

The development of Old English conjunct clauses: How syntactic changes interact

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MMLL Cambridge Linguistics Forum

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Introduction

Overview

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 - 1 demonstrate the existence of interactions between syntactic changes

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 - ② illustrate how corpus linguistics and formal syntax can be brought together

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 - 1 demonstrate the existence of interactions between syntactic changes
 - 2 illustrate how corpus linguistics and formal syntax can be brought together
 - 3 build and defend a model of Old English conjunct clauses

Databases used

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- www.pcmep.net



Early Middle English texts

Number	File Name	Text Name	Assigned Year
1	CMPETERB1	First Continuation of the Anglo-Saxon Chronicle E	1131
2	WorcFrag	The First Worcester Fragment	1135
3	TheGrave	The Grave	1140
4	BodySoul	Body and Soul	1150
5	CMPETERB2	Second Continuation of the Anglo-Saxon Chronicle E	1154
6	CMLAMBET	The Lambeth Homilies*	1160
7	PatNost	Pater Noster	1160
8	CMTRINIT	The Trinity Homilies*	1160
9	CMORM	Ormulum	1175
10	PoemaMorale	Poema Morale	1175
11	ProvAlf	The Proverbs of Alfred	1175
12	CMVICES1	Vices and Virtues	1180
13	LordOneGod	Lord as Thou art one God	1195
14	Ureisun	A Good Orison of Our Lady	1200
15	WooingGroup	Texts of the Wooing Group	1200

Table 1: Overview over early Middle English text files used and their approximate dates of composition

The special status of Old English conjunct clauses

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Explaining the word order distributions in CC
The interaction of syntactic changes

Distributional facts
Sketch of a formal analysis
Arguing for C-head conjunctions
Summary

Old English clause type and topicalisation

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(1) a. MC with topicalisation (common)

[_{topic} þone sudran steorran] we ne geseod næfre
the southern star we not see never

'We don't ever see the southern star' (cotempo, _Temp:9.8.299)

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b. CC with topicalisation (rare)

and [_{topic} þone sang] we sungon unseldon mid heom
and the song we sang frequently with them

'And we frequently sang the song with them'
(coelive, ÆLS_[Swithun]:262.4384)

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(2) a. [subject Se engel] [finite verb gehyrte] hi
the angel encouraged them
mid his wordum
with his words
(cocathom1, *ÆCHom* I, 13:284.110.2451)

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the angel encouraged them
mid his wordum
with his words
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- b. & [subject þæt folc] nugyt þæt tacn
and that people now-yet that token
Iosepes gesetnesse [finite verb æfterfylgead]
Joseph's law after-follows
'And the people still follow that aspect of Joseph's law'
(coorosiu, Or 1:5.24.13.472)

Double-class membership of Old English conjunctions

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- Solution: Two categories for conjunctions: CONJ and C

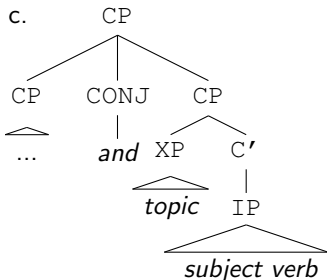
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b. CP → CP CONJ CP

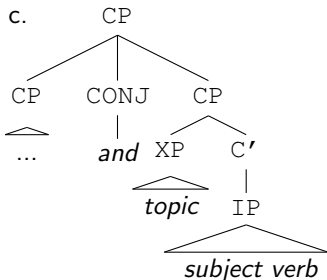


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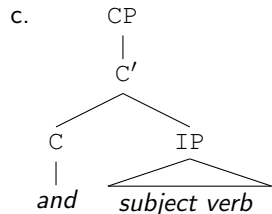
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(4) a. C - C-head conjunction
and C ...

