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Towards a morpho-syntactic analysis of *-ī-scō* and *-ā-scō* verbs

Abstract: The goal of this chapter is to identify the morpho-syntactic rules which govern the formation of *-sco* verbs in Latin in a Constructivist framework. We assume a coherent syntactic structure for all productive *-sco* verbs, in which a stative sub-component and an inchoative one are both active. Then we concentrate on the vocalic element which is required between the root and the suffix *-sco* itself. In particular, we claim that the choice of either *-ē-* or *-ā-* or *-ī-* can be predicted according to the status of the underlying lexical element. A list of roots which can only compare in stative configuration typically select *-ē-* ('Caland' type, e.g. *rubesco*), which is also related to stativity for diachronic reasons. Non-stative roots, nouns, adjectives instead select *-ā-* and *-ī-* either on the model of corresponding *-āre* and *-īre* verbs or as proper thematic elements, which are inserted in order to allow the insertion of *-sco*.

Keywords: Latin linguistics, *-sco* suffix, thematic vowels, stative verbs, morpho-syntax

1 Introduction

The target of this contribution is to propose a set of formal rules that is able to give reason of the distribution of the vocalic elements in the Latin inchoative verbs. The inchoative verbs are characterized by the presence of the suffix *-sco* (e.g., *vetera-sco* 'I become old'). The suffix *-sco* is always preceded by a verbal theme, meaning that the base of the verb needs a vocalic element bridging it with the *-sco* suffix. If the *-sco* suffix is morpho-phonologically stable, the thematic element is not; it alternates between *-ē-*, *-ī-* and *-ā-*. We claim that a simple set of three rules is able to predict the distribution of the vocalic element. The three rules apply to three different sets of bases; the first one requires the insertion of *-ē-* and is lexically restricted to a set of roots which show a consistent paradigmatic coherence ('Caland' roots, see Section 5); the second rule also requires *-ē-*, probably influenced by the first one, and targets the denominal and deadjectival derivations, having, thus, a broader synchronic distribution; the

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third rule, finally, applies to the deverbal inchoatives and requires the maintenance of the thematic vowel of the verb from which the inchoative is derived. This set of rules predicts a greater variability in the realization of the vocalic element in the deverbal set, a prediction that is borne out. There is, finally, a set of denominal and deadjectival inchoatives which do not present the *-ē-* vowel, in contrast with the second rule. These exceptions will be treated in a specific section, showing that, in many cases, there is an idiosyncratic explanation for their deviant behaviour.[1] Our analysis has the advantage of identifying a coherent relationship between the element *-sco* and the vocalic elements preceding it. We show that, even if both the vocalic elements and the *-sco* suffix are inherited, their relationship is ruled by internally coherent synchronic constraints.

The contribution is organized as follows. In Section 2, we propose a descriptive categorization of the data. In Section 3, we introduce a few notions about the framework that we adopt for the analysis. In Section 4, we propose a formal account for the syntactic and semantic contribution of the *-sco* suffix to the verbal derivation. In Section 5 and Section 6, we present the set of rules regulating the insertion of the vocalic element bridging the base and the *-sco* suffix. The contribution is closed by the concluding remarks (Section 7).

2 A descriptive categorization

The verbs presenting the *-sco* suffix in their morphophonological form are about 250.[2] A first major differentiation is in order: there is a group of *-sco* verbs from an existing Latin base, and a second one whose members seem opaque and underivable. An example of a verb belonging to the first category is *crassesco* 'I become fat, thick' from *crassus* 'fat, thick'. This verb is morphophonologically derivable adjoining to the adjective in its undeclined form, *crass-*, the suffix *-sco*. The final form involves a vowel *-ē-* bridging the two elements. The

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1 It is relevant to note that there are verbs for which it is unavoidable to propose a non-synchronic analysis (inherited schemes); e.g., *posco* 'I demand, I request'. These verbs will not be analysed.

2 To collect the data, we used the *Oxford Latin Dictionary* and, when possible, the *Thesaurus Linguae Latinae*. Additionally, we searched for the occurrences of the relevant verbs with the *Library of Latin texts (A Series)*. We restricted our research to the appropriate chronological limits. Our list does not include the prefixed verbs, meaning we listed all the prefixed variants of a single verb under the same lemma, e.g., the verb *acesco* 'I become sour' has four prefixed variants with the prefixes *co-*, *ex-*, *in-*, *per-*. We listed all these variants under the same lemma.

