

VoiceP Deactivation and Deponency in Latin

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Abstract What is a deponent verb? Why do we have verbs which have only a Non Active morphology and never an Active one? Is it possible to these verbs as a coherent category, with a common feature? Is this common feature a syntactic one, a semantic one or a morphological one? I'm trying to propose a (partial) answer to these questions. To do that, I have analysed the most salient and representative Latin deponent verbs in the Latin texts of the first century BCE. The proposed analysis is a syntactic-semantic one. The issue of deponent verbs is inextricably bound to the Latin passive morphology (-r). I claim that -r is a Voice° deactivator, like German *sich* in anticausatives and middles and Italian *si*. This analysis is sustained by its distribution and syntactic-semantic features. A deactivated Voice° can convey an anticausative interpretation, a middle-passive or a reflexive (through Argument Identification). The only productive class of deponents in Latin is the denominal one and there is an obvious relationship between Voice° deactivation and deponents. In the derivation(s) of denominal deponents a deactivated Voice° is needed. Without it the Int Arg, merged with the verbalized noun (nP), could not gain the Ext Arg (initiator) semantics. The bridge between these two positions is built by Argument Identification, a semantic mechanism that relies on the presence of the deactivated Voice° and, consequently, on the -r morphology.

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1 The Issue

The -r morphology¹ in Latin is pervasive; it is used to convey many different meanings and different argument structures. Behind this variability, anyway, we can find a specific pattern: a syntactic pattern linked to a

1 I use this term to refer to the Latin non-active (middle?) morphology in general, even if the -r form is not present throughout the paradigm (see section 5).

peculiar configuration of VoiceP.² This paper is devoted to the analysis of this pattern and of its interactions with different categories of verbs.

The verbal category more deeply analysed is the deponent one. A deponent is a verb that always shows an *-r* morphology (it does never show an active counterpart of this morphology) and has an active meaning:³

- (1) Suos hortatur uti fortem animum gererent (Sall., *Iug.*, 107, 1)
 his men.ACC Urges.NAct so that strong spirit bear.IPFV.SBJV.3PL
 'He urges his own men, so that they show a strong spirit'

A 'normal' Latin verb, instead, has both an active and a non-active form with, respectively, an active and a non-active meaning:

- (2) Quem versum senex Precilium laudat (Cic., *Ad famil.*, 13, 15, 2)
 Which verse.ACC the old Precilium praises.PRS.3SG
- (3) Laudatur Apronius a Trimarchide (Cic., *Verr.*, 3, 155)
 Praise.NAct.3SG Apronius from Trimarchides
 'Apronius is praised by Trimarchides'

The final aim of this paper is to show that also deponent derivations can be analysed the same way we analyse the other derivations involving the *-r* morphology.

In section 2, I briefly sketch the morphological analysis of deponents, motivating why I choose a syntactic approach. In section 3 and 4, I present the case of the German and Italian pronouns used to derive middle voice (*sich* and *si*), endorsing Schäfer 2008 analysis: their function is to deactivate Voice°, the head responsible for the introduction of the Ext Arg features. In section 5 and 6, I draw a parallel between the Latin *-r* morphology and *si-sich*, stating their functional equivalency as Voice° deactivators. In section 7, I introduce the analysis of deponents, starting out from the fact that these verbs are mainly denominals; the presence of the Voice° deactivation (*-r* morphology) is justified by the denominal derivation itself: the alleged Ext Arg is, indeed, merged internally in a Small Clause configuration with the verbalized noun, and the Voice° deactivation allows it to acquire the Ext Arg features that it needs (it *is* the initiator of the

2 The highest projection of the VP layer is usually called VoiceP. I follow this use. Anyway, a different terminology (ex. Ramchand 2008, InitP) could be used to indicate the same phrase: the syntactic projection of the external argument.

3 I use the gloss NAct to indicate that the morphology of this verbal form is non-active, without committing myself to a specific terminology, like Middle or Passive.

event,⁴ by the end) through Argument Identification. In section 8, I draw the conclusions and present the main issues that are still open.

2 The Morphological Proposal (Xu, Aronoff, Anshen 2007; Lavidas, Papangeli 2007)

Latin deponents verbs have been analysed from many point of view, one of the most significative is the morphological one (ex. Xu, Aronoff, Anshen 2007, Lavidas, Papangeli 2007, Embick 2000). The main idea is that deponents are *morphological* deviations, peculiar verbs that do not behave 'normally'. The choice is to to have a more complex morphology and a plain and banal syntax.

The morphological explanation is quite simple: a feature [+pass] is present directly in the feature bundle of the verbal root⁵ and forces the verb to appear in the *-r* (passive) form. From this perspective, for example, the verb *hortor* is just a simple transitive with a plain transitive syntax. The only difference between a *hortor* and a non-deponent transitive (*laudo*) is that the root of the former, but not the root of the latter, is endowed with the [+pass] feature:⁶

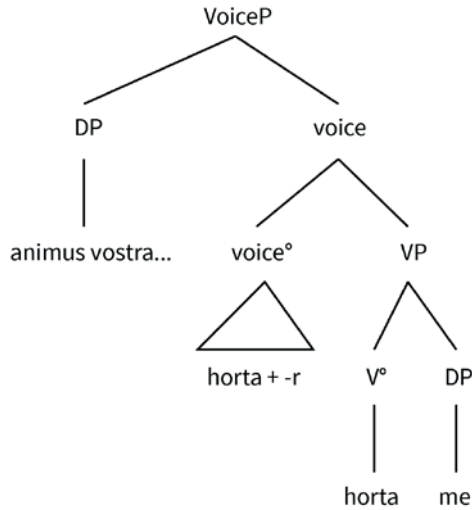
- (4) Animus aetas virtus vostra me hortantur (Sall., *Cat.*, 58, 19)
 Courage.NOM age.NOM virtue.NOM yours me urge.Nact.3PL
 'Your courage, your young age, your virtue urge me'

4 In Ramchand (2008) terms.

5 I do not want to enter into the complex field of the definition of root, but this morphological proposal is not compatible with a strong Distributed Morphology framework: a completely empty root cannot be specified for such a feature.

