

The grammaticalization of KPs: ‘configurationality’ and ‘structural simplification’:

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Abstract

Roberts and Roussou (2003) analyse grammaticalization within Minimalism, and Ledgeway (2011a, 2011b) deals with grammaticalization in Latin/Romance, also within Minimalism. Neither of them analyses the grammaticalization of KPs (case-markers) and so this is the theme of this paper. The grammaticalization of two very important Latin/Romance KPs (de marking genitive, ad marking dative) indeed conforms to both Robert & Roussou’s and Ledgeway’s hypotheses, since they originate from Latin PPs (de denoting separation, ad denoting direction), and within X’-theory complements (e.g. KPs) are ‘simpler’ than adjuncts (e.g. PPs) in that the former require fewer feature place-holders than the latter (Robert & Roussou (2003:106)), and so by Roberts & Roussou’s (2003:200-201) ‘structural simplification’ (reduction of ‘feature syncretisms’) PPs are grammaticalized as KPs. Robert & Roussou’s ‘structural simplification’ assumes configurationality and can only occur in configurational syntax, and so configurationality is a prerequisite for grammaticalization in Minimalism, which conforms to Ledgeway’s argument (2011a:405-434)) that the key syntactic change from Latin to Romance is the rise of configurationality, which gives rise to functional categories in Romance (Ledgeway (2011a:409)). Finally, as configurationality is a controversial notion, alternative scenarios are considered in the appendix where configurationality no longer has explanatory value, and ‘re-analysis’ is argued to be the key to understanding grammaticalization, since it is in itself sufficient to explain grammaticalization, with or without configurationality.

1 Introduction

Roberts & Roussou (R & R) (2003) analyse the grammaticalization of three functional categories in Minimalism: auxiliary verbs (T) (R & R (2003:chapter 2)), complementisers (C) (R & R (2003:chapter 3)) and determiners (D) (R & R (2003:chapter 4)). Ledgeway (2011a, 2011b) also analyses the grammaticalization of these three functional categories in Latin/Romance, and his outlook on functional categories is also generative, since he also posits these three functional categories as heads on the left edge of VP, TP and NP respectively (Ledgeway (2011a:409, 2011b:721), cf R & R (2003:5, 19-25)). Furthermore, Ledgeway connects all this to the rise of configurational syntax in (proto-)Romance (Ledgeway (2011a:386-389, 409ff)). There is another functional category that has not yet been analysed, namely functional prepositions (K). In this paper, I analyse the grammaticalization of this new functional category in Latin/Romance within Minimalism.

2 Generative models of language change

Lightfoot (1991:chapter 1, 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. Lightfoot (1999:66-68, 2006:10, 45)) identifies three components in language acquisition: 1) internal grammar (I-G) 2) universal principles and parameters of grammar

(UG) 3) the trigger experience in the form of primary linguistic data (PLD). I-G is formed by children scanning their PLD and setting the parameter values of their UG accordingly (Lightfoot (1991:1, 1999:66-67, 2006:10, 45)):

- a) Linguistic triggering experience (genotype → phenotype)
- b) Primary linguistic data (Universal Grammar → internal grammar)

Language change, therefore, lies in I-G and is the result of different parameter settings between generations of speakers (Lightfoot (1999:101ff, 2006:88-89)). As UG is a genetic constant, the source for language change lies in the PLD and how it is scanned and re-analysed by children (Lightfoot (1999:66-68, 178-179, 225, 2006:11-2, 87-90)).

Lightfoot (1991:163-173, 1999:180-204, 264-266, 2006:13-14, 90-111, 161-165) further asserts that language evolution is random, yet grammaticalization occurs cross-linguistically (see Heine and Kuteva (2002)) and is hence a clear counter-example. R & R introduce to Lightfoot's model a learning device in language acquisition that chooses the 'simpler' alternative in re-analysis (R & R (1999:1020-1022, 2003:14-17), Clark and Roberts (1993:313-319)), and since grammaticalization always leads to 'simpler' structures, it is a natural kind of change that can occur cross-linguistically (R & R (2003:2-7)).¹ Examples of grammaticalization are therefore 'basins of attraction' within the possible space of parametric variation and change (R & R (2003:4), van Gelderen (2011:4)), and R & R (2003) define 'simplicity' as the reduction of 'formal feature syncretisms', which are defined as 'the presence of more than one formal feature in a given structural position: H [+F, +G...]' (R & R (2003:201), Roberts (2010:49)). For the rest of this paper, I test R & R's hypotheses with the grammaticalization of Latin/Romance functional prepositions.

