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Two Types of Cliticization and Quantifier Stranding in the History of English

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ABSTRACT. This paper discusses two types of cliticization: long-distance cliticization and short-distance cliticization. The firmer was only observed in Old English, while the latter is available throughout the history of English. It is proposed that long-distance cliticization became obsolete due to the loss of object shift and that the mechanism of short-distance cliticization has changed in the history of English. It is also claimed that the change of the syntactic status of quantifiers affects the availability of quantifier stranding in object position.*

Keywords: long-distance cliticization, short-distance cliticization, weak head K, quantifier stranding

1. Introduction

This paper is concerned with two types of cliticization in the history of English: long-distance cliticization and short-distance cliticization. Long-distance cliticization takes place at the clause level, and it is only observed in Old English (OE; 450–1100). Short-distance cliticization, on the other hand, takes place within a Quantifier Phrase (QP), and it is pervasive throughout the history of English, including present-day English (PE; from 1900 onward). It is argued that long-distance cliticization became unavailable due to the loss of object shift. Although short-distance cliticization is observed from OE through PE, the mechanisms are different. The quantifier is a QP with K in OE and it is a Q without K in PE. As a consequence, quantifier stranding in object position is possible in OE, but it is not in PE.

Let us begin by reviewing cliticization in Italian. In example (1), which is a causative construction in Italian, the nominal object *il libro* 'the book' follows the infinitive *leggere* 'read' in the embedded clause.

(1) Giovanni fa *leggere* *il libro* a Mario.
Giovanni makes read the book Mario
'Giovanni makes Mario read the book.' (adapted from Burzio (1983: 194))

If an embedded object is pronominalized, it will be cliticized on the matrix verb, as in (2).

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(2) a. Giovanni *lo* fa leggere a Mario.
'Giovanni makes Mario read *it*.'
b. Giovanni *lo* vuole leggere.
'Giovanni wants to read *it*.'
c. Giovanni sperava di legger*lo*.
'Giovanni was hoping to read *it*.' (Burzio (1983: 196))

In (2a), *lo* 'it' is the object of the embedded verb *leggere* 'read', and it is cliticized on the matrix verb *fa* 'makes'. A similar phenomenon is observed in the restructuring construction as in (2b). In non-restructuring constructions like (2c), cliticization of an embedded pronominal object onto a matrix verb does not take place; the embedded pronoun *lo* 'it' is adjoined to the embedded verb *legger* 'read' in (2c).

In Italian, an embedded subject is also cliticized on the higher verb if it is a pronoun, as in (3). In (3c), *lo* 'him' is the subject of the embedded verb *lavorare* 'work' and is cliticized on the higher verb *fa* 'makes'. If it stays at the post-verbal position as in (3b), the sentence will be ungrammatical.

(3) a. Elena fa lavorare Gianni.
Elena makes work Gianni
b. *Elena fa lavorar-***lo**.
Elena makes work-him
c. Elena ***lo*** fa lavorare.
Elena him makes work
'Elena makes him work.' (Guasti (1997: 129–130))

A phenomenon similar to the one in (2b) is observed in OE as well. An object of the lower or lexical verb can occur before the finite or modal verb, as shown in (4).[1] In (4) and the following examples, lexical verbs are in a box; modal verbs are underlined; and relevant subject/object pronouns are in boldface and italics. In addition, topic phrases are in brackets.

(4) a. To ðam leohte soðlice [ure geleafa] ***us*** <u>sceal</u> gebringan
to that light verily our faith us shall bring
'to that light verily our faith shall bring us' (ÆCHom I 262.115)
b. [Ðyssera næddrena geslit] ***eow*** <u>mihte</u> to deaðe gebringan.
these serpents bite you might to death bring

[1] The examples of OE in this paper were retrieved from the York-Toronto-Helsinki Parsed Corpus of Old English Prose (Taylor et al. (2003)).

'The bite of these serpents might bring you to death.' (ÆCHom II 283.137)

Note that not all pronouns are clitics in OE. If a pronoun is accompanied with *self* 'self', the complex of the pronoun and *self* will remain at the original object position, as in (5).

(5) Ærest sceal se mann ***hine sylfne*** awendan fram yfele
first shall the man him self turn from evil
'First shall a man turn himself from evil' (ÆCHom II 237.63)

Here, we briefly consider clitics that will be examined in what follows. Hopper and Traugott (1993) define simple (or phonological) and special (or syntactic) clitics as in (6) and (7), respectively.

(6) Simple (or phonological) clitics occur in a position where their full form would occur.
(see Hopper and Traugott (1993: 5–6))

(7) Special (or syntactic) clitics occur in a position where an equivalent full form would usually not occur; in many languages this is the second position in the clause.
(see Hopper and Traugott (1993: 5–6))

As already mentioned above, clitics under consideration occur in a position where a full noun phrase would usually not occur. Thus, this kind of clitic in OE can be classified into a special (or syntactic) clitic. In addition, it is assumed that such clitics must be adjoined to a functional head as in (8) and that OE clitics in (4) are adjoined to C, which is occupied by a finite verb.

