

*On the use of the ablative of the gerund and the  
nominative of the present participle in Latin  
technical literature*

Giovanbattista Galdi – Jasper Vangaeveer



Université  
de Lille  
3 SCIENCES HUMAINES  
ET SOCIALES

# Introduction

- Republican and Classical Latin: the ablative of the gerund (AG) has an instrumental (or causal) force

(1) Ter. *Andr.* 17 *faciuntne **intellegendo**, ut nil intellegant?*

(‘don’t they show, by their understanding, that they understand nothing at all?’)

- Occasionally: semantic weakening

(2) Liv. 2,59,9 *consul, cum **reuocando** nequiquam suos persecutus esset, in pacato agro castra posuit*

(‘the consul, after he had vainly followed his men while calling them back, fixed the camp on a peaceful territory’)

# Introduction

- Imperial and Late Latin: the AG
  - Becomes more frequent and its use looser
  - Often occurs in contexts where one expects a present participle in the nominative case (NPP)
- Crucial development from a diachronic perspective: in the Romance languages, the gerund “became in effect a new present participle, ousting the latter [...] from its verbal function and confining it purely to an adjectival role” (Elcock 1960: III)

# Introduction

- This paper: comparison of the uses of the AG and of the NPP in a number of technical treatises (2<sup>nd</sup> c. BC - 6<sup>th</sup> c. AD)
- Special focus on two aspects:
  - The semantic and pragmatic relation between the gerundial/participial constructions and their matrix clauses (MC's)
  - The ordering pattern of gerundial/participial clauses with respect to their MC's (word order)

Author	Text	Domain	Chronology	Number of words
Cato	<i>De agri cultura</i>	Agriculture	2 <sup>nd</sup> c. BC	16.026
Varro	<i>Res rusticae</i>	Agriculture	2 <sup>nd</sup> -1 <sup>st</sup> c. BC	35.692
Celsus	<i>De medicina</i>	Medicine	1 <sup>st</sup> c. AD	104.017
Columella	<i>Res rustica</i>	Agriculture	1 <sup>st</sup> c. AD	109.177
Chiron	<i>Mulomedicina Chironis</i>	Veterinary medicine	4 <sup>th</sup> c. AD	65.580
Ps. Apuleius	<i>Herbarium</i>	Herbarium	4 <sup>th</sup> c. AD	18.725
Pelagonius	<i>Ars veterinaria</i>	Veterinary medicine	4 <sup>th</sup> -5 <sup>th</sup> c. AD	22.541
Palladius	<i>Opus agriculturae</i>	Agriculture	5 <sup>th</sup> c. AD	42.159
Vegetius	<i>Digesta artis mulomedicinae</i>	Veterinary medicine	5 <sup>th</sup> c. AD	48.409
Anthimus	<i>De obseruatione ciborum epistula ad Theodericum regem Francorum</i>	Cookery	6 <sup>th</sup> c. AD	4479

# Data

- All prepositionless AGs and all NPPs used as converbs
- Converbs: non-finite verb forms which function
  - Syntactically as the predicate of a non-finite clause subordinate to a MC
  - Semantically as an eventive, adverbial means for expanding the event expressed by their MC, as *smiling* and *leaning* in (3)

(3) *With a glass of wine in his hand, Paul stood **smiling** in the doorway, **leaning** slightly backward, his legs wide apart.* (Fabricius-Hansen & Haug 2012: 1)

Author	Number of converb AGs	Number of converb NPPs
Cato	1	0
Varro	18	44
Celsus	54	47
Columella	26	81
Chiron	36	94
Ps. Apuleius	5	11
Pelagonius	6	16
Palladius	14	41
Vegetius	30	62
Anthimus	4	3
<b>Total</b>	<b>194</b>	<b>399</b>

Century	Author	Percentage of converb AGs	Percentage of converb NPPs
2 <sup>nd</sup> BC – 1 <sup>st</sup> AD	Cato	51%	43%
	Varro		
	Celsus		
	Columella		
4 <sup>th</sup> AD – 6 <sup>th</sup> AD	Chiron	49%	57%
	Ps. Apuleius		
	Pelagonius		
	Palladius		
	Vegetius		
	Anthimus		
	Total	100%	100%



