication headed by the prefix *ex-* ‘out’ in (29) has an important consequence: unlike in the syntactic representations of stative and atelic change verbs (see (23) and (27), respectively), in (29) the root *AR-* ‘dry’ is not incorporated from an inner complement position (the SC predicate position is originally occupied by the resultative prefix) but is directly conflated to *v*: cf. the abovementioned distinction between incorporation and conflation at the end of Section 3. Both operations are involved in (29): (i) conflation of the root *AR-* onto the *v*(erb) and (ii) incorporation of the resultative prefix *ex-* ‘out’ via head-to-head movement up to *v*.

(28) *fontes (…) celeriter aestibus exarescerent* (Caes. Civ. 3.49.4)

spring.NOM.PL quickly heat.ABL.PL out-dry.IMPF.SBJ.3PL

‘The springs quickly dried up in the hot weather.’

structure. Applying such a unifying proposal to the Latin verbs under the current study would lead us to posit the very same structural meaning to truly stative verbs like (22) and atelic change verbs like (26), which goes against Haverling’s (1996f) description of facts (see Section 2 above) and does not capture the relevant differences between these verbs. See also Devine and Stephens (2013: 108-109) for a formal semantic account of unprefixed – *sco* verbs, which is compatible with the unaccusative analysis in (27).
As pointed out above, the prefix of –sco verbs like the one in (28) expresses an aspectual or phasal content. In this sense Acedo-Matellán and Mateu (2013) show that the expression of aspect can be claimed to be sensitive to Talmy’s (1991, 2000) well-known satellite vs. verb-framed distinction: i.e., so-called “satellite-framed languages” like German, Russian, and

13 Recall, for example, Haverling’s (2008: 75) descriptive statement on telic verbs like inaresco and exaresco: “the different prefixes indicate focus on different parts of the process or change and sometimes they indicate whether a telic action is initio-transformative <e.g., inaresco> or fini-transformative <e.g., exaresco>”.

14 According to Talmy (1991, 2000), languages can be classified in two big typological groups depending on how they lexicalize the path of a motion event. In satellite-framed languages, this semantic component is lexicalized as a non-verbal element associated with the verb that he calls satellite, instantiations of which are Germanic directional particles and Latin and Slavic directional prefixes. In satellite-framed languages the verb root can lexicalize a co-event component expressing the manner in which the motion takes place, alongside motion itself (e.g., The bottle floated into the cave). In verb-framed languages, on the other hand, the path, together with the motion component itself, is lexicalized in the verb root and any manner co-event has to be expressed as an adjunct (e.g., Cat. La botella va entrar a la cova flotant ‘The bottle entered the cave floating’). See Demoite (2015), Levin and Rappaport Hovav (2015), and Acedo-Matellán and Mateu (2015) for three recent overviews of the huge literature on Talmy’s lexicalization patterns.

The fact that satellite-framed languages like English have complex path of motion constructions like (21a) He danced into the room and complex resultative constructions like (21b) He hammered the metal flat, but verb-framed languages like Romance do not, has been explained by their different morphophonological encodings of
Latin can express aspect in the shape of a prepositional-like satellite, whereas so-called “verb-framed languages” like Romance or Japanese can not. For example, Acedo-Matellán and Mateu (2013: 25; exs. (64)-(65)) describe the parallelism between the Latin prefix *de-* in (30a) and the Russian prefix *pere-* in (30b): both encode eggressive aspect (i.e., the one that expresses the end of the event; cf. (28)).

(30) a. *Dum musteus fructus de-fervescat.* (Col. 9, 15)

until sweet.NOM.SG fruit.NOM.SG down-boil.PRS.SBJV.3SG

‘Until the sweet fruit has stopped fermenting.’

b. *Pivo pere-brodilo.* (Russian)

beer PERE-fermented

‘The beer has finished fermenting.’