3 Functional prepositions

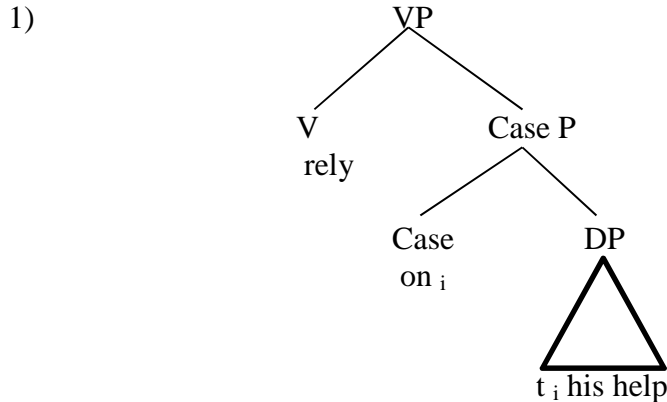
Both generative and non-generative models distinguish two types of prepositions: lexical and functional (Cinque (2010:3-11)). Huddleston et al. (2002:647-661), which is non-generative, defines functional² prepositions in English as those that are part of the subcategorisation of the head predicate e.g. *they disposed of the box* where *of* is obligatorily selected by the head predicate *dispose* (**they disposed the box*) and cannot co-vary with other prepositions: **they disposed at/below/on/through/under the box* (Huddleston et al. (2002:647)). This is a contrast to lexical prepositions which display lexical meaning through spatial co-variance with other prepositions: *put it under / above / near the table* (Huddleston et al. (2002:647)).³

¹ It is not clear whether this learning device is part of UG, since while Vincent & Borjars (2010:280, 293) consider it as part of UG, van Gelderen (2011:9) attributes it to Chomsky's 'third factor principles' i.e. principles that are not specific to the faculty of language (UG) (Chomsky (2005:6, 2007:3)). Either way this learning device is present in Minimalism and plays a prominent role in the Minimalist framework of grammaticalization (van Gelderen (2011:4)).

² Huddleston et al. (2002:647) actually call them 'grammaticised prepositions', but since 'grammaticised' is synonymous with 'grammaticalised' (Campbell and Janda (2001:94)), these prepositions can be regarded as the results of grammaticalization, which produces 'functional' elements in generative grammar.

³ As spatial meaning is essential to prepositions (Cinque (2010:3, 5, 7-11)), the lack of it in functional prepositions makes them semantically weaker than lexical ones (Huddleston et al. (2002:647), Abraham (2010:261-3)). If such functional prepositions are indeed derived from lexical ones, this is a case of 'semantic bleaching'. Both 'semantic bleaching' and 'lexical > functional' are diagnostic traits of grammaticalization (Campbell (2001:118-121, 124-141)).

Huddleston et al.'s definitions converge with the generative definition that functional prepositions are governed by their head predicates (Abraham (2010:261), Koopman (2010:28 fn. 7, 61), Rauh (2002)). As such they are markers of the Case⁴ relation(s) between the head predicate and its complement(s) (Abraham (2010:261-272), Terzi (2010:205), Cinque (2010:7)). Furthermore, their lack of spatial co-variance with other prepositions is due to the fact that they are markers of Case relations that are non-spatial (Abraham (2010:261, 272)) e.g. English *rely on* (Abraham (2010:272)), whose complement is non-spatial and so *on* is obligatorily selected by the head verb *rely* and does not co-vary with other prepositions (Huddleston et al. (2002:660)). English *on* is therefore regarded as a functional preposition (Abraham (2010:272), Huddleston et al. (2002:660)):



Functional prepositions are represented as K(case) in generative grammar (Svenonius (2010:128-133, 155)),⁵ which is the functional projection for morphological case (van Kemenade and Vincent (1997:18-21)). This is supported by the fact that such functional prepositions occupy syntactic functions that often correspond to morphological case in other languages (Abraham (2010:261-3, 272), Huddleston et al. (2002:601)):

2) milit-es	Graec-i	super-at-i
soldier-NOM.PL	Greek-NOM.PL	overcome-PERF.PTCP-NOM.PL
sunt	Roman-is	
be.PRES.3PL	Roman-ABL.PL	

'The Greek soldiers were beaten by the Romans (=Romanis).' (my brackets)
(Latin, in Abraham (2010:272))

In 2), *Romanis* has ablative case (-is) and is the agent of the head predicate (*superati sunt*), which is non-spatial (Blake (1994:33)). English preposition *by* in *by the Romans* is equivalent to the Latin ablative case and can hence be regarded as a functional preposition (Huddleston et al. (2002:601)).