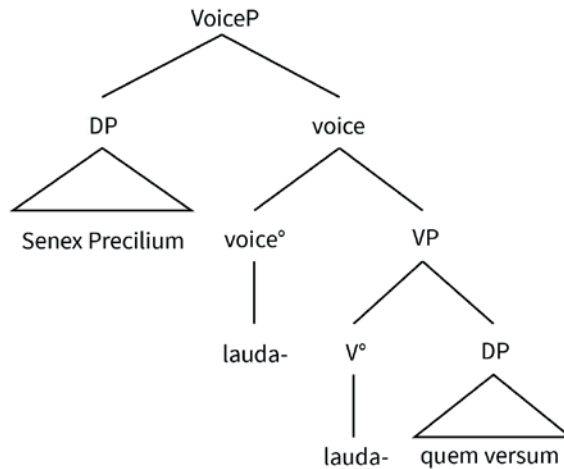
6 I am not concerned about final word order issues, so the tree does not reflect the actual Latin word order.

(5)



(6) Quem versum senex Precilium laudat (Cic., *Ad famil.*, 13, 15, 2)
 Which verse.ACC the old Precilium praises.PRS.3SG

(7)



The choice of a simple syntax could be on the right track if we accept the fact that a root can be specified for such a feature. The problems, anyway, are more than a few. First, Lavidas and Papangeli’s proposal does not give a real explanation of the phenomenon. They do not explain why the [+pass]

feature is present in the feature bundle of the root of the deponent verbs. Since they reject a semantic explanation, the presence of the feature happens to be quite random. In fact, they say:

We take here the morphological approach to allow for a non-systematic view of the data, in the sense that the feature specification that accounts for deponent verbs is realized in a random way and possibly relies on the idiosyncratic properties of each verb. (Lavidas, Papangelis 2007, p. 120)

Xu, Aronoff, Anshen (2007), instead, try to build a solution for this issue: they link the presence of the [+pass] morphological feature to the semantics of the *non-canonical active verbs*. If a verb happens to have this semantics, then the -r morpheme will mark it. The problem is that the link between a morphological feature and a specific semantic verbal category is not entirely clear, as it is not clear what is exactly the reference of the term *non-canonical active verbs*, since there are many other *non-canonical active verbs*, like *cresco*, which do not have the -r morphology.

There is a third morphological approach that aims to solve this problem: Embick 2000. The main difference with respect to the previous ones is the status of the [pass] feature. He proposes to put this feature directly in the root (abandoning the strongest DM hypothesis). This root feature is then available for the syntactic derivation. This hypothesis is more complete and clear about its consequences.

In this section, I am not trying to assess that the morphological approach is completely on the wrong path. Many latin verbs have to be analysed synchronically along these lines. There is non other way. I am trying, instead, to assess that this approach is not conclusive, and that the presence of this morphological feature has to be syntactically justified, at least diachronically.⁷

3 The -r Morphology and the Likes (Italian *si*, German *sich*, modern Greek N-Act)

To try to understand what is a deponent (and if deponents are, to some extent, an homogeneous class) we have to explain where and when the -r morphology appears. What is the trigger of this morphology?

The -r morphology that we find on the deponents is widely used in Latin. The same morphology can be used to derive:

7 This is even more important for those verbs whose first appearance is historically attested: for these verbs a purely morphological feature would entirely miss a bigger generalization.

- a simple passive:

- (8) A me Lesbia amata mea est (Cat., *Carmina*, 87, 2)
 from me Lesbia.NOM loved.NOM mine.NOM Is
 'Lesbia has been loved by me'

- a reflexive:

- (9) Abditur Orion (Cic, *Arat. Phaenom.* 462, 26)
 Hide.NACT.3SG Orion
 'Orion hides himself'

- an anticausative (opposed to a causative):

- (10) Africano illi superiori coronam sibi in convivio ad caput adcommodanti,
 cum ea saepius rumperetur,
 while it.NOM.F many times break.Nact.SBJV.IPFV.3SG
 P. Licinius Varus: «noli mirari» inquit «si non convenit; caput enim
 magnum est!» (Cic., *De Or.*, 2, 250)
 'While the Africanus, during the dinner, was putting back again on his
 own head the crown, since it (the crown) kept on breaking, P. Licinius
 Varus said: «You shouldn't wonder that it doesn't fit, in fact you have a big
 head!»'

In Italian, the pronoun *si* has the same distribution, if we accept the Italian middle as a passive. This is possible since, interpretively, the entailments of a middle derivation are quite similar to the entailments of a canonical passive: the external argument is syntactically absent, but interpretively present.⁸ In Italian there is also a past participle passive, the most productive one, derived using a different structure. I will not deepen its derivation here.

Middle-passive:

- (11) La mela si mangerà domani!
 The apple SE eat.FUT.3SG Tomorrow
 'The apple will be eaten tomorrow'

⁸ I am not claiming that the *-r* and the *si* are just the same element; I am claiming that both can have the same function (VoiceP deactivation, as we will see later). They maintain some differences, for example *si* has a 3rd person feature that *-r* does not have, that is why in Italian there is no 1st/2nd person middle, such a construction would result in a feature clash. See Koontz-Garboden 2009 for a semantic reflexivization analysis of anticausatives in Spanish and Schäfer and Vivanco (unpub) for an alternative view.

Reflexive:

- (12) Gianni si è colpito volontariamente!
 Jonh SE is hit on purpose
 'Gianni hit himself on purpose!'

Anticausative:

- (13) Il vaso si è rotto cadendo dal tavolo
 The vase SE is broken falling off the table
 'The vase broke falling off the table'

In German⁹ we find the same pattern¹⁰ with the pronoun *sich*:

Anticausative:

- (14) Die Temperatur veränderte sich
 'The temperature changed SE'

Reflexive:

- (15) Hans wäscht sich
 'Hans washes SE'

Also in Modern Greek the N-Act morphology has almost exactly the same distribution of the -r morphology in Latin.

Passive:

- (16) To vivlio diavastike ktes
 The book.NOM read.NAct Yesterday
 'The book was read yesterday'

Reflexive:¹¹

- (17) I Maria htenizete
 The Mary combs.Nact
 'Mary combs herself'

⁹ German and Greek examples from Schäfer (2008).

¹⁰ There are middles also in German (see Schäfer 2008).

¹¹ For *afto*- see Alexiadou, Schäfer (2014).

- (18) I Maria afto-katastrefete
 The Mary self-destroys.Nact
 'Mary destroys herself'

Anticausative:

- (19) I supa kegete
 The soup burns.Nact
 'The soup is burning'

I will set aside the German reflexive construction because, as Alexiadou and Schäfer (2012) shows, this construction is perfectly consistent with a pure reflexive analysis: the *sich* element is merged as a direct object and bound by the external argument; because of this it is not consistent with an analysis related to the characteristics of the Voice projection. Even for the Italian reflexive derivation (that shows an unaccusative behaviour, ex. the [be] auxiliary) it is not clear if the *si* is part of the Voice projection or if it is a thematically autonomous element. The Latin and Greek reflexive derivations, instead, are a clear case of Voice modification, since the N-Act morphology and the -r morphology cannot be analysed as thematically autonomous pronouns.