Path/Result (e.g., see Mateu and Rigau (2002) and Acedo-Matellán (2010), i.a.). In Romance languages, the obligatorily incorporating status of Path/Result saturates the phonological matrix of the verb root, whereby Manner conflation is not allowed. See also (i) for Acedo-Matellán and Real-Puigdollers’ (2014: 161) elaboration of this idea based on the availability vs. non-availability of a specific functional Vocabulary Item (VI) for the functional head Path:

(i) Acedo-Matellán and Real-Puigdollers (2014: 161): verb-framed Romance does not possess a specialised VI for the expression of the trajectory-denoting head Path, and Path can only be interpreted in this language when it is fused together with the *v* and a root is inserted therein. This brings about the consequence that only roots which fit well with the semantic import of *v*+Path (motion event + trajectory) can be insertable. By contrast, in satellite-framed Germanic, Path receives a VI of its own, and the verb can be lexicalised through any root (involving motion).
An anonymous reviewer wonders if there is independent evidence showing that the “verbal” root in the formation of prefixed –sco verbs (e.g., see (28) and (30a)) is conflated (i.e., directly adjoined to the verbal head) rather than incorporated from an inner Small Clause position, as in unprefixed –sco verbs: cfr. the analyses in (29) and (27), respectively. As noted above, the verb cannot acquire phonological content via incorporation in (29) since the inner complement position is already occupied by the satellite (i.e., by the resultative prefix). It is then worth noting that the evidence for this proposal runs parallel to the one that we reviewed when dealing with incorporation cases like to enter the room dancing vs. conflation ones like to dance into the room: cfr. (20a) and (21a) above. The following pair in (31a,b) should also receive a similar explanation: the incorporated root (√) in (31a) comes from the inner Small Clause predicate position, whereas the conflated root in (31b) is directly adjoined to the verb since the inner SC position is originally occupied by the resultative preverb \(e(x)-\) ‘out’. See also Acedo-Matellán (2010) and Acedo-Matellán and Mateu (2013), for further discussion on the parallelism between Latin and English satellite-framed constructions like (32), where the root \(\sqrt{COUGH}\) is also conflated with a null verb and the resultative element (cfr. the English particle out with the Latin prefix \(e(x-)\)) occupies the inner SC predicate position. Finally, see also McIntyre (2004) for a general discussion of conflation structures in event path constructions like John danced on (cfr. Cat. En Joan continuà ballant ‘John kept on dancing’), which Acedo-Matellán and Mateu (2013) relate to satellite-framed cases of aspectual prefixation like (30a). As predicted by Talmy’s (1991, 2000) typology, satellite-framed constructions like John danced on, (28), (30), (31b), and (32) are not typically found in verb-framed languages like Romance (see footnote 14).15

15 Although the verb \(e-rumpere\) lit. ‘out-break’, i.e., ‘break out’ in (31b), does not exist in Catalan, one could say that Talmy’s prediction is not correct in the light of examples like (i). However, it is clear that the Catalan verb
(31) a. *si quis eorum vincula ruperit*  
(Cic. Catil. 4.4.8)

if who.NOM.SG them.GEN.PL chain.ACC.PL break.PERF.SUBJ.3SG

‘if any of them has broken the chains.’

([VoiceP someone... [vP vdo [sc the chains \(\sqrt{\text{BREAK}}\)]]: ’someone broke the chains, i.e., made [sc the chains broken’)

b. *Si erumpunt omnia.*  
(Cic. Catil. 1,3)

si out-break.PRES.IND.3PL everything.NOM.NEUT.PL

‘If they all burst forth into public view.’

([vP [v \(\sqrt{\text{BREAK-VGO}}\) [sc everything out]]: ‘everything breaks out’, lit. ‘everything goes out in a violent manner’)  

(32) *[Serpentes] putamina ex-tussiunt.*  
(Plin. Nat. 10, 197)

snake.NOM.PL shell.ACC.PL out-cough.3PL

‘The snakes cough the egg shells out.’

