

Null arguments in Old English

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Outline of the talk:

1. Introduction and previous research
2. A new quantitative investigation
3. Results: differences between texts, between clause types, between persons
4. Analysis
5. Summary and conclusions

1. Introduction and previous research

The possibility of referential null subjects in Old English (OE) has been the subject of conflicting assertions:

- ‘The phenomenon of referential *pro*-drop does not exist in Old English’ (Hulk & van Kemenade 1995: 245)
- ‘Old English has *pro*-drop’ (van Gelderen 2000: 137)
- *Pro*-drop ‘occurs (or survives) only spasmodically’ in OE (Mitchell 1985: 633)

⇒ So who’s right?

- Examples have been known of for a hundred years: Pogatscher (1901) gives an extensive list, though some of his examples can be analysed as cases of coordination reduction (CR).
- Variation exists across manuscripts, e.g. in *Caedmon’s Hymn*:

- (1) *Nu scylun hergan hefaenricas uard* (Cambridge UL MS. M, line 1)
 (2) *Nu we sculan herian heofonrices Weard.* (Bodleian Library MS. T₁, line 1)
 now (we) must praise heaven.GEN guard
 ‘Now we must praise the lord of the heavenly kingdom’

- Corpus Christi Oxford MS 279 (MS. O) shows signs of a correction to insert the pronoun!

The availability of the YCOE (Taylor, Warner, Pintzuk & Beths 2003) and YCOEP (Pintzuk & Plug 2000) now enables a large-scale quantitative investigation...

2. A new quantitative investigation

- Search of all texts over 20,000 words in the YCOE, plus the YCOEP *Beowulf*
- Aim: to find and count:
 - a) overt personal pronoun subjects
 - b) referential null subjects (RefNSs)
- Carried out using CorpusSearch 2 (Randall, 2005–2007)

RefNSs are tagged distinctly (**pro**) from cases of CR (**con**) and null expletives (**exp**).

- Pilot search revealed two classes of **pro** that aren’t canonical RefNSs:
 - ‘Jussive’ clauses (imperatives with subjunctive verb form), as in (3)
 - Clauses involving the verb *hatan* ‘to be called’, as in (4)

- (3) *gemenge wið buteran* (colaece,Lch_II_[1]:3.8.2.406)
 mix.SUB with butter
 ‘Mix with butter’
- (4) ... *from anum Arrianiscan biscepe, Eudoxius wæs haten* (coorosiu,Or_6:33.151.22.3215)
 ... from an Arian bishop Eudoxius was called
 ‘... by an Arian bishop called Euxodius.’

- In the YCOE *Benedictine Rule*, 29 of 30 examples of main-clause **pro** are like (3); in the *Heptateuch*, 48 of 52. Shouldn’t be taken to support a RefNS analysis
- In the YCOE *Orosius*, 27 of 34 examples of main-clause **pro** are like (4). These probably involve a contact relative clause with a gap rather than a true RefNS (see Mitchell 1985: 186, Poppe 2006: 197–201)

⇒ Steps were therefore taken to exclude such cases from the figures in the next section!

3. Results

Pronouns vs. RefNSs in OE finite indicative clauses in YCOE & YCOEP, by text and clause type:

Text	Clause type	Overt	Null	Total
<i>Ælfric’s Lives of Saints</i> (coalive.o3)	Main	807 (99.1%)	7 (0.9%)	814
	Subordinate	1144 (99.4%)	7 (0.6%)	1151
	Conjoined	544 (96.3%)	21 (3.7%)	565
	Total	2495	35	2530
<i>Ælfric’s Homilies Supplemental</i> (coelhomo.o3)	Main	599 (99.8%)	1 (0.2%)	600
	Subordinate	874 (99.8%)	2 (0.2%)	876
	Conjoined	505 (99.0%)	5 (1.0%)	510
	Total	1978	8	1986

