

# Peripheral cases: Deviations in morphological case at the clausal edge

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Syntax Colloquium  
Frankfurt, 13 January 2025

## 1 Introduction

morphological case: morphophonological cues for identifying syntactic function – help in processing

- (1) a. **Der Hund** hat **den Fuchs** aufgespürt.  
the.M.NOM dog has the.M.ACC fox tracked.down.PTCP  
'The dog has tracked down the fox.'
- b. **Den Fuchs** hat **der Hund** aufgespürt.  
the.M.ACC fox has the.M.NOM dog tracked.down.PTCP  
'The dog has tracked down the fox.'

→ syntactic function transparent also if the DP is not adjacent to the case licenser

no such flexibility in English:

- (2) a. **The dog** chased **the fox**.
- b. #**The fox** chased **the dog**.  
'The dog chased the fox.'

general tendency: languages with more overt case marking tend to have more flexible word order patterns

traditional approaches (Sapir 1921: 166, Marchand 1951, Mustanoja 1960: 68, Baugh & Cable 1993: 162–163; see Pintzuk 2002: 381–382 for discussion): Middle English word order becoming fixed due to the loss of morphological case, i.e. ultimately processing

possible expectation: morphological case retained especially if DP not adjacent to licenser

↔ proposal: this does not hold in general (Pintzuk 2002) and particularly at the clausal edges → no direct causal link between a relatively impoverished morphology and a relatively fixed word order

## 2 Case and position

abstract Case licensed at certain positions in the syntactic derivation

morphological case shows variation:

- may or may not reflect abstract Case
- case syncretism may vary in a single system (gender, type of DP)

regular case distinction in English pronouns:

- (3) a. **He** chased **them**.  
b. \***Them** chased **he**.

regular case syncretism with feminine, neuter and plural DPs in German:

- (4) a. **Die** **Katze** hat **die** **Schlange** aufgespürt.  
the.F.NOM/ACC cat has the.F.NOM/ACC snake tracked.down.PTCP  
'The cat has tracked down the snake. / The snake has tracked down the cat.'
- b. **Die** **Schlange** hat **die** **Katze** aufgespürt.  
the.F.NOM/ACC snake has the.F.NOM/ACC cat tracked.down.PTCP  
'The snake has tracked down the cat. / The cat has tracked down the snake.'

→ word order variation not directly governed by morphological case

similar conclusions regarding OV and VO order in Old (and Middle) English (Pintzuk 2002)

preverbal and postverbal objects in Old English:

- (5) a. swa hwider swa se cining Oswi **his rice** mihte ennan  
as far as the king Oswy his kingdom could stretch  
'as far as the king Oswy could stretch his kingdom'  
(*Chad*, 44; Pintzuk 2002: 383)
- b. þæt he mot ehtan **godra manna**  
that he might persecute good men  
'that he might persecute good men'  
(*WHom*, 130.37–38; Pintzuk 2002: 383)

factors favouring the object in the right sentence bracket (Pintzuk 1997):

- heaviness (length of NP)
- main clause (rather than subclause)
- finite auxiliary clause-medial (rather than clause-final)
- later texts (before 950: 24.3%; after 950: 44.8%)

proportion of postverbal objects (Pintzuk 2002):

- unambiguous accusative: 30.4%
- ambiguous nominative/accusative: 30.8%

→ conclusion of Pintzuk (2002): no significant differences associated with morphological case marking – also: ambiguity in most cases only formal (context disambiguates)

preverbal objects do not automatically disappear with the loss of morphological case in Middle English (Pintzuk 1997)

→ word order changes not directly governed by changes in morphological case

### 3 Relative clauses and the left edge

relative clauses: relative operator (overt or covert) moving to the left periphery

- (6) a. This is the cat [**which** \_\_\_\_\_ likes rain].  
b. This is the cat [**which** our neighbours found \_\_\_\_\_].

relative pronouns marked for Case according to their syntactic function – movement targeting [Spec,CP] A'-movement

morphological case on relative operators:

