### Evidence for "Underlying" XV Word Order in Early Old French

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### www.ling.upenn.edu/~kroch/handouts/digs16.pdf

### I. Statistical independence in word order patterns in Yiddish (Santorini 1993)

#### Noun Phrase Extraposition in Yiddish

### (1) ven der vatr nurt doyts leyen kan if the father only German read can

(2) ven der vatr leyen kan nurt doyts if the father read can only German

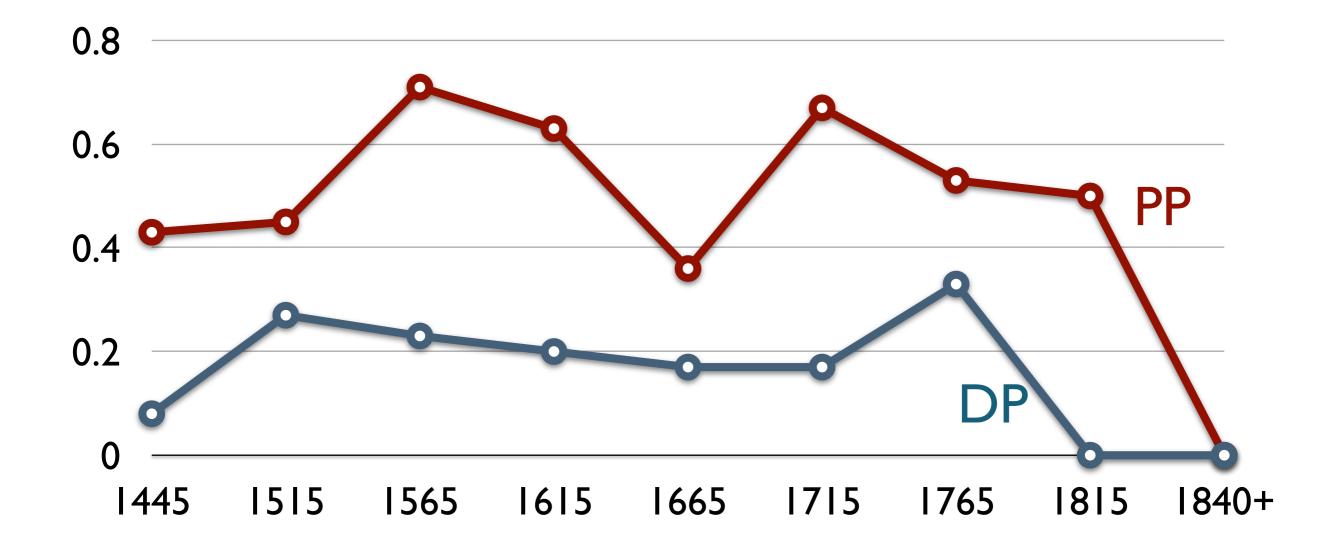
#### Prepositional Phrase Extraposition in Yiddish

- (3) dz ikh reyn fun der ashin verde that I clean from the ashes become
- (4) dz ikh reyn verde fun der ashin that I clean become from the ashes

### Frequency of DP and PP Postposing in the History of Yiddish (Santorini 1993)

Date	DP postposing			Р	P postposing	
	Postposed	Not postposed	freq.	Postposed	Not postposed	freq.
1400-1489	1	12	.08	9	12	.43
1490-1539	7	19	.27	13	16	.45
1540-1589	7	24	.23	52	21	.71
1590-1639	10	40	.20	39	23	.63
1640-1689	4	19	.17	17	30	.36
1690-1739	1	5	.17	6	3	.67
1740-1789	1	2	.33	8	7	.53
1790-1839	0	1	.00	1	1	.50
1840-1950	no INFL-final data		_	no INF	L-final data	_

### Graph of DP and PP Postposing in the History of Yiddish



### II. Statistical independence in word order patterns in Ancient Greek (Taylor 1994)

#### "Free" Word Order in Ancient Greek

### SXV: Καμβύσης τὰ δῶρα ἐδέξατο

Kambuses the gifts received

- SVX: Καμβύσης ἐδέξατο τὰ δῶρα
- VSX: ἐδέξατο Καμβύσης τὰ δῶρα
- VXS: ἐδέξατο τὰ δῶρα Καμβύσης
- XSV: τὰ δῶρα Καμβύσης ἐδέξατο
- XVS: τὰ δῶρα ἐδέξατο Καμβύσης

pattern	formula		
S,Xv	(1-s)(1-p)		
X , Y v	$(1-p)^2$		
S v X	p(1-s)		
X v S	s(1-p)		
XvY	2p(1-p)		
vS,X	sp		
v X , Y	$p^2$		

Formula for calculating distribution of clause types based on the probability of postposing of subjects and complements

pattern	formula	observed distribution	expected distribution				
ļ.•			•				
S X v	(1-s)(1-p)	41	41				
XYv	$(1-p)^2$	7	5				
S v X	p(1-s)	31	31				
X v S	s(1-p)	13	12				
XvY	2p(1-p)	4	8				
v S X	sp	8	9				
v X Y	$p^2$	5 3					
Total N = 109 s = .23 p = .43							
N for clauses with subjects $= 93$							
N for clauses without subjects $= 16$							
$\chi^2 = 4.12,  \mathrm{p} > .8$							

Best fit of observed and expected distribution of clauses with 2 arguments in Homer

pattern	formula	observed distribution	expected distribution			
S X Y v	$(1-s)(1-p)^2$	4	5			
S X v Y	2p(1-s)(1-p)	10	7			
X Y v S	$s(1-p)^2$	2	2			
S v X Y	$p^2(1-s)$	1	3			
X v S Y	2p(1-p)(1-s)	4	3			
v S X Y	$s(p^2)$	0	1			
Total N = 21 s = .29 p = .41						
$\chi^2 = 3.66,  \mathrm{p} > .8$						