However, equivalence to morphological case does not necessarily entail that the preposition in question is a K, since there is a distinction between grammatical and semantic cases with the former corresponding to non-spatial semantic roles and Case relations and the

⁴ In this paper, I follow the generative tradition in using 'Case' to denote abstract case, i.e. the syntactic relation between a head predicate and its complements, and 'case' for morphological case, both of which do not necessarily coincide with each other since not all languages have morphological case while Case is held to be universal (Lightfoot (1999:114)). Morphological case is therefore a sufficient but not a necessary condition for Case. I also follow Vincent and van Kemenade (1997:17) in equating Case with grammatical relations (SUBJECT, OBJECT and OBLIQUE) (Butt (2009a:36ff)).

⁵ In Svenonius (2010:130-131, 148, 155)), the use of *of* in English PPs like *outside of the house / in front of the house*, which is functional given that it is part of the complement of lexical prepositions (*outside, in front*) and does not co-vary with other prepositions (Huddleston et al. (2002:658-659)), is represented as K.

latter to spatial ones (Blake (1994:2, 32-35)). It is therefore necessary to make sure that the Case relations / morphological cases in question really are grammatical in being non-spatial.⁶
 In the next section, I apply these distributional criteria to Latin/Romance.

4 Latin/Romance

4.1 Latin/Romance functional prepositions

From Latin to Romance, there are two prepositions that mark semantic roles and Case relations that are non-spatial and correspond to earlier Latin morphological cases, namely *de* marking the possessor of nouns and thus marking the OBLIQUE relation between the head noun and its complement (i.e. the possessor),⁷ which corresponds to the Latin genitive of possession (3) (Salvi (2011:338-343)); *ad* marking the recipient of three-place verbal predicates and thus marking the OBJECT relation between the head verb and its indirect object, which corresponds to the Latin dative of recipient (4) (Salvi (2010:338-343)). Both of these two Cases/cases are non-spatial and are classified grammatical by Blake (1994:32-35):

3) s-a mákkina de Juanne
 DEF.ART-FEM.SG car.FEM.SG of Juanne
 ‘The red car of Juanne.’ (Sardinian, in Ledgeway (2011a:442))

4) les teng-o que regal-ar
 them.DAT have-1SG.PRES that give-INF
 a los niñ-os
 to DEF.ART.MASC.PL child-MASC.PL
 la bicicleta nuev-a
 DEF.ART.FEM.SG bicycle.FEM.SG new-FEM.SG
 ‘I have to give the children a new bike.’ (Spanish, in Ledgeway (2011a:436))

Ledgeway (2011a:396-401, 406-408, 440-442) argues that (proto-)Romance is strictly configurational and has strict positions for complements of both nouns and verbs, namely postnominal and postverbal respectively, given that (proto-)Romance is head-initial (Ledgeway (2011a:440ff)). Examples like 3) and 4) should be represented configurationally:

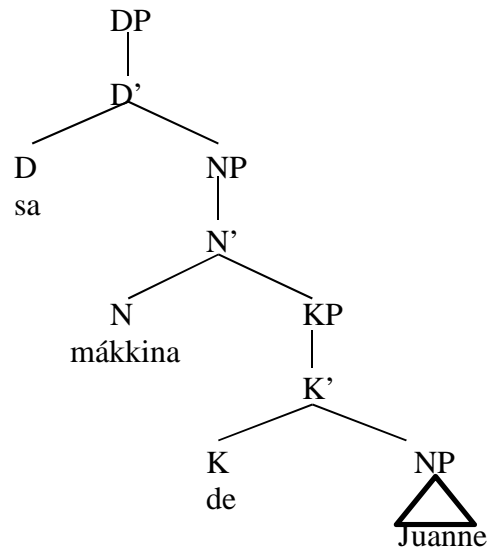
⁶ There are some prepositions in Latin which are functionally equivalent to Latin cases but are lexical nonetheless, since they have clear spatial meanings e.g. locative / *in*-PP (Luraghi (2010:21ff)):

1) non in hort-is aut suburban-is su-is,
 not in country.seat-ABL.PL or suburban.villa-ABL.PL their-ABL.PL
 sed Neapol-i, in celeb-errim-o oppid-o
 but Naples-LOC in crowded-SUPERLATIVE-ABL.SG town-ABL.SG
 ‘... not in their country seats or their suburban villas, but in Naples, a very much-frequented town.’ (Cicero, *Rabirius Postumus* 26-27)