characteristics of this vowel will be analysed later (Section 5). An example of a verb belonging to the second category is *posco* 'I demand, request'. In this case the verb cannot be decomposed in a base synchronically attested outside the verbal paradigm itself + *-sco*; the *-sco* suffix is still recognizable, but there is no adjective/noun/verb from which this verb may be derived. The target of this contribution is to propose an analysis of the verbs in which the *-sco* morpheme is consistent with synchronic morphological and semantic restrictions, looking at the realization of the vocalic element bridging the *-sco* morpheme with the underlying lexical item. This point is crucial since, whereas in verbs like *(g)nosco* or *posco*, *-sco-* there is no synchronic mechanism linking an existing lexical item to the *-sco* element (the complex root+*-sco* is inherited), in the productive formations, *-sco* requires a stem, that is a thematized root.[3] In the second group, moreover, the meaning contribution of the *-sco* element is not structurally coherent, that is, in this class *-sco* covers a complex set of meanings, ranging from the inchoative one of *(g)nosco* to the iterative one of *posco*. Given that, we focus on the productive derivations involving the *-sco* morpheme, setting apart the second category of verbs.

From the point of view of the lexical morpheme, it is possible to subdivide the first category of inchoatives among denominals, deadjectivals and deverbals. An example of a denominal inchoative is *gemmesco* 'I become like a gemstone' from *gemma* 'gemstone'. An example of a deadjectival derivation is *duresco* 'I become hard' from *durus* 'hard'. An example of a deverbal derivation is *(e)dormisco* 'I sleep off something', from *dormio* 'I sleep'. It is possible to also categorize as deverbal a relevant group of about 50 inchoative verbs which enter in a specific paradigmatic relation with a set of related nominal/adjectival formations in *-or*/*-idus* (further details in Section 5). An example of such a verb is *rubesco* 'I become red', which is related to the stative verb *rubeo* 'I am red', to the noun *rubor* 'redness, blush' and to the adjective *rubidus* 'red'. From now on, for the sake of simplicity, we will refer to this kind of verbs as '*rubesco* type'.

From the point of view of the morphophonological composition, the verbs belonging to the first category can be further subdivided looking at the vowel bridging the *-sco* ending with the base:

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3 For *posco* this is shown by the fact that the root, taking away the *-sco* element, is hardly transparent due to phonological changes which affected it in diachrony. Moreover, the iterative/intensive meaning of the suffix can be explained only in a comparative (cf. NHG *fragen* 'to question' vs. *forschen* 'to research' < *'to question over and over again'. Many thanks to one of the anonymous reviewers for suggesting us this example) and reconstructive perspective (Leumann 1977: 535–539).

– verbs in -*ē-sco*:

this type represents the vast *majority* of the -*sco* verbs. E.g., *acerbesco* 'I become sour', *calvesco* 'I become bald', *ditesco* 'I become rich', *pinguesco* 'I become fat', *rubesco* 'I become red', *arboresco* 'I grow in a tree' and *lap-idesco* 'I become stonelike';

– verbs in -*ī-sco*:

this type represents a small subset of *the -sco* formations. E.g., *(e)dormisco* 'I sleep off', *(per)prurisco* 'I itch', *laetisco* 'I rejoice' and *longisco* 'I grow long';

– verbs in -*ā-sco*:

this type is even more restricted than *the -ī-sco* one. E.g., *gemmasco* 'I grow sprouts' *(re)puerasco* 'I become a child (again)', *generasco* 'I am born', *inte-grasco* 'I become whole' and *amasco* 'I fall in love'.

The relationship between the lexical and the morphophonological categorization is complex. The most transparent lexical category is the one containing the de-verbal inchoatives which enter in the -*esco/-eo/-or/-idus* paradigm, exemplified above with *rubesco* 'I become red'. In this case the bridging vowel is always -*ē*-.[4]

The deadjectival verbs usually present the -*ē*- vowel too. Among these about 80, only seven do not present this vowel only. Among these seven verbs, three have -*ī*-: *unisco* 'I get unified with someone/something' from *unus* 'one', *longisco* 'I become long' from *longus* 'long' and *laetisco* 'I rejoice' from *laetus* 'happy'.[5] Two alternate among -*ē*- and -*ī*-: *vil(e/i)sco* 'I become worthless' from *vilis* 'worthless' and *viv(e/i)sco* 'I come to life' from *vivus* 'alive'.[6] Two, finally, alternate among *ē* and -*ā*-: *veter(a/e)sco* 'I become old' from *vetus* 'old', *tener (a/e)sco* 'I become tender' from *tener* 'tender'.