Best fit of observed and expected distribution of clauses with 3 arguments in Homer

	subject postposing	NP compl. postposing	N
1 NP argument	.27	.44	112
2 NP arguments	.23	.48	109
3 NP arguments	.29	.41	21
1  NP/1  PP argument	.28	.48	58

Probability of subject and NP complement postposing in four Homeric data sets

# III. The evolution of VX and XV in Old French

#### Preliminaries, I

- In tensed sentences only non-finite VPs are considered to avoid interference from  $V_{fin}$ -to-C and  $V_{fin}$ -to-T movement.
- Sentences in which a target clausal complement or adjunct moves further left than T are excluded since their "underlying" position relative to the non-finite verb is not recoverable.
- Sentences in which a target complement or adjunct is a clitic or empty category are excluded since their position is fixed or undeterminable.

### Preliminaries, II

Old French texts contain occasional examples of OVT(ense) word order, superficially similar to the word order in German subordinate clauses:

(I) ...weil Maria das Brot gegessen hat because Maria the bread eaten has

(2) Quant l'ostes ce escouté eut when the army that heard had (1190-BORON-R,38.579)

#### Preliminaries, III

However, in Old French, OVT(ense) word order is always due to leftward movement of a VP to an A-bar position. This conclusion is supported by two facts:

- •Pre-Tense VPs always occur to left of any clitics associated with the finite verb.
- •Pre-Tense VPs may be either OV or VO, superficially violating in the Final-Over-Final Constraint.

 (1) des que vos tant dit m'an avez since that you so-much told me of-it have (1170-YVAIN-R,151.5230)

 (2) Seignur servir bien deit l'um tel lord serve well owes one such (1120-BRENDAN-R,55.666)

(3) Ainz que trovét nule rien ait.
 before that found any thing has

 (1120-BRENDAN-R,70.1085)

Excluded finite clause types I

(I) (Subject)> Finite V > Object

Nostres Sires savoit tout bien 'Our Lord knew everything well.' (1190-BORON-R,9.110)

si avroiz molt grant aventage 'So you would have a very great advantage.' (1170-YVAIN-R,41.1361) Excluded finite clause types 2

(2) (Subject) > Object > Finite V

Uns viels prestre la porte garde 'An old priest was guarding the door' (116X-MARIE-DE-FRANCE-R,16.276)

et vos enor et joie rande 'and God give you honor and joy' (1170-YVAIN-R,162.5687)

#### Excluded finite clause types 3

(I) Object>(Subject)>Finite V> Nonfinite V

Sa grant honur a grant dol ad turnede (f. sg.) 'He has turned his great honor to great sorrow.' (I0XX-ALEXIS-V,29.282)

(2) (Subject)>Object>Finite V>Nonfinite V
Li amiralz .X.escheles ad justedes (f. pl.)
'The admiral arranged ten batallions.' (1100-ROLAND-V,234.3228) VO & OV word order: *avoir*+participle

 (1) Rollant ad mis l' olifan a sa buche
 'Roland raised the ivory horn to his mouth.' (1100-ROLAND-V,133.1772)

 (2) Li reis Marsilie out sun cunseill finet
 'King Marsilla had adjourned his council.' (1100-ROLAND-V,5.53) VO & OV word order: modal+infinitive

# (I) Je veul avoir mon loier 'I want to have my pay.' (I27X-CASSIDORUS-P, I64. I546)

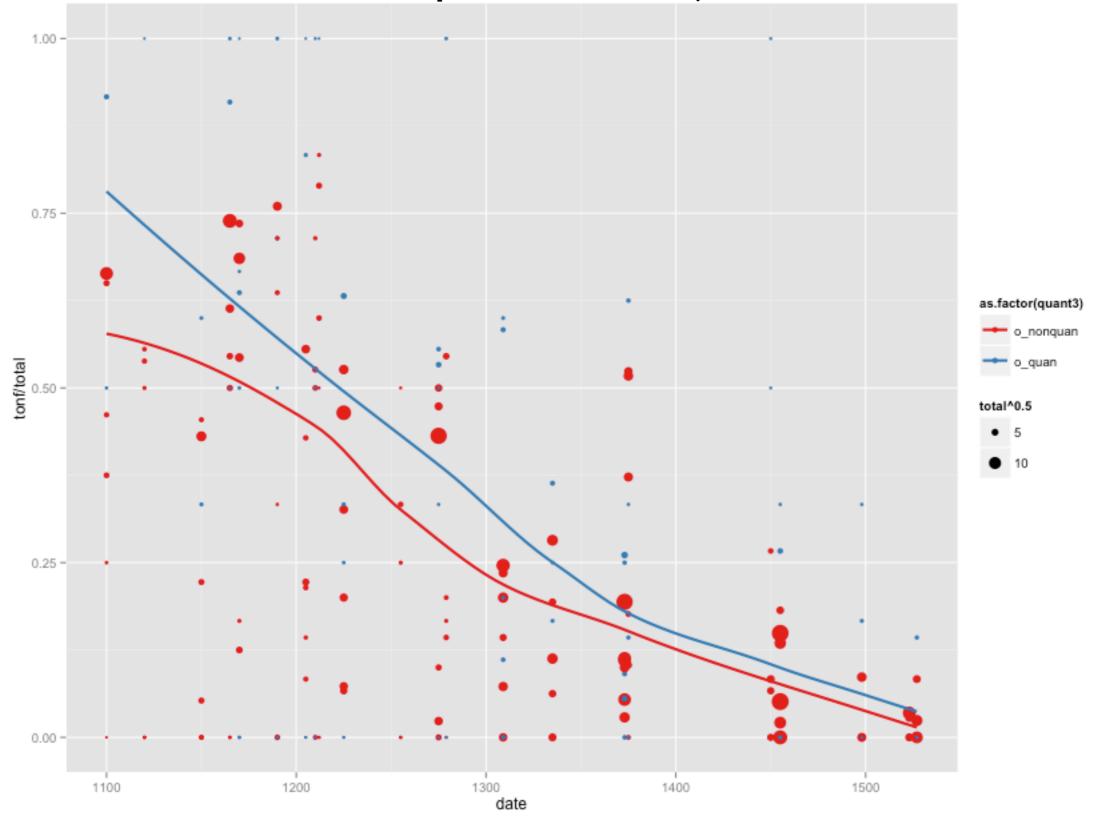
# (2) Kar ne poeit le jur choisir 'For he cannot choose the day.' (116X-MARIE-DE-FRANCE-R,111.2262)