b. C' → C IP

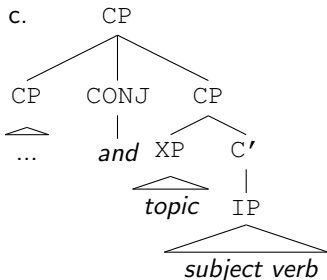


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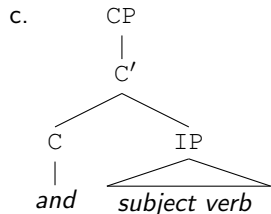
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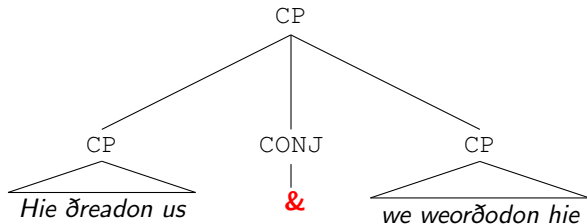
b. C' → C IP



- Structural ambiguity

Illustration

- (5) *Hie ðreadon us & we weorðodon hie*
they rebuked us and we honored them
'They rebuked us and we honored them'
(cocura, CP:36.255.7.1666-1667)

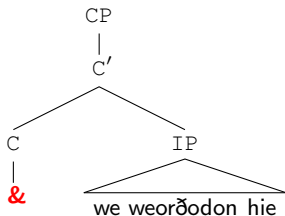


Illustration

(6) (They rebuked us)

& we weorðodon hie
and we honored them

'And we honored them' (cocura,CP:36.255.7.1667)



Etymology

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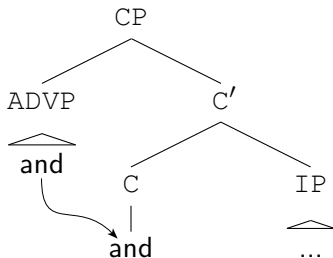
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- d. Anglo-Frisian [X. *Then* Y] > [X *and* Y]



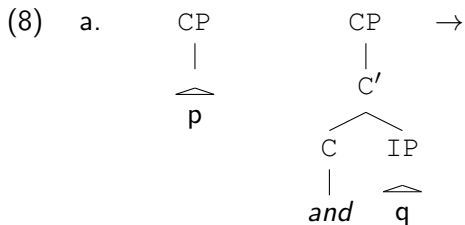
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- Claim: Old English is in the process of replacing C-head conjunctions with logical connectors

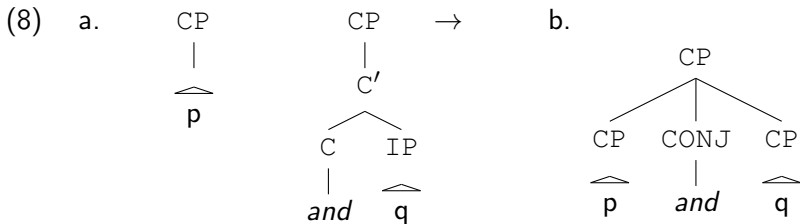
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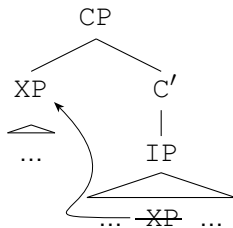


How do C-head conjunctions explain the special word order distributions in CCs?

Topicalisation in Old English

- Topicalisation is modelled as fronting of an XP to Spec,CP

(9)



- Most commonly DPs and PPs
- Information-structurally driven

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Modelling topicalisation

Explaining the distributional difference w.r.t topicalisation
Modelling verb placement
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Examples of topicalisation

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- (10) a. *Æðelhere; Annan broðor Eastengla cyninges [...]*
Æthelhere Anna's brother of-East-Angles king
[_{CP} [_{DP} **þone**_i] [_{IP} *mon slog eac mid ealle his compweorode*]]
that-one one slew also with all his battle-troop
- 'Æthelhere, the brother of Anna, the king of East-Anglia [...] That one, people killed along with all his troops' (cobede, Bede_3:18.236.15.2411-2413)

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- b. [_{CP} [_{DP} **þan synfullen** [...]] [_{IP} *he behet Godes godnysse [...]*]],
to-the sinful he promised God's goodness
[_{CP} [_{DP} **þa gode**] [_{IP} *he manode, þæt heo on heora godnysse þurhwunedan*]]
the good he instructed that they in their goodness through-lived
'To the sinful [...] he promised God's goodness [...]. The good, he instructed to keep their goodness.' (coneot, LS_28_[Neot]:57.48-49)