# Semantics & pragmatics. Theoretical framework

- The specific **semantic relation** that holds (generally) implicitly between the converb clauses and their MC (“adverbial relations”, “rhetorical relations” or “discourse relations”)
- The **information structural function** of the converb clauses with respect to their MC (based on Fabricius-Hansen & Haug 2012 and Haug 2012)

# Semantics: Theoretical framework. Discourse relations

- Generally: a discourse relation between a converb clause and its MC
- We distinguished 5 semantically coherent networks of discourse relations
  - (a) **Modal network:** similarity/comparison and manner/instrument
  - (b) **Temporal network:** anteriority, posteriority, simultaneity duration (accompanying circumstance) and simultaneity overlap (temporal framing)
  - (c) **Spatial network:** spatial frame
  - (d) **CCC (Cause-Condition-Concession) or logico-causal network:** cause/reason, condition, concession, result/consequence, purpose and contrast
  - (e) **Specifying network:** a further explanation of the matrix event

# Semantics: Theoretical framework. Information structure

- Starting point: the partition of a sentence in a theme and a rheme
- Haug (2012): the information structural function of non-finite clauses is to expand the rheme of their MC in three possible ways:
  - (a) They ELABORATE on the matrix event and are part of the rheme of their MC
  - (b) They FRAME the rheme of their MC
  - (c) They provide new information about the theme of their MC in a way similar to the MC itself (= INDEPENDENT RHEMES)
    - > Independent rhemes are independent on the rheme of their MC, but dependent on its theme

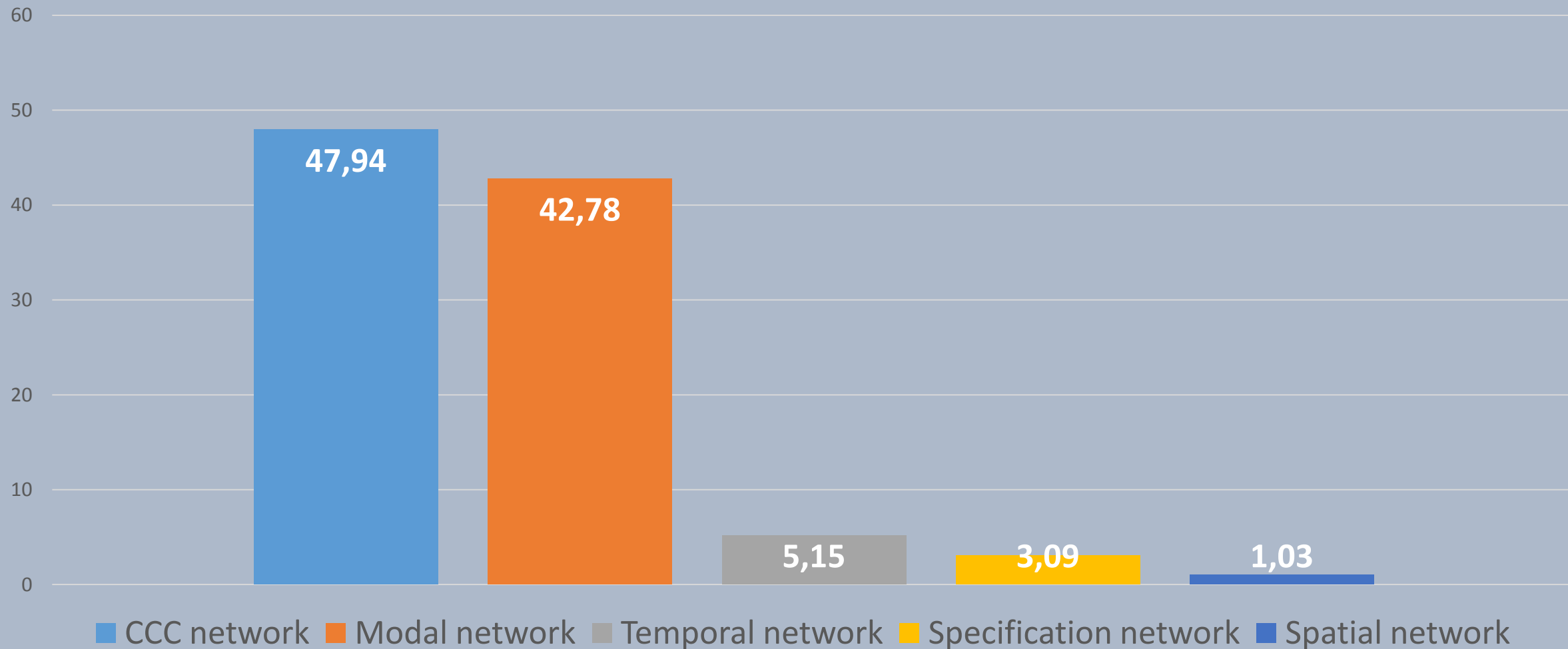
SEMANTICS		INFORMATION STRUCTURE	
Network	Discourse relation	Elaborating	Framing
Modal	Similarity/comparison		x
	Manner/instrument	x	
Temporal	Anteriority		x
	Posteriority		x
	Simultaneity duration	x	
	Simultaneity overlap		x
Spatial	Spatial frame		x
CCC	Cause/reason		x
	Condition		x
	Concession		x
	Purpose		x
	Contrast		x
	Result/consequence		x
Specifying	Specification	x	