# VO & OV word order: other nonfinite clauses

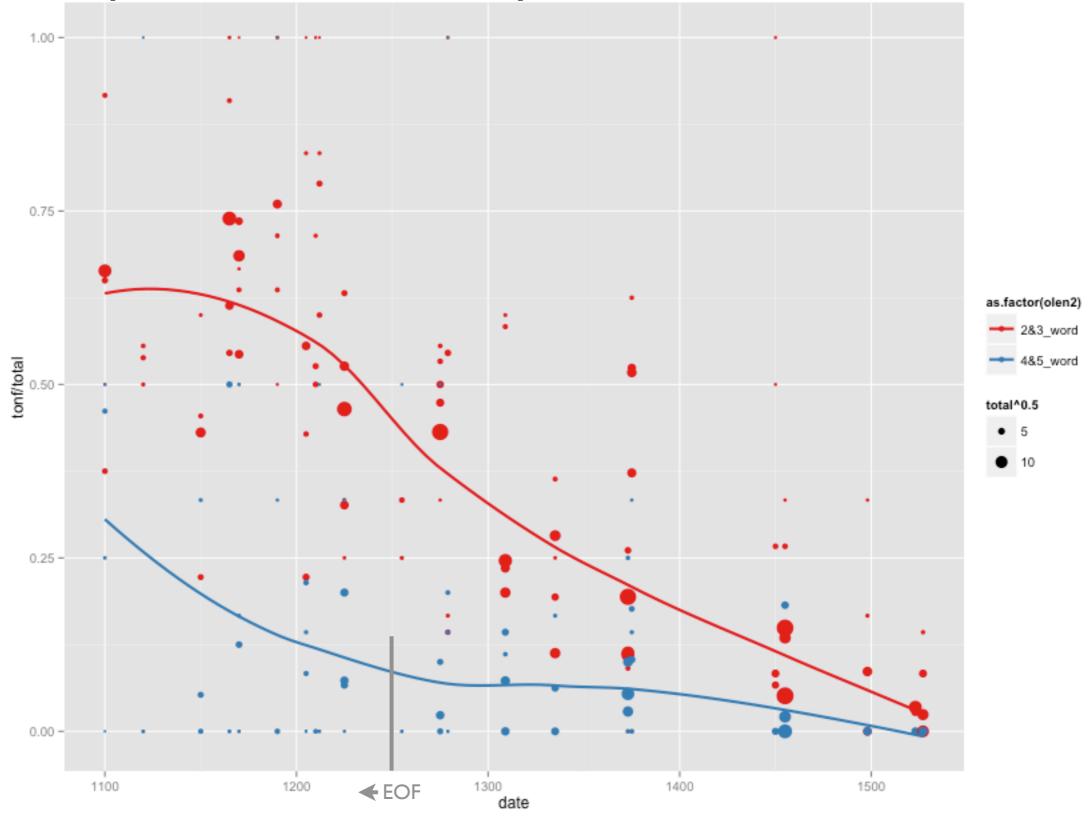
# (I) é pursievre David cessad 'and he ceased to pursue David' (II50-QUATRELIVRE-P,47.1793)

## (2) Le abét e tuz baiser enprent 'He begins to kiss the abbot and everyone.' (1120-BRENDAN-R,47.464)

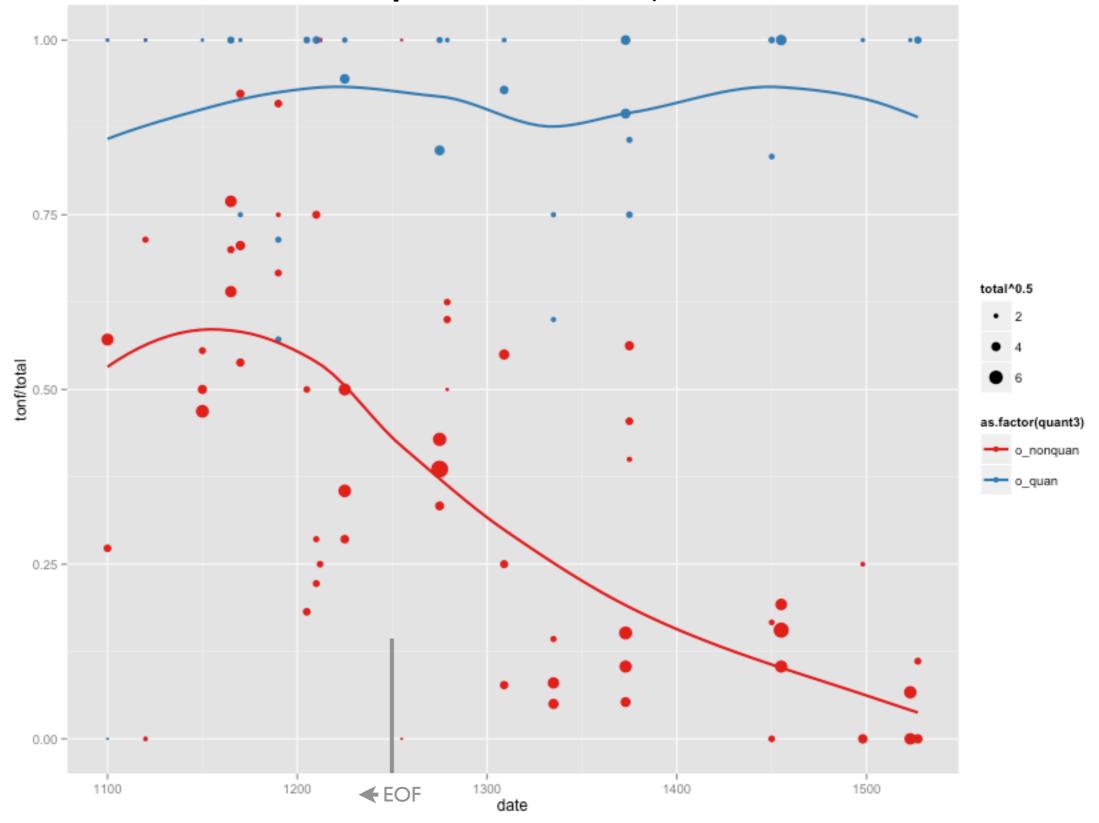
# OV decline with multi-word quantified and non-quantified objects