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- c. [_{CP} [_{PP} **on weallendum ele**] [_{IP} *he het hine baðian*]]
in boiling oil he ordered him bathe
'In boiling oil, he ordered that one should bathe him'
(colsigewZ, ÆLet.4_[SigewardZ]:1026.455)

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- Arguments supporting subjects in Spec,CP

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- (11) [_{CP} [_{DP} Ræpsas] [_{C'} **ne syn** [_{IP} gesungene mid Alleluian]]]
reply not be.subjunctive sung with hallelujah

'A response (in church service) should not be sung with a hallelujah'
(cobenrul, BenR:15.39.20.518)

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- (12) [CP [DP min God] [IP **me** asende to __ sona his engel]]
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'My God sent his angel to me at once'
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- (13) [CP [DP þæs regul] [IP ic wille, [CP þæt gesinlice __ sie geræd on geferrædenne]]]
this rule I want that diligently be read in company

'This rule, I want to be read out diligently in company'
(cobenrul,BenR:66.127.9.1223)

CCs and topicalisation

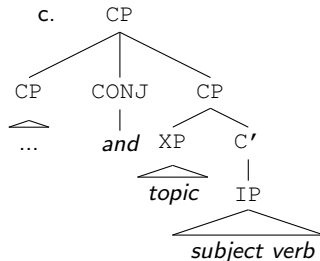
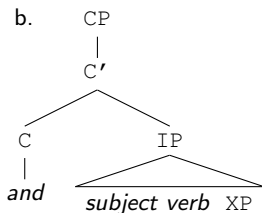
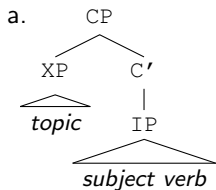
CCs and topicalisation

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(14)



Relevant Structures

- (15) a. **+MC** Object - Pronominal subject ... V

[_{DP} Langsume tale] we magon macian be ðysum
long tale we may make about this
'We could write a long tale about this' (coaelhom,ÆHom_23:80.3745)

- b. **+CC** Conjunction ... Object - Pronominal subject ... V

& [_{DP} horses hyda] hi habbað him to hrægle gedon
and horse's hide they have themselves to clothing done
'And they used horse hide for their clothing' (comarvel,Marv:26.1.130)

- c. **-MC** Pronominal subject ... { V, Object }

He arærde ða on ðære ylcan byrig [_{DP} mære cyrcan]
He reared then in the same city great church
'He then built a great church in the same city'
(cocathom2,ÆCHom_II,_38:287.262.6496)

- d. **-CC** Conjunction - Pronominal subject ... { V, Object }

Ac he worhte [_{DP} fela wundra] ætforan þam deman
but he worked many wonders before the judge
'But he performed many miracles in front of the judge'
(coaelive,ÆLS_[Exalt_of_Cross]:202.5672)

Topicalisation - Synchronic results

Clause type	Topicalisation <i>Object - spro ... V</i>	No Topicalisation <i>spro ... {V, Object }</i>
MC	1063 (31.6%)	2,306 (68.4%)
CC	579 (16.4%)	2,944 (83.6%)

Table 2: Object topicalisation rates in MCs and CCs

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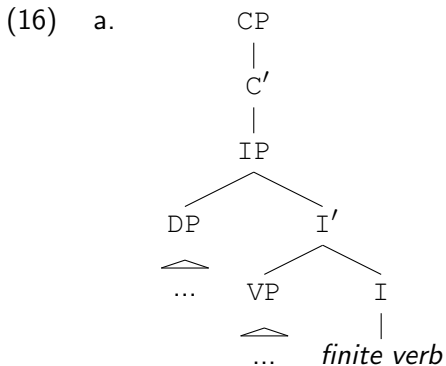
Verb-medial and verb-final structures

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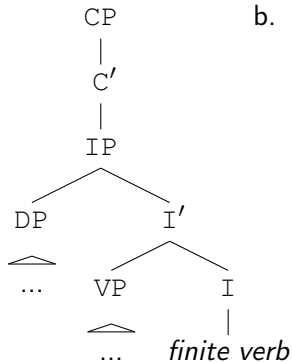
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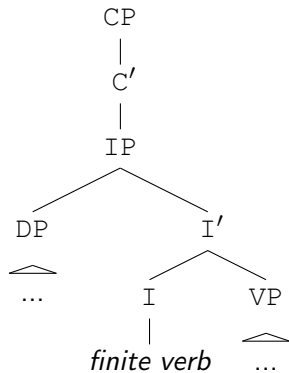
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(16) a.



b.