The denominal verbs, about 60, show greater variation. Among them, 17 present the possibility of having a different bridging vowel. Thirteen present the vowel -*ā*-: *roborasco* 'I become strong' from *robor* 'strength', *pullulasco* 'I sprout' from *pullulus* 'sprout', *granasco* 'I flourish' from granum 'grain', *gem-masco* 'I sprout' from *gemma* 'sprout', *germinasco* 'I sprout' from *germen* 'sprout', *gelasco* 'I freeze' from *gelus* 'frost', *corporasco* 'I incarnate' from *corpus* 'body', *(ef)ferasco* 'I become wild' from *ferus* 'wild', *gallulasco* 'I change voice

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4 There is only one exception: *putesco* 'I become rotten'. This verb is attested as *putisco* in a single occurrence from Cicero, mainly present in recent codices (cf. TLL s.v. p. 2752, 36–37; we thank one of the anonymous reviewers for pointing it out): *animum illi pecudi datum pro sale, ne putisceret.* (Cɪᴄ. fin. 5, 38).

5 Many of this unexpected -*i* verbs can be considered hapax or are philologically contested.

6 Alternation between -*i* and -*e* is frequent in the manuscripts (we thank an anonymous re-viewer for pointing out this issue). Given this fact, these exceptions look less relevant.

during boyhood' from *gallulus* 'small rooster', (*il*)*luculasco* 'I dawn' from *lux* 'light' or *luculentus* 'full of light', *puellasco* 'I become a child' from *puella* 'female child', *puerasco* 'I become a child' from *puer* 'child' and *vesperascit*[7] 'it becomes dark' from *vesper* 'evening'. Two present both the *-ā-* and the *-ē-* vowel: *purpur(a/e)sco* 'I become red as purple' from *purpura* 'purple' and *tenebr(a/e)sco* 'I become dark' from *tenebra* 'darkness'. Two, finally, present both the *-ī-* and the *-ē-* vowel: *luc(e/i)sco* 'I become bright' from *lux* 'light' and *call(e/i)sco* 'I become hard' from *callus* 'callus'.[8] It is of note that, also in this case, the most frequent template involves the *-ē-* element.

The deverbal inchoatives that do not belong to the category mentioned previously (*-esco/-eo/-or/-idus* paradigm) show the greatest variation. The remaining deverbals are 24: 8 present the *-ē-* vowel (e.g., *apparesco* 'to begin to appear', *augesco* 'to begin to grow, to increase'); 5 the *-ā-* vowel (e.g., *amasco* 'to begin to love', *generasco* 'to be generated', *integrasco* 'to begin anew'); 9 the *-ī-* vowel (e.g., *cupisco* 'to wish', *dormisco* 'to fall asleep'); and, finally, 2 alternate between *-ē-* and one of the other two (*ingem(e/i)sco* 'to complain, to moan', (*con/de/ad*)*sud(a/e)sco* 'to sweat much').

From this short overview, it is possible to conclude that the deverbal inchoatives, if not belonging to the '*rubesco* type', present greater variation with respect to the denominal and deadjectival verbs. The denominals, then, with respect to the deadjectivals, present many more cases in which the *-ā-* vowel is present.

3 Framing the analysis

The analysis of the *-sco* verbs relies on the decomposition of their meaning. We want to identify the specific contribution of the three elements that constitute the inchoative verbal forms: the verbal root, the vowel and the *-sco-* morpheme. The target, as already mentioned in the introductory remarks, is to propose an account capable of predicting the stem-vowel variation in the attested verbs. The *-sco* morpheme, as will be clarified below, is related to the *Aktionsart* of the verbal event. The analysis of the structuring of the verbal event is taken from a constructivist perspective (Hale and Keyser 2002; Marantz 2005, 2013; Mateu and Acedo-Matellán 2012; Acedo-Matellán and Mateu 2013; Cuervo 2014, 2015).

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7 *vesperascit* 'it becomes dark', for obvious reasons, is presented using the third person and not the first one.

8 Due to the existence of adjective *callidus* and *lucidus* both *callesco* and *lucesco* might be regarded as part of the Caland system (we thank an anonymous reviewer for this note).

This framework conceives verbal events as the by-product of the subsequent merging of different syntactic heads. The speaker is endowed with a set of universal syntactic heads with a specific semantic denotation. Each head is related to the introduction of a specific argument.

– v-be°: identification stative event, related to the introduction of a *holder*.
– v-go°: uncontrolled dynamic event, related to the introduction of an *undergoer*.
– v-do°: controlled dynamic event, related to the introduction of a *doer*.

The composition of these heads in different phrases creates the relevant verbal structure, as it is possible to observe in the following examples:

(1) a. [v-goP [v-beP]] → Change of state event (e.g., *the chair broke*.)
     b. [v-doP [v-beP] → Causative event (e.g., *John broke the chair*.)
     c. [v-doP] → Activity (e.g., *John walks*.)