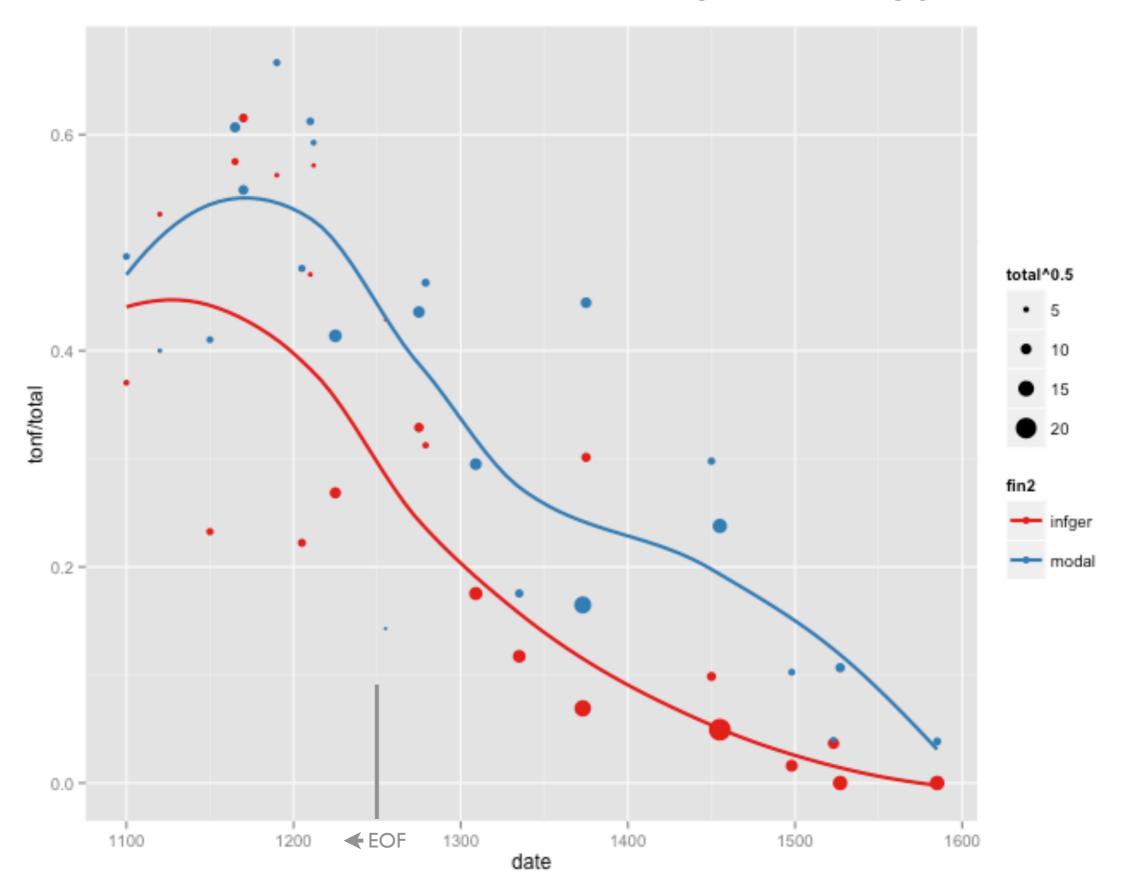
# OV decline by multi-word object length, quantified and non-quantified combined



# OV decline with one word quantified and non-quantified objects



#### Decline of OV word order by clause type



avoir+participle with object agreement

 (1) Li emperere ad prise sa herberge (f. sg.)
 'The emperor has taken his lodging.' (1100-ROLAND-V,182.2486)

## (2) Vos li avez tuz ses castels tolu<u>z</u> (m. pl.) 'You have taken all his castles from him.' (1100-ROLAND-V,16.208)

avoir+participle with object disagreement

 (1) Li nostre deu i unt fait felonie (m. sg. - f. sg.)
 'Our gods have committed a felony there.' (1100-ROLAND-V,188.2595)