Examples of I-initial and I-final structure

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(17) a. *I-final headedness*

... þa [IP ðu [I' [VP **mæstne welan**] hæfdest]]

... when you most wealth had

'... when you had the greatest wealth'

(coboeth,Bo:26.58.24.1078)

Examples of I-initial and I-final structure

- IP can be initial or final (Pintzuk 1999)

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b. *I-initial headedness (or extraposition of the object)*

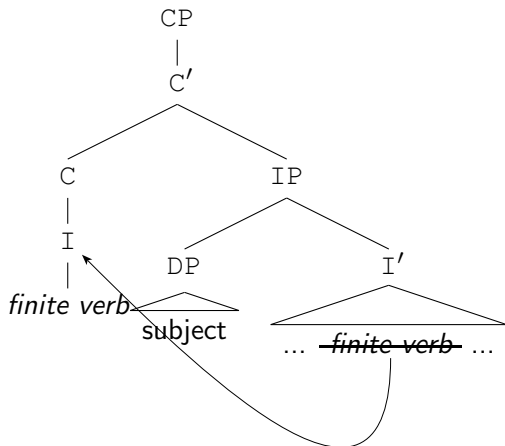
... for ðan ðe [IP we [I' *habbað* [VP **heofenlice welan**]]]
... for that that we have heavenly wealth

'... because we have heavenly wealth'
(cocathom2,ÆCHom_II,_38:281.63.6343)

High verb placement

- Finite verbs can also be placed under C in special environments

(18)



High verb placement 1

- Interrogatives, categorical

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(19) a. [_{CP} [_C [_I *Com*]] [_{IP} he to heom gescrydd ?]]
 came he to them clothed
 'Did he come to them with clothes on?'
 (coeluc2,Eluc_2-[Warn_46]:9.10)

High verb placement 1

- Interrogatives, categorical

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 (coeluc2,Eluc_2-[Warn_46]:9.10)
- b. [_{CP} hwanon [_C [_I *come*]] [_{IP} þu Giezi ?]]
 whence come you Gehazi
 ‘Where do you come from, Gehazi?’
 (cocathom1,ÆCHom_I,_27:408.241.5443)

High verb placement 2

- Operator adverbs, *þa*, *þonne*, categorical

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(20) a. [_{CP} **þa** *cwoman* [_{IP} we to sumre byrig]]
 then came we to some city

‘Then we arrived in a city’ (coalex,Alex:15.1.126)

High verb placement 2

- Operator adverbs, *þa*, *þonne*, categorical

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‘Then we arrived in a city’ (coalex,Alex:15.1.126)

b. [_{CP} **þonne** *findst* [_{IP} þu ðæron ænne gyldenne wecg]]
then find you thereon one golden coin

‘Then you will find a golden coin in it’
(cocathom1,ÆCHom_I,_34:470.163.6811)

High verb placement 3

- negation, *ne*, non-categorical licensing

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not saw he Christ in life
'He did not see Christ alive' (coelive,ÆELS-[Mark]:147.3294)

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b. [_{CP} [_{IP} He **ne** *geseah* hine siððan]]
He not saw him then

‘He did not see him then’ (coelive,ÆLS_[Book_of_Kings]:296.3879)

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(22) a. [_{CP} **nyton** [_{IP} hi hwæt hi doð]]
not-know they what they do

‘They don’t know what they do’ (cocathom2,ÆCHom_II,_2:17.183.408)

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b. [_{CP} [_{IP} ge **nyton** hwænne seo tid ys]]
you not-know when the time is