([VoiceP The snakes... [vP [v \(\sqrt{\text{COUGH-VDO}}\) [sc the shells out]]: ‘the snakes cough the shells out’, lit. ‘they make [sc the shells out] by coughing’)  

Furthermore, following Svenonius (2004), one could argue that aspectual prefixes like the ones in (28) and (30) could be analyzed as expressions of an Asp head rather than of an in-

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*irrompre* ‘to break in’ is a lexical vestige from Latin, like *interrompre* ‘interrupt’. Unlike in Latin, no compositional meaning can be attributed to these alleged bimorphic verbs in Catalan.

(i)  
*En Joan irrompé a l’habitació*  
(Catalan)

det. Joan in-broke loc.prep the room

‘Joan broke into the room’.
stantiation of an inner resultative predication (i.e., the Small Clause Result predicate), as in (29). However, as we have just seen, there is typological evidence for analyzing these aspectual prefixes as originating as heads of resultative/abstract path predication. Otherwise, it would be a mere coincidence that both types of prefixes (resultative and aspectual ones) are typically lacking in verb-framed languages. Moreover, putting this typological evidence aside, it has been argued that so-called “superlexical”/“external” prefixes (e.g., the ones encoded in Asp; see Svenonius (2004)) are in fact resultative/inner prefixes: see Arsenijevic (2006, 2007a,b) and Zaucer (2009), i.a., for detailed theoretical and empirical justification of this claim, which is compatible with Acedo-Matellán and Mateu’s (2013) Talmian account of considering aspectual prefixes as involving an abstract Path.

Finally, as predicted by Talmy (1991, 2000), along the shift from satellite-framed Latin to verb-framed Romance, the typical Result(ative) prefixes of Classical Latin can be claimed to have been reanalyzed as markers of the v(ernal) head, which led to the more widespread extension of the phenomenon known as “parasynthesis” in Romance languages (cfr. Crocco-Galèas and Iacobini (1993), Haverling (2010), and Batllo (2015), i.a.). This diachronic issue falls beyond the scope of the present paper (cfr. Mateu (2015) for a preliminary formal proposal).

5. Conclusions

In this paper, I have presented a formal syntactic account of Haverling’s (1994ff.) descriptive insights regarding the event structure of both stative verbs and –sco verbs expressing change in Early and Classical Latin. Among other things, I have paid attention to the fact that Latin
unprefixed –sco verbs and Catalan –ejar verbs (Oltra-Massuet and Castroviejo 2013) share many properties: (i) they express a property that is interpreted as internally-caused; (ii) they cannot be causativized directly; (iii) they are atelic; (iv) they do not involve a final state; and (v) they are restricted to imperfective tenses. However, I have argued that Oltra-Massuet and Castroviejo’s (2013) insightful claim that Catalan –ejar verbs express Davidsonian/dynamic states cannot be applied to Latin –sco verbs. Rather the latter have been claimed to behave as indefinite change of state verbs (a.k.a. degree achievements).

As far as the syntactic formalization of the argument structure of state and change of state verbs in Early and Classical Latin, I have concentrated on the important formal distinction between incorporation and conflation, which has proved very useful in the previous literature, for example, when dealing with denominal verb formation (see Haugen (2008, 2009)) and formation of resultative constructions (see Mateu (2012)). Following this trend, I have shown that in Early and Classical Latin the formation of stative verbs and unprefixed –sco verbs (e.g., cf. arere ‘be dry’ and arescere ‘grow dry’ or ‘become drier’, respectively) involves incorporation of the root from an inner complement/predicate position, whereas the formation of prefixed –sco verbs (e.g., exarescere ‘become totally dry’) involves (i) conflation (i.e., direct adjunction) of the root with a null light verb and (ii) incorporation of the resultative predicate from the inner SC predicate into the upper verb due to its affixal status.

Finally, following Acedo-Matellán and Mateu’s (2013) formal account of Talmy’s (1991, 2000) typology of motion events, I have briefly dealt with the question of why aspecual resultative prefixation in telic verbs like inaresco ‘start becoming dry’ or exaresco ‘become totally dry’ is a phenomenon that is expected to be more typical of satellite-framed languages rather than of verb-framed ones.
References