The causative/anticausative alternation, instead, is more interesting for our purposes. The element that in a German or Italian reflexive construction can be analysed as a thematically autonomous one (*sich*, *si*), in the anticausative construction cannot receive the same analysis. This is because there is only one thematic role in anticausatives, the one that has been already given to the only argument of the proposition.¹² Given that, the *sich/si* pronouns cannot bear any thematic role. These two elements, in these environments, can offer an insightful parallel with the Latin 'passive' morphology that we are trying to describe.

4 The Analysis of the Anticausatives (Schäfer 2008)

Schäfer (2008) proposes an interesting analysis of the anticausative constructions, mainly in German and Italian. The classical anticausative alternation is perfectly visible in these examples:

- (20) Ho rotto il vaso
 Have.1SG broken the vase
 'I broke the vase'

12 For an alternative analysis see Koontz-Garboden 2009.

- (21) Il vaso si è rotto
The vase SE is broken
'The vase broke'
- (22) Ho affondato la nave
Have.1SG sunk the ship
'I sank the ship'
- (23) La nave è affondata
The ship is sunk
'The ship sank'
- (24) Hans verändert die Temperatur
'Hans changes the temperature'
- (25) Die Temperatur veränderte sich
'The temperature changed SE'
- (26) Hans öffnete die Tür
'Hans opened the door'
- (27) Die Tür öffnete sich
'The door opened SE'
- (28) Hans zerbrach die Vase
'Hans broke the vase'
- (29) Die Vase zerbrach
'The vase broke'

These examples perfectly show that an anticausative is not always marked with a special morphology. In Italian, German, Greek, Albanian, French and in many other languages we find the same pattern, a list of marked anticausatives (21), (25), (27), and a list of unmarked anticausatives¹³ (23), (29).

¹³ And also a list of alternating anticausatives, ex. it. *congelare* vs. *congelarsi*, *bruciare* vs. *bruciarsi*. The opposition has been functionalized, the marked one is telic, the unmarked one is not. This functionalization is a reanalysis of the opposition, not an ontological fact regarding the markedness itself (Folli 2002, Schäfer 2008).

Schäfer (2008) analyses the differences between the marked constructions and the unmarked ones. Firstly, (ch. 1) he shows that the two constructions are not aspectually differentiated. It is impossible to claim that markedness is a reflection of telicity and unmarkedness represents atelicity (Folli 2002) because there are many counterexamples to this generalization: *affondare* and *guarire* are telic, but they are not marked, and *estendere* is marked but also possibly atelic.¹⁴ Another possible claim is that the marked anticausatives would have a semantically present external argument, and the unmarked ones would not; the SE pronoun would be a reflection of this semantics. This proposal, anyway, is untenable, because there are no signals of an external argument semantics in the marked anticausative constructions (see Schäfer 2008, ch. 2, for the specific semantic tests). The external argument is totally absent from both marked and unmarked anticausatives, there is no semantic difference from this point of view.

Schäfer, then, starts over, and tries firstly to answer to the technical question: how and where is the SE element merged in the derivation?

His proposal is quite simple: the SE pronoun is merged in the external argument phrase, in the VoiceP:

(30) [VoiceP Sich [Voice° [vP [v° [Root Int.Arg.]

The Voice head (Voice°) automatically introduces in the derivation the External Argument/Initiator (Ramchand 2008) features. The anticausative derivation, anyway, does not include the Ext Arg, nor syntactically and neither interpretively, as we have shown. The SE pronoun itself solves this clash. The SE pronoun is merged in the position of the External Argument, syntactically absorbing the Ext Arg/Initiator features; being without a proper binder, anyway, it has no denotation/reference in the real world; an element without a denotation cannot be interpreted as a real argument, since to be an argument an element has to be potentially identified. The SE pronoun absorbs the thematic features of the Initiator and cannot be interpreted as an argument: it deactivates the Voice°.

There are issues with regard to the exact position of the SE pronoun in Italian with respect to German. In German it is impossible to merge an HighApplP above the VoiceP:

¹⁴ The telic interpretation is a further specification of the *resultative* one. All these verbs can (or must) participate to a *resultative* construction. The *resultative* construction involves a Verbal event (V<e>) and a secondary, stative, predication. This configuration can be variously achieved, and gives always as an output a *resultative* and *causative* interpretation at C-I.

- (31) Der Maria öffnete sich (*aus Versehen) die Tür
 The.DAT Mary opened SE (by mistake) the door
 'Maria opened the door by mistake'

The only possible interpretation of *der Maria* in (31) is a LowAppl, the dative of interest. It is impossible to interpret *der Maria* as a causer of the event (a causer related PP as *aus Versehen* is, in fact, ungrammatical). Why is it impossible to merge an applicative phrase right above the VoiceP? The solution is straightforward if we take a look at the mechanism of deactivation. This mechanism works only if the SE pronoun is not bound, since a bound SE pronoun acquires denotation, becoming a proper Ext Arg. A proper Ext Arg cannot deactivate Voice°, and the sentence ends up being ungrammatical. In (31) the HigAppl would bind the SE pronoun. In Italian, the situation is different:

- (32) A Maria si è aperta (involontariamente) la porta
 to Mary SE is opened (by mistake) the door
 'Maria opened the door by mistake'

In (32) both interpretations are available for *a Maria*, HighAppl and LowAppl. This means that *si* works as a deactivator even if it has a proper binder in a C-commanding position. Why is that? Schäfer analyses this as a consequence of the fact that *si* in Italian can be bound only by subjects, the DP in Spec,HighApplP is not a subject, and the issue does not arise. The position of *si* and *sich* is not different in his account, they are both merged in Spec,VoiceP. I think, instead, that we should take a closer look at the 'only subject' constraint on *si*. Following Roberts (2011), I suggest to merge the *si* pronoun directly in Voice°. This could account for the differences that exist between *si* and *sich*. (for ex. the existence of the impersonal construction in Italian and not in German). If we accept that in the impersonal derivation we need an arbitrary pronoun in Spec,VoiceP (Cinque 1988), it is straightforward why in German it is not possible to have true impersonals with *sich*: *sich* already occupies the position needed for the merging of the arbitrary pronoun, blocking the impersonal derivation. Building on this assumptions, we can say that the *si*, in Italian, has been almost functionalized, being merged (or being the morphological reflection of a syntactic feature on the Voice°) directly in the head position. Given that, it is clear why it cannot be bound by the DP in Spec,HighAppl, it is no more a real and active pronoun.