- not applicable for covert pronouns
- case distinction (e.g. *der* 'DEM.NOM' vs. *den* 'DEM.ACC')
- case syncretism (e.g. *which*)

original relative markers in Old English (Traugott 1992, van Gelderen 2009, Ringe & Taylor 2014):

- complementisers, such as *þe*
- *d*-pronouns
- the combination of the above options

combination:

- (7) a. ac gif we asmeagaþ þa eadmodlican dæda þa þe he  
but if we consider those humble deeds that.F.PL.ACC REL he  
worhte, þonne ne þincþ us þæt nan wundor  
wrought then not seems us that no wonder  
‘But if we consider the humble deeds that he wrought, then that will not  
appear marvellous to us.’ (*Blickling Homilies* p. 33)
- b. þurh þæt þe he on þam gebede gehyrð  
‘through that.N.ACC REL he in this.DAT prayer hears  
‘through what he hears in this prayer’  
(Aethelwold, *The Benedictine Rule*, 884–885)

fully fledged paradigm of *d*-based relative pronouns

most frequent pattern in Old English involved the complementiser *þe* (Traugott 1992, Ringe & Taylor 2014)

changes in Old/Middle English in line with the relative cycle (van Gelderen 2009):

- original relative pronoun reanalysed into a complementiser
- this reanalysis makes the [Spec,CP] position available for novel relative pronouns

reanalysis of *that* into a complementiser:

- *that* was the most unmarked pronoun (singular, neuter, nominative/accusative) – see Wunderlich & Fabri (1995), Wunderlich (1996), Wunderlich (2004) on the markedness hierarchies
- disappearance of *þe*
- disappearance of the other *d*-pronouns

*that* attested as a complementiser on its own from Middle English onwards (see van Gelderen 2009):

- (8) and suggeð feole þinges; bi Arðure þan kinge. // þat næuere nes  
and say many things about Arthur the king that never not-was  
i-wurðen  
happened  
‘and say many things about King Arthur that never happened.’  
(Layamon, *Brut*, Caligula version, 11473–11474)

innovation in Middle English: appearance of *wh*-based relative pronouns (see, for instance, Mustanoja 1960, Rydén 1983, van Gelderen 2004, Gisborne & Truswell 2017, Bacskai-Atkari 2020b; 2022b)

for the reanalysis of *that*: the relative pronoun has to lose features that are not available on complementisers – case, number, gender

loss of inflection on relative *that* in line with the general loss of inflectional morphology in Old/Middle English

general loss of inflectional endings in Middle English:

- general “reduction of forms and endings” (van Gelderen 2014: 128)
- similar changes in other Germanic languages as well – but: change in English appears to be rapid, possibly due to dialectal differences in the available texts (Allen 1997)

but: asymmetry between demonstrative and relative pronouns (Bacskai-Atkari 2020b)

- Allen (2016: 54–56): system of demonstratives still active in Early Middle English (with considerable dialectal differences) – diversity not mirrored by relative clauses even in morphologically rich dialects: old (demonstrative-based) relative pronouns infrequent
- occurrence of *that* with masculine, feminine or plural antecedents attested from at least the 9th century on (van Gelderen 2004: 84, citing Kock 1897: 30, Wülfing 1901: 407–408, Dekeyser 1986: 99; see also Traugott 1992: 227 and Allen 2016: 45) – losing gender features

→ the loss of morphological features on *that* is an early development when compared to changes in the general system (Bacskai-Atkari 2020b)

→ loss of inflection earlier in the peripheral position

- unexpected inasmuch as the function of the pronoun is cued less overtly
- expected inasmuch as the relative pronoun is removed from its case position (Bacskai-Atkari 2020b)

similar asymmetry in main clause interrogatives with *whom* as the complement of a preposition in formal English (Radford 1997: 142; cf. also van Gelderen 2004: 80):

- (9) a. \***Whom** were you talking to?  
b. To **whom** were you talking?