<i>Bede's History of the English Church</i> (cobede.o2)	Main	724 (96.7%)	25 (3.3%)	749
	Subordinate	1039 (98.0%)	21 (2.0%)	1060
	Conjoined	378 (92.6%)	30 (7.4%)	408
	Total	2141	76	2217
<i>Benedictine Rule</i> (cobenrul.o3)	Main	144 (99.3%)	1 (0.7%)	145
	Subordinate	177 (98.3%)	3 (1.7%)	180
	Conjoined	29 (100.0%)	0 (0.0%)	29
	Total	350	4	354
<i>Beowulf</i> (cobeowul; from YCOE Poetry)	Main	190 (78.2%)	53 (21.8%)	243
	Subordinate	139 (93.3%)	10 (6.7%)	149
	Conjoined	24 (92.3%)	2 (7.7%)	26
	Total	353	65	418
<i>Blickling Homilies</i> (coblick.o23)	Main	436 (99.5%)	2 (0.5%)	438
	Subordinate	582 (99.1%)	5 (0.9%)	587
	Conjoined	345 (98.9%)	4 (1.1%)	349
	Total	1363	11	1374
<i>Boethius, Consolation of Philosophy</i> (coboeth.o2)	Main	905 (99.3%)	6 (0.7%)	911
	Subordinate	1098 (99.6%)	4 (0.4%)	1102
	Conjoined	263 (98.5%)	4 (1.5%)	267
	Total	2266	14	2280
<i>Ælfric's Catholic Homilies I</i> (cocathom1.o3)	Main	1289 (99.9%)	1 (0.1%)	1290
	Subordinate	1510 (99.7%)	4 (0.3%)	1514
	Conjoined	653 (99.1%)	6 (0.9%)	659
	Total	3452	11	3463
<i>Ælfric's Catholic Homilies II</i> (cocathom2.o3)	Main	1096 (99.9%)	1 (0.1%)	1097
	Subordinate	1196 (99.7%)	4 (0.3%)	1200
	Conjoined	555 (98.8%)	7 (1.2%)	562
	Total	2847	12	2859
<i>Anglo-Saxon Chronicle C</i> (cochronC)	Main	53 (94.6%)	3 (5.4%)	56
	Subordinate	165 (100.0%)	0 (0.0%)	165
	Conjoined	200 (89.7%)	23 (10.3%)	223
	Total	418	26	444
<i>Anglo-Saxon Chronicle D</i> (cochronD)	Main	67 (88.2%)	9 (11.8%)	76
	Subordinate	197 (99.0%)	2 (1.0%)	199
	Conjoined	214 (88.4%)	28 (11.6%)	242
	Total	478	39	517

<i>Anglo-Saxon Chronicle E</i> (cochronE.o34)	Main	119 (85.0%)	21 (15.0%)	140
	Subordinate	237 (98.8%)	3 (1.3%)	240
	Conjoined	251 (93.7%)	17 (6.3%)	268
	Total	607	41	648
<i>Cura Pastoralis</i> (cocura.o2, cocuraC)	Main	723 (99.6%)	3 (0.4%)	726
	Subordinate	1505 (99.7%)	5 (0.3%)	1510
	Conjoined	339 (99.4%)	2 (0.6%)	341
	Total	2567	10	2577
<i>Gregory's Dialogues C</i> (cogregdC.o24)	Main	755 (99.7%)	2 (0.3%)	757
	Subordinate	1414 (99.7%)	4 (0.3%)	1418
	Conjoined	659 (99.5%)	3 (0.5%)	662
	Total	2828	9	2837
<i>Gregory's Dialogues H</i> (cogregdH.o23)	Main	242 (100.0%)	0 (0.0%)	242
	Subordinate	425 (100.0%)	0 (0.0%)	425
	Conjoined	119 (99.2%)	1 (0.8%)	120
	Total	786	1	787
<i>Herbarium</i> (coherbar)	Main	451 (100.0%)	0 (0.0%)	451
	Subordinate	119 (100.0%)	0 (0.0%)	119
	Conjoined	162 (100.0%)	0 (0.0%)	162
	Total	732	0	732
<i>Bald's Leechbook</i> (colaece.o2)	Main	90 (76.3%)	28 (23.7%)	118
	Subordinate	94 (94.0%)	6 (6.0%)	100
	Conjoined	23 (65.7%)	12 (34.3%)	35
	Total	207	46	253
<i>Martyrology</i> (comart3.o23)	Main	215 (99.5%)	1 (0.5%)	216
	Subordinate	243 (98.8%)	3 (1.2%)	246
	Conjoined	217 (98.2%)	4 (1.8%)	221
	Total	675	8	683
<i>Orosius</i> (coorosiu.o2)	Main	360 (99.7%)	1 (0.3%)	361
	Subordinate	711 (99.3%)	5 (0.7%)	716
	Conjoined	313 (93.2%)	23 (6.8%)	336
	Total	1384	29	1413
<i>Heptateuch</i> (cootest.o3)	Main	753 (99.9%)	1 (0.1%)	754
	Subordinate	807 (99.9%)	1 (0.1%)	808
	Conjoined	456 (98.9%)	5 (1.1%)	461
	Total	2016	7	2023