Either *si* were in Spec,VoiceP, or in Voice°, what matters is that it is present in VoiceP. Another evidence that *si* is present VoiceP (either in

the specifier or in the head) comes from the use of the Italian causative light verb *fare*. If we use *fare* with an anticausative, or with a verb that is obligatorily construed with *si*,¹⁵ the *si* disappears:

- (33) Il vaso si è rotto
The vase SE is broken
'The vase broke'
- (34) ho fatto rompere (*si) il vaso involontariamente
Have.1SG made break.Inf (*SE) the vase Unintentionally
'I broke the vase unintentionally'
- (35) Gianni si è ammalato
John SE is sick.PST.PTCP
'Gianni got sick'
- (36) Ho fatto ammalare (*si) Gianni
Have.1SG made sick.INF (*SE) John
'I've been the cause of Gianni's illness'

If the light verb *fare* is merged in Voice^o (with its own Ext Arg), it replaces the Voice^o deactivated by *si*. The deactivation is no more needed, since the Voice^o has been replaced. This would explain the facts in (33)-(36). If we suppose, instead, that the light verb *fare* is not directly merged in the VoiceP projection of the main verb, but only in a dedicated projection above,¹⁶ the problem cannot be straightforwardly explained. A possible solution is to propose two different merging positions for the light verb *fare*, a low one and a high one. We can observe the higher one in (37).

- (37) Giovanni ha fatto colpire la palla a Maria
John has made hit the ball to Mary
'John let/forced Mary (to) hit the ball'

15 The Italian deponents.

16 Maybe the projection where the other modals are merged (*potere*, *volere*, etc). But *fare* cannot enter in a derivation where only the subordinated verb is negated, contrarily to the other modals:

- *Ho fatto non uscire Gianni.
- Non ho fatto uscire Gianni.
- Ho potuto non partecipare alla festa.
- Non ho potuto partecipare alla festa.

In (37) we need a merging position for the external argument realized through the oblique PP (*a Maria*). Apparently we need two VoiceP, one for *Giovanni* and one for *Maria*. Another option is not to consider *Maria* an Ext Arg at all, but a different kind of argument, maybe another applicative. This could be sustained by the fact that *Maria* does not show strong *initiator of the event* features. The issue is far from being settled.

The anticausative derivations without *si*, (23) and (29), are easier to explain: the Voice° is simply absent and we just project the v° (or Proc° in Ramchand 2008):

(38) [vP [v° [VRoot Int Arg]]]

We have explained how it is syntactically and morphologically possible to have two constructions that can derive the anticausative semantics. Both are possible derivation and nothing prevents one of the two constructions to appear. Anyway, we would not expect such a variation in a single language. We expect to find this kind of variation between two languages, since the raw linguistic (lexical [Roots], morphological, syntactical) material can be different. How to explain, instead, this variation within a single language? There must be a trigger somewhere that can explain how a native speaker chooses between the two derivations. The derivation without Voice° is far more economical than the other (which implies the projection of Voice° and its deactivation), how can we justify the presence of the marked one? What triggers the appearance of Voice°?

Schäfer, following Haspelmath (1993), Alexiadou and Anagnostopoulou (2004) and Alexiadou, Anagnostopoulou and Schäfer (2006), places this trigger directly in the verbal semantics or, better, in the mental categorization of the root from which the verb is derived. This proposal needs a distinction between different categories of roots, a distinction driven by our real world knowledge about the single roots. There are *agentive roots* (ex. murder) < *externally caused roots* (ex. destroy) < *cause unspecified roots* (ex. break) < *internally caused roots* (ex. blossom). The category of the root is directly reflected by the syntactic constructions it can enter. The categories of roots are ordered from the less spontaneous one to the most spontaneous, a root of the first two category usually does not enter in an anticausative alternation and is fully transitive, a cause unspecified one enters in the anticausative alternation, an internally caused one is usually fully intransitive (unaccusative). In different languages, a root can behave differently; for example, in English the externally caused root *destroy* does not form anticausatives:

(39) *The book destroys

In Italian, instead, the similar root *distruggere* can form an anticausative:

- (40) Il libro si è distrutto
 'The book SE is destroyed'

This peculiar difference can be a reflection of a different categorization of a similar root, or of a different syntactic behaviour of the entire externally caused category in Italian (and in French, Hebrew and Greek) with respect to English (and German).

What I have just shown does not solve the problem of the two different syntactic behaviours of the anticausative roots: all the anticausative roots are categorized as $\sqrt{\text{cause unspecified}}$. Given that, the marked vs. unmarked morphology is not expected. Schäfer's innovation is to suggest a fine-grained distinction, internal to the $\sqrt{\text{cause unspecified}}$ category. He proposes to draw a line inside this category, a line dividing the *more spontaneous* roots from the *less spontaneous* ones. The less spontaneous roots will have to show a VoiceP in the syntactic derivation (a deactivated VoiceP), the more spontaneous ones will not have to. The more spontaneous roots will alternate between a causative and an anticausative entirely without VoiceP, the less spontaneous ones will alternate between a causative and an anticausative with a deactivated VoiceP. The exact point where this line is drawn is a language specific idiosyncrasy.

The solution proposed is interesting, but it requires posing a syntactically active feature directly in the $\sqrt{\text{Root}}$, since there is no semantic difference between the two anticausatives that can be detected after the syntactic component. For example, a *agentive* root is syntactically allowed to enter an anticausative derivation. Only after syntax, comparing the final output of the anticausative derivation (with the $\sqrt{\text{agentive}}$) with the most common outputs associated with the agentive root category, we can rule it out. In the marked vs. unmarked anticausative case this operation is not possible, since there are no different interpretive outputs to compare. There is no semantic difference at the end of the derivation between the unmarked and the marked anticausatives, so the requirement for the projection of the Voice^o has to rely entirely on a pre-syntactic feature.

Anyway, the useful insight, trying to explain what the *-r* morphology is and why deponents have such a morphology, is that there is a syntactic structure behind his (si-sich) morphology, and that this syntactic structure involves VoiceP. In the next section, I will try to show its syntactic and semantic features and see if they are compatible with the Latin Non-Active morphology.