‘You don’t know when the time comes’ (cowsgosp,Mk_[WSCp]:13.33.3255)

High verb placement 4

- imperative-hortative system, non-categorical licensing

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(23) a. [_{CP} **Nime** [_{IP} he þisne clað]]
take.subjunctive he this cloth
'{May he/ Let him / He should } take this cloth'
(cocathom2,ÆCHom_II,_31-32:242.34.5375)

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'{May he/ Let him / He should } take this cloth'
(cocathom2,ÆCHom_II,_31-32:242.34.5375)

b. [_{IP} he **nime** lynen hrægl]
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'{May he/ Let him / He should } take a linen cloth'
(colwstan2,ÆLet_3_[Wulfstan_2]:68.79)

High verb placement 4

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and you hence forth not sin.imperative
'Do not sin anymore!' (coaelhom,ÆHom_14:226.2127)

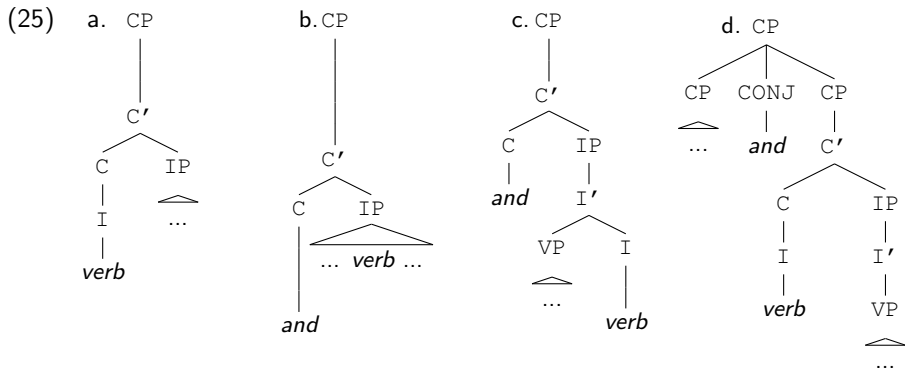
CCs and verb placement

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Distribution of verb placement patterns

- A comparison between sentences with high verb placement, verb-final and verb-medial structures should reveal that, by comparison with MCs, CC display
 - (i) a lower rate of high verbs and
 - (ii) a higher rate of **both** verb-final and verb-medial structures.

The special status of Old English conjunct clauses
Explaining the word order distributions in CC
The interaction of syntactic changes

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Explaining the distributional difference w.r.t topicalisation
Modelling verb placement
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High verb placement V-to-C

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(26) **High verb placement / V-to-C:**

a. V - Subject

[_{CP} þonne *geleanað* [_{IP} he hit us swa us leofast bið]]
then repays he it us as us dearest is

'Then he will repay us in a way that will be most pleasing to us'
(cowulf,WHom_2:71.47)

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b. Conjunction ... V - Subject

& [_{CP} þa *æteawde* [_{IP} he hine Nerone þy þridan dæge]]
and then appeared he reflexive to-Nero the third day

'And then he appeared to Nero on the third day'
(coblick,LS_32-[PeterandPaul[BiHom_15]]:183.221.2364)

Verb-medial, potentially I-initial

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(27) **Verb-medial / Potentially I-initial (I-initial or postposition):**

a. Subject - V ... X

[_{IP} hi *underfengon* edlean heora weorca]
they received reward of-their works

'They received the reward for their works'
(cocathom1,ÆCHom_I,_28:416.170.5564)

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b. Conjunction ... Subject - V ... X

& [_{IP} hi *underfengon* þone halgan gast]
and they received the holy ghost

'And they received the Holy Ghost' (cocathom1,ÆCHom_I,_22:357.86.4389)

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Verb-final, necessarily I-final

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(28) **Verb-final / necessarily I-final:**

a. Subject ... X ... V

[_{IP} He þa forðon Drihtnes willan *sohte*]
he then therefore Lord's will sought

'Therefore, he then sought the Lord's will'

(coblick,LS_17.1_[MartinMor[BiHom_17]]:225.265.2900)

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b. Conjunction ... Subject ... X ... V