The lexicon (formed by a list of roots) does not project autonomous phrases. When a root is merged in a syntactic derivation, it is directly adjoined to a syntactic head.[9]

The Latin sentence in (2), for example, represents a causative event, in which there are two phrases: a controlled dynamic phrase (v-doP) and an identification stative phrase (v-beP). These two phrases are related to the presence of two arguments, a *holder* and a *doer*. The *doer* is in control of the dynamic event that brings the state, of which the *holder* is the subject, into existence. The root is firstly merged into v-be° and then moves to v-do°.

(2)   *alii verum . . . hordeum . . . molunt.* (PLIN. nat. 18, 28)
      others.NOM instead barley.ACC   mince.3.PL.PRS.ACT[10]
      'Others, instead, mince the barley.'

4 The role of *-sco*

Before proposing an analysis of the vocalic element bridging the *-sco* morpheme and the verbal base, we must address the issue of the role of *-sco*

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9 In support of this view, see Alexiadou (2014).
10 For the abbreviations we follow the Leipzig Glossing Rules (see: www.eva.mpg.de/lingua/resources/glossing-rules.php).
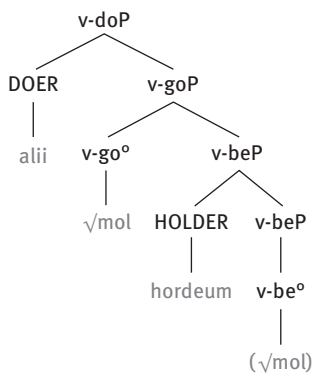
Figure 1: Syntactic structure for example (2).

in Classical Latin. The *-sco* morpheme in Classical Latin has been frequently described, in its productive uses, as a morpheme that adds dynamicity to a stative verbal derivation (Haverling 2000, 2010).

(3) *ager aret.* (Colvm. 2, 8, 5)
     field.NOM be.dry.3.SG.PRS.ACT
     'The field is dry.'

(4) *dum arescunt mea (vestimenta).* (Plavt. Rud. 574)
      while become.dry.3.PL.PRS.ACT my.NOM.PL (clothes.NOM)
      'While my clothes dry.'

Mateu (2017), following the description put forward by Haverling, proposes a formal account in which the *-sco* morpheme is treated as the Latin morphological output[11] of the v-go° (see Mateu 2017: ex. 27). The inchoative derivations describe change of states, meaning that the derivation of these verbs involves two argumental phrases, a stative phrase and an uncontrolled dynamic phrase (v-goP) that leads to the state. He proposes to mark the lower stative phrase as

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11 The term *morphological output* belongs to the Distributed Morphology framework (DM, Halle and Marantz 1993). In this framework, morphemes are not conceived as carrying syntactic features and projecting syntactic phrases, they are post-syntactically matched with the derived structure, meaning that they are late-inserted. Morphology is the output of the syntactic derivation. Syntax, consequently, is derived merging a set of functional heads, not a set of morphemes.

a locative Central Coincidence Relationship (Hale and Keyser 1993, Hale and Keyser 2002), a v-beP in our terms.[12]
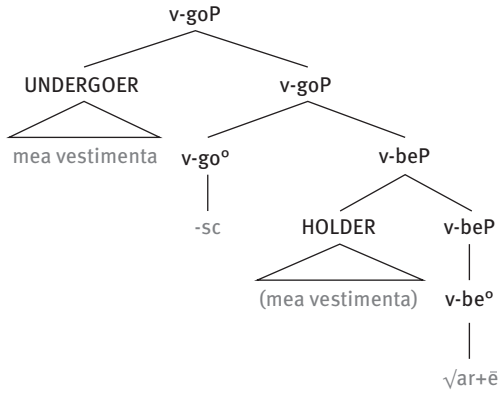

Figure 2: Syntactic structure for example (4).

The same derivation adequately describes the deadjectival/denominal cases, the only difference being the merging position of the formative of the verb. In Figure 2 the formative of the verb, √*ar*- (a defective root), is directly merged in the stative head (v-be°), realized as -*ē*-. In a deadjectival/denominal derivation, on the other side, the formative of the verb comes from a previously derived phrase, an a(djectival)P or a n(oun)P. Since a phrase cannot be merged in a head position, it follows that an inchoative denominal/deadjectival derivation will have the following structure:

(5) *novella castanieta calvescunt*. (COLVM. 4, 33, 3)
      new.NOM.PL chestnut.forests.NOM become.bald.3.PL.PRS.ACT
      'The new chestnut forests become bald.'