(8) Clitics must adjoin to a functional head, e.g. T or C. (see Kayne (1991: 649))

There is another kind of clitic throughout the history of English. This clitic can occupy the same position in which full noun phrases can occur. In this sense, this type of clitic can be counted as a simple (or phonological) clitic. The next section provides examples of two types of cliticization.

2. Two Types of Cliticization

2.1. Long-distance Cliticization

This section provides examples involving long-distance cliticization. In OE, subject pronouns can appear between topic phrases and finite verbs, as shown in (9), where the pronoun *we* 'we' occurs between the topic phrase *be ðæm* 'by that' and the finite verb *magon* 'may'.

(9) [Be ðæm] ***we*** magon suiðe swutule oncnawan ðæt
by that we may very clearly perceive that
'By that we can perceive very clearly that . . .' (CP,181,16/van Kemenade (1987: 111))

Full noun phrases usually occupy the position between modal and lexical verbs. In this sense, the pronoun in (9) can be regarded as a special clitic (see (7)). Due to the definition of (7), on the other hand, the subject pronoun *he* 'he' in (10) is not a clitic. This is because the position where the pronoun occurs can also be a position for full noun phrases.

(10) Ne sceal ***he*** noht unalyfedes don
not shall he nothing unlawful do
'he shall not do anything lawful.' (CP,60,15/van Kemenade (1987: 111))

Object pronouns can also occupy the same position subject pronouns can occupy as clitics. This is exemplified in (11), where the object pronoun *hine* 'it' occurs between the topic phrase *on sumre stowe* 'in some place' and the finite verb *mihte* 'might'.[2]

(11) [on sumre stowe] ***hine*** man mihte mid heafde geræcan.
in some place it one might with head reach
'in one place a man might reach it with his head' (ÆCHom I 468.102)

The object pronoun *hine* 'him' in (12) below can also be regarded as a clitic for the same reason why the object pronoun in (10) above is a clitic (see note 1).

(12) Ne mihte ***hine*** nan man of þam geleafan gebringan
NEG could him no one from the faith turn
'No man could turn him aside from the faith' (ÆLS 4.193)

The subject/object pronouns in (9) and (11) are left-adjoined to the higher verbs after raising out of the verb phrases headed by the lexical or lower verbs. The object pronoun in (12) raises out of the VP and is right-adjoined to the higher verb. That is why this type of cliticization is called long-distance cliticization in this paper.

2.2. Short-distance Cliticization

This section provides another type of cliticization: short-distance cliticization. This operation takes place within a QP and pronouns do not move out of the QP. A full noun phrase can either precede or follow the quantifier *eall* 'all', as illustrated in (13) and (14), which are examples of subject. In (13), the noun phrase *ða gelaðedan* 'the invited people' precedes the quantifier *eall* 'all', whereas the noun phrase *mancyn* 'mankind' follows the quantifier *eall* 'all' in (14).

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[2] In (11) another pronoun *man* 'one' is cliticized on the finite verb *mihte* 'might'. The status of the indefinite pronoun *man* 'one' is left open for future research.

(13) Þa ongunnon ***ða*** ***gelaðedan*** ***ealle*** hi beladian;
then began the invited all them excuse
'Then the invited people all began to make excuses.' (ÆCHom II 213.6)

(14) Hit ne mihte ***eall*** ***mancyn*** gedon gif he sylf nolde;
it NEG might all mankind do if he self not-would
'All mankind could not have done it, if he himself had not willed it'
(ÆCHom I 343.238)

Subject pronouns, on the other hand, are much more likely to precede the quantifier *eall* 'all', as in (15). The 'quantifier-pronoun' order as in (16) is quite rate in OE. The 'pronoun-quantifier' order as in (15) is counted as an example of short-distance cliticization. Since the pronoun occupies the same position a full noun phrase can, the pronoun of this kind can be counted as a simple clitic (see the definition of (8)).

(15) Đa astrehton ***hi*** ***ealle*** hi æt his fotum
then stretched they all them at his feet
'then they all stretched themselves at his feet' (ÆCHom II 282.89)

(16) ***Ealle*** ***we*** cumað to anre ylde. on þam gemænelicum æriste;
all we come to one age on the common resurrection
'We shall all come to one age at the common resurrection,' (ÆCHom I 220.114)

This tendency is true of the case of object pronouns. Object pronouns are also likely to precede the quantifier *eall* 'all', as in (17), and the 'quantifier-pronoun' order as in (18) is not so common in OE.