# Discourse relations in our corpus

- Two preliminary remarks:
  - Analysis of each occurrence within its discourse context; in several cases it was very difficult to pin down the exact discourse relation of the AG/NPP
  - Whenever an AG/NPP construction was semantically ambiguous, *i.e.* allowing both a purely temporal interpretation and a semantically “richer” one (causal, conditional, concessive etc.), we generally opted for the latter

# Discourse relations between the AG and its MC

## The semantics of the AG



# Discourse relations between the AG and its MC

- Strong dominance of cause/reason (4) and manner/instrument (5)

(4) Veg. *mulom.* 2, 13, 2 *ne indignatio uulneris in neruos cerebrumque*  
***penetrando*** *periculum generet*

(‘lest the angriness of the wound, by penetrating into the nerves and brain, should create danger’)

(5) Varro *rust.* 1, 1, 2 *quoniam emisti fundum, quem bene* ***colendo*** *fructuosum*  
*cum facere uelis*

(‘since you have bought an estate and wish to make it profitable by good cultivation’)

- Our distinction of cause/reason and manner/instrument is generally based on the variable of intentionality

# Discourse relations between the AG and its MC

- No relevant differences emerge on the diachronic axis, although in earlier sources manner/instrumental appears to be more frequent, while cause/reason is slightly preferred in later texts
- Temporal instances of the AG: only 10 times (5% of the totals), and only in late sources
- Interestingly, 9 times out of 10 there are no syntactic constraints for the choice of the AG, because its subject is co-referent with the main one and the NPP could have thus been used

(6) Anthim. *praef.* p. 3,1 *si quis cabalicando et in labore festinando amplius potum praesumpserit*

(‘if someone drinks too much before riding his horse or hurrying about his business, then he will suffer pain when jolted on his horse’)



# Discourse relations between the AG and its MC

- Specification is very rare: 6 instances, 5 of which in Columella
- Here, the converb is mostly a verb of saying governing an object in the (in)direct speech and specifying the words of its MC, which is itself a semantically richer verb of saying (or a synonym)

(7) Colum. 3, 10, 18 *idque nobis poeta uelut surdis ueritatis inculcet **dicendo***  
"..."