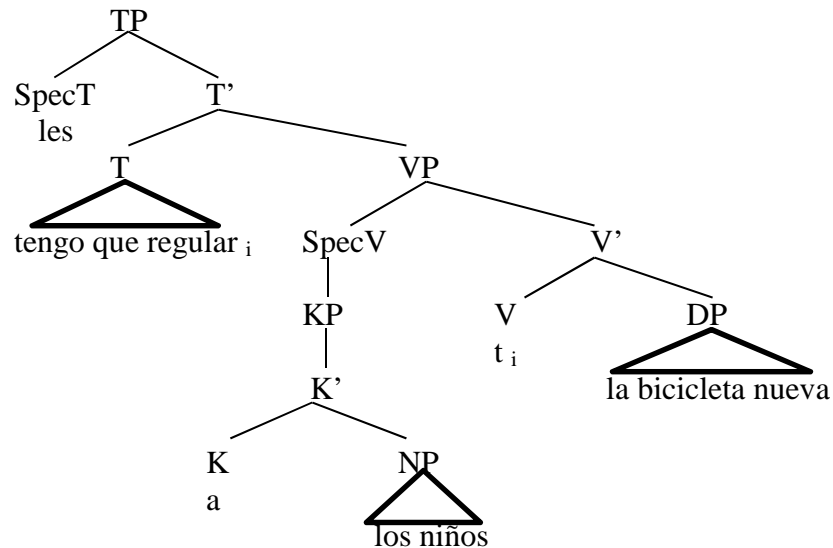
Here the *in*-PPs (*in hostis aut suburbanis suis... in celeberrimo oppido*) are functionally equivalent to the locative cased noun (*Neapol-i*), given that they are co-ordinated (*sed*) and apposed to each other, but since the Latin preposition *in* and the Latin locative case both have clear spatial meanings (Blake (1994:35)), these *in*-PPs cannot be classified as functional or as KPs.

⁷ Nouns tend only to assign OBLIQUE relations to their complements, unlike verbs and prepositions which can assign SUBJECT and OBJECT relations to their complements (Blake (1994:60-61)).

3)



4)



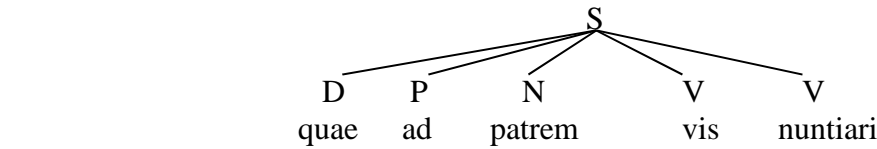
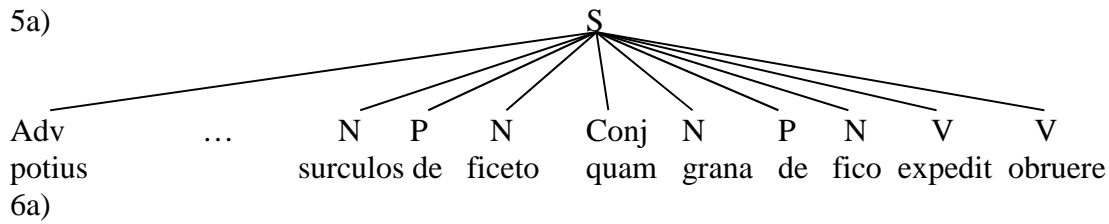
4.2 the grammaticalization of Romance functional prepositions *de* and *ad*

Both Latin *de* and *ad* have spatial (i.e. lexical) usages that are directly relevant for the grammaticalization of Romance *de* and *ad* (see note 3). Latin *de* denotes ‘separation’ and is hence a lexical preposition (5) (Väänänen (1981:90-94), Adams (2011:267-268)):