5 The *-r* Morpheme as a Deactivator of VoiceP

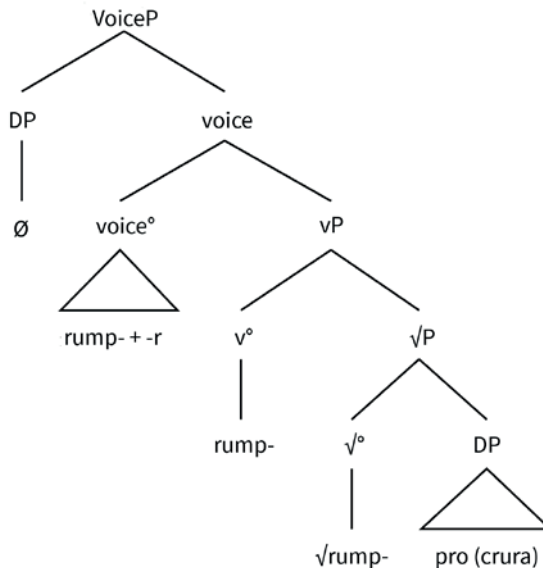
We have seen that in the anticausative constructions a pronoun can deactivate the VoiceP projection, giving as an output an expletive VoiceP. I claim that this is exactly what happens with the *-r* morpheme in Latin, it is a deactivator of the VoiceP projection.

A clear evidence is that *-r* is used, as we have already seen, to derive marked anticausatives:¹⁷

- (41) Gallos castrant [...], candenti ferro inurentes ad
 Roosters.ACC castrate.3PL with an incandescent iron burning till
 infima crura, usque dum rumpatur (Varr., *Rus.*, III, 9, 3)
 the lowest part of the legs, till break.SBJV.3SG
 ‘They castrate the roosters, burning the lowest part of the legs with an
 incandescent tool, till the legs break’

This follows perfectly if we suppose that the *-r* morpheme has the same function in Latin that the one that the SE pronouns have in Italian and German:

(42)



17 It is used the singular instead of the plural because *crura* is a neuter. An anonymous reviewer points out that *rumpatur* could be interpreted also as an impersonal: «till someone breaks (them/the legs)». I think that this second interpretation, even if possible, should not be accepted, the anticausative one makes the discourse more fluent and intelligible.

It has been claimed, also, that the *-r* element could be derived from a nominal suffix *-r* (Hrozný 1917, Marstrand 1919), or from an ancient reflexive or impersonal pronoun (Clafin 1927). This etymology draws a parallel with the Italian and German pronominal forms and with the latin *cu-r* < *qua-re* («why»). The problem of the etymology of *-r*, anyway, is still open, and there is no final evidence for any of the proposed theories. Interestingly, anyway, the *-r* element has no 3rd person features, this allows it to appear in 1st/2nd person environments, without raising a feature clash issue.¹⁸

Another interesting piece of evidence is the position of the *-r* element: it is at the end of the verbal form. This is not expected if we suppose that the derivation follows a strict Mirror Principle: the agreement morphemes are merged in T°, and should follow the *-r*, merged in Voice°. If the *-r*, instead, is derived from a pronominal form, and this pronominal form was an XP in spec,VoiceP, we can find an historical reason for the position of this element.¹⁹ For the same reason *si* in Italian is at the end of the verbal form and not in the position of the usual Voice morphemes.

Obviously, a problem is solved and many others arise. Even if we suppose that the *-r* morpheme is derived from a pronoun, we can see many differences between it and the SE pronouns. First, it is not generalized through the entire paradigm: 1Sg *rumpor*, 2Sg *rumpere/rumperis*, 3Sg *rumpitur*, 1Pl *rumpimur*, 2Pl *rumpimini*, 3Pl *rumpuntur*. The 2nd singular is, probably, derived from the ancient secondary middle ending **-se/*-so*, with rhotacism (**-se* > *-re*). The *-s* has been adjoined later, probably because of the influence of the active form (**-re-s* > *-ris*). The 2nd plural, instead, has not yet been reconstructed. A possible option is a derivation from a form involving a participle and an auxiliary (gr. λεγόμενοι ἔσστε). This form, during the first centuries of Latin (or even before), would have lost the auxiliary. The SE pronoun, instead, does not have this gapped distribution in the paradigm, it is present even in the participle and in the infinitive: *ammalatosi*, *rottosi*, *rompersi*, *ammalarsi*. In Latin this is not the case, the infinitive is built with an *-i* adjoined to the endings of the present²⁰ (*amā-se-i* > *amā-re-i* > *amāri*; *rumpě-se-i* > *rumpě-e-i* > *rumpi*) and the participle does not show any evidence of a possible *-r* (historical grammar data from Vineis 2005).

18 This shows that the same configuration (VoiceP deactivation) can have different entailments; it depends on the etymological source.

19 Within a DM framework, it is possible to derive this structure through the operation called *merger under adjacency*. The verb is built following the Mirror Principle, but the *-r* morpheme is later merged under adjacency to the complex verbal form already formed through head movement. This approach, anyway, is similar to the one proposed here; the reason why the *-r* morphemes merges under adjacency and not through head movement could be exactly its pronominal ancestry and the fact that it was an XP in Spec,VoiceP.

20 It is worth noticing that exists an archaic infinitive built with an *-r* morpheme: *-ier/-rier*, similar to the impersonal passive form of the Osco-Umbrian epigraphs.

This pattern shows that, probably, the *-r* morpheme was initially a pronoun. Anyway, it was not the only way to achieve the VoiceP deactivation.²¹ As we have seen, in the paradigm of the present we can observe, at least, two different morpheme series, the *-r* series and the 2nd person series. This second series is not etymologically transparent. The morphological complexity, anyway, should not obscure the functional transparency of these forms, to signal the syntactic deactivation of the Ext Arg position.

6 The Middle Derivation and Its Syntactic and Semantic Entailments

The deactivation of VoiceP creates a configuration that we will call *middle construction*. What are the main characteristics of this construction? Can these characteristics justify the appearance of the middle morphology in all the environments that we have seen before ((8), (9), (10))?

Let us take a look at the syntactic and semantic consequences of the insertion of a non referential pronoun in Spec,VoiceP. The merge of an element in the syntactic structure is a syntactic operation. A syntactic operation is blind to the semantics of the elements involved in it. We can merge a non referential pronoun in the Ext Arg position, there are no semantic restrictions on the syntactic merge operation. The element merged in Spec,VoiceP absorbs the Ext Arg features, but, as we have seen, it is not interpretable as an argument, not having a denotation (the semantic interpretation comes at the end of the phase). The only semantic entailment of such a structure is the absence of a pure Initiator of the event (Ramchand 2008 terminology) externally merged in spec,VoiceP. This is the reason why the interpretation of a derivation involving a deactivated VoiceP is manifold:

- (43) The external argument can be perceived as interpretively present and disjunctive with respect to the internal one. We have a MIDDLE-PASSIVE derivation.
- (44) The external argument can be perceived as completely absent. We have an ANTICAUSATIVE derivation.
- (45) The external argument can be perceived as interpretively present and bound through Argument Identification by the internal argument. We have a REFLEXIVE derivation.