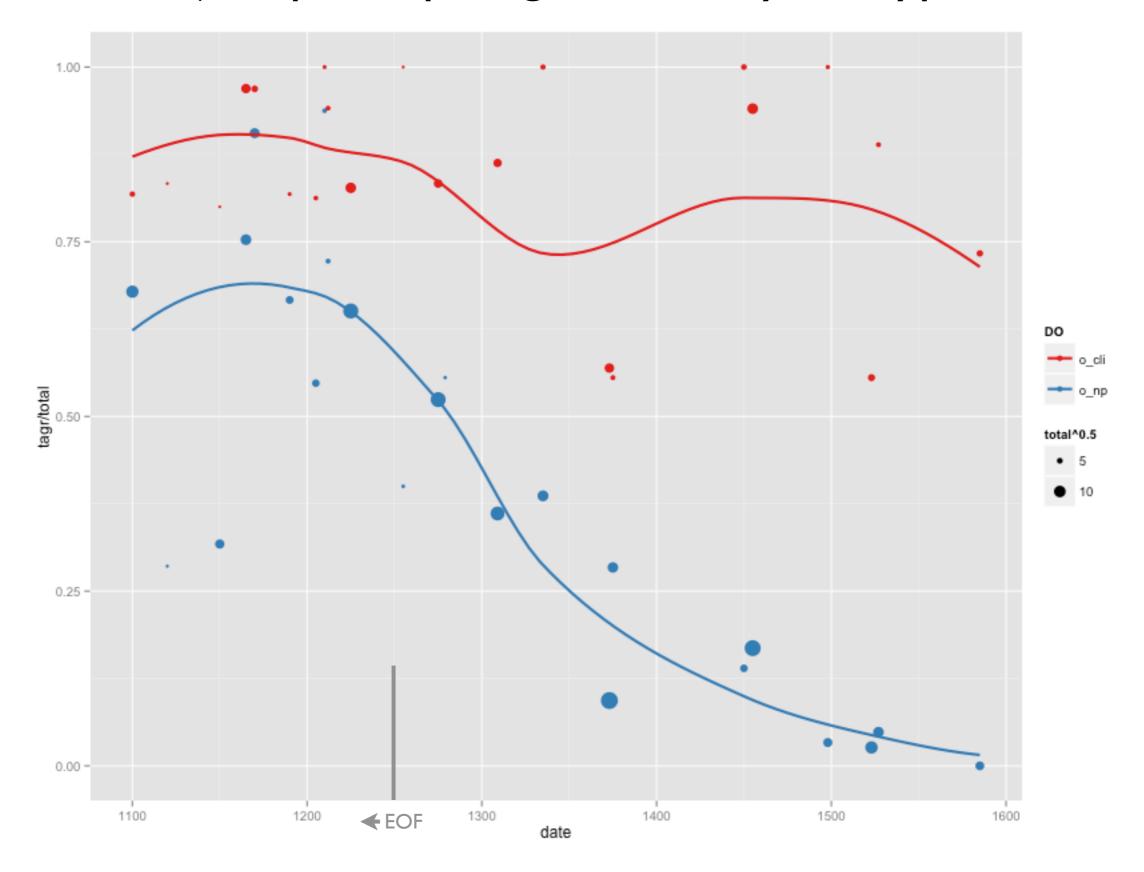
(2) ... avoit tous les autres vainc<u>u</u> (m. sg. - m. pl.)
 '... (the emperor) had vanquished all the others.'
 (137X-PRISE-R,.639)

*avoir*+participle with agreeing and disagreeing clitic objects

 (1) Forment l'(= la prison) ont ferm<u>ee</u> et serr<u>ee</u> (f. sg.) 'They closed and sealed it securely.' (1190-BORON-R,25.398)

(2) tuz les i ad perdut (m. pl. - m. sg.)
'He lost them all there.'
(1100-ROLAND-V,152.2053)

### Object-participle agreement by DP type



avoir + participial small clause

(1) s' avoient les espees traites desos les capes (f. pl.)
 'So they had their swords drawn under their capes.'
 (122X-AUCASSIN-14-P,.21)

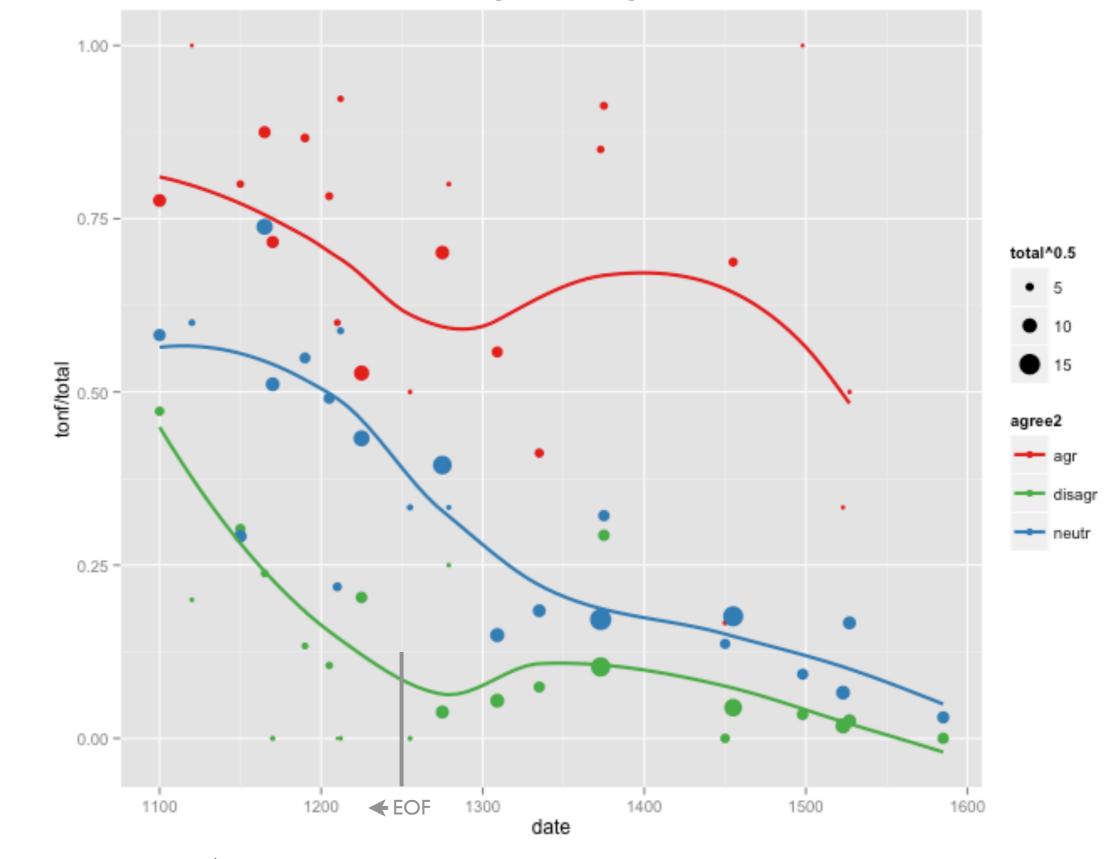
## (2) N' ot drap vestu fors la chemise. 'He had no clothes on except for his shirt.' (116X-MARIE-DE-FRANCE-R,99.2003)

