

**FORMALISM VS FUNCTIONALISM: THE
GRAMMATICALIZATION OF ROMANCE
COMPLEMENTISERS IN MINIMALISM**

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ABSTRACT:

The grammaticalization of Romance complementisers (*que, ad, de*) contains new data for Roberts and Roussou's (R & R) (2003) Minimalist framework of grammaticalization, who argue that grammaticalization is a process of "structural simplification" which makes it a common change cross-linguistically (R & R 2003:2-4). The grammaticalization of Romance complementisers conforms to their hypothesis, since they all lose *Agree* relations, and this conforms to R & R's definition of "simplicity" as the reduction of "feature syncretisms" (R & R 2003:201).

Furthermore, a comparison between Romance complementisers and English/Germanic ones (*that, to*) reveals that not only do cross-linguistic examples undergo "structural simplification", they also display similar discourse and communicative patterns, which supports another hypothesis, namely Vincent and Borjars' (2010) idea that formalism and functionalism should not be seen as mutually exclusive in explaining language change.

Section 1: Introduction:

In this paper, I analyse the grammaticalization of Latin *quod* > Romance *que* and that of Romance prepositional complementisers within Minimalism, since (1) they are related phenomena, as they show complementary distribution in Romance (2) both have cross-linguistic counterparts in R & R (2003)¹ (3) while Latin *quod* is well analysed, the origins of Romance prepositional complementisers are not, and so this paper contains some original analysis of Latin/Romance syntax.

Section 1.1: Lightfoot:

Lightfoot (1999:chapters 3 and 4, 2006:10-15, 88-89)) argues that grammar is moulded during first language acquisition, which is hence the locus for language change. There are three components: (1) internal grammar (IG) (2) universal principles and parameters of grammar (UG) (3) the trigger experience in the form of primary linguistic data (PLD). IG is formed by children scanning their PLD and setting the parameter values of their UG (Lightfoot (1999:66-67, 2006:10, 45)). As UG is a genetic constant, the source for language change lies in the PLD and how it is re-analysed by children (Lightfoot 1999:66-68, 178-179, 2006:11-2, 87-90).

¹ R & R (2003:100, 111) acknowledge them as cross-linguistic counterparts to English *to* and Germanic *that*.

Section 1.2: 'Re-analysis':

The classic example of "re-analysis" in grammaticalization is English *going to* > *gonna* (Hopper and Traugott 1993:2-4):

- a. "the change occurs only in a very local context, that of purposive directional constructions with non-finite complements, such as *I am going to marry Bill...*"
- b. "the change is made possible by the fact that there is an inference of futurity from purposives... In the absence of an overt directional phrase, futurity can become salient."
- c. "the re-analysis is discoverable... only when the verb following *be going to* is incompatible with a purposive meaning... for example, *I am going to like Bill, I am going to go to London...*"

(a) identifies the examples where the old (*going to* denoting movement and purpose) and new (*gonna* denoting futurity) interpretations co-exist, while (b) recognises their semantic overlap and identifies the context where the old interpretation is weakened. (c) identifies the outcome of "re-analysis" in examples where only the new interpretation is possible. The three steps of "re-analysis" are:

- (a) there are examples where, due to semantic overlap, two interpretations co-exist

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(b) in particular contexts, the new interpretation is prominent

(c) there are examples where only the new interpretation is possible

Section 1.3: Roberts and Roussou (2003):

Lightfoot (1999, 2006) and R & R (2003) employ a cue-based model of language acquisition where 'cues' express parameter values (Lightfoot 2006:chapter 4, R & R 2003:14-15). The three steps in "re-analysis" are therefore all "cues". Lightfoot asserts that language evolution is random because PLD is language-specific and unpredictable:

... the expression of the cues changed in such a way that a threshold was crossed and a new grammar was acquired. That is as far as this model goes, *and it has nothing to say about why the distribution of cues should change...* (my italics) (Lightfoot 1999:166)

Lightfoot's model therefore predicts that the cross-linguistic distribution of "cues" is random. Grammaticalization occurs cross-linguistically and is incompatible. R & R therefore introduce a learning device in language acquisition that chooses the "simpler" alternative in ambiguous "cues" (R & R 2003:14-17), and since R & R (2003:2-4) argue that grammaticalization always leads to "simpler" structures, grammaticalization can occur cross-linguistically as "simpler" structures are favoured in language acquisition. R & R (2003:201) define "simplicity" as the reduction

Modern French (Huot 1981:10-11, Kayne 1984:104-105):

(2a) Jean le redout-e beaucoup,
John it fear-PRES.3SG very.much
d' être licencié
DE be.INF fired
'John fears it very much, namely to be fired.'²

(2b) Jean redout-e beaucoup
John fear-PRES.3SG very.much
un licenciement
a dismissal
'John fears very much a dismissal.'

Modern Sardinian (Jones 1993:262, 264):

(3a) cred-o de ti conosk-ere
believe-PRES.1SG DE you know-INF
'I believe that I know you.'

(3b) lu cred-o
it believe-PRES.1SG
'I believe it.'

Furthermore, the prepositions of these prepositional infinitives only subcategorise for infinitives, which suggests that they are

² This prepositional infinitive (*d'être licencié*) is in apposition with a non-prepositional pronoun (*le*) and is hence equivalent to it.

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complementisers, given that infinitives are clausal (Rizzi 1982:94,
Mensching 2000:63):

Modern Italian (Benucci 1992:24, Rizzi 1982:94):

- (4) *afferm-o di questo
assert-PRES.1SG DE this

Modern French (Huot 1981:9, Kayne 1984:104):

- (5) *Jean redout-e beaucoup
John fear-PRES.3SG very.much
d-u licenciement
DE-DEF.ART dismissal

Modern Sardinian (Jones 1993:262, 264):

- (6) *cred-o de cussu
believe-PRES.1SG DE that

Such prepositional infinitives are analysed as argument CPs, and
they show complementary distribution with finite CPs headed by
que:

Modern Italian (Benucci 1992:24-25, Rizzi 1997:288):

- (7a) cred-o di fa-re questo
believe-PRES.1SG DE do-INF this
'I believe that I am doing this.'

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- (7b) lo cred-o
it believe-PRES.1SG
'I believe it.'
- (7c) *cred-o di questo
believe- PRES.1SG DE this
- (7d) cred-o che
believe-PRES.1SG QUE
le scriv-a
to.her write-3SG.PRES.SUBJ
'I believe that he/she writes to her.'

Modern French (Huot 1981:9-10, 33, Kayne 1984:104):

- (8a) Jean crain-t ...
John fear-PRES.3SG
d' échou-er à cet examen
DE fail-INF to this exam
'John fears to fail this exam.'
- (8b) Jean crain-t ... un-e
John fear-PRES.3SG one-FEM.SG
augmentation de loyer
rise.FEM.SG of rent
'John fears a rise of rent.'
- (8c) *Jean crain-t ... de l'
John fear-PRES.3SG DE DEF.ART

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(8d) échec à cet examen
 failure to this exam
 Jean crain-t ...
 John fear-PRES.3SG
 de perd-re s-a place
 DE lose-INF his-FEM place.FEM
 et que plusieurs
 and QUE several
 de se-s camarade-s
 of his-PL comrades-PL
 so-ient poursuivi-s en justice
 be-PRES.SUBJ.3PL prosecuted-PL in justice
 ‘John fears... to lose his place and that several of
 his comrades would be prosecuted in justice.’³

Modern Sardinian (1993: 247, 262, 264):

(9a) pessa-íat de éss-ere
 think-IMPERF.3SG DE be-INF
 maláid-u

³ The prepositional infinitive (*de perdre...*) and the finite complementation (*que...*) are co-ordinated by *et*, which shows that they are syntactically equivalent.

sick-MASC.SG

‘He thought that he was sick.’