→ left peripheral position potentially rather a trigger for the lack of morphological case distinctions

## 4 Case and the Accessibility Hierarchy

Noun Phrase Accessibility Hierarchy (Keenan & Comrie 1977):

(10) SU > DO > IO > OBL > GEN > OCOMP

implicational hierarchy: subjects are the least marked function – grounded in processing factors (Keenan & Hawkins 1987, Hawkins 1995, Kirby 1996)

original observation of Keenan & Comrie (1977) pertained to the occurrence of resumptive pronouns

but: hierarchy relevant for relative pronouns as well

- pronouns also fill the gap – more likely to occur in the lower functions (Filler-Gap-Complexity Hypothesis of Hawkins 1999: 252–258; see also Romaine 1984: 440, Fleischer 2004a: 230, Bacskai-Atkari 2023)
- relative pronouns diachronically spreading from the lower functions in English (Romaine 1982: 61, Gisborne & Truswell 2017: 31–32, Bacskai-Atkari 2024c; see also van Gelderen 2004: 87, citing Dekeyser 1986: 100–101 and Allen 1977: 197–199)
- spread from the lower functions: not only for *wh* versus *that* but also for *who(m)* versus *which* (Bacskai-Atkari 2024c)

hierarchy grounded in processing (Keenan & Hawkins 1987, Hawkins 1995, Kirby 1996) – higher (less marked) functions easier to process

Hawkins (1999: 260–261): processing decisive regarding the distribution of relative pronouns

- lower functions more difficult to process
- relative pronouns more likely to occur in the lower functions of the Accessibility Hierarchy
- relative pronouns can overtly mark the gap – case inflection (gender and number transparent from head noun)

appearance of *wh*-relatives in English:

- in Middle English, starting with *which* (Mustanoja 1960, Rydén 1983, van Gelderen 2004, Gisborne & Truswell 2017, Bacskai-Atkari 2020b; 2022b)
- *which* available for [+personal] referents till Early Modern English (Johansson 2012)
- language contact an important factor – Latin, French (van Gelderen 2004, Gisborne & Truswell 2017)

data from *The Canterbury Tales* (The General Prologue, The Knight’s Tale, The Miller’s Tale) – between 1387 and 1400 (Bacskai-Atkari 2024a):

	SU	DO	PP
<i>who(m)/which</i>	5	4	41
<i>who(m)/which that</i>	11	5	5
<i>that</i>	209	28	8

pattern:

- overall picture: system altogether *that*-dominant
- *wh+that* behaves *wh*
- subject/object differences statistically significant:  $X^2(2, N = 262) = 11.734$ ,  $P = 0.002831$

distribution in the King James Bible (Bacskai-Atkari 2020a;b; 2023) – 1611/1769

	SU	DO	PP
<i>who(m)/which</i>	2555	1544	263
<i>that</i>	4677	624	2

pattern:

- overall picture: clear asymmetry
- subject/object differences statistically significant:  $X^2(1, N = 9400) = 873.6215$ ,  $P < 0.00001$

→ subject/object asymmetries in line with the expectations based on Filler-Gap-Complexity Hypothesis of Hawkins 1999: 252–258

but: morphological distinction between *which/that* not decisive (*which* earlier and more frequent than *who(m)* in Middle English)

relative pronouns in German: inflected just like demonstratives – also for case

relative clauses with *wo* in various dialects, e.g. Hessian, Alemannic

- (11) Des Geld, **wou** isch verdien, gehäiet mir.  
 the.N money REL I earn.1SG belongs I.DAT  
 ‘The money that I earn belongs to me.’ (Hessian, Schaafheim\_Radheim\_6; Fleischer 2016)

→ variation between *d*-pronouns and *wo*

asymmetries in German: distinction below DO and above OBL decisive (Fleischer 2004a, Bräuning 2020), IO patterns with DO or with OBL (Fleischer 2004a; indirect objects rare in corpora, see Fleischer 2004a, Herrmann 2005, Bacskai-Atkari 2020b)

results from SynAlm for Baden-Württemberg (Bacskai-Atkari 2022a):

	SU	DO	IO
<i>d</i>	1934	279	388
<i>dw</i>	1738	275	310
<i>w</i>	2240	302	150

pattern:

- overall picture: clear asymmetry
- *d+wo* behaves *d*
- difference between DO and IO statistically significant:  $X^2(1, N = 1704) = 67.641$ ,  $P < 0.01$
- difference between SU and DO not statistically significant:  $X^2(1, N = 6768) = 2.6704$ ,  $P = 0.10$

→ asymmetries in line with the expectations based on Filler-Gap-Complexity Hypothesis of Hawkins 1999: 252–258

variation in Standard German between *d*-pronouns and *welch*-pronouns:

- (12) a. Das ist die Frau, **die** das Haus gebaut hat.  
 that is the.F.NOM woman who.F.NOM the.N.ACC house built.PTCP has  
 ‘That is the woman who built the house.’
- b. Das ist die Frau, **welche** das Haus gebaut hat.  
 that is the.F.NOM woman who.F.NOM the.N.ACC house built.PTCP has  
 ‘That is the woman who built the house.’

variation primarily stylistic (Fleischer 2004b)

*welch*-pronouns already attested in Old and Middle High German (Coniglio & Paul 2019) but becoming established in Early New High German (Fleischmann 1973: 152, citing Wunder 1965: 414; see also Behaghel 1928) – contact with Latin and French also relevant

distribution in the Luther Bible (Bacskai-Atkari 2024b) – 1545

	SU	DO	IO	PP
<b><i>d</i>-pronouns</b> (660)	402 (94.81%)	236 (95.55%)	8 (80%)	14 (63.64%)
<b><i>welch</i>-pronouns</b> (43)	22 (5.19%)	11 (4.45%)	2 (20%)	8 (36.36%)



pattern:

- *welch*-pronouns more likely to occur in the lower functions
- significant difference between DO and IO:  $X^2(1, N = 257) = 4.8369, P=4.8369$
- significant difference between DO and PP:  $X^2(1, N = 269) = 31.336, P<0.01$
- no significant difference between SU and DO:  $X^2(1, N = 671) = 0.18043, P=0.671$
- no significant difference between IO and PP:  $X^2(1, N = 32) = 0.85686, P=0.3546$

→ same kind of asymmetry as in the dialect data with *wo* – but: inflectional cues exactly the same in the two paradigms

→ asymmetries in relative clauses regarding the distribution of relative pronouns cannot be sufficiently explained by morphological case

## 5 Elliptical comparatives

comparative clauses:

(13) Mary is more motivated than her mother is.

comparative clause often elliptical (Bacskai-Atkari 2018):

(14) Mary is more motivated than her mother.

ellipsis can lead to ambiguity (Bacskai-Atkari 2018: 168–173):

(15) I love you more than **Peter**.  
Subject reading: ‘I love you more than Peter loves you.’  
Object reading: ‘I love you more than I love Peter.’

case ambiguity: different underlying functions of the remnant

special case of potentially ambiguous structures: attributive comparatives – DP-external and DP internal readings (Lerner & Pinkal 1995)

(16) I saw a taller man than **my father**.  
External reading: ‘I saw a taller man than my father saw.’  
Internal reading: ‘I saw a taller man than my father is.’

subject remnants in both cases – but: underlying clause with a lexical verb or a predicative clause

→ no isomorphism requirement on the elliptical clause (Barros et al. 2014, Vicente 2018, Bacskai-Atkari 2023) – elided string must be e-GIVEN (Merchant 2001: 25–36)

position of the remnant DP: moved to the left (to FP, Merchant 2001)

position of the *than*-XP: extraposed to the right

subject-object ambiguities in German comparatives with case-ambiguous remnants (e.g. feminine):

- (17) Ich liebe dich mehr als **meine** Schwester.  
I love.1SG you.ACC more as my.F.NOM/ACC sister  
'I love you more than my sister.'

no ambiguity with masculine remnants:

- (18) a. Ich liebe dich mehr als **mein** Bruder.  
I love.1SG you.ACC more as my.M.NOM brother  
'I love you more than my brother loves you.'
- b. Ich liebe dich mehr als **meinen** Bruder.  
I love.1SG you.ACC more as my.M.ACC brother  
'I love you more than I love my brother.'