Possible cases of *avoir* + participial small clause with postposed DP

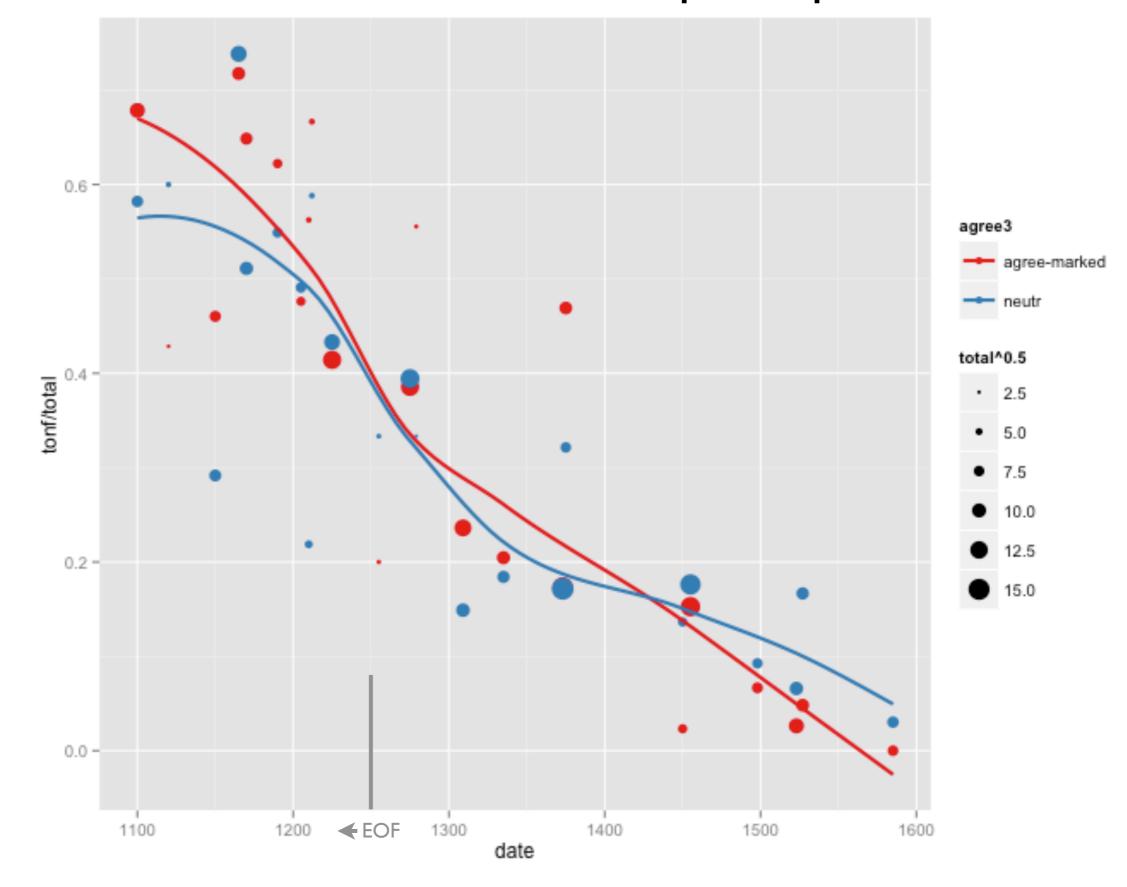
(1) out vestue sa brunie (f. sg.)
 'He had put on his body armor.'
 (1100-ROLAND-V,29.364)

 (2) s' avoient bien <u>liez</u> de cordes les piez (m. pl.)
 'So they had their feet tightly bound with cords.' (1170-YVAIN-R,125.4314)