<i>Vercelli Homilies</i> (coverhom)	Main	468 (98.9%)	5 (1.1%)	473
	Subordinate	610 (99.3%)	4 (0.7%)	614
	Conjoined	393 (98.3%)	7 (1.8%)	400
	Total	1471	16	1487
<i>West-Saxon Gospels</i> (cowsgosp.o3)	Main	1416 (99.7%)	4 (0.3%)	1420
	Subordinate	1139 (99.7%)	3 (0.3%)	1142
	Conjoined	824 (99.4%)	5 (0.6%)	829
	Total	3379	12	3391
<i>The Homilies of Wulfstan</i> (cowulf.o34)	Main	128 (100.0%)	0 (0.0%)	128
	Subordinate	351 (100.0%)	0 (0.0%)	351
	Conjoined	182 (100.0%)	0 (0.0%)	182
	Total	661	0	661

Cells which show a frequency of RefNSs of greater than 2% are highlighted.

3.1 Differences between texts

- Most texts show a frequency of overt pronouns of 98–100% in all clause types.
 - RefNSs were (probably) ungrammatical by the grammars underlying them.
 - Ælfric's *Lives of Saints* and *Orosius*: RefNSs only frequent in conjoined clauses.
 - Some kind of modified CR, as proposed for Old Norse by Faarlund (1990: 104)?
 - Bede's *History of the English Church, Beowulf, Bald's Leechbook*, and the C, D and E manuscripts of the *Anglo-Saxon Chronicle* all exhibit null subjects to a greater extent.
 - All these texts arguably exhibit Anglian features (see e.g. Fulk 2009: 96).
- ⇒ A case for dialect variation within OE? See also the texts investigated by Berndt (1956).

3.2 Differences between clause types

- In all of the texts that robustly exhibit RefNSs, null variants are more common in main clauses than in subordinate clauses.
 - Effect of main vs. subordinate clearly significant (chi-square: 15.612; $p < 0.0001$)
 - Similar to results found by Axel (2007) for Old High German, by Håkansson (2008) for Old Swedish, and by me (in progress) for Old Saxon.
- However (as in the other three languages) RefNSs in subordinate clauses do exist:

- (5) *þæt þone hilderæs hæl gedigeð* (cobeowul,11.293.236)
 that the battle-charge hale endure
 'that (they) will survive the assault unharmed'

3.3 Differences between persons

- In all of the texts that robustly exhibit RefNSs, 3rd person null variants are more common.

Pronouns vs. RefNSs in finite indicative clauses in *Beowulf* and *Bald's Leechbook*, by pers. & no.

Text	Person	N	Overt	Null	Total	
<i>Beowulf</i>	1	sg	75 (97.4%)	2 (2.6%)	77	
		pl	21 (100.0%)	0 (0.0%)	21	
	2	sg	26 (96.3%)	1 (3.7%)	27	
		pl	10 (100.0%)	0 (0.0%)	10	
	3	sg	172 (80.4%)	42 (19.6%)	214	
		pl	49 (71.0%)	20 (29.0%)	69	
	Totals			353	65	418
	<i>Bald's Leechbook</i>	1	sg	1 (100.0%)	0 (0.0%)	1
			pl	11 (100.0%)	0 (0.0%)	11
		2	sg	52 (100.0%)	0 (0.0%)	52
pl			0	0	0	
3		sg	108 (77.1%)	32 (22.9%)	140	
		pl	35 (71.4%)	14 (28.6%)	49	
Totals			207	46	253	

- In both texts, effect of 3rd vs. non-3rd person is statistically significant.
 - *Beowulf*: chi-square: 26.972; $p < 0.0001$
 - *Bald's Leechbook*: chi-square: 19.038; $p < 0.0001$
- The effect of number in the third person is not statistically significant in either text.
 - *Beowulf*: chi-square: 2.672; $p = 0.1021$
 - *Bald's Leechbook*: chi-square: 0.644; $p = 0.4223$

⇒ Null subject occurrences cannot be attributable solely to the influence of Latin. If the absence of pronouns in Old English resulted entirely from isolated instances of over-literal translation we would expect a random distribution of null subjects across persons (cf. van Gelderen 2000: 133).