This is the kind of variation that we expect if we analyse VoiceP deacti-

²¹ A single series is, clearly, more economical, but nothing forces us to exclude the presence of different series, and a morphological levelling operation.

vation as a syntactic procedure that entails the absence of an Initiator externally merged in spec, VoiceP. This is the kind of variation that we find in the actual occurrences of the *-r* morphology in Latin.

How do we choose, then, between these different interpretations? The answer is straightforward: it is the syntactic-semantic context that disambiguates. The root is part of this context, an *agentive* root will force a middle-passive interpretation, a *naturally reflexive* one, instead, a reflexive interpretation. Also other elements can force a specific interpretation, for example the *afto-* prefix in Modern Greek can force a reflexive interpretation on an *agentive* root (Alexiadou, Schäfer 2014). Also the anticausative interpretation is made possible by a certain kind of root (*cause unspecified root*, Schäfer 2008). Anyway, as usual, a specific and strong pragmatic context can upset the usual expectations about the interaction between a root and the Voice° deactivation. I will not deepen this aspect here, it is beyond the scope of this paper.

It is interesting to note that we can see a sort of a grammaticalisation process of the element that deactivates VoiceP. In German *sich* is fully analysable as a pronoun, merged in a specifier position (an XP position), in Italian *si* is merged in the head position (Voice°), in Latin it is fully functional, it represents just the fact that VoiceP has been deactivated, it is not (anymore) the active deactivator that we see in Italian and German. This observation calls for a diachronic analysis of the shift between *si* and *-r* in the Late Latin period.²²

In Italian and German, the presence of a different construction, the specific Passive (derived from the canonical evolution *stative adjectival participle* > *eventive adjectival participle* > *passive*, Givón 2009, pp. 45-60, Gildea 1997, 2014), must have had consequences on the evolution of the middle derivation and of its uses. Probably the pressure of another construction had some influence on the typical uses of the middle one; this kind of pressure, anyway, should be analysed as a pragmatic pressure, not as a syntactical one.

Now we can partially understand the syntactic and semantic entailments of the Latin *-r* morphology, and we are able to go back to the analysis of deponent verbs.

²² As an anonymous reviewer points out, this can be analysed as an example of the spec-to-head tendency that is so common in grammaticalisation (van Gelderen 2004, Gianollo 2015).

7 Deponents and *-r* Morphology, the Denominal Derivations

Deponent verbs show an *-r* morphology. Following the proposal made above, I suppose that a deactivated VoiceP tops the vP layer of every deponent derivation. The Latin *-r* is the morphological realization of this deactivation.

Why, then, cannot we solve the problem following the marked anticausative paradigm? Marked anticausatives have a middle-passive morphology because the Voice^o is always forced to appear, even if there is no real Ext Arg/Initiator of the event. It is a requirement of the [*-spontaneous*] root. Deponents may have a similar constraint on the syntactic derivation. The biggest problem with respect to this proposal is self-evident, deponents are not anticausatives. The initiator of the event is overt and present in a deponent derivation,²³ while in a marked anticausative derivation it is not. The problem is not to justify the presence of Voice^o (the features of the Initiator are overtly present in the derivation, VoiceP has a clear reason to be projected), the problem is to justify the reason behind the deactivation of Voice^o, the reason behind the presence of *-r*.²⁴ The solution adopted for marked anticausatives cannot be adopted also for deponents.

We have to go back to the characteristics of deponents. Deponents do not share only the *-r* morphology, they also share an interesting common derivation: many of them are denominals. Xu, Aronoff and Anshen (2007) provide a percentage: 46.5% of deponent verbs in Latin are denominals.

Flobert (1975) classifies every deponent occurred in the history of Latin literature according to when it is firstly attested. His classification is very useful to shed a light on the diachrony of deponent's attestations. He subdivides the Latin age in different periods: (I) Plautus, (II) Terence, (III) Cicero, (IV) Virgil, (V) Seneca, (VI) Tacit, (VII) Apuleius, (VIII) half of the third century/fourth century, (IX) half of the fourth century/423, (X) 423/sixth century, (XI) seventh century/eighth century.

The data:

- (I) the new attestations of non-denominal deponents are high, 129, while the denominal attestations are 96.
- (II) the new non-denominals are 9, while the new denominals are 29.

23 This is quite obvious, since it has been proposed that these verbs are nothing else than normal active verbs (see section 2).

24 An anonymous reviewer points out that the activation of deponents is common (Flobert 1975). An activated deponent has to be analysed as a normal transitive verb, with the Ext Arg merged in spec,VoiceP. I will go even further: also the competitor (the verb that still shows a deponent form) has to be analysed in the same spirit, being the *-r* form, by then, just a morphological and normative feature (much in the spirit of Embick 2000). I am not completely refusing a morphological approach to many cases of deponency. I am positive, however, that a deeper answer has to be searched, and that this answer for the rise of deponents is mainly syntactical.

- (III) the non-denominals are 8, the denominals 59.
- (IV) the non-denominals are 0, the denominals 7.
- (V) the non-denominals are 0, the denominals are 19.
- (VI) the non denominals are 3 and the denominals are 4 (*equor, crinior, nauculor, proemior*).
- (VII) the non-denominal is 1 (a back-formation) and the denominals are 12.

The pattern is clear and obvious: every newly formed deponent is denominal, the non-denominal deponents are inherited. There are apparent exceptions, mainly in the VI period. These exceptions, anyway, can be explained. The first exception of the VI period is clearly not attested before because of its semantics: *masturbor* (Mart. 9, 41); the second one is a back-formation, *spernor* (it has been created for metric purposes from *asperno*); the third one is a frequentative: *queritor*, created from a precedent (inherited) deponent verb (*queror*).