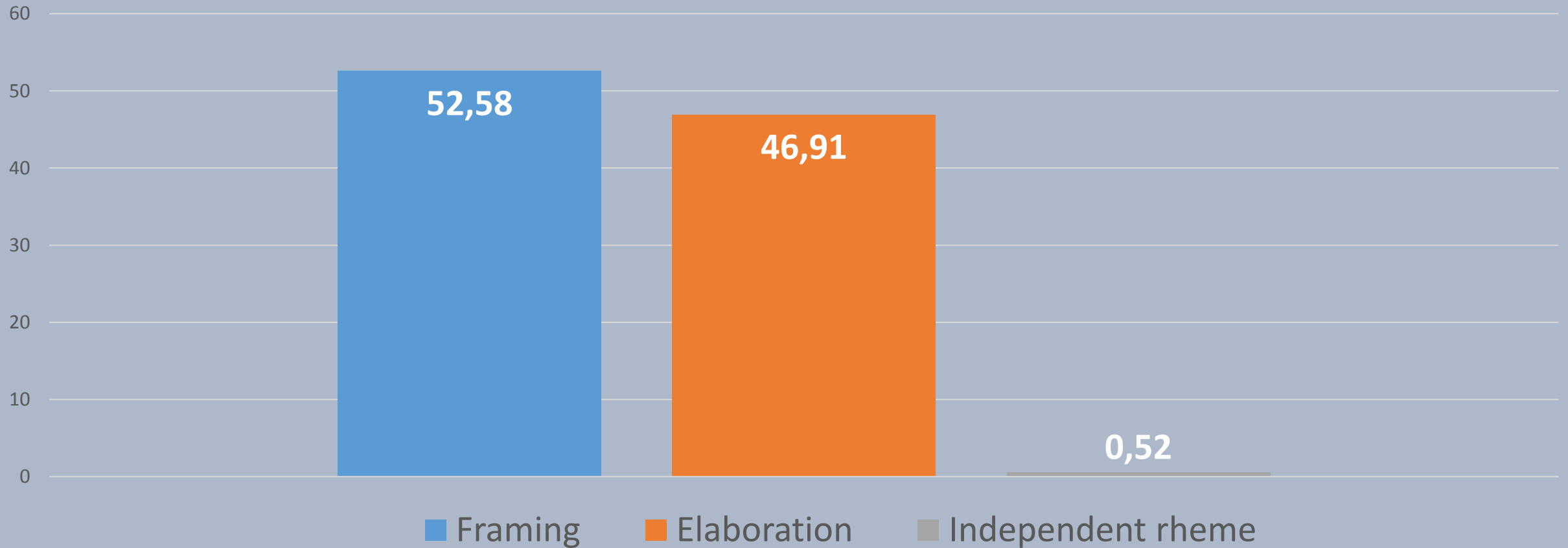
(‘and this the poet would impress upon us, as if we were deaf to the truth, in saying’)

- Space is found only twice

(8) Cels. 8, 1, 6 *in aure quoque primo rectum et simplex iter, **procedendo***  
*flexuosum*

(‘In the ear the passage is also at first straight and single, but as it goes further becomes tortuous’)