(9b) lu pessa-íat

it think-IMPERF.3SG

‘He thought it.’

(9c) *pessa- íat de cussu

think-IMPERF.3SG DE that

(9d) Maria pess-at ki su trenu

Maria think-PRES.3SG QUE her train

est in ritardu

be.PRES.3SG in delay

‘Maria thinks that her train is delayed.’

As Romance *que* is analyzed as a complementiser (Kayne 1976:259, 1984:104, Huot 1981:20-26), this complementarity further supports the CP analysis of these prepositional infinitives (Kayne 1984:104, Rizzi 1997:288).

However, there are prepositional infinitives that show ‘complementarity with *que*’ (10d, 11d, 12c) but neither ‘equivalence to non-prepositional (pro)nouns’ (10b-c, 11b-c, 12b) nor ‘affinity with infinitives’ (10c, 11c, 12b):

Modern Italian (Benucci 1992:24-30, Mensching 2000:64):

(10a) mi vant-o

REFL.PRO boast-PRES.1SG

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- di fa-re questo
 DE do-INF this
 ‘I boast of doing this.’
- (10b) se ne vant-a
 REFL.PRO PRO boast-PRES.3SG
 ‘He/she boasts of it.’⁴
- (10c) mi vant-o di questo
 REFL.PRO boast-PRES.1SG DE this
 ‘I boast of this.’
- (10d) si vant-a che
 REFL.PRO boast-PRES.3SG QUE
 i su-oi compit-i
 DEF.ART.PL his/her-PL task-PL
 si-a-no stat-i rifiut-at-i
 be-PRES.SUBJ-3PL been-PL reject-PASS.PL
 ‘He/she boasts of the fact that his/her tasks have
 been rejected.’

⁴ Huot (1981:8) argues that French pronouns *en* and *y* are equivalent to *de* + DP and *à* + DP respectively and are hence PPs. The same can be said of Italian *ne* and *ci*, which correspond to *di* + DP and *a* + DP respectively (Benucci 1992:24).

Modern French (Huot 1981:48-49):

- (11a) Jean se réjou-it
John REFL.PRO look.forward-PRES.3SG
de part-ir...
DE leave-INF
'John looks forward to leave...'
- (11b) Jean s' en
John REFL.PRO PRO
réjou-it
look.forward-PRES.3SG
'John looks forward to it.' (see note 4)
- (11c) Jean se réjou-it
John REFL.PRO look.forward-PRES.3SG
de ce voyage
DE this trip
'John looks forward to this trip.'

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- (11d) Jean se réjou-it
John REFL.PRO look.forward-PRES.3SG
que cette affaire soit
QUE this matter be.PRES.SUBJ.3SG
termin-ée
complete-PASS
'John looks forwards to this matter being
completed.'

Modern Sardinian (Jones 1981:247, 260-261):

- (12a) so content-u
be.PRES.1SG content-MASC.SG
de inténd-ere cussa notitzia
DE hear-INF that news
'I am content to hear that news.'
- (12b) so content-u
be.PRES.1SG content-MASC.SG
de cussa notitzia
DE that news
'I am content about that news.'
- (12c) so content-u
be.PRES.1SG content-MASC.SG

ki ses arriv-atu
 QUE be.PRES.SUBJ.2SG arrive-PERF.PTCP
 ‘I am content that you have arrived.’

On the other hand, there are examples where there is ‘equivalence to non-prepositional (pro)nouns’ (13b) and ‘affinity with infinitives’ (13c) but no ‘complementarity with *que*’ (13d):
 Modern Italian (Benucci 1992:24-25, Rizzi 1982:94):

(13a) prov-o a fa-re questo
 try-PRES.1SG A do-INF this
 ‘I try to do this.’

(13b) prov-o questo
 try-PRES.1SG this
 ‘I try this.’

13c) *prov-o a questo
 try-PRES.1SG A this

(13d) *prov-o (a) che
 try-PRES.1SG (A) QUE
 Ugo partecip-a
 Ugo participate-3SG.PRES.SUBJ

Benucci (1992:30), Mensching (2000:63-64), Huot (1981:48-50) and Jones (1993:260-262) regard the prepositional infinitives in (10)-(12) as PPs, while Benucci (1992:25) and Rizzi (1982:94) analyse the one in (13) as a CP. The two key tests are

therefore ‘equivalence to non-prepositional (pro)nouns’ and
‘affinity with infinitives’.

Section 2.2: the origins of Romance complementisers:

The wide distribution of Romance prepositional complementisers suggests that they were grammaticalized early in proto-Romance/Latin (Vincent 1988:68-70, Ledgeway 2011:429-432), but there is as yet no identification of their origins. I therefore propose to reconstruct this change by the comparative method. It is argued that the category of prepositional infinitives (PP or CP) is determined by the head predicate (Benucci 1992:23, Huot 1981:7, Jones 1993:262-264), and so I propose to reconstruct one head predicate that subcategorises for prepositional CPs using the distributional tests above. Although ‘complementarity with *que*’ is not essential, it will be insisted since this justifies my use of the Latin corpus for *quod* (Cuzzolin 1994).

Section 2.3: proto-Romance reconstruction:

Cuzzolin (1994:317-323) contains texts from Roman Italy, Spain, Gaul and Africa, the last of which has not left any Romance language behind. The key areas are therefore Italy, Spain and Gaul, and so I have used Old Spanish (Beardsley 1921), Old Italian (Salvi

and Renzi 2011) and Old French (Van Reenan and Schøsler 1991) to reconstruct proto-Romance.

Section 2.4: Old Romance prepositional CPs:

The two key distributional tests are (see section 2.1):

- a) ‘equivalence to non-prepositional (pro)nouns’
- b) ‘affinity with infinitives’

In modern Romance, test b) depends on ungrammatical examples like (4)-(6), (7c), (8c), (9c) and (13c). This is impossible in historical analysis since historical data is assumed to be grammatical. The key test in historical analysis is therefore test (a), since this depends on positive examples. Furthermore, given that the retention of pre-grammaticalized properties is very common in grammaticalization (Bybee, Perkins and Pagliuca (1994:15-19)),^{5 6}

⁵ This retention still exists in modern Romance: modern Italian *provare a* + infinitive (13a) displays ‘equivalence to non-prepositional (pro)nouns’ (13b) and ‘affinity with infinitives’ (13c), but the prepositional infinitive is also equivalent to Italian *ci* (13d) (Benucci 1992:24), which is prepositional (see note 4):

(13d)	ci	prov-o
	PREP.PRO	try-1SG.PRES
	‘I try it.’	

This suggests that PP traits are still retained in modern Romance, and they definitely can be retained in Old Romance. Negative evidence, given

it is possible to discard test (b) entirely and use only test (a) to reconstruct proto-Romance prepositional CPs, since only the latter depends on positive evidence (see note 5).

Section 2.5: ‘verbs of considering’:

There is comparative evidence that Romance ‘verbs of considering’ subcategorise for prepositional CPs:

Old Spanish *asmar*:

- (15) asm-ó de se-er clérigo
 consider-PRET.3SG DE be-INF clergyman
 ‘He considered to be a clergyman.’
 (*Vida de Santo Domingo de Silos* verse 34)

‘retention’, does not disprove grammaticalization, whereas any positive evidence suffices to prove it.

⁶ In R & R (2003), retentions in grammaticalization are accounted for by ‘lexical splits’ e.g. English modals, which are analysed as V and T synchronically (R & R 2003:42-43). Retentions, therefore, do not challenge Minimalism.