The formative of the verb is merged in the complement-of-the-state position and is then incorporated into the verbal event. The rest of the derivation mirrors the derivation in Figure 2.

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12 Mateu (2017) focuses on the contribution of the prefixes to the final meaning of the inchoative verbs. The unprefixed variant just described is non-telic, meaning that the event is conceived as durative and not entailing an endpoint. If, on the other side, the verb is prefixed (*exaresco*), it describes a telic event, meaning that there is a final endpoint. We will not focus on this alternation, for further analyses specifically on the inchoative verbs see Haverling (2000) and Mateu (2017). For a more general analysis of the transition events and of the contribution of the verbal prefixes in a comparative view see Acedo-Matellán (2016).

A first note on the positions of the vocalic element. In Figure 2, the -ē-vowel is directly adjoined to the root ($\sqrt{ar}$+ē-) and not part of the root itself. The vocalic element cannot be conceived as part of the root, since it disappears when the element is not verbal but adjectival (*ar-idus* 'dry').[13] As we will clarify in the next section, this vocalic element belongs to the *stative* phrase, meaning that it appears in specific verbal contexts involving a v-be°. In Figure 3, consequently, it is merged in the v-be°.
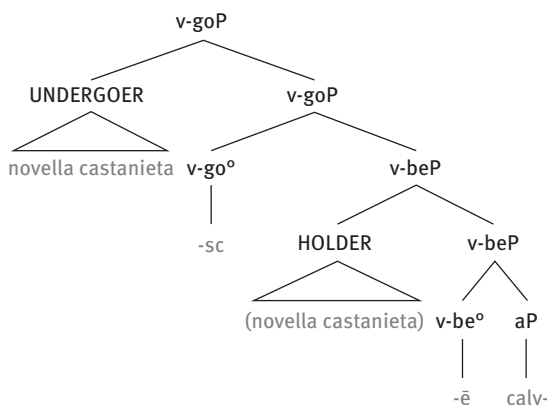
Figure 3: Syntactic structure for example (5).

Up to this point, we proposed a specific morphosyntactic rule for the insertion of the -*sco* morpheme: we described it as the Classical Latin morphological output of the v-go° in a change of state derivation.

(6)   [v-go°] ⟷ *sc* / [v-goP [v-beP]]

This generalization is clearly too strong; it would predict that in Classical Latin the -*sco* morpheme should be present in each change of state derivation. This is clearly not the case, since there are change of state verbs, like *morior* 'I die', that do not show a -*sco* morpheme.[14] This rule only holds true if we restrict its scope to the productive denominal/deadjectival/verbal derivation and to the

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13 Moreover, -ē- is not a proper part of the verb stem, since it does not appear in the perfect. The synchronic connection of -ē- with the stative phrase is coherent with its origin from the PIE stative morpheme *-eh₁- (see further).

14 For an analysis of this kind of change of state verbs see Gianollo (2010, 2014) and Pinzin (2017).

aresco category. A general description of the morphological means used in Latin to derive the change of state verbs is beyond the scope of this contribution. For our target, that is the analysis of the distribution of the vocalic elements in the inchoative derivations, this simple rule will do the job.

5 The strong pattern, the *-ē-* morpheme

In the general description proposed in Section 2, we noted the consistent presence of the *-ē-* vowel in the '*rubesco* type'. There is a single exception, signalled in n. 4. This single exception, anyway, does not invalid the general pattern, that is strong and evident. Why is this vowel present in this kind of verbs? A first possible answer could be to take the *-ē-* vowel as part of the root. However, this proposal, as briefly explained above, is not adequate; the adjective and the noun derived from the same root do not show an *-ē-* vowel: *algidus* 'cold', *algor* 'coldness'.[15] It is of note that in the nominal derivations *-ē-* is also absent; *-ē-* only appears when the root is in a verbal derivation, may the verbal derivation be stative or inchoative (see ex. (3) and (4)). We proposed to relate the *-sco* morpheme to the higher part of the inchoative derivation, v-goP (see Figures 2 and 3). The *-ē-* vowel, instead, is not only present when the derivation is inchoative, it is also present when the derivation is stative. A straightforward proposal could be to relate it to the projection of v-be°. This proposal would put on the same morphosyntactic level both the *-sco* morpheme and the *-ē-*, meaning that both elements would be the morphological realization of a specific syntactic head. There is, however, a difference between these two elements: the *-sco* morpheme is more productive, it is conceivable as an autonomous morpheme actively used by Latin speakers, that is, it has a broader distribution; *-ē-*, on the other side, looks more constrained: no new stative verbs marked by the *-ē-* vowel are derived during the classical period,