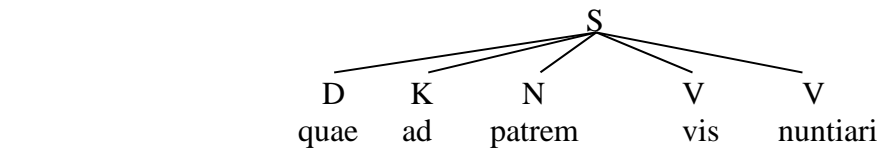
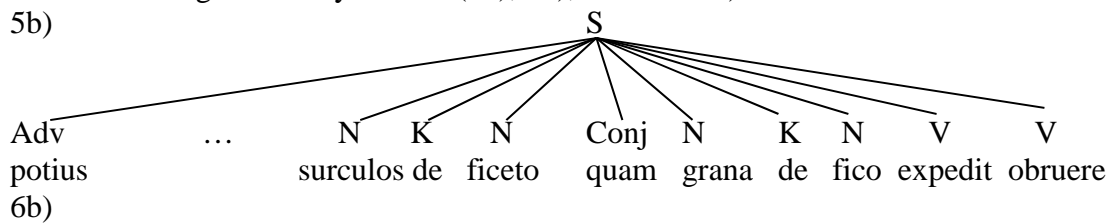
5) potius	...	surcul-os
rather		shoot-ACC.PL
de	ficet-o	
DE	fig.plantation-ABL.SG	
quam	gran-a	de
than	seed-ACC.PL	DE
exped-it		obru-ere
be.useful-3SG.PRES		destroy-INF

‘It is better to destroy the shoots from the fig-plantation rather than the seeds from the fig-tree.’ (Varro, *de re rustica* 1.41.5, 116 BC-27 BC)

In 5), *de* specifies the source (*ficeto* ‘fig-plantation’, *fico* ‘fig-tree’) from which the object (*surculos* ‘shoots’, *grana* ‘seeds’ respectively) is derived and hence has a clear spatial meaning, that of ‘separation’. *de* is therefore semantically very close to a possessive genitive,



As these PPs are re-analysable as KPs (see previous sub-section), they can be represented as KPs non-configurationally as well (5b), 6b), see note 10):



In a non-configurational framework such as Lexical Functional Grammar (LFG), semantic roles are part of the argument structure (a-structure) (Bresnan (2001:9-14, 19-22, 27-30)) while grammatical relations belong to the functional structure (f-structure) (Bresnan (2001:19-22, 26-30)), both of which operate independently and do not occupy fixed positions at constituent structure (c-structure) (Butt (2009b:59-62), Bresnan (2001:chapter 1)), when c-structure in a language as morphologically strong and syntactically free as Latin (see note 10) is classified as ‘flat’ (i.e. non-configurational) by Ledgeway (2011a:389-396, 401-405) (cf Bresnan (2001:5-8)), as represented in 5) and 6). As such, there is no difference in terms of ‘feature syncretisms’ between the c-structures in 5a) and 5b) and between those in 6a) and 6b), since their differences lie crucially not in their c-structures but in their a- and f-structures (7), 8): 7a) and 8a) have PP-adjuncts that correspond to the *ad*- and *de*-PPs at the c-structures in 5a) and 6a) respectively whereas 7b) and 8b) have KP-complements that correspond to the *ad*- and *de*-KPs at the c-structures in 5b) and 6b) respectively:

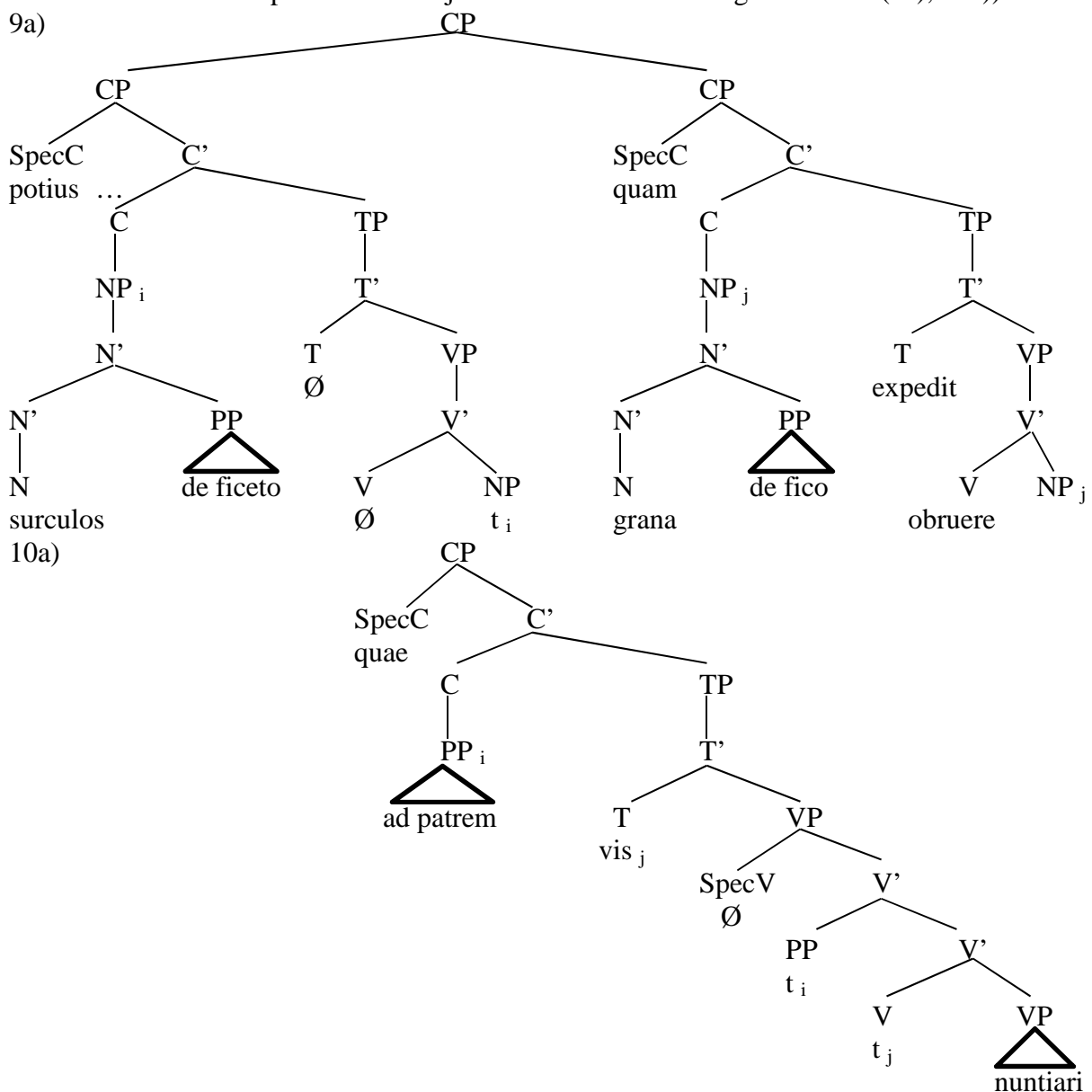
7a)	PRED	<i>surculos</i> <OBL>	PRED	<i>grana</i> <OBL>		
	OBL	[-]	OBL	[-]		
	ADJUNCT	[PRED	<i>de</i> <OBJ>]	ADJUNCT	[PRED	<i>de</i> <OBJ>]
		[OBJ	<i>ficeto</i>		[OBJ	<i>fico</i>
]]	
8a)	PRED	‘nuntiari <SUBJ, OBJ2>’, ¹¹				
	SUBJ	[PRED	<i>quae</i>]			
	OBJ2	[-]				
	ADJUNCT	[PRED	<i>ad</i> <OBJ>]			
		[OBJ	<i>patrem</i>]	

¹¹ As the infinitive is passive (*nuntiar-i* ‘to be announced’), its argument structure is modified with the SUBJ of the corresponding active (*nuntiare* ‘to announce’) suppressed and its direct object linked with SUBJ (Butt (2009a:38)). The indirect object (OBJ2) remains unaltered though.