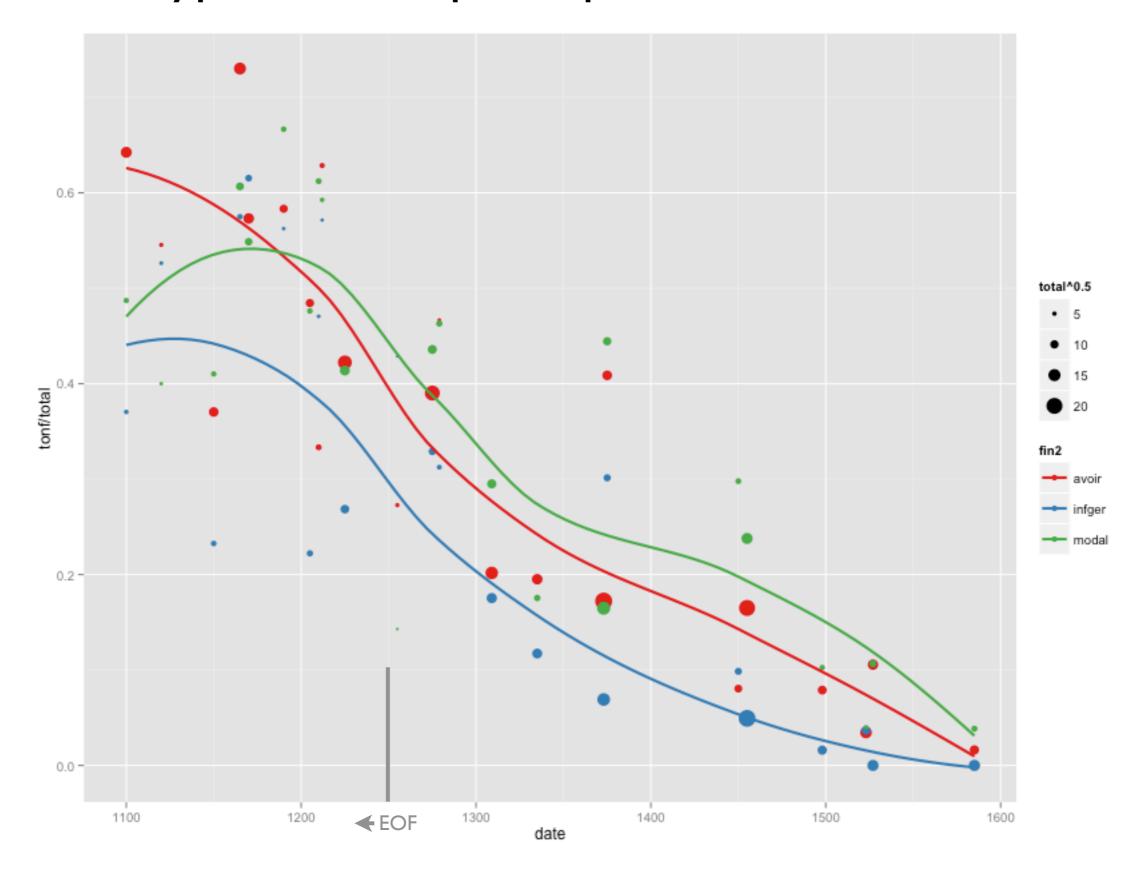
### Decline of OV word order in clauses with avoir+participle



# Decline of OV word order: agree-marked versus neutralized *avoir*+participle



### Decline of OV word order by clause type: all *avoir*+participle versus others



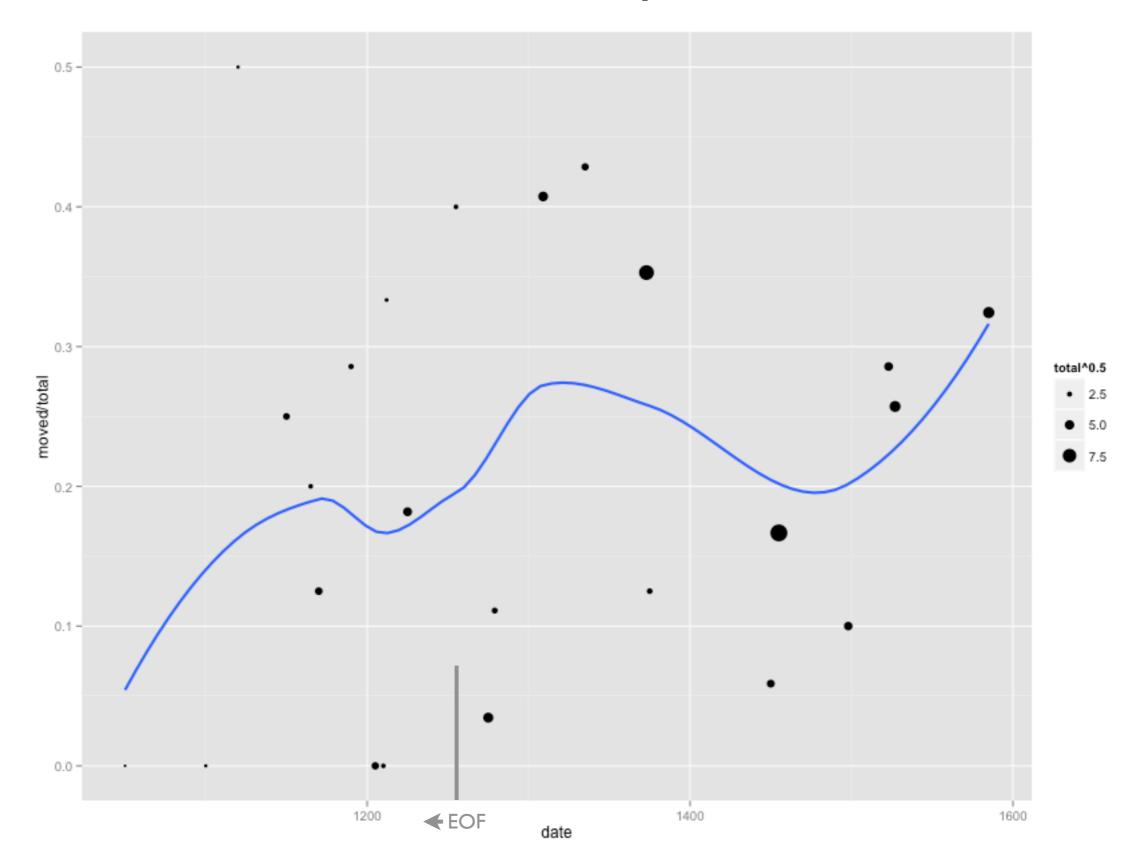
### Cases of raising of a nonfinite verb across an adverb

 (1) En celui temps Bruthus avoit congneu<u>e</u> charnelment Ynogen sa femme (f. sg.)
 'During this time Brutus had had intercourse with his wife Ynogen.'