The same predicate is attested with non-prepositional (pro)nouns:

- (16a) asm-ó un consejo malo e
 consider-PRET.3SG one plan evil and
 perigloso
 dangerous
 ‘He considered an evil and dangerous plan.’
 (*El libro de Alixandre* verse 170)

- (16b) así lo a-n
 so it have-PRES.3PL
 asm-ado...
 consider-PERF.PART
 ‘so they have considered it...’
 (*Cantar de Mio Cid* 844)

The same predicate is also attested with finite complementation headed by *que*, since the content of the plan in (16a) is expressed by a finite clause:

- (17) asm-ó que.. .
 consider-PRET.3SG QUE
 casar-ié con Olimpias...
 marry-COND.3SG with Olimpias
 ‘He considered that... he would marry
 Olimpias...’ (*El libro de Alixandre* verse 171)

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Old Italian *pensare*:

- (18) non pens-ò mai
NEG consider-PRET.3SG ever
di ritorn-are a-l
DE return-INF to-DEF.ART
vescovado...
diocese
'He never considered going back to the diocese.'
(*Cronica fiorentina*, Schiaffini (1926:108))

The same predicate selects non-prepositional (pro)nouns:

- (19) pens-ando il
consider-GERUND DEF.ART.MASC.SG
grande onore
great.MASC.SG honour.MASC.SG
e la ricc-a
and DEF.ART.F.SG rich-FEM.SG
potenza...
power.FEM.SG
'considering the great honour and rich power...'
(*Il Tesoretto* 182-183)

Many attestations of the finite complementation express beliefs rather than deliberation, but the following is ambiguous:

- (20) voi dov-ete pens-are
 PRO.2PL must-PRES.2PL consider-INF
 che l' om
 QUE DEF.ART.MASC.SG man.MASC.SG
 che è 'namorat-o sovente
 REL.PRO is in.love-MASC.SG often
 mut-a stato
 change-PRES.3SG state
 'You must think/consider that the man who is in
 love often changes state.'
 (*Il Tesoretto* 2354-2356)

Since *Tesoretto* is a piece of didactic text (Contini 1960:169-174), the author could be obliging his reader not only to 'believe' in a particular statement (*che l'om...*) but also to 'consider' its truth value.

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In old French, *penser* is attested with *de* + infinitive (21) and *a* + infinitive (22):

(21) comenc-er-ai a pens-er de
 begin-FUT-1SG A consider-INF DE
 aukune bon-e estoire
 some good-FEM.SG story.FEM.SG
 fa-ire
 make-INF
 ‘I shall begin to consider making some good story.’

(22) se je pen-s a racont-er
 and.so I consider-PRES.1SG A tell-INF
 la bon-e vie
 DEF.ART.FEM.SG good-FEM.SG life.FEM.SG
 ‘... and so I am considering to tell the good life.’

The same predicate is attested with non-prepositional (pro)nouns:

(23a) ge meisme-s les
 I EMPHATIC-PL PRO.3RD.PL
 pens-e
 consider-PRES.1SG
 ‘I am considering those very things.’

- (23b) li pueple
DEF.ART.NOM.SG nation
pens-erunt vein-es
consider-PRET.3PL futile-FEM.PL
chose-s
thing.FEM-PL
'The nation considered futile things.'

Most examples of finite complementation denote beliefs, but the following is ambiguous:

- (24) je me pen-s
I REFL.PRO.1ST.SG consider-PRES.1SG
que ce so-it
QUE DEM.PRO be-PRES.SUBJ.3SG
m-a fame...
my-FEM wife.FEM

'I am thinking to myself that it is my wife...'

(*La chastelaine de Vergi* 256)

Deliberation into the embedded clause (...*que ce soit ma fame* '... that it is my wife') is strongly suggested by the use of the reflexive pronoun (*me* i.e. he is thinking to himself about this), which suggests introspection and deliberation.

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For proto-Romance, therefore, one can reconstruct 'verbs of considering' which subcategorise for prepositional CPs headed by *de* and *ad* as well as finite complementation headed by *que*.

Section 3: grammaticalization:

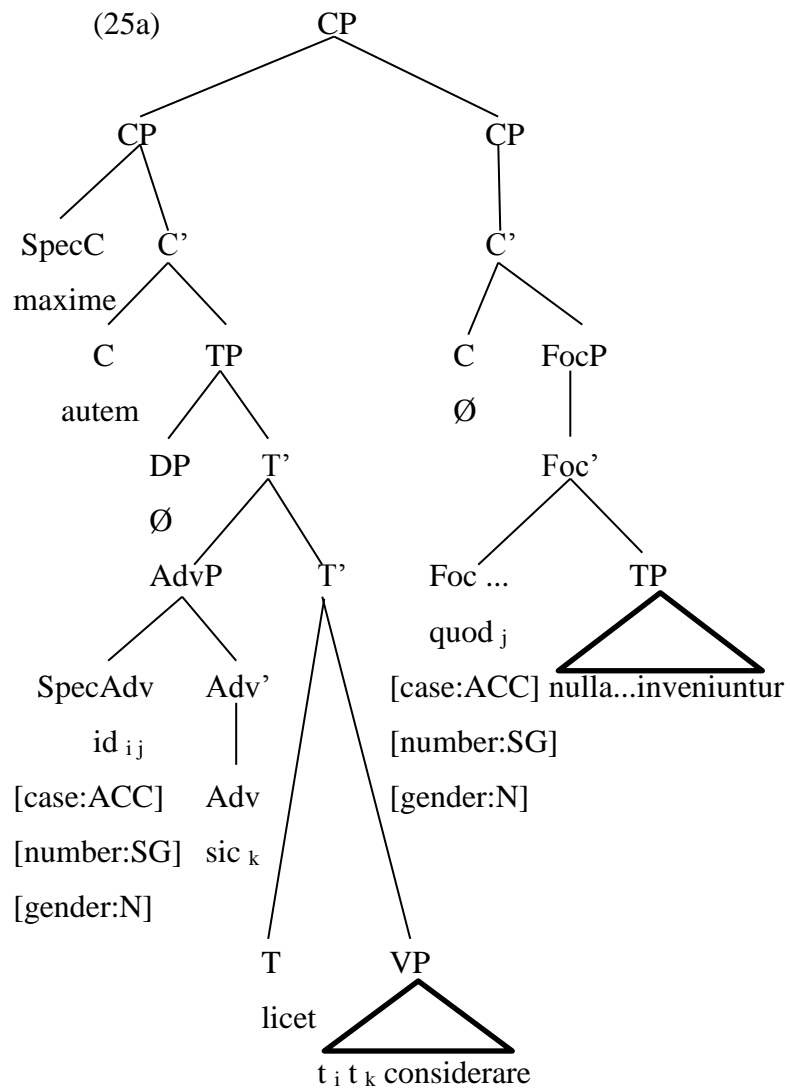
Section 3.1: Latin *quod* / Romance *que*:

Latin 'verbs of considering' subcategorise for *quod*, the precursor of Romance *que*. These have the relative pronoun (*quod*) in the focus position of the dislocated clause,⁷ and its antecedent is in the argument position of the matrix clause (Cuzzolin (1994:42-45, 86), Serbat (2003:548-550, 557-560)). There is therefore an *Agree* relation between *quod* and its antecedent:

⁷ According to Rizzi (1997:288), Focus is part of the CP layer below ForceP (=R & R's CP).

- (25) maxime autem id sic
especially but it.N.SG thus
licet consider-are,
be.possible consider-INF
quod... null-a
QUE.N.SG none-N.PL
inveni-unt-ur
find-PRES.3PL-PASS
'But it is especially possible to consider it thus,
namely that... none are found.'
(Vitruvius, *Architectura* 2.6.5 (80-15 BC))

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One could analyse the whole CP (*quod... nulla inveniuntur*) as the direct object of the main verb (*considerare*), like Romance *que* in (7)-(9), (17), (20) and (24), but this is prevented by the antecedent pronoun (*id*), which not only occupies the direct object position of the matrix clause but also reinforces the pronominal reading of *quod*. This is step (a) (see section 1.2).