The etymology of the non-denominal deponents firstly attested during the period (I) is, in most of the cases, obscure. We can say almost nothing about the etymological derivation of these verbs. It has been argued that these verbs may be the leftovers of a specific category of intransitives, the intransitives with a subject-undergoer, as opposed to the category of the intransitives with a subject-agent (the split intransitivity hypothesis). The subject-undergoer intransitives were marked with the middle morpheme, the others were unmarked. The later stages of Latin would have lost the overt marking of this split (Benedetti 2002, Gianollo 2010, 2014). It is also possible to think that some of these inherited verbs, once, were denominals, and at the time of Plautus they had already lost their derivational transparency.²⁵ Given this pattern, I will focus only on the other class of deponents, the productive one. I hope that the analysis of denominal derivations will help to provide a possible explanation for the obligatory presence of the deactivated VoiceP in this kind of deponent derivation, leaving aside the problem of the non-denominal deponents. What seems to be clear, anyway, is that the class of deponents is not entirely homogeneous.

7.1 A First Derivation

The presence of -r has to be related to a bi-eventive vP (First Phase), otherwise the deactivation of Voice° would deactivate the only argument position present in the derivation, giving as an output an event without any arguments. We have, then, to find a place below Voice° for the arguments of deponents to appear (producing a meaningful semantics in the process).

²⁵ This hypothesis needs a stronger set of data to confirm (or reject) it.

For a first group of deponents (ex. *arbitror, testor, medicor, philosophor, interpretor, parasitor, poetor, sycophantor*) this place is a Small Clause.. This SC includes the nominal and the theme. The meaning of these verbs is 'x acts in a specific way to become y (of z)'. For example, *medicor illum* can be analysed as 'I act in such a way to be a healer of him'. We can see this in (46):

- (46) Id suo consilio factum esse testatur (Cic., *Phil.*, 14, 3)
 that by his own suggestion made be testify.Nact.3SG
 He testifies that he has done that on his own

In this case, the argument is a *pro*, and the nominal²⁶ from which the verb is built is *testis*. Both these element are merged to form a SC:

- (47) [SC [nP test-] [DP pro]]

This SC conveys the semantic 'x is y' (an identification), '*pro is a witness*'. To verbalize this construction we need a vP. The head n° moves to v° to gain its verbal status:

- (48) [vP [v° testa- [SC [nP (test-)] [DP pro]]]]

Now we need VoiceP. We need it because of our assumption that the -r morphology is a VoiceP deactivation mechanism:²⁷

- (49) [VoiceP [Voice° testa- [+r] [vP [v° (testa-) [SC [nP (test-)] [DP pro]]]]]]

This is the crucial point, why do we need this projection to derive the final structure? Without the insertion of this projection we would not need to deactivate it with the -r morphology. It seems to be more economical not to merge it at all. Anyway the -r appears. The -r is merged after the Internal Merge of *testa-* with Voice°. Its function is to deactivate the syntactic projection of the Ext Arg. Once we have merged VoiceP we are forced to

26 I abstract away from the nominalization. I assume, in a DM spirit, that a nominalization has happened starting from the root [$\sqrt{\text{test-}}$] merged with the nominalizer n°: [nP [n test-] [RootP [Root (test-)]]]].

27 This seems theory-dependent. It will be clear in a few steps, anyway, that there is a stronger (semantic) reason for the presence of Voice° in these constructions than the simple statement that -r is a Voice° deactivator.

The element *testa-* is an abstract feature; we can link it to different Vocabulary Items, depending on the context.

deactivate it, there are non more arguments able to occupy that position. Again, why do we need this projection?

The possible interpretation of a deactivated Voice^o are listed in 43-45. A deactivated Voice^o can convey a 'no external argument' meaning, as we have seen in the anticausative derivations in Italian, Latin, German and Greek ((8)-(19)). In anticausatives, VoiceP is needed because of the peculiar semantics of the root that forces the presence of Voice^o allowing, anyway, an anticausative derivation. We have seen that this cannot be the right answer for deponents (section 7).

A deactivated Voice^o can also give as an output a semantics involving the presence of a distinct external argument without the syntactic presence of its projection (8): a middle-passive derivation. This solution too is untenable: deponents cannot be interpreted as passives, the fact that they are active is one of their characteristic features.

The only remaining option is the reflexive one (9). This option is not only the last one remaining, it would also convey a welcomed result: explaining why the arguments of deponent verbs have a strong initiator feature. *Arbitror, testor, medicor, philosophor, interpretor, parasitor, poetor, sycofantor*: all the arguments of these verbs (externally merged in a SC with the verbalized n^o) have a strong initiator feature. It is a voluntary decision of the argument to perform the action described by these verbs. The big problem has always been the *-r* morphology, that is incompatible with a full-fledged VoiceP projection and, consequently, with the merging of the argumental DP in the Ext Arg position (spec,VoiceP). Now we can try to solve this problem. The argument, as we have seen, is externally merged in a SC with the nominal root below VoiceP, it is not merged in spec,VoiceP; the argument, anyway, has to be linked to spec,VoiceP since it is the Initiator of the event in the final derivation; this link is created through Argument Identification and *-r* is the element that allows Argument Identification to occur. This solution explains why denominal deponents are active (their argument is the initiator of the event) and why they involve a 'passive' *-r* in their derivation (it links the argument as the subject of the SC and the syntactic position where the initiator features are projected).

This interpretation is similar to the naturally reflexive interpretation of many Latin and Modern Greek derivations:

- (50) I Maria htenizete
 The Mary combs.Nact
 'Mary combs herself'

The difference between a naturally reflexive verb and a deponent is the derivation itself, that in the first case involves a naturally reflexive root with the argument as its complement, and in the second case a complex denominal structure.

7.2 A Second Derivation, a Possessive Relationship

Another class of denominal deponents is formed by verbs with a possessive semantics: *piscor*, *praedor*, *molior*, *lucror*, etc.