& [_{IP} he ær þone feþan *sohte*]
and he earlier the warfare sought

'And earlier he sought battle'
(coblick,LS_12_[NatJnBapt[BiHom_14]]:167.105.2115)

Verb placement - Synchronic results

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Clause Type	<i>V S</i>	<i>SVX</i>	<i>SXV</i>
	High verb V-to-C	Verb-medial Potentially I-initial	Verb-final Necessarily I-final
MC	17,335 (48.2%)	17,135 (47.6%)	1,517 (4.2%)
CC	3,886 (23.7%)	9,980 (60.8%)	2,541 (15.5%)
SC	1,119 (3.2%)	16,948 (48.6%)	16,837 (48.2%)

Table 3: Verb Positions in MCs, CCs and subordinate clauses (SCs), all subject typess

Verb-final, CC vs. MC $\chi^2=2024.1$, $df=1$, $p<0.001$, odds ratio = 4.19, 95%-confidence interval [3.92 – 4.48].

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- Conjunct clauses are not inherently more verb-final than main clauses. The verb appears in final position more often only as a result of a reduced ratio of high verbs.

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- It's possible to divide all CCs into those clauses whose conjunction are a logical connector
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 Conj ... X ... Subject
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- Then the rate of verb-final structures should be more or less the same for MCs and clauses involving logical connectors.
- The rate of verb-final structures should be higher than in MCs only for those clauses that can potentially include C-head conjunctions.

Illustration of relevant sentences

(29) **Necessarily logical connector**

Conjunction ... Some Constituent ... Subject - Verb

And [_{PP} on ðæm ðeowdome] [_{IP} he *geendade* his lif]
and in the service he ended his life

'And in that service [=as a zoo keeper], he ended his life'
(comart3,Mart.5-[Kotzor]:Ja16,A.9.103)

(30) **Potential C-head conjunction**

Conjunction - Subject - Verb ... X

And [_{IP} he swa *geendode* þa ealdan gecyðnyse]
and he so ended the old testament

'And thus he ended the Old Testament'
(colwstan1,ÆLet.2-[Wulfstan_1]:127.179)

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Clause type	V S	SVX	SXV
	High verb (V-to-C)	Verb-medial Potentially I-initial	Verb-final I-final
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potential C-head	400 (3.9%)	7,697 (74.8%)	2,188 (21.3%)
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The loss of C-head conjunctions and other syntactic changes interact

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- Well-established syntactic changes in early English:
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 - ② loss of I-final headedness
- A new change:
 - ① disappearance of C-head conjunctions
- Interaction between those changes make important predictions

Development of Topicalisation

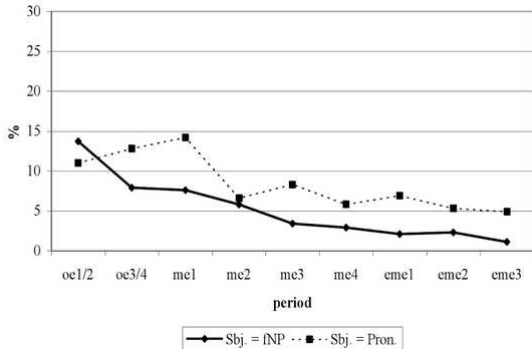


Figure 1: Rate of direct object topicalisation in clauses with full (fNP) and pronominal subjects (Pron.) From: Speyer (2010: 52)

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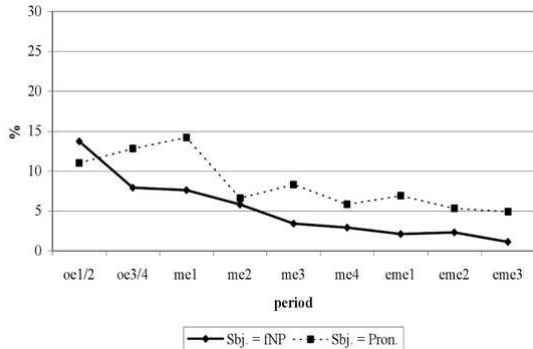


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- topicalisation declines during Early English from c. 15 to 5%