Step (b) occurs when the antecedent in the matrix clause is omitted (Cuzzolin (1994:45, 86)), which is attested one century or so after Vitruvius (Cuzzolin (1994:120)):

(25b) illic reput-ans ideo...
 there reconsider-PRES.PTCP thus
 se fallac-ibus
 REFL.PRO.ACC.SG deceitful-ABL.PL
 litter-is accit-am
 letter-ABL.PL invite-PERF.PTCP.ACC.SG
 et honor-e praecipu-o
 and honour-ABL.SG exceptional-ABL.SG
 habit-am,
 treat-PERF.PTCP.ACC.SG
 quod-que ...nav-is
 QUE-and ship-NOM.SG
 summ-a su-i
 top-ABL.SG.FEM self-GEN.SG

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part-e veluti terrestr-e
part-ABL.SG.FEM like on.land-N
machinamentum

artificial.structure.N

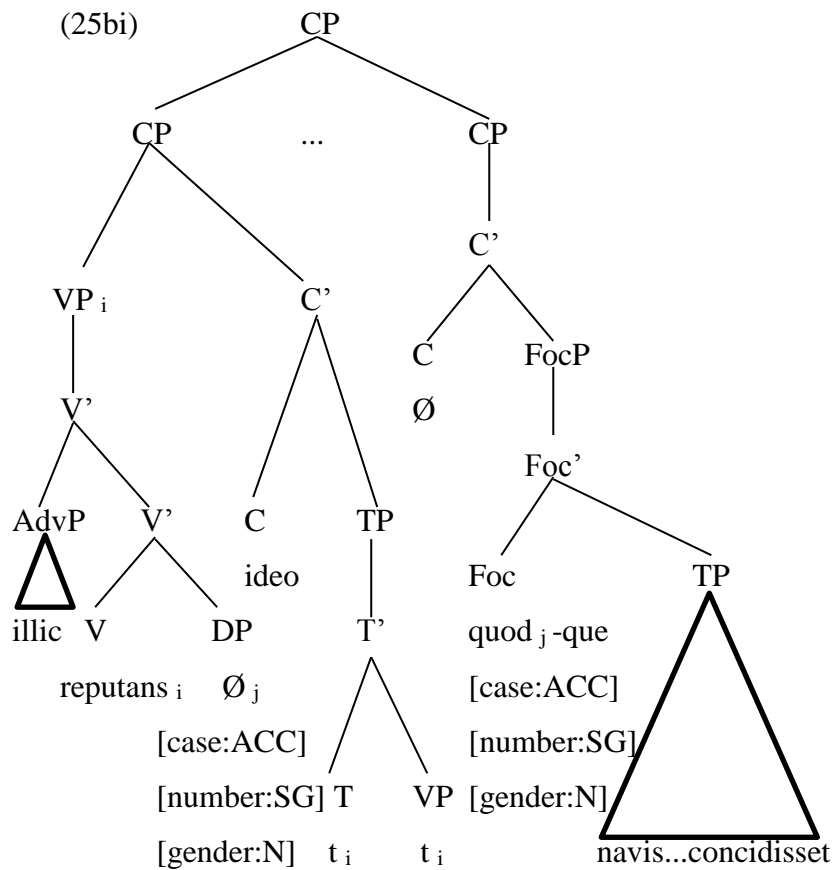
concid-isse-t

collapse-PLUPERF.SUBJ.3SG

‘...thus reconsidering there that she had been
invited by deceitful letters and had been treated
by an exceptional honour, and (this, namely)
that... a ship had collapsed on its own tip like an
artificial structure on land.’

(Tacitus, *Annales* 14.6.1) (56-117 AD)

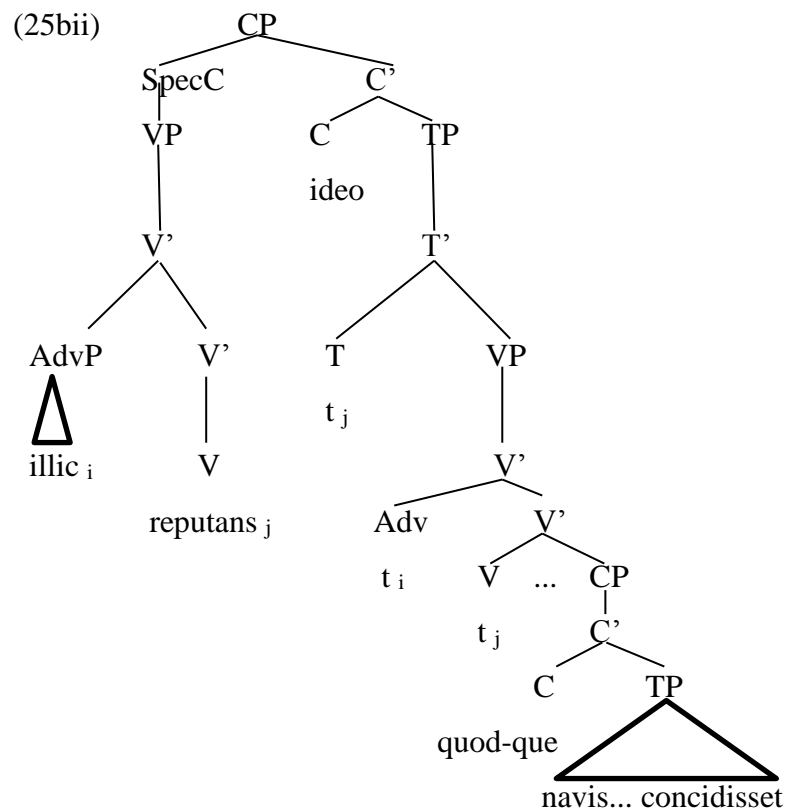
quod could still be analyzed as a relative pronoun if one assumes an
empty antecedent:



But since the antecedent is empty (\emptyset), not only is the analysis of *quod* as a relative pronoun weakened, it is also possible to analyse the CP (*quodque... concidisset*) as the direct object of the main verb

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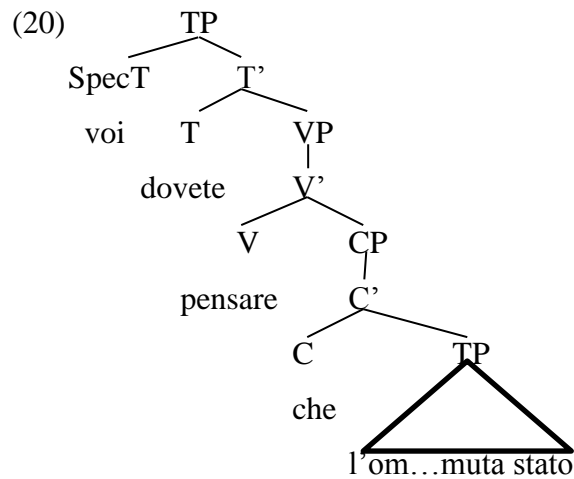
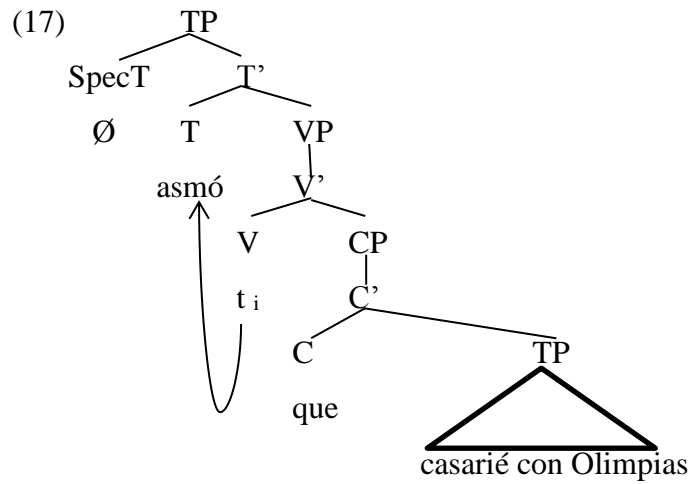
(*reputans*) where *quod* would be re-analysed as the
 complementiser:⁸