- (51) Est provinciae Narbonensis et in Nemausiensi agro stagnum Latera appellatum,
ubi cum homine delphini societate piscantur (Plin. M., *Nat. Hist.*, 9, 29)
wherewith man dolphins together fish.Nact.3PL
'In the Narbonensis province, in the Nemausiensis region, there is a lake, called Latera, where the dolphins help men to fish'

The core meaning of these verbs is 'x acts in a specific way to HAVE y'. There must be a reflection of this different meaning in the derivation. We have, at least, two possibilities. We can begin merging the argument (DP) with the nP (*pisc-*) in a SC, just like in the first derivation that we have seen above:

- (52) [SC [DP delphini] [nP pisc-]]

The problem is that the relationship between these two elements is *delphini* HAVE *pisc-*, not ARE *pisc-* (a possession and not an identification). How could we derive this different relationship? A first option is to provide the DP with a Dative feature, a common derivation in Latin for the possessive relationship (Marco librum est. Marco.DAT librum.ACC is. 'Marco has a/the book'). *Delphini*, anyway, is not DAT, it is NOM. We can deal with this problem proposing a double syntactic case marking, DAT+NOM, with a single morpho-phonological realization, NOM. There are languages in which this double case marking is morpho-phonologically realized, for example Korean (*Swunhi-eykey-ka* Swunhi-Dat-Nom. Yoon, Yoon 1991). If we assume that double case marking is possible, as we are forced to do in the Korean example, then to hypothesize that the same mechanism can be not only overt, but also covert, is not such a bold move (see Anagnostopoulou 2003 for a similar case in Greek). The second solution is to abandon the SC analysis. A low Appl^o could convey the possessive relationship:

- (53) [ApplP delphini [Appl^o [nP pisc-]]]

Delphini is merged in spec,ApplP, and the nP is the complement of the Appl^o, the Appl^o mediates between the two arguments providing a possession relationship.

The second option is conceptually easier, but the first one would give a more unitary overview of the various kinds of deponent verbs; both options are perfectly acceptable within my proposal about deponents.

7.3 A Third Derivation, Transitive Deponents

There is a third kind of denominal deponents, and this has always been the main challenge in the analysis of the deponent verbs: the double argument deponents²⁸ (usually called *transitive deponents*). Verbs like *recordor*, *hortor*:

(54) Senex in culina clamat, hortatur coquos (Plaut., *Cas.*, 4, 1)
 The old man in the kitchen clamours, urges cooks.ACC.PL
 'The old man clamours in the kitchen, he urges the cooks'

(55) Quis perversam atque impiam religionem (Lentuli)
 Who perverse.ACC and impious.ACC belief.ACC (Lentulus.GEN)
 recordatur? (Cic., *Pro Sull.*, 25)
 remembers?
 'Who remembers the impious and perverse beliefs of Lentulus?'

These verbs, at a glance, seem to support an analysis like the one proposed by Xu, Aronoff and Anshen (2007). They look like normal transitive verbs with a peculiar morpheme; this is the most intuitive interpretation. We have already seen, anyway, why this cannot be the whole story, even if the morphological analysis can sometimes be synchronically adequate (note 24). If we maintain the hypothesis that the *-r* morpheme is a VoiceP deactivator, we have to conclude that both arguments are merged below Voice°. If the ACC argument is not problematic, the NOM one is trickier.

Again, we can identify two main subsets of transitive deponents, the verbs that do not have a clear etymology and the verbs that have a clear denominal derivation. Again, I have decided to focus just on the second group, even if I am perfectly aware that an analysis of the first group is, by the end, unavoidable.

I will use as a specimen the verb *recordor*. This verb is denominal, the basic noun is *cor* [heart], and its composite meaning is 'x acts in a specific way to have y back in x's heart'. We can imagine a derivation similar to the one we have supposed for *testor*, in which the noun is merged in a SC with one of the arguments, the accusative one:

(56) [SC [DP perversam [...] religionem] [nP cord-]]

28 Also the first kind of deponents can have a second argument. The difference is that in that case the second argument is an argument of the nominal basis from which the verb is derived, in this case it is an obligatory argument of the verb, it cannot be analysed as an argument of the noun.

The SC has a figurative locative meaning; the DP is **in** the heart (*cord-*). Again, we can propose a feature on the DP, retaining the SC analysis,²⁹ or we can propose a different projection, a PP. The derivation, then, goes on as before, merging the v° (with a repetitive prefix *re-*) and the deactivated Voice $^\circ$ (*-r*).

(57) [VoiceP [Voice $^\circ$ re-cord(a)- *-r* [vP [v $^\circ$ re-cord(a)- [PP [DP *perversam* [...] religionem] [P $^\circ$ [nP (cord-)]]]]]]]]

This derivation, obviously, is not complete. Where is the NOM argument? We have to find a place in the derivation for the NOM argument, it is undeniably present in the final derivation of (55).

A possible solution is to exploit the derivations that we have already seen. It is possible to merge the two derivations, creating a new and explanatory derivation. We have already the first mechanism (the PP) in the derivation in (57), we have to add the possessive relationship (53) (abstracting away from the vP-VoiceP projections):

(58) [ApplP *quis* [Appl $^\circ$ [PP [DP *perversam* [...] religionem] [P [nP *cord-*]]]]]

The result is a derivation that conveys the meaning ‘*quis* HAVE *perversam* religionem IN(loc) *cord-*’, the NOM argument is the possessor of the entire PP. The argument merged as the possessor of the entire PP is linked through Argument Identification to the Ext. Arg. projection, the semantic entailments are the same that we have already seen.

8 Conclusion and open questions

In this paper, I have shown that Latin *-r* morphology is a VoiceP deactivator, like the SE pronouns in Italian and German. VoiceP deactivation can explain why the interpretation of this element is manifold (§ 3-6).

The productive derivation of deponents in Classical Latin is a denominal derivation (§ 7). Deactivated VoiceP (*-r*) is present in the derivation of denominal deponents because it is essential to convey the final meaning of the verbal construction. The Int Arg (merged with the nP) has to relate to the Ext Arg position through Argument Identification to acquire the semantics of the Initiator of the event. The deactivated VoiceP drives this relationship (§ 7.1-7.3).

Now I would like to point the attention to some issues that are still open.

29 I have made the same suggestion for *piscor* before.

The first one is related to non-denominal deponents: how could we derive the structure of these verbs? Are they an homogeneous class³⁰ (Gianollo 2010, 2014)? Is it possible that at least some of them are non-transparent denominals?³¹ The second issue is related to the Italian class of denominal deponents, verbs like *arrabbiarsi*, *incavolarsi*, *incazzarsi*, *imbestialirsi*, *immaginarsi*, etc.... Many verbs in this class have a parasynthetic morphology, they incorporate a preposition in their morphological make-up. Why do we see this preposition in Italian and not in Latin? Can this preposition tell us more about the derivation of this class of verbs cross-linguistically?

It will be interesting to try to answer these questions (and many others) through a diachronic analysis of the evolution of denominal deponents from Classical Latin to Old Italian, analysing the recurrent patterns, the morpho-syntactic hints and the semantic evolution of these verbs.

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30 Many non-denominal deponents show the frequentative suffix *-it*, is this related to a specific derivation or is this an epiphenomenon?

31 Ex. it. *ricordarsi*: does it directly inherit its deponency from Lat. *recordor* or its middle structure (*si*) is related to a different and synchronic function?

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