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15 For a morphosyntactic analysis of the adjectives of the *-idus* kind, that are beyond the scope of this contribution, see Mateu (2017). In a diachronic perspective, Bozzone (2016) showed that the Caland series like *rubesco/rubor/rubidus* are the remnant of an ancient class of PIE 'verbal' adjectives. Crucially, it is assumed that the IE stative formation with *-ē-i̯e/o* was a secondary output of those adjectives: this can explain why in our *rubesco* type a canonical derivation is non-transparent. On this topic, see also Rau (2009) and, as regards to the Latin adjective in *-idus*, see Nussbaum (1999). Furthermore, as we will recall further, the archaic nature of *-ē-* can shed light on its decay as a productive deverbal suffix (cf. Section 6).

the entire set of stative verbs in which the *-ē-* vowel is present is inherited.[16] A way of signalling the limited productivity of *-ē-* is to propose a lexically restricted rule of insertion:

(7) [v-be°] $\leftrightarrow$ *-ē-* / {√*ar-*, √*alg-*, …}

This rule of insertion restricts the presence of *-ē-* to the derivations involving v-be° and the specified roots.

Combining the rule in (6) and the rule in (7), we predict the presence of the *-ē-* vowel both in the stative and inchoative derivation (both involve v-be°) and the presence of *-sco* only in the inchoative derivation (in the stative derivation v-go° is absent).

There is an evident issue with respect to this proposal, anyway. The *-ē-* vowel is also consistently present in the denominal/deadjectival inchoatives, as noted in Section 2. The rule in (7) is not enough. In the denominal/deadjectival inchoatives the *-ē-* vowel is present *only* in the inchoative derivations. The correspondent statives do not show *-ē-*, the v-be° is lexicalized by means of the projection of the verb *esse* 'to be'. An example is the verb *sterilesco* 'I become infertile' from *sterilis* 'infertile'. The only way to derive a stative predication involving *sterilis* 'infertile' or a morphophonologically related root is by means of *esse* 'to be'.

(8) *quae sterilis est vacca, taura appellata.* (VARRO. rust. 2, 5, 6)
      which.NOM.SG infertile.NOM.SG is cow.NOM taura.NOM called.NOM.SG
      'An infertile cow is called *taura*.'

This means that *-ē-* vowel, in these denominal/deadjectival cases, is always related to the presence of the *-sco* morpheme and, consequently, to the presence of v-go°. We can derive this distribution by means of a specific rule:

(9) [v-be°] $\leftrightarrow$ *-ē-* / [v-goP [v-beP [n/aP]]]

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16 A close relationship between *-ē-* and stativity, despite its incoherent synchronic distribution, is clear on diachronic and comparative grounds (Jasanoff 2003): Italic data confirm that, even without a consistent stative paradigm, *-ē-* can refer to the result of a change-of-state process, as forms like Umbrian *maletu* 'crumbled' or *vaseto* 'empty' > 'lacking' (both associated to *-ā-* verbs) show (cf. Bertocci 2014).

This means that, whenever a deficient,[17] and thus incorporated (see Figure 3), nominal/adjectival element is merged in a change of state structure, -ē- will appear to mark the v-beº. This rule does not contrast with the rule in (7), since they scope on two different sets, the denominal/deadjectival inchoatives and the '*rubesco* type' verbs. It is possible, however, to hypothesize a connection between the two rules. The rule in (9) is an extension of the rule in (7). Every Latin verb – except for some irregular verbs ('unregelmäßige' verbs, Leumann 1977: 521) – needs a thematic vowel.[18] The choice of the -ē- vowel in the denominal/deadjectival inchoatives depends on the existence of the '*rubesco* type'; it is an extension of the '*rubesco* type' to the new inchoative derivations, meaning that, even if -ē- is not productive anymore in Classical Latin, it is still maintained as a marker in the new denominal/deadjectival inchoative derivations, on the basis of the '*rubesco* type' pattern. As we will propose in the next Section, the '*rubesco* type' is strongly attractive, some inchoative verbs that usually have their own thematic vowel, coming from a previous use of the root in, e.g., a causative or activity derivation, are attracted by the '*rubesco* type' and start presenting the -ē- vowel.

Up to this point, we proposed two morphosyntactic rules governing the presence of the -ē- vowel in the inchoative verbs. One rule predicts that with a specific set of roots -ē- will always mark the presence of the v-beº ('*rubesco* type'); the second one predicts that every new inchoative denominal/deadjectival derivation will present the -ē- vowel bridging the nominal/adjectival element with the -*sco* morpheme. We proposed that the choice of the -ē- vowel as a bridging element is due to the influence of the '*rubesco* type', that is present as a strong paradigmatic element in the grammatical competence of the Latin speakers.