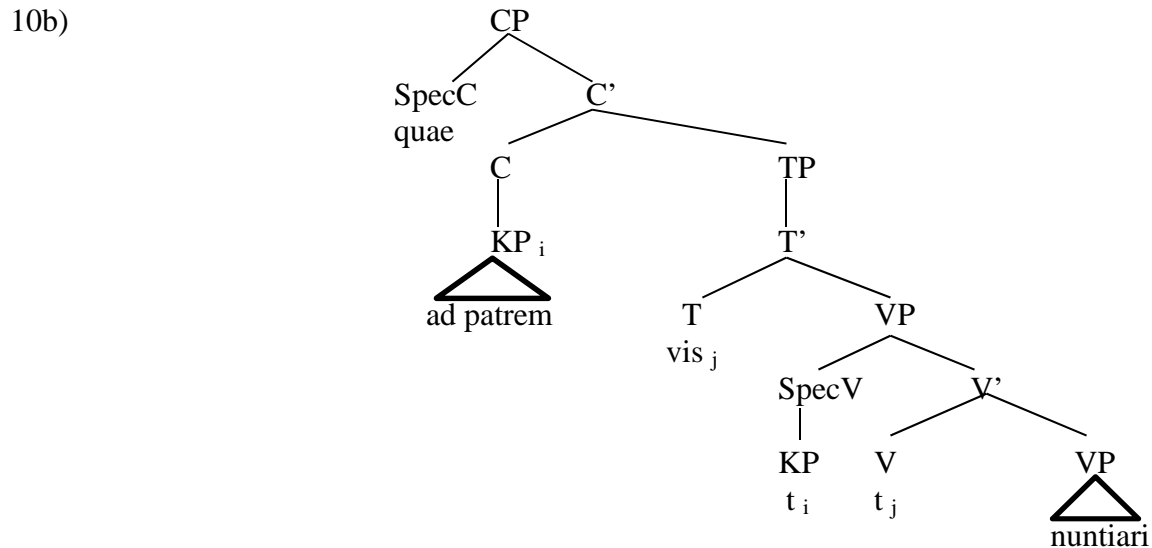
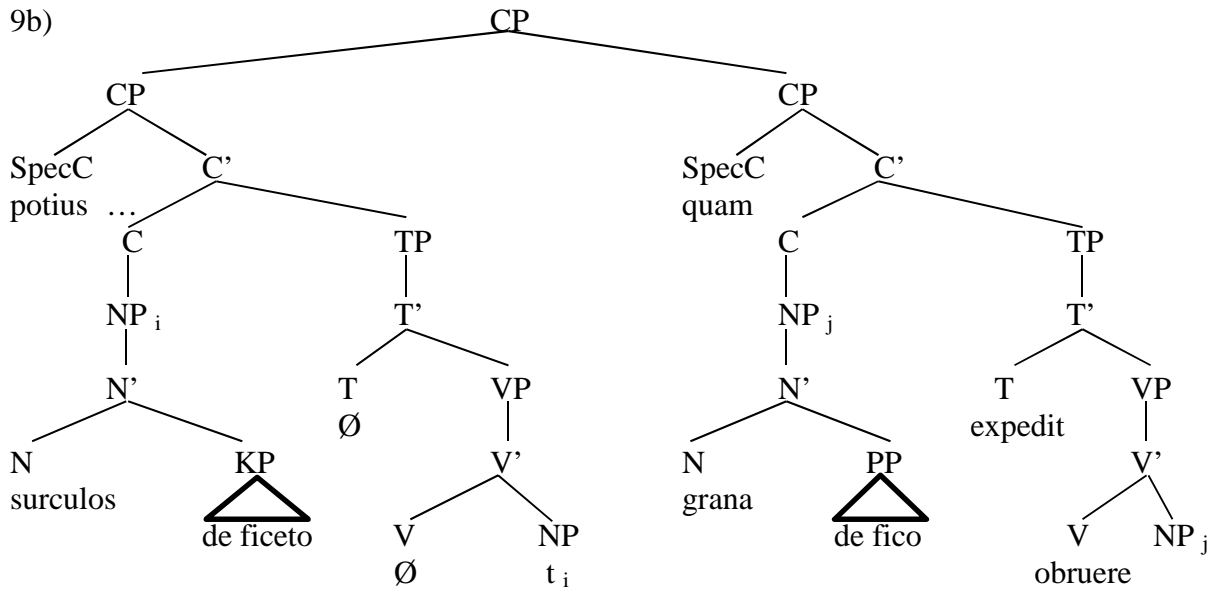
- 7b) PRED *surculos* <OBL> PRED *grana* <OBL>
OBL [PRED *de* <OBJ>] OBL [PRED *de* <OBJ>]
 [OBJ *ficeto*] [OBJ *fico*]
- 8b) PRED ‘nuntiari <SUBJ, OBJ2>’
SUBJ [PRED *quae*]
OBJ2 [PRED *ad* <OBJ>]
 [OBJ *patrem*]

Grammaticalization, being driven by ‘simplicity’ (reduction in ‘feature syncretisms’) cannot occur in a non-configurational language like Latin, which may be the reason why functional categories are generally absent in Latin (Ledgeway (2011a:387-389, 409)).

Alternatively, one can represent these Latin examples configurationally in anticipation of (proto-)Romance (see section 3.1). In a configurational framework like Minimalism, adjuncts and complements occupy different syntactic positions in accordance with X’-theory (Butt (2009a:38-39)), and *ad*-PPs and *de*-PPs, being spatial PPs, are not complements of their heads and should be represented as adjuncts i.e. sisters and daughters of X’ (9a), 10a):



When they are re-analysed as KPs, however, they are complements of their respective heads i.e. as sisters of the head and daughters of X’ (cf section 4.1, ex 3-4):



In 9b) and 10b), KPs, being complements, are ‘simpler’ (i.e. they have fewer ‘feature syncretisms’) than 9a) and 10a) respectively since PPs in the latter, being adjuncts, incur extra feature nodes and place-holders in X'-theory (R & R (2003:106)). The grammaticalization of *de* and *ad* hence comes through in configurational syntax, since complement-KPs are preferred to adjunct-PPs in language acquisition by being ‘simpler’.