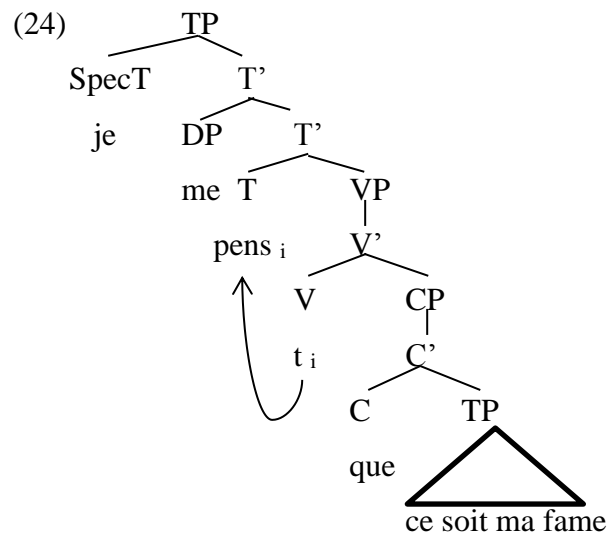
⁸ This is supported by the co-ordination (-*que*) between the *quod*-clause (*quodque... concidisset*) and the Accusative with Infinitive construction (*se... habitam (esse)*), since the latter is the default CP construction in classical Latin (Cuzzolin 1994:10-13, Serbat 2003:528-529).

(25bii) contains fewer “feature syncretisms” than (25bi) since the *Agree* relation between *quod* and its antecedent is lost.

Step (c) occurs in Romance since Romance *que* is analysed as a complementiser (Kayne 1976:259, 1984:104):



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Such is the grammaticalization of Romance *que*, and it conforms to R & R's “simplicity”.

Section 3.3: Latin/Romance prepositional complementisers:

No one has yet discovered the Latin origins of Romance prepositional complementisers, especially since prepositional infinitives are not attested in Latin. Nonetheless, it is argued that Latin prepositional gerunds/gerundives are replaced by prepositional infinitives in Romance (Schulte 2007:79, 87-90, 106-109, Beardsley 1921:97-99, 106-108, 150-153). The earliest example of “verbs of considering” selecting a prepositional gerund/gerundive is in the passive:

- (26ai) rati-o ad host-ium
 method.FEM-NOM.SG to enemy-GEN.PL
 impet-us perpetu-o
 attack-ACC.PL continuous-ADV
 repell-end-os
 ward.off-GERUNDIVE-ACC.PL
 excogit-at-a
 devise-PERF.PTCP.PASS-FEM.NOM.SG
 ‘... the method is devised in order to ward off the
 enemies’ attack continuously.’⁹
 (Vitruvius, *Architectura* 1.3.1) (80-15 BC)

⁹ According to Baldi (2002:406) and Schulte (2007:89-90), *ad* + gerunds/gerundives expresses purpose and are purpose adjunct clauses.

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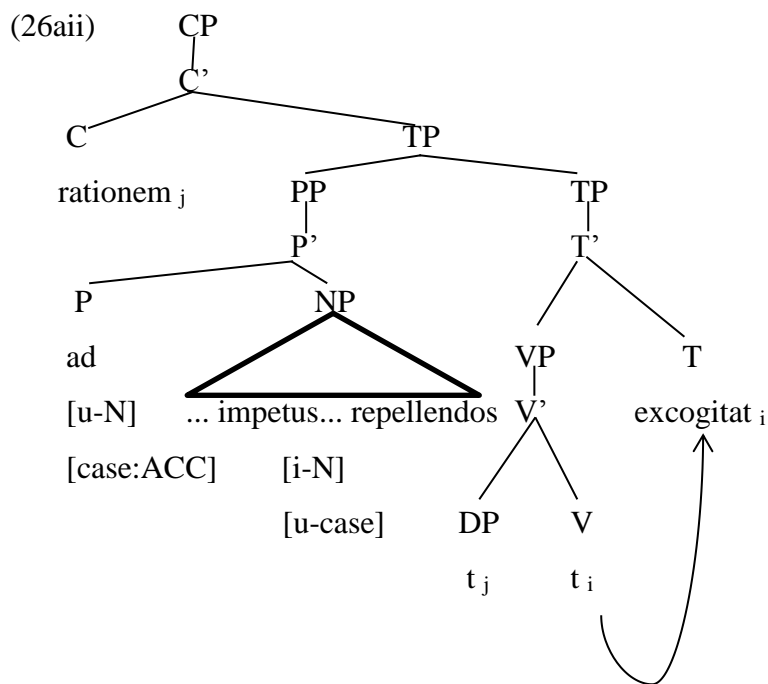
The active would be:

(26aii) *ration-em ad host-ium
 method.FEM-ACC.SG to enemy-GEN.PL
 impet-us perpetu-o
 attack-ACC.PL continuous-ADV
 repell-end-os
 ward-GERUNDIVE-ACC.PL
 excogit-at
 devise-PRES.3SG
 ‘... he devises the method in order to ward off the
 enemies’ attack continuously.’

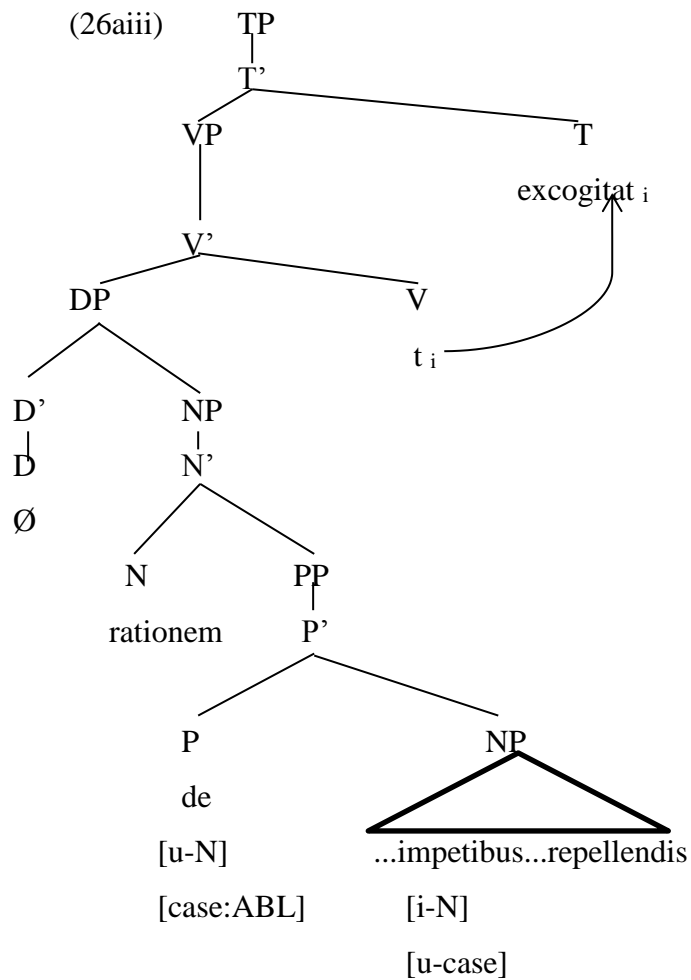
One can reconstruct a parallel construction with *de* +
gerund/gerundive modifying the direct object (*rationem*) with *de*
meaning ‘about’ (Beardsley 1921:97-99):

(26aiii) *ration-em de host-ium
 method.FEM-ACC.SG about enemy-GEN.PL
 impet-ibus perpetu-o
 attack-ABL.PL continuous-ADV
 repell-end-is excogit-at
 ward-GERUNDIVE-ABL.PL devise-PRES.3SG
 ‘... he devises the method about warding off the
 enemies’ attack continuously.’