As already noted in Section 2, however, the data do not perfectly fit this proposal. First of all, there is a set of deverbal inchoatives, as *amasco* 'I fall in love' from *amo* 'I love', that we still have not taken into consideration. In these cases, the choice of the bridging vowel is highly variable. We will treat these verbs in the next Section. Secondarily, there is a group of denominal/deadjectival verbs that do not present the -ē- vowel as a bridging element, e.g., *longisco* 'I become long' from *longus* 'long', *puellasco* 'I become a child' from *puella* 'female child' and *puerasco* 'I become a child' from *puer* 'child'. We will treat these cases in the next Section.

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17 Deficient means that it is not an autonomous noun or adjective. In order to be an autonomous noun/adjective an n/aP needs more structure, as the D(eterminer) P(hrase).
18 As for thematic vowels, see Embick and Halle (2005) and Bertocci (2017).

6 *-sco* with *-ā-* and *-ī-* stems

As we said above, *-ē-* is selected as the most reliable bridging element for *-sco* verbs for both syntactic and morphological reasons; in particular, it looks structurally related to v-be modification not only at a synchronic level, but especially considering its history and its comparative distribution.

Nevertheless, some *-sco* verbs do select for *-ā-* and *-ī-* stems.

The first point to consider is the syntactic structure of *-ā-sco* and *-ī-sco* verbs, and the lexical elements they involve. As far as the syntactic structure is considered, the *-asco* and *isco* verbs conform to the template we proposed before, in which there are two event phrases, a v-goP introducing a v-beP:

(10) *caput   deponit,*
      head.ACC.SG.   down.put. 3.SG.PRES.ACT. PVB.
      condormiscit. (PLAVT. Curc. 360)
      sleep.become.3.SG.PRES.ACT.
      (he) nods off, begins to sleep

Moreover, in some cases *-sco* has a valency change effect. In *roborasco* for instance it converts the causative *roborare* in a change of state predicate: *-sco* licenses v-goP and allows an identification between the subject and the condition of being strong, exactly as in the *-ē-sco* verbs.

A second point to consider is the lexical item associated with *-sco*. As anticipated above, whereas the *-ē-sco* type only admits a specific set of roots (the 'Caland' ones), or nouns and adjectives involving identification, *-ā-sco* and *-ī-sco* can derive from verbs as well (*amasco, cupisco*); conversely, some nouns, from which one could expect an *-ē-sco* verb, derive an *-ā-sco* or *-ī-sco* one (*veterasco, puellasco*).

A first hypothesis considers the possibility that the existence of an underlying verb of the first or of the fourth class acts as a model. That is, *amasco* seems directly derived by *amāre*, with its thematic categorization. Under this view, *-sco* would be able to head a v-goP, irrespectively of the presence of *-ē-*, provided that the underlying verb:
1) allows a stative interpretation (e.g., *I fall in the state of be in love*);
2) is thematized (in this case, *-sco* can apply to the *-ā-* or the *-ī-* stem).

Consequently, we should state a more general rule according to which, when a v-be° is not overtly realized, *-sco* can license v-go only if a thematic stem is involved. The result of this rule would be that only *-ā-* or *-ī-* verbs can host *-sco*:

(11) *-sco* ↔ [v-goP [v-beP]] / √-*ā*-,-*ī*-]

According to rule (11), we can also explain the late denominal verbs like *puer-asco*, which are problematic with respect to the rule proposed in (9). Here again we can assume, firstly, that despite the absence of *-ē-*, the morpho-syntactic structure is compatible with the *-ē-sco* verbs treated above. In *puerasco, corpo-rasco, gallulasco*, etc. the noun (e.g., *puer*) means the entity with which the subject identifies itself, that is, a v-be phrase is involved. The availability of an identification reading in these nouns allows for a v-go/v-be structure, triggering a derivation by *-sco*. When this happens, the selection of *-ā-sco* is possible for two reasons: on the one hand, if a *-ā-re* verb is present (e.g., *corporare* triggering *corporasco*), it acts as a model for a bare derivation process headed by *-sco*. On the other hand, as a default thematic element, -ā- can be conceived as the preferred element for repairing the lack of an -ē- stem.

There is, finally, a small set of *-ī-sco* verbs like *longisco, unisco, laetisco* (see above) in which the selection of *-ī-* as a thematic element instead of *-ā-* does not seem triggered by an attested *-ī-re* verb. However, at least for *unisco*, the 'pronominal' forms *unius* and *unī* could have enhanced the verbal stem *unī-*.