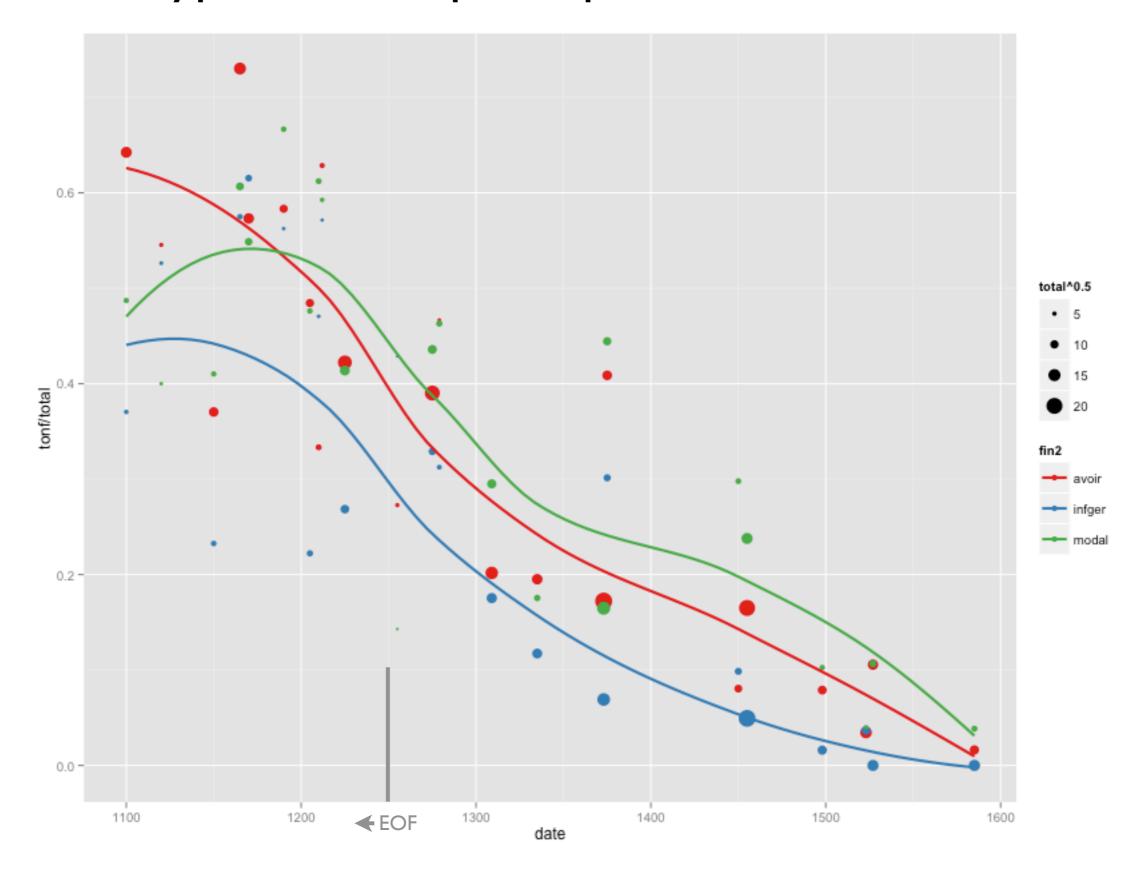
### (I33X-PERCEFOREST-P,87.443)

 (2) il n' avoit pas mis encores son consel ensamble
 'He had not yet assembled his council.' (1373-FROISSART-P,402.8059)

# Frequency of the raising of nonfinite verbs over adverbs by date



### Decline of OV word order by clause type: all *avoir*+participle versus others



## $VX \leftrightarrow XV$ word orders in clauses with full DP direct and indirect objects in Early Old French

	V > DO	DO > V	Row Totals	Estimated DO scrambling
V > IO	40	2	42	.048
IO > V	5	5	10	
Column Totals	45	7	52	
Estimated IO scrambling	.11			

Expected DO,IO > V order =  $.11^*.048^*52 = .28$ Observed DO,IO > V order = 5

Chi-square =81.14

### $VX \leftrightarrow XV$ word orders in clauses with a full DP direct object and a clausal level PP in Early Old French

	V > DO	DO > V	Row totals	Estimated DO scrambling
V > PP	237	54	291	.19
PP > V	24	38	62	
Column totals	261	92	353	
Estimated PP scrambling	.092			

Expected DO, PP > V order =  $.092^* . 19^* . 353 = 6.0$ 

Observed DO, PP > V order = 38 Chi-square = 169.8

## $VX \leftrightarrow XV$ word orders in clauses with full DP direct and indirect objects in later Old French

	V > DO	DO > V	Row totals	Estimated DO scrambling
V > IO	41	3	44	.068
IO > V	6	1	7	
Column totals	47	4	51	
Estimated IO scrambling	.13			

Expected DO, IO > V order =  $.13^*.068^*51 = .44$ 

Observed DO, IO > V order = 1 Chi-square = 0.6966

### $VX \leftrightarrow XV$ word orders in clauses with a full DP direct object and a clausal level PP in later Old French

	V > DO	DO > V	Row totals	Estimated DO scrambling
V > PP	200	58	258	.22
PP > V	3	3	6	
Column totals	203	61	264	
Estimated PP scrambling	.015			

Expected DO,PP > V order =  $.015^*.22^*264 = .88$ Observed DO,PP > V order = 3 Chi-square = 5.21

### Finis