→ morphological case apparently a reliable indicator of underlying function

predicative comparatives: only nominative remnant possible – this is also the default case (Schütze 2001)

- (19) a. Ich bin schneller als **du**.  
I am faster as you.NOM  
'I am faster than you.'
- b. \*Ich bin schneller als **dich**.  
I am faster as you.ACC  
'I am faster than you.'

attributive comparatives show case distinction – based on the experimental data presented in Bacskai-Atkari (2023: 258–282):

- nominative remnant for the DP-external reading
- accusative remnant for the DP-internal reading

→ ambiguity only with case syncretism (e.g. feminine remnants)

DP-external reading:

- (20) Kontext: Ich habe mit [meiner Schwester / meinem Bruder] beschlossen, unseren Eltern dieses Jahr selbstgemalte Bilder zu schenken.  
'Context: I have decided with [my sister / my brother] to give self-painted pictures to our parents this year.'

- a. Ich male ein schöneres Bild als **meine** Schwester.  
I paint.1SG a.N nicer.N picture as my.F.NOM/ACC sister  
'I am painting a nicer picture than my sister.'
- b. Ich male ein schöneres Bild als **mein** Bruder.  
I paint.1SG a.N nicer.N picture as my.M.NOM brother  
'I am painting a nicer picture than my brother.'
- c. \*Ich male ein schöneres Bild als **meinen** Bruder.  
I paint.1SG a.N nicer.N picture as my.M.ACC brother  
'I am painting a nicer picture than my brother.'

DP-internal reading:

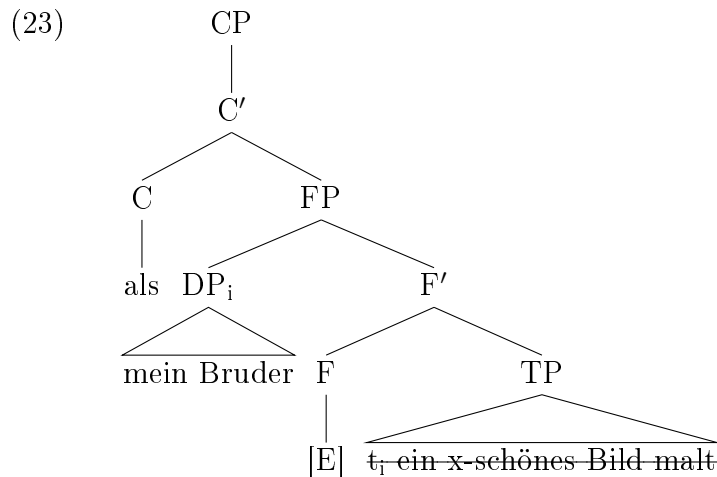
- (21) Kontext: [Deine Schwester / Dein Bruder] ist ganz schön groß, jedoch nicht [die größte Frau / der größte Mann] der Welt.  
'Context: [Your sister / Your brother] is fairly tall but not [the tallest woman / the tallest man] in the world.'

- a. Ich kenne eine größere Frau als **deine** Schwester.  
I know.1SG a.F taller.F woman as your.F.NOM/ACC sister  
'I know a taller woman than your sister.'
- b. \*Ich kenne einen größeren Mann als **dein** Bruder.  
I know.1SG a.M taller.M man as your.M.NOM brother  
'I know a taller man than your brother.'
- c. Ich kenne einen größeren Mann als **deinen** Bruder.  
I know.1SG a.M taller.M man as your.M.ACC brother  
'I know a taller man than your brother.'

derivation of the DP-external reading unproblematic (see Bacskai-Atkari 2018; 2023):

- (22) Ich male ein schöneres Bild [CP als [FP **mein** Bruder [TP ein  
I paint.1SG a.N nicer.N picture as my.M.NOM brother a  
x-schönes Bild malt]].  
x-nice picture paints  
'I am painting a nicer picture than my brother.'