5 Conclusion: ‘structural simplification’ and ‘configurationality’

The grammaticalization of Latin/Romance KPs therefore conforms to R & R’s framework since it displays ‘structural simplification’ i.e. reduction in ‘feature syncretisms’. It also conforms to Ledgeway’s account of the rise of configurationality in Latin/Romance historical syntax, since while *de*-PPs and *ad*-PPs (as well as genitive and dative KPs- see note 10) display free word order in Latin, their KP counterparts have strict positions in (proto-) Romance. Furthermore, a relationship can be established between R & R’s ‘simplicity’ and Ledgeway’s ‘configurationality’, since only in a configurational language like (proto-) Romance can there be a quantitative difference in ‘feature syncretisms’ between adjunct PPs and complement KPs. Configurationality is therefore a prerequisite for grammaticalization.

Appendix

1 ‘configurationality’?

While Ledgeway’s account of the rise of configurationality in (proto-)Romance is cogent, configurationality is a controversial issue whose existence is open to dispute (Ledgeway (2011a:432, fn54)). It might be dangerous to attribute explanatory value to configurationality, as I have done in this paper. One could alternatively take radical positions in both Minimalism and LFG and insist that either model applies universally to all languages, even typologically different ones like Latin and Romance. It is hence possible to argue that even Latin has syntactic configurations in accordance with Minimalism (Ledgeway (2011a:fn16)), which begs the question as to why grammaticalization did not happen sooner i.e. within the Latin period. The same question is entailed by radical LFG, since it is possible to reformulate R & R’s reduction of ‘feature syncretisms’ in terms of LFG i.e. complements in Minimalist configurations correspond to complements at f-structure in LFG, and complements can be argued to be ‘simpler’ than adjuncts not only in terms of the configurational design of X’-theory (9a, 9b, 10a, 10b)) but also at f-structure in LFG where adjuncts assume empty complements (7a, 8a)) whereas complements do not (7b, 8b)).¹² Why did the grammaticalization of Romance KPs not occur in Latin?

2 Re-analysis

As explained in section 2, UG is a genetic constant and so the key towards language change lies in the ‘re-analysis’ of the PLD. Hopper and Traugott (H & T) (1993:2-4) give the following steps for the ‘re-analysis’ of English *going to* > *gonna*: 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* (H & T (1993:2)) 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.’ (H & T (1993:3)) c) ‘the re-analysis is discoverable... only when the verb following *be going to* is incompatible with a purposive meaning, or at least unlikely in that context, for example, *I am going to like Bill, I am going to go to London...*’ (H & T (1993:3)). 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 (the absence of an overt directional phrase) where the old interpretation is weakened and the new one strengthened. b) is therefore the locus of ‘re-analysis’, and c) identifies the outcome.

In section 3.2, ex. 5) and 6), the semantic overlap between spatial PPs (*de* denoting ‘separation’, *ad* denoting ‘direction’) and KPs (*de* denoting genitive, *ad* denoting dative) is clear, yet there is no evidence that the original interpretation of *de* and *ad* as spatial Ps is weakened. Adams (2011:267-268) argues that in 5) *de* still retains its prepositional force of ‘separation’ and in 6) both Adams (2011:266) and Pinkster (1990:201-202) argue that *ad* still has a strong denotation of ‘direction’. 5) and 6) are therefore at best at stage a) of ‘re-analysis’ and as such the ‘re-analysis’ (hence change) cannot yet come through, even if Latin is already configurational and even if one allows grammaticalization to occur at f-structure.¹³

¹² All this ties in with the hierarchy of grammatical relations in LFG where complements are ranked higher than adjuncts (Butt (2009b:61-62), Dalrymple (2001:11-27)), and so one could argue that higher grammatical relations in LFG are ‘simpler’ than lower ones.

¹³ Adams (2011:266-268) gives all the evidence and chronology of the ‘re-analysis’, and the examples where the prepositional (i.e. spatial) force of both *de* and *ad* is weakened are considerably later than the Latin examples given in this paper (for *de*, the first examples are attested in the 4th century AD (Adams (2011:268), whereas for *ad*, they are attested in the medieval period).

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