As Latin prepositions assign morphological case to their nominal complements, there is an *Agree* relation between them:



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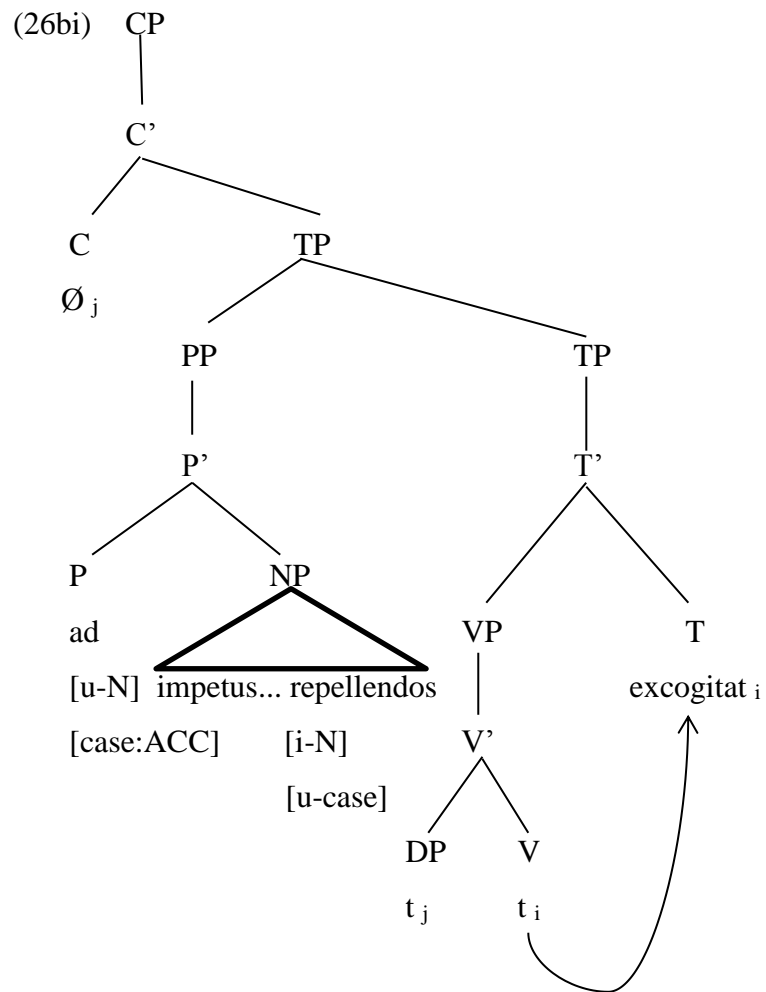
One could alternatively analyse these prepositional gerunds/gerundives as complements of the main verb (*excogitat*), like Romance prepositional complementisers. However, as

gerunds/gerundives have nominals endings (*ad... impet-us... repellend-os, de... impet-ibus... repellend-is*), the *Agree* relation between the prepositions and the gerunds/gerundives is unambiguous. Furthermore, there is an explicit direct object in (26a) (*rationem*). These prepositional gerunds/gerundives must therefore be analysed as PP-adjuncts. This is step (a).

Step (b) occurs when the direct object is omitted, which is possible in Latin, since Latin allows null arguments (Ledgeway (2011:432-433), Vincent (2000:38-40, 43ff)). One can therefore reconstruct the following:

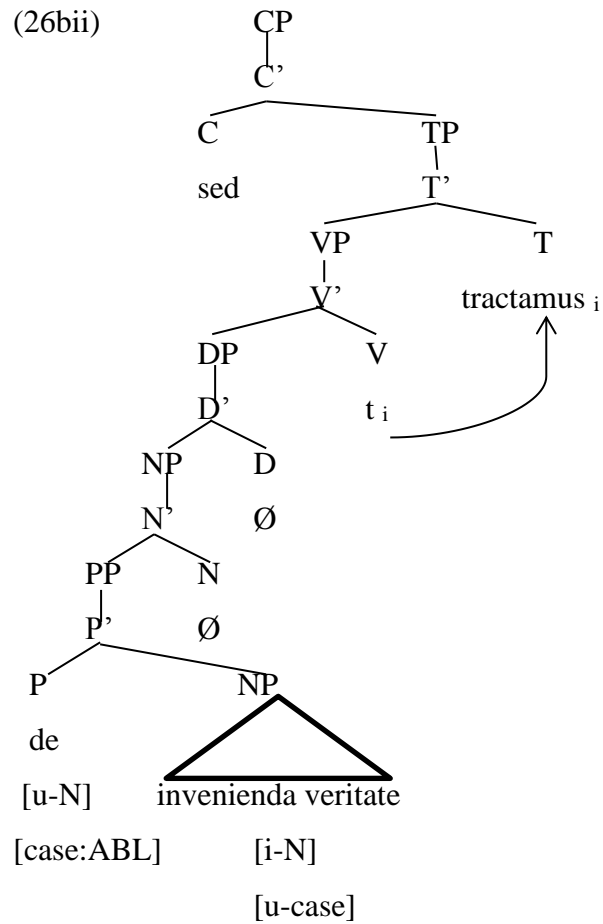
- (26bi) * \emptyset ad host-ium
 \emptyset to enemy-GEN.PL
 impet-us perpetu-o
 attack-ACC.PL continuous-ADV
 repell-end-os excogit-at
 ward-GERUNDIVE-ACC.PL devise-PRES.3SG
 ‘... he is devising (something) in order to ward off
 the enemies’ attack continuously.’

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As for *de*-gerund/gerundive, there is an example in Augustine (354-430 AD) where the main verb is construed with an empty object:

(26bii) sed de inveni-end-a
 but about find-GERUNDIVE-ABL.SG.FEM
 veritat-e tract-amus
 truth-ABL.SG.FEM deal-PRES.1PL
 ‘... but we are considering (something) about
 finding the truth.’ (*Academicos* 3.14.30)



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When the prepositional gerunds/gerundives are replaced by
prepositional infinitives, one can reconstruct the following:

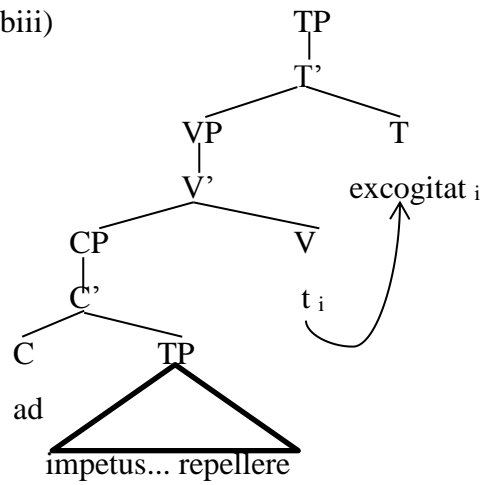
(26biii) * \emptyset ad host-ium
 \emptyset to enemy-GEN.PL
 impet-us perpetu-o
 attack-ACC.PL continuous-ADV
 repell-ere excogit-at
 ward-INF devise-PRES.3SG
 ‘... he is devising (something) in order to ward off
 the enemies’ attack continuously.’

(26biv) sed de inven-ire
 but about find-INF
 veritat-em tract-amus
 truth-ACC.SG.FEM deal-PRES.1PL
 ‘... but we are considering (something) about
 finding the truth.’