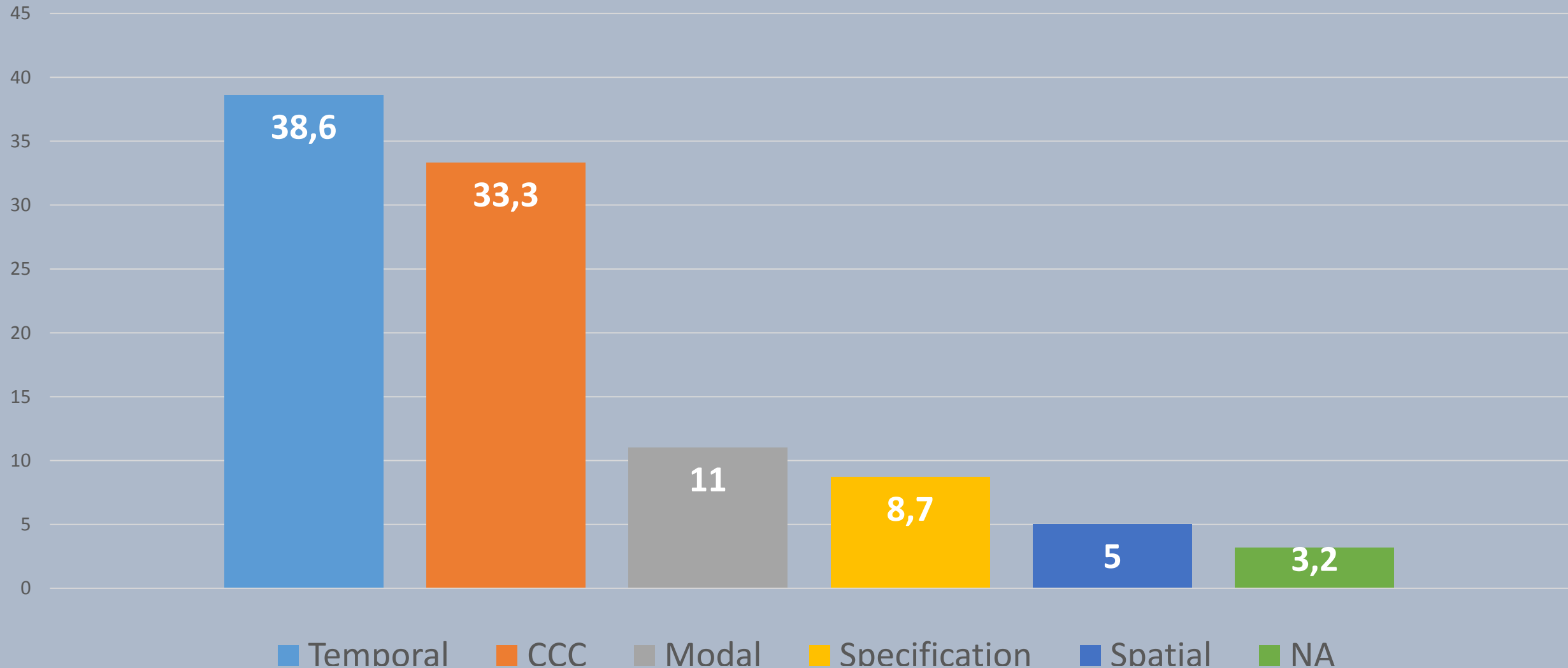
# Information structural function of the AG



(9) Chiron 855 *quod* (medicamentum) *in ea manu admittito et **mouendo** uti mihi uoles* eqs.  
(‘which you have to take in your hand and to shake before you use it for me’)

# Discourse relations between the NPP and its MC

## The semantics of the NPP



# Discourse relations between the NPP and its MC

- Clear dominance of the temporal network

(10) Cels. 2, 6, 7 *neque is seruari potest, qui sine ullo tumore **febricitans** subito strangulatur*

(‘It is impossible for a patient to be saved, who, having fever without any swelling, is suddenly choked’)

- In one third of these instances, the NPP expresses anteriority (the great majority is restricted to late sources)

(11) Pelagon. 132 *Post clysterem (equus) **ambulans** satis quiescat; sed prius uentrem calidaueris*

(‘after the injection, he should walk and then rest sufficiently’)

# Discourse relations between the NPP and its MC

- Together, cause/reason (12) and manner/instrument (13) amount to 45% of the NPPs (against 90% of the AGs)

(12) Cels. 4, 21, 147 (morbus) *et per aetatem saepe **repetens** sic cruciat*  
(‘and in course of time the disease often recurs so as to be a cause of suffering’)

(13) Pelagon. 24 *quod etiam Cappadoces **facientes** corpora equorum et nutriunt et augent*  
(‘by doing which the Cappadocians also nourish and increase the size of the bodies of their horses’)

# Discourse relations between the NPP and its MC

- Specification (14) and space (15), which are very rare with the AG, correspond to 9% and 5% of all NPPs respectively (higher frequency in earlier authors)

(14) Varro *rust.* 1, 1, 11 *tum de his rebus dicam **sequens** naturales diuisiones*

(‘I shall treat of the subject, following the natural divisions’)

(15) Cels. 4, 1, 3 *eaque (arteria) **descendens** ad praecordia cum pulmone committitur*

(‘descending to the praecordia, it makes a junction with the lung’)