This claim has welcome outcomes, since it explains why, in the later stages of Latin, the restrictions embedded in *-sco* weakened, enabling it to have a larger distribution than in the archaic phase. In turn, we can also imagine that gradually the iconicity of *-sco* became less transparent, leading to the striking morphological optionality of the termination *-iscere/-escere* of ancient and modern Italian *ferisco, favorisco, punisco*, etc., cf. Rohlfs (1969: 242).

In order to motivate the selection of *-ā-* and *-ī-*, finally, it is to recall that, keeping apart the most ancient nucleus of *-sco* verbs ((*g)nosco, posco*, etc.), which are probably inherited from PIE, *-sco* cannot apply directly to a root, but it requires to be merged with a stem, that is, with a thematized root. As far as *-ā-* and *-ī-* as 'thematic' element are concerned, we want to stress that *-ā-* and *-ī-* share a number of properties: both look related to the derivation of verbs from nouns/adjectives (*multare, curare*); they are the only possible output for parasynthetic formations (*impedīre, dērīvāre*), and more generally -ā- appears with secondary formations like intensives and causatives or with metaplasms due to prefixation (*experīre < parĕre, dīcāre < dīcĕre, placāre: placēre, edūcāre < dūcĕre, cantāre < canĕre, gestīre: gestāre: gerĕr*); both *-ā-* and *-ī-* are controversial as regards to their etymology, this means that many verbs of the first and of the fourth class have not cognate forms in other IE languages, and that their diffusion in Latin is an innovation (Bertocci 2017). Once we state that *-sco* requires a stem, then, the selection of *-ā-* or *-ī-* as bridging element for *-sco* verbs can be expected,

since they are productive, represent an innovation, and are the typical thematic elements of Latin verb.[19]

However, the rule (11) itself fails to prevent some nouns to produce both *-ē-sco* verbs and *-ā-sco* or *-ī-sco* ones, e.g., *sudesco* (Varro. ling. 5, 109) /*sudasco* (Plavt. Cas. 360). Yet, we do not consider this as a structural objection, since, at the one hand, most of these data are very sporadic formations (*gallulasco, corporasco* are late hapax); on the other hand, we believe that *-ē-sco* type should be considered as a default option, always available with the adequate syntactic environment. Our claim is that these tokens do not modify the general frame, in which *-ē-sco* is the default strategy, and only under specific conditions *-ā-sco* or *-ī-sco* can arise.

7 Conclusion

We have analysed the distribution of the suffix *-sco* paying attention to the morpho-syntactic conditions which allow its insertion as an inchoative morph. In particular, we have shown that *-sco* license the v-go head (Section 4) when a v-be head is also active in the lexical structure of a verb.

This condition is typically represented by the *-ē-sco* verbs from nouns and adjectives (*sterilesco*) and from a set of roots we labelled as 'Caland', as in the diachronic terminology (*algesco*). In both cases, we assumed that *-ē-* is transparently related to the stative component of the event.

The second point we addressed is the selection of the lexical item on which *-sco* applies: keeping apart a small set of verbs like *posco*, *-sco* always requires a stem, that is, a thematized root. Unexpectedly, not only the stative related *-ē-*, but *-ā-* and *-ī-* are also involved. Our hypothesis to explain *-ā-sco*, *-ī-sco* verbs is that *-ā-* and *-ī-* can be selected as bridging elements at two conditions: (1) when an underlying *-ā-re* or *-ī-re* verb (or a backformed stem, see *longisco < longitūdō*) is available; (2) when a stative component is semantically conceivable, but it is not overtly realized through *-ē-*.

The selection of the bridging vowel associated to *-sco*, then, depends on the morpho-syntactic properties of the events that *-sco* verbs describe. The fate

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19 We do not take a position on the choice *between -ā-* and *-ī-*; However, beside the verbs which can be thought as derived by *-ā-re* or *-ī-re* (*finisco, amasco*), we observe that *-ā-* and *-ī-* are deeply related in the late history of Latin. At least in Italo-romance varieties, *-are* and *-ire* terminations are often alternating giving rise to frequent metaplasms, so that some scholars (Prosdocimi 1991) traced them back to the Latin itself.

of -ē-, which is not productive in Latin outside stative verbs like *timeo*, together with the availability of -ā- and -ī- as thematic vowels, makes -ā-*sco* and -ī-*sco* possible as well, even if less frequent throughout the Latinity.

Abbreviations

√   =   root
aP   =   adjectivalizing phrase
DM   =   Distributed Morphology
nP   =   nominalizing phrase
vP   =   verbalizing phrase

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