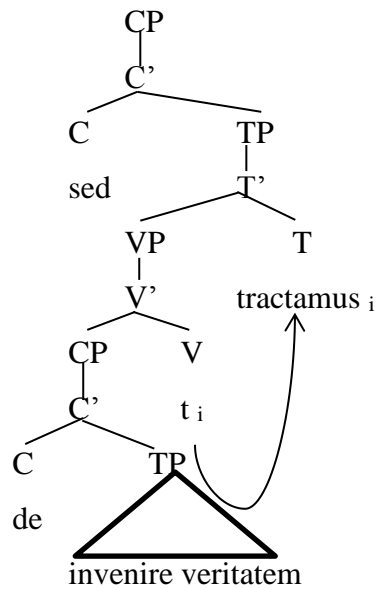
Since Latin/Romance infinitives do not have nominal endings, the
Agree relation between the preposition and its complement is no
longer guaranteed. Furthermore, as infinitives are ambiguous
between nouns and clauses, *de* and *ad* could be re-analysed as
complementisers (C) selecting infinitival TPs. These prepositional

infinitives would be re-analysed as CP-arguments of the main verb in place of the empty argument:

(26biii)



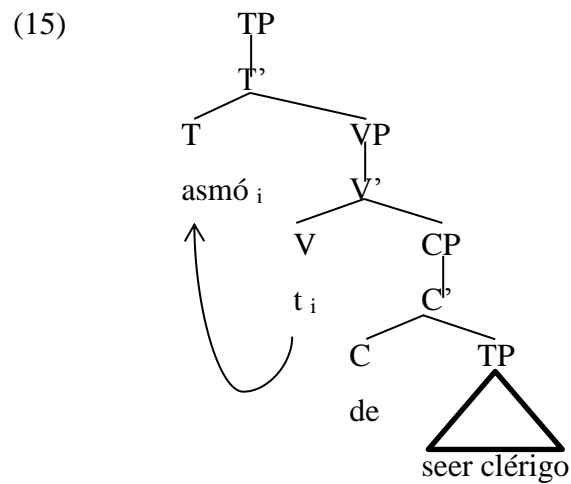
(26biv)

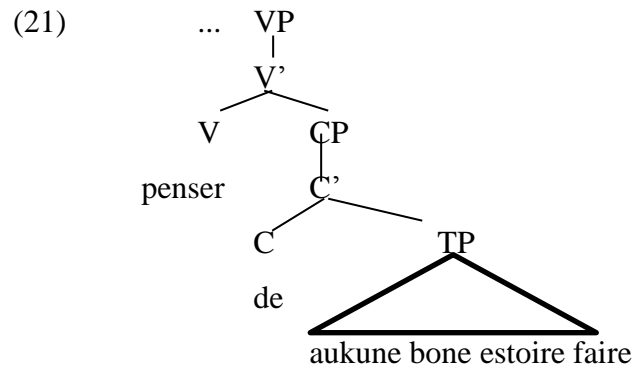
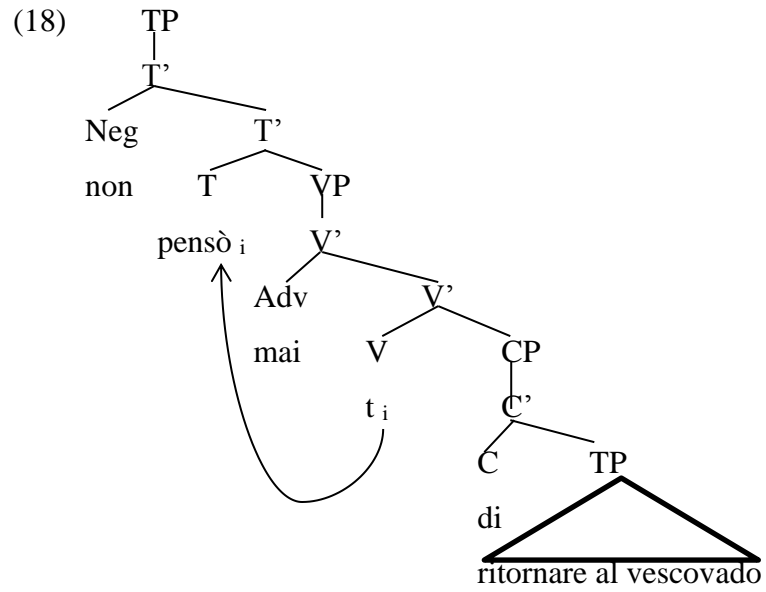


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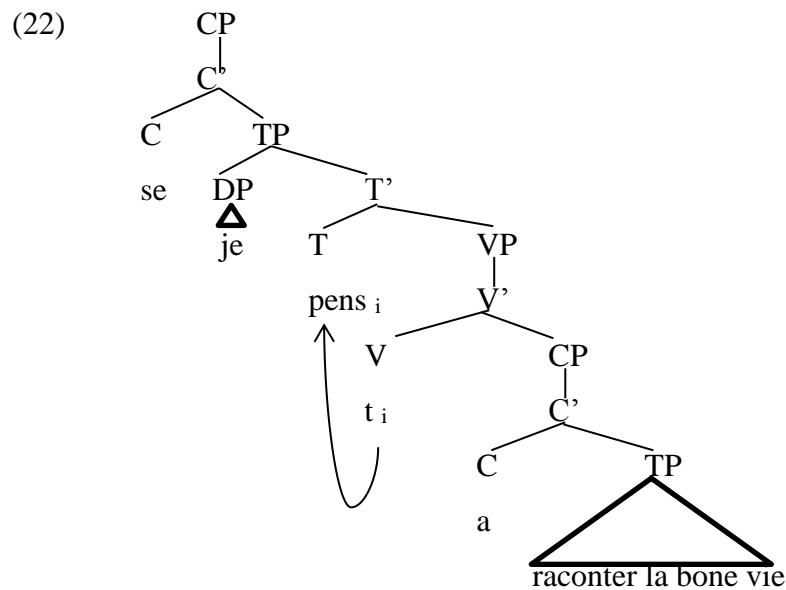
26biii) and 26biv) have fewer ‘feature syncretisms’ than 26bi) and 26bii), since the *Agree* relation between the preposition and its complement is lost.

Step (c) occurs in Romance where such prepositional infinitives are analysed as CPs:





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Romance prepositional complementisers therefore also conform to R & R's 'simplicity'.

Section 4: cross-linguistic distribution and V & B (2010):

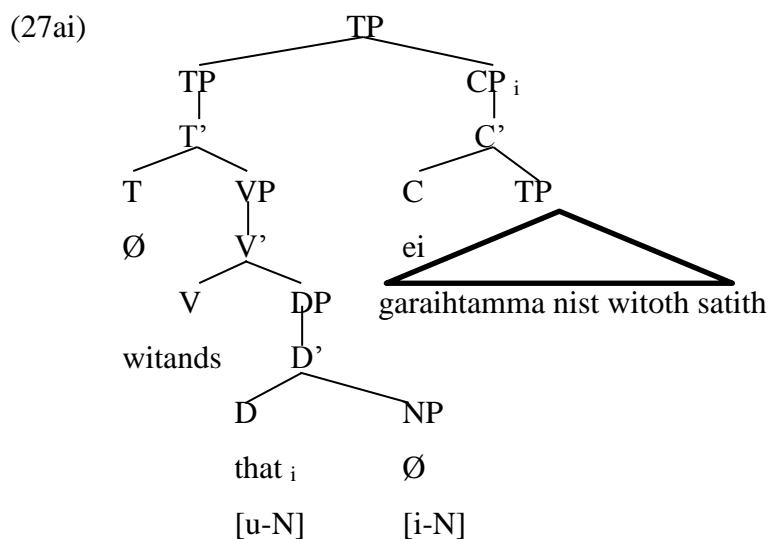
V & B (2010) argue that formalism and functionalism should not be seen as mutually exclusive in explaining language change. Formalist approaches are said 'to model this data (grammaticalization) in terms of the innate asymmetries of Universal Grammar (R & R's 'simplicity' - see section 1.3)...' (my brackets) (V & B 2010:280), while functionalism 'seeks to explain these diachronic patterns (cross-linguistic distribution of

grammaticalization) with reference to discourse and interpersonal communication strategies (the ‘cues’- see section 1.3)...’ (my brackets) (V & B 2010:280). This hypothesis can be verified by comparing cross-linguistic examples of grammaticalization.