3.4 Null objects

Referential null objects (RefNOs) are also found in OE (Ohlander 1943, van der Wurff 1997):

- (6) *se here ... gesæt þæt lond and gedælde* (cochronC,ChronC_[Rositzke]:881.1.762)
 the army invaded the land and divided
 'The army ... invaded the country and divided (it) up'

- (7) *hie ... leton holm beran / geafon on garsecg* (cobeowul,4.47.41–42)
 they let sea bear gave on ocean
 ‘They let the sea bear (him), gave (him) to the ocean’

I have not attempted a quantitative investigation of RefNOs, due to the difficulty of deciding what constitutes a true RefNO as opposed to e.g. Modern English *I have eaten*.

4. Analysis

Traditional account following Taraldsen (1978) attributes null subjects to rich agreement. But this can't account for the OE facts (*pace* van Gelderen 2000).

Verb paradigm for the simple present and past tenses in Old English: *nerian* ('to save')

N	Person	Present ind.	Past ind.	Present subj.	Past subj.
sg	1	ner-ie	ner-ed-e	ner-ie	ner-ed-e
	2	ner-est	ner-ed-est		
	3	ner-eþ	ner-ed-eþ		
pl		ner-iaþ	ner-ed-on	ner-ien	ner-ed-en

- OE agreement is just too weak (cf. e.g. Müller 2005): no person distinctions in the plural!
- Differences between texts/dialects are mysterious under an agreement-driven account.
- An agreement-driven account would predict RefNOs to be impossible, contrary to fact.

Is OE a 'radical null argument' language like Japanese and Imbabura Quechua? Neeleman & Szendrői (2007, 2008) suggest that such languages require agglutinating morphology on pronouns.

OE pronoun paradigm

	Nominative	Accusative	Dative	Genitive
1 sg	iċ	mē, meċ	mē	mīn
2 sg	þū	þē, þeċ	þē	þīn
3 sg m	hē	hine	him	his
3 sg n	hit			
3 sg f	hēo, hīo	hīe, hī	hire	
1 du	wīt	unc		uncer
2 du	ġit	īnc		īncer
1 pl	wē	ūs, ūsic	ūs	ūre
2 pl	ġē	ēow, ēowic	ēow	ēower
3 pl m	hīe, hī		him, heom	hira, hiera,
3 pl n				heora, hiora
3 pl f				

There is no feature value or combination of values such that they define a nonsingleton set of forms in which all members share phonetic material (cf. Neeleman & Szendrői 2007: 706). So if Neeleman & Szendrői are on the right track, OE wasn't a radical null argument language.

However, other languages are like OE in not fitting very well into the traditional null argument typology:

- In formal and written Finnish, for example...
 - ...1st and 2nd person pronouns can always be left unexpressed in finite contexts.
 - ...3rd person pronouns can be left unexpressed when 'bound by a higher argument, under conditions that are rather poorly understood' (Holmberg 2005: 539).
 - ...referential objects may also be unexpressed in similar contexts.
- Hebrew has a similar distribution in the past and future (Vainikka & Levy 1999: 615)
- Also Icelandic, Marathi, Russian, Brazilian Portuguese?

These could be classed as 'a separate type of null-argument language' (Holmberg & Roberts 2010: 10–11).

Holmberg's (2010: 101–104) analysis of partial null argument languages:

- RefNSs in partial null subject languages are DPs that bear a full set of ϕ -features but whose D-feature is uninterpretable ([uD]).
- T⁰ bears [u ϕ]-features associated with an EPP-feature.
 - T⁰ Agrees with the subject and attracts it to SpecTP.
 - This values T⁰'s [u ϕ]-features as well as the [uCase] feature of the subject DP.
- In consistent null subject languages, T⁰ (together with an incorporated ϕ P pronoun) has a [uD] feature which can be valued by Agree with a null Aboutness topic in the C-domain.
- In partial null subject languages, this strategy is not available.
- Finnish then has two ways of valuing the [uD] feature on the subject DP:
 - In the case of 1st and 2nd person null subjects, it is valued by agreement with the speaker (Λ_A) or addressee (Λ_P) projections in the left periphery.
 - In the case of 3rd person referential null subjects, it is valued through a structurally defined control relation with a DP antecedent.
 - The nullness of the pronoun is then due to an extended version of chain reduction.

Questions arising from this account:

- Why can't a null Aboutness topic control a null subject in SpecTP directly? (Allowing it to do so makes the wrong predictions... but how can it be ruled out?)
- How does the Agree relation between left-peripheral elements and T⁰ or the subject pronoun in SpecTP, in order to value the latter's [uD] feature, come to hold? The left-peripheral element must bear a valued D-feature. But it also needs to bear an *unvalued*

feature of some kind in order to probe, under the standard conception of Agree (Chomsky 2000, 2001).