structure:



nominative case regularly assigned in [Spec,TP] to the subject remnant

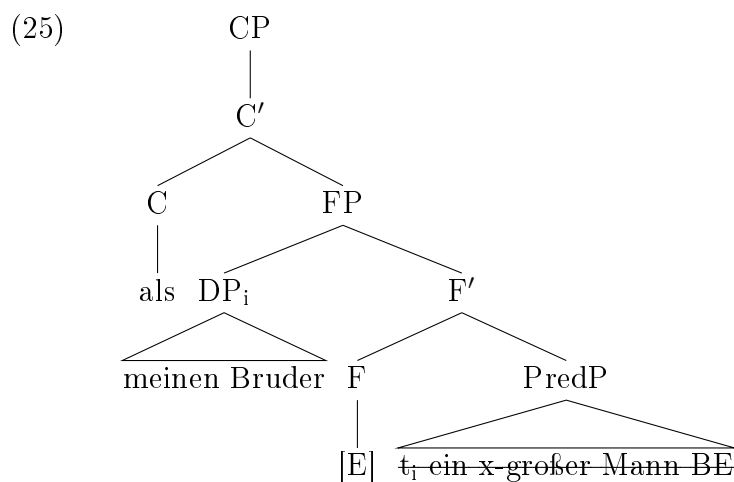
derivation of the DP-internal reading: accusative subject remnant only possible if it is not on [Spec,TP] before

→ no TP in the underlying predicative clause – instead: PredP (in the sense of Bowers 1993; 2010 and den Dikken 2006, in that predication is not tied to tense)

- (24) Ich kenne einen größeren Mann [<sub>CP</sub> als [<sub>FP</sub> **deinen Bruder** [<sub>PredP</sub> ein I know.1SG a.M taller.M man as your.M.ACC brother a x-großer Mann BE]]].  
 x-tall man BE  
 'I know a taller man than your brother is.'

“BE”: the phonologically empty Pred head

structure:



no nominative case assigned from T as there is no TP

source of the accusative case:

- not a default case in German (Schütze 2001)
- cannot come from *als* (C) – accusative on subject remnants only allowed in attributive comparatives
- only possible source: matrix verb – accusative assigned to the entire object DP in the matrix clause (also adjacency effect, see Bacskai-Atkari 2023)

→ deviation in morphological case in elliptical attributive comparatives:

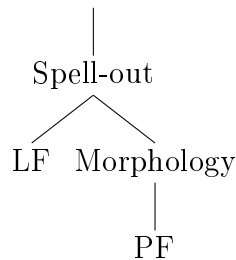
- DP located in an *A'*-position
- elliptical clause moved to the right (minimally of the modified DP, potentially to the right sentence bracket)
- assigned nominative Case realised as morphological nominative
- lack of assigned case: default case overwritten by an accusative case assigner

→ decisive factor at the periphery: vicinity of an overt case assigner

## 6 Implications

architecture of grammar in Distributed Morphology (Embick & Noyer 2007; see also Halle & Marantz 1993):

(26) Syntactic derivation



(abstract) morphemes receive phonological content via Vocabulary Insertion – Late Insertion

syntax/morphology connections are by default transparent – but: mismatches (readjustments) possible (Embick & Noyer 2007)

- all features present in the syntax mapped onto PF (e.g. number specification on nouns)
- post-syntactic (dissociated) features added in PF do not map onto LF (“ornamental”)

post-syntactic insertion: contextual inflection such as agreement and case

single exponent for multiple nodes possible

→ different scenarios:

- prototype: local canonical case assigner determines morphological case
- default: no canonical case assigner present – default (underspecified) case
- reduction: DP moves away from case assigner – default (underspecified) case
- overwriting: no canonical case assigner present, but case taken from another local case assigner

→ word order influences morphological case

## 7 Conclusion

morphological case and adjacency of the DP to licenser

- no correlation in Old English OV/VO (Pintzuk 2002)
- peripheral position of DP in relative clauses rather facilitates case syncretism
- asymmetries in relative clauses not simply due to whether case is distinguished (processing argument)
- reduced comparative clauses show case deviations that mask the underlying function

→ non-canonical positions for DPs do not act as conserving environments for morphological case – may rather foster deviations

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