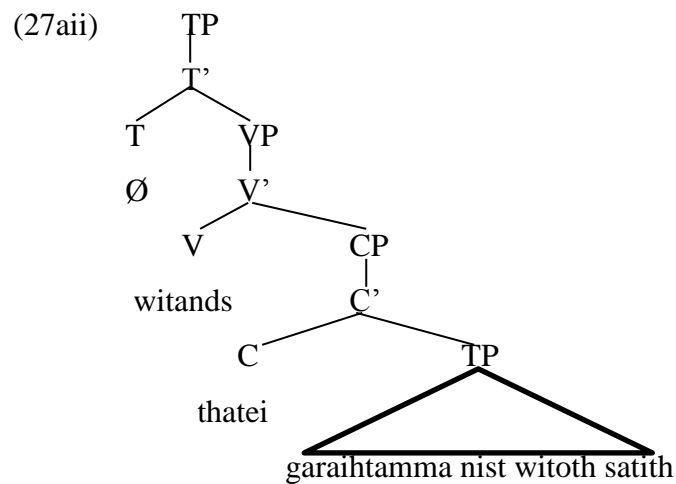
Section 4.1: English *that* vs Romance *que*:

Step (a), like (25a), has an argument pronoun in the matrix clause in apposition to a dislocated clause (R & R 2003:116-119):

- (27a) wit-andS that-ei garaiht-amma
 know-PRES.PTCP DEM.PRO-C the.just-DAT
 n-ist witoth satith
 NEG-is law made
 ‘knowing this, namely that the law is not made for
 the just.’ (R & R 2003:118-119)



Alternatively, one could analyse the entire CP as the direct object of the main verb (*witands*). *thatei* is hence re-analysed as one word and functions as the complementiser of the CP-argument (R & R 2003:118-119):



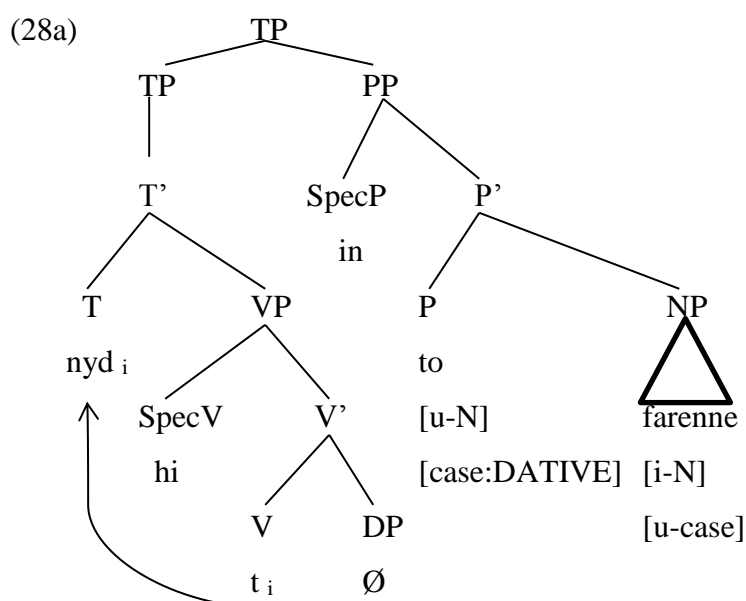
(27aii) contains fewer ‘feature syncretisms’ than (27ai) since the *Agree* relation between the demonstrative pronoun and the dislocated clause is lost.

Step (b), like (25b), involves the weakening of the pronominal nature of the pronoun, since *that* in (27) does not have an explicit nominal complement and need not be analysed as a demonstrative pronoun.

Section 4.2: English *to* vs Romance *ad*:

English *to*-infinitives, like Romance *ad*, also originate from *to*-PPs expressing purpose (R & R 2003:103-105, see note 9):

- (28a) *nyd hi inn to farene*
urge them in to go
 ‘urge them so that they would go in’
 (R & R 2003:105)

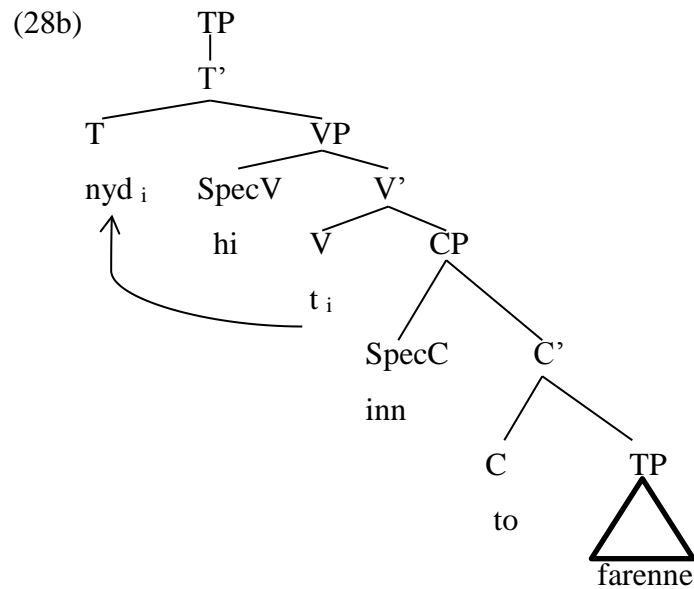


Since *nyd* ‘urge’ is a verb of command, it is possible to analyse the *to*-PP (*to farene*) as an indirect command and hence the CP-object of *nyd*. However, this is impossible in proto-Germanic since the complement of *to* has an etymologically nominal ending (*far-enne*) which makes the *Agree* relation between the preposition and its

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complement unambiguous. *to farenne* must still be analysed as a PP-adjunct. This is step (a).

Step (b) involves the morphophonological weakening of the nominal case system, since R & R (2003:106) argue that the ending *-enne* was no longer part of the case paradigm in Old English. *farenne* was therefore ambiguous between being a noun and a clause, and the *Agree* relation between *to* and its complement is no longer guaranteed. *to* could therefore be re-analysed as a complementiser selecting a TP complement (*farenne*) (R & R 2003:105-106):



(28b) contains fewer “feature syncretisms” than (28a) since the *Agree* relation between *to* and *farenne* is lost.

Section 4.3: Formalism vs functionalism:

R & R’s “simplicity”, as defined as “reduction of feature syncretisms”, is a formalist consideration, and the fact that it applies to all of these cross-linguistic examples accounts for their cross-linguistic distribution, given that ‘simpler’ structures are favoured in language acquisition (see section 1.3). Equally, the cross-linguistic distribution of “cues”, which are functionalist factors, is far from random: both Romance *que* (25a) and English *that* (27a) involve the use of a pronoun being the argument of the main verb and in apposition to a dislocated clause, and both undergo weakening of pronominal readings (25b, 27b). Both Romance *ad* (26a) and English *to* (28a) originate from *to*-PPs denoting purpose and are re-analysed as CP-arguments due to morphophonological weakening of nominal endings and empty arguments in the matrix clause (26b, 28b). PLD displays clear cross-linguistic trends, which contradicts Lightfoot (1999:166) (see section 1.3). Formalism and functionalism are therefore not mutually exclusive in explaining language change.

Conclusion:

The grammaticalization of Romance complementisers, both finite (*que*) and non-finite (*de*, *ad*) (sections 3.1, 3.2), conforms to

R & R's account of grammaticalization and language change (sections 1.3). A comparison between them and Germanic/English *that* and *to* (sections 4.1, 4.2) verifies V & B's argument that formalism and functionalism are not mutually exclusive in explaining language change (section 4.3).

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