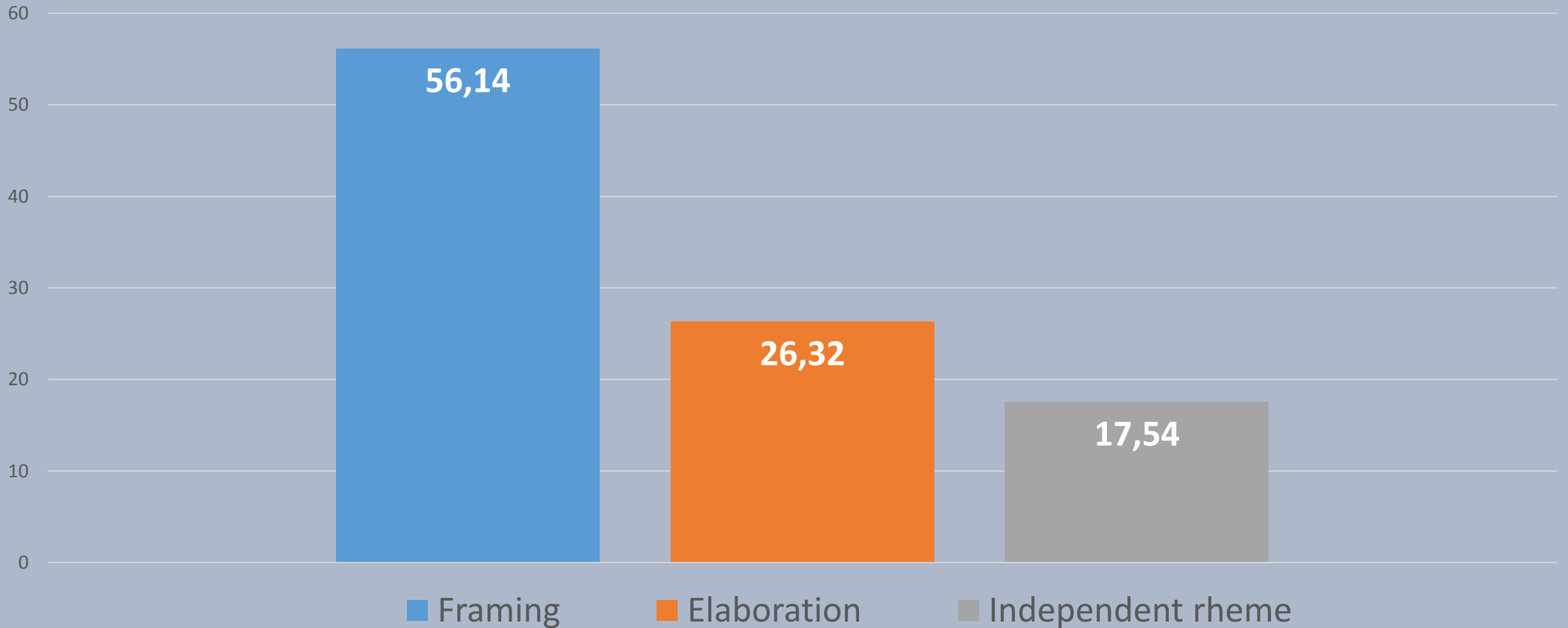
# Discourse relations between the NPP and its MC

- In 3% of the cases, there is no discourse relation between the NPP and its MC
- This is especially the case in passages where symptoms of an illness are described or where several sequential instructions are given

(16) Varro *rust.* 3, 8, 2 *cibatui quod sit, obiciunt triticum siccum, in centenos uicenos turtures fere semodium, cottidie **euerrentes** eorum stabula, a stercore ne offendantur, quod item seruatur ad agrum colendum*

(‘As to food, dry wheat is given them, about a half-modius for 120 turtle-doves, and their quarters are swept out every day so that they may not suffer harm from the dung—and this is also kept for fertilizing the ground)

# Information structural function of the NPP





# Word order. Theoretical framework

- The ordering pattern of AGs and NPPs with respect to their MC depends on the strength of one of three competing functional and cognitive forces (Diessel 2005):

(a) **Processing** (cf. Hawkins 1994: 423): "linear ordering is subservient to constituent-structure recognition"

- The relative order of two constituents depends on the number of words between their heads in the parse string (= the recognition domain): the shorter the recognition domain, the easier the string is to process