Loss of verb-final structure

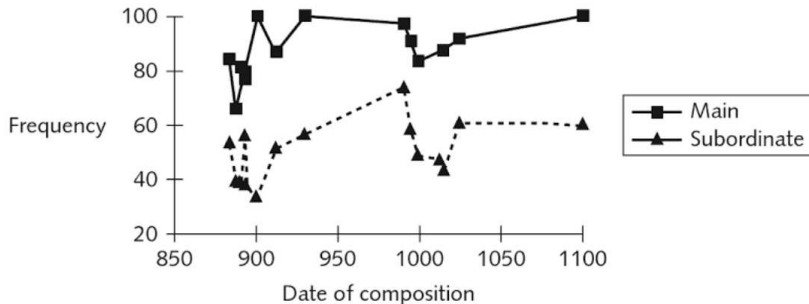
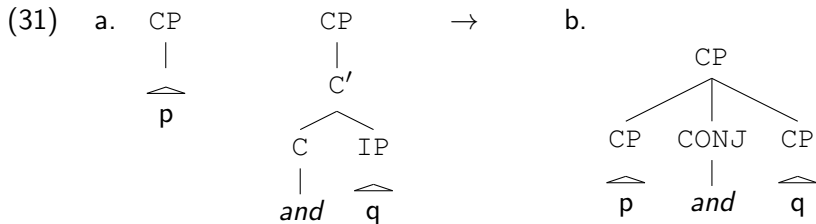


Figure 2: Frequency of I-Initial structure in Old English clauses with auxiliary verbs, 884-1100. (From: Pintzuk (1999: 220), as reprinted in Janda and Joseph 2003: 523.)

- well-studied change (e.g. Smith 1893, dialectal factor Trips 2001)

Disappearance of C-head conjunctions

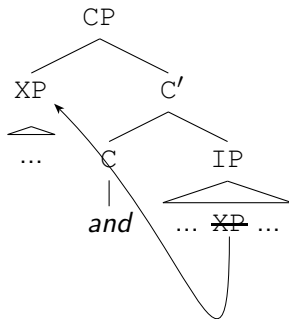
- Old English is in the process of replacing C-head conjunctions with logical connectors



How C-heads influence the change in topicalisation

- The loss of C-head conjunctions should compensate for the decline in topicalisation

(32)



Interaction between C-head conjunctions and topicalisation

Hypothesis 1: *Differential Development of Object Topicalisation*

Measuring object topicalisation as the occurrence of a nominal object DP before a subject pronoun, 'object - pronoun subject,' vs. its occurrence after a pronominal subject, 'pronoun subject ... object,' one should find

- (i) a substantial decline in topicalisation over time and
- (iii) a faster decline of this pattern in MCs than in CCs.

Object Topicalisation - Synchronic results repeated

Clause type	Topicalisation	No Topicalisation
	<i>Object - spro ... V</i>	<i>spro ... {V, Object }</i>
MC	1063 (31.6%)	2,306 (68.4%)
CC	579 (16.4%)	2,944 (83.6%)

Table 2: Object topicalisation rates in MCs and CCs

Results - The diachrony of topicalisation by clause type

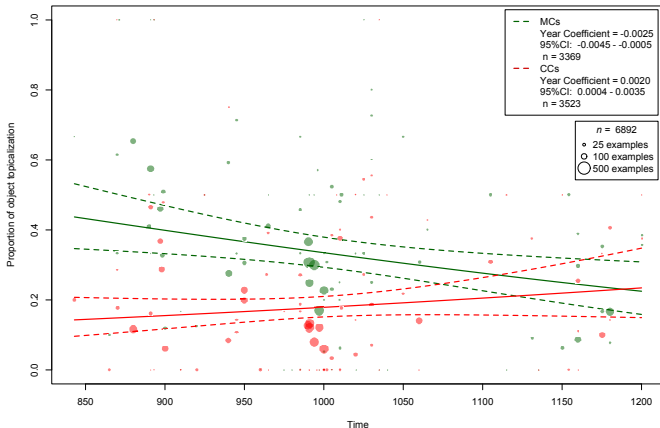
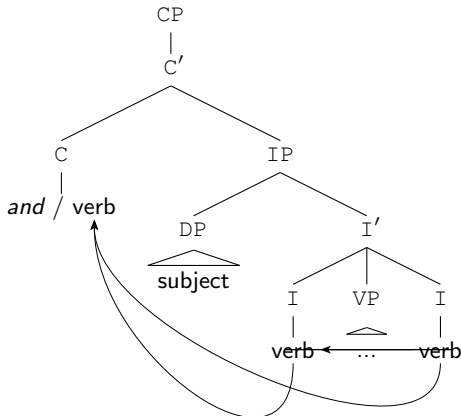