My proposal: the ability of these left-peripheral elements to probe is subject to cross-linguistic variation. Specifically:

- In a given language Λ_A^0 , Λ_P^0 and Aboutness^0 may each independently bear a probing feature $[\text{u}\phi]$ alongside their valued D-feature.¹
- It is this that gives them the ability to probe and thus enter into an Agree relation with SpecTP or T^0 , valuing the latter's $[\text{uD}]$ -feature as a byproduct.
- This gives us a four-way typology of null argument languages:

Typology of null-argument context-linking

	$[\text{u}\phi]$ on Λ_A^0 , Λ_P^0	$[\text{u}\phi]$ on Aboutness^0	Examples
a)	Yes	Yes	Greek, Italian, Japanese
b)	Yes	No	Finnish, Hebrew, Marathi
c)	No	No	English, French, Bambara
d)	No	Yes	Old English (some texts)

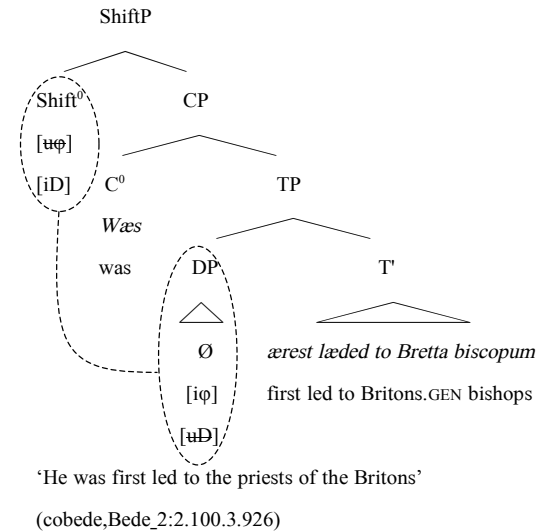
The null argument variety of OE instantiates option d). This covers the key facts:

- First and second person null arguments are comparatively rare.
 - This is expected if they are required to have discourse topicality (Sigurðsson 1993: 254). I therefore assume that Λ_A^0 and Λ_P^0 lacked the ability to probe in Old English.
- Null arguments in subordinate clauses are comparatively rare.
 - This can be captured if subordinate finite clauses in OE are islands with respect to agreement and do not always project a complete left periphery. (Perhaps the presence or absence of this left periphery is connected to the referentiality of the clause in the sense of Haegeman & Ürögdi 2010.)
- Null objects can be found.
 - The account given here predicts that objects can be null if they are higher in the derivation than the subject when Aboutness^0 is merged, i.e. in cases of fronting of objects for whatever reason (by no means rare in OE).

A sample configuration for null subjects is given overleaf.

¹ I will call this feature $[\text{u}\phi]$ for today's purposes, although it is likely that the feature will have to be further specified in order to circumvent locality restrictions.

Licensing of null subjects in Old English



A final important feature of partial null subject languages, according to Holmberg (2005: 540), is that they permit generic null subjects. Generic null subjects are certainly possible in Old English, as illustrated by (8), though the use of *man/mon* in this role is more common.

- (8) *Wip þæs magan springe þonne þurh muð bitere hræcð oþþe bealcet*
 for the maw.gen sore.dat when through mouth bitterly retches or belches
 'For sores of the mouth when (the patient) retches or belches bitterly through the mouth'
 (colaece, Lch_II_[2]:15.1.1.2296)

It thus seems that there is a plausible case to be made for OE as a partial null argument language.

5. Summary and conclusions

- Some OE texts reflect a null-argument-permitting grammar. Some don't.
 - So Hulk & van Kemenade (1995: 245), van Gelderen (2000: 137) and Mitchell (1985: 633) were all right, after all.
- Clear patterns can be seen in those texts that robustly exhibit referential null arguments.
 - RefNAs are rare in subordinate clauses.
 - RefNAs are rarer in the 1st and 2nd persons than in the 3rd person.
 - Both RefNSs and RefNOs can be found.
- OE null arguments cannot be accounted for by rich agreement, but...
- OE can be analysed as a partial null argument language in the sense of Holmberg (2010).
 - This has implications for comparative work on early Germanic (Rosenkvist 2009, Walkden in progress) and for the typology of null argument languages in general.

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