# Word order. Theoretical framework

- The ordering pattern of AGs and NPPs with respect to their MC depends on the strength of one of three competing functional and cognitive forces (Diessel 2005):
  - (b) **Discourse pragmatics:** initial and final converb clauses have different discourse pragmatic functions
    - E.g. initial converb clauses usually organize the information flow in the ongoing discourse, providing a thematic ground or orientation for subsequent clauses
  - (c) **Semantics:** some converb clauses are more likely to precede (e.g. conditionals) or to follow (e.g. causals) their MC because of their semantics
- An additional element applying to temporal clauses is that of temporal iconicity

# Word order with the AG and the NPP

- Default order (based on the relative order of the AG/NPP itself and its matrix predicate): converb – MC (83% with the AG, 70% with the NPP)
- The subject of the converb:
  - Is normally (AG) or nearly systematically (NPP) coreferential with that of its MC
  - Is mostly unexpressed (whatever the relative position of the converb with respect to its MC)
  - When codified and shared, it generally precedes both predicates (S – converb – MC) and is only rarely found in between them or in final position

# Discussion. Word order and framing

- Tendency: framing converb – MC (in 90% and 86% of all AGs and NPPs respectively)
  - > Strong correlation between two variables, viz. the anteposition of converbs and their information structural function (framing); this is expected, since framing constituents typically occur sentence-initially
- Order MC – framing converb is very rare (in 10% and 14% of all AGs and NPPs respectively) and motivated mainly by processing principles
  - > The default force for word order in non-finite clause linkage in our corpus, as more generally in Latin, is discourse pragmatics, not processing principles or semantics

# Discussion. Word order and elaboration

- Tendency: elaborating converb – MC (75% and 61% of all elaborating AGs and NPPs respectively)
- Why? A combination of semantics and of the dominant word order pattern in Latin:
  - Usually, finite verbs are found at the end of the clause
  - Non-finite verbs preceding their MC are more clearly part of the finite construction (which is important in the case of elaboration converbs) than those which follow their MC, because postposed non-finite verbs are more easily understood as loose or independent events
- Order MC – elaborating converb is less frequent (in 25% and 39% of the elaborating AGs and NPPs respectively) and motivated mainly by processing principles

# Discussion. Word order and independent rhemes

- (AG: only one problematic instance)
- Independent rheme NPPs can be preposed or postposed
- **Preposed independent rheme NPPs** express two discourse relations:
  - Anteriority (iconicity of sequence)
  - Contrast (processing principles)

# Discussion. Word order and independent rhemes

- **Postposed independent rheme NPPs** express four discourse relations:
  - Anteriority (processing principles)
  - Posteriority (iconicity of sequence)
  - Contrast (very rare; processing principles)
  - Result/consequence (very rare; iconicity of sequence)

# Conclusions

Main results for the AG and the NPP in our corpus:

- **Information structure:** dominance of framing, more markedly with the NPP than with the AG; high frequency of elaboration with the AG; near absence of independent rhemes with the AG, whereas they account for about 18% of the NPPs
- **Semantics:** dominance of temporal and logico-causal networks with the NPP and of the logico-causal and modal networks with the AG
  - > The range of semantic values is wider with the NPP than with the AG and is relatively stable over the centuries (both converbs tend to keep their prototypical semantic force)
  - > The semantic bleaching of the AG is mostly found within the temporal network (5%, only in late sources), but occasionally occurs with the spatial (3%) and specification (1%) networks (both esp. in earlier sources)



# Conclusions

-> The NPP has a wider range of discourse relations than the AG and this central difference remains stable over the centuries

- **Word order:** both (a) framing and (b) elaborating AGs and NPPs tend to precede their MC; with (a), the dominating force for their ordering pattern is discourse-pragmatics, with (b) it is a combination of semantics and a general rule of word order in Latin

-> The postposition of AGs and NPPs is generally due to processing principles

-> Independent rheme AGs and NPPs behave quite differently: their ordering pattern is primarily motivated by the principle of iconicity of sequence, but it can be overridden by processing principles

*Thank you for your attention!*