Figure 3: Illustration of mixed-effects logistic regression model for the development of object topicalisation in MCs and CCs

CCs should lose verb-final patterns faster

- The loss of C-head conjunctions opens the C-position in CCs.
- Verb-final patterns disappear in general.
- CCs will see an additional reduction in verbs in the IP.

(33)



Interaction between C-head conjunctions and verb-final

Hypothesis 2: *Differential Development of I-Final Structures*

When the corpus texts' proportions of I-final structures are regressed against clause type and time,

- (i) all clause types should show a constant rate effect for the decline in such structures
- (ii) except for clauses that may involve a C-head conjunction, which should lose verb-final structures faster than the others.

Verb placement - Synchronic results repeated

Clause type	<i>V S</i>	<i>SVX</i>	<i>SXV</i>
	High verb (V-to-C)	Verb-medial Potentially I-initial	Verb-final I-final
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Results - Statistical Model

```
formula = VerbFinal ~ Year + ClauseType + Year:ClauseType + (1 | Text),  
Fixed effects: family = binomial, data = H2
```

	Estimate	Std.Error	z-value	p
Intercept	2.9167	1.1904	2.450	0.01428*
Year	-0.0063455	0.0011922	-5.323	<0.001***
ClauseType (MC→CC (log. con.))	0.8945	1.2800	0.699	0.48466
ClauseType (MC→CC (C-head c.))	3.1561	0.4743	6.655	<0.001***
ClauseType (MC→SC)	3.1017	0.4398	7.058	<0.001***
Year:ClauseType (MC→CC (log. con.))	-0.0006035	0.0013266	-0.455	0.64914
Year:ClauseType (MC→CC (C-head c.))	-0.0012987	0.0004896	-2.652	0.00799**
Year:ClauseType (MC→SC)	0.0001689	0.0004550	0.371	0.71045

Random effect:
Text, N=101
Variance of random intercepts: 0.6619

Null deviance: 96086 on 87297 degrees of freedom
Residual deviance: 67757 on 87289 degrees of freedom
AIC: 67775

Table 5: Logistic regression mixed-effects model for verb-final structures by time and clause type

Results - The diachrony of verb-final by clause type

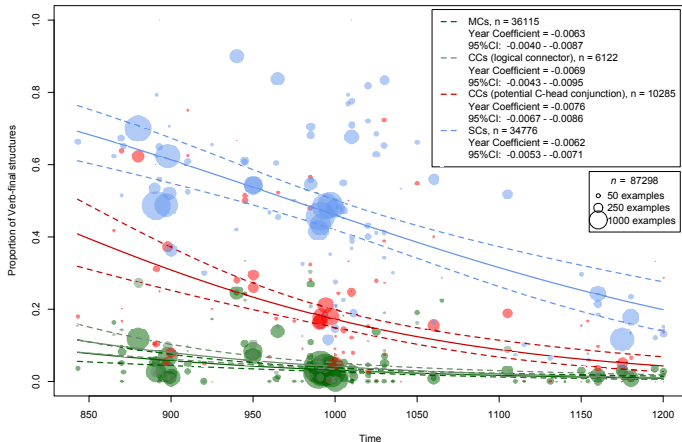


Figure 4: Illustration of the decline in I-final structures

Conclusion

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Discussion

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- supports Grammar Model where conjunctions can optionally be placed under C
 - ① alternative explanations? coordination of IPs? but how would diachrony follow?
- numerous open questions (info-structure, difference between conjunctions, prose vs. poetry, ...)

Thank you very much for your attention!

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