(17) 7 he ***us*** ***ealle*** gebletsað 7 gehalgað
and he us all blesses and hallows
'and who blesses and hallows us all' (ÆCHom I 328.75)

(18) ac wentst abuton þæt ðu ***ealne*** ***hine*** geseo;
but turn about that thou all it see
'but turnest it about, that thou mayest see it all' (ÆCHom I 341.172)

In later periods of English, the precedence of pronouns over quantifiers is getting a strict rule. Pronouns, subject or object, must precede the quantifier *eall* 'all'. This is shown in (19) and

(20) for Middle English (1100–1500), in (21) for Modern English (1500–1900), and in (22) and (23) for PE.[3]

(19) subject 'pronoun-quantifier' order in Middle English (1100-1500)

a. And ***they all*** seyde nay, they wolde nat fyght with hym
'and they all said no, they would not fight with him' (CMMALORY,61.2058)

b. and of the plente of hym ***we alle*** han takun, and grace for grace
'and of the plenty of it we have all taken, and grace for grace' (CMNTEST,I,1.32)

(20) object 'pronoun-quantifier' order in Middle English (1100-1500)

a. and he gretys ***you all*** well
'and he greets you all well' (CMMALORY,193.2876)

b. and giue ***us alle*** on heuene eche erdingstouwe
'and give us all an eternal dwelling-place in heaven' (CMTRINIT,173.2361)

(21) subject 'pronoun-quantifier' order in Modern English (1500-1900)

a. ***They all*** laught to see Jack's colour come and goe, like a wise man ready to make a good end. (ARMIN-E2-H,11.104)

b. and ***we all*** lodged there, because that was the appointed Place to meet at (OA TES-E3-P1,4,79.478)

(22) a. *Jack saw ***all them***/***all us***/***all you***.

b. Jack saw ***them all***/***us all***/***you all***. (Brisson (1998: 228))

(23) a. ****All they***/***all we***/***all you*** left.

b. ***They***/***you***/***we all*** left. (Brisson (1998: 228))

To sum up, two types of cliticization have the following properties: long-distance cliticization is available only in OE, while short-distance cliticization is observed throughout the history of English, from OE through PE. Subject/object pronouns are cliticized on matrix verbs through long-distance cliticization; and they are cliticized on the quantifier within a QP through short-distance cliticization.[4]

3. Basic Assumptions

3.1. Clause Structure of Old English

[3] The examples of Middle English and those of Modern English were retrieved from The Penn-Helsinki Parsed Corpus of Middle English (Kroch and Taylor (2000) and The Penn-Helsinki Parsed Corpus of Early Modern English (Kroch et al. (2004)), respectively.

[4] For diachronic studies of quantifiers see Bartnik (2011) and Yanagi (2008, 2012).

This section briefly describes some basic assumptions necessary for examining two types of cliticization provided in the previous section. Following the general assumption (cf. van Kemenade (1987) and Pintzuk (1999)), I assume that OE is a verb-second (V2) OV language and that in main clauses finite verbs are located at the C head and topic phrases occupy the specifier of the CP. This is schematically illustrated in (24a).

(24) a. $[_{CP}$ [topic] Vf $[_{TP}$ subject $[_{vP}$ $[_{VP}$ object V_{inf}]]]]
b. $[_{CP}$ [topic] ***pro***-Vf $[_{TP}$ (subject) $[_{vP}$ $[_{VP}$ (object) V_{inf}]]]]

In (24a), if the subject or object is pronominalized, it will be adjoined to the C head or the finite verb (Vf), as in (24b) (see Kayne (1991: 649)).

3.2. Labeling Algorithm

This paper adopts a version of labeling algorithm proposed by Chomsky (2008, 2013, 2015). The approach is characterized by the following two concepts:

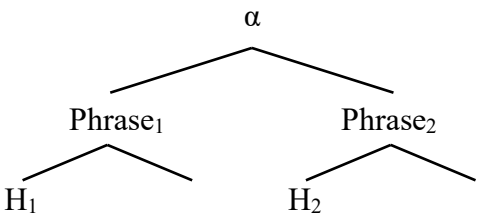
(25) Labeling algorithm: The category created by Merge receives the label of the closest head. (Rizzi (2015: 321))

(26) Labeling must be complete at the interfaces. (Rizzi (2015: 321))

On assumption (25), the closest head with the appropriate features will label the newly-created category by Merge. Labeling takes place at the interfaces, as assumed in (26).

There is a problematic case of the labeling algorithm. It is the merger of two phrases, and both heads in the two phrases are equally distant from the above category.

(27) Phrase Merge (XP-YP Merge)

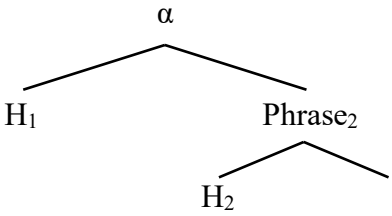


(Rizzi (2015: 325))

In the configuration of (27), both H_1 and H_2 qualify as the closest head to the newly-created node. Then, the labeling algorithm cannot give a proper label to α, and α remains unlabeled. There are two ways to resolve the no-winner labeling competition as in (27). One is related to movement. In (27), if one of the two phrases, $Phrase_1$ and $Phrase_2$, is moved, then α will receive the label of the other. The other way is feature sharing. If both phrases (or their heads) provide the same feature, then α can be labeled by that feature. A typical example of feature sharing is a *wh*-question.

There is another problematic case of the labeling algorithm: an instance of Head-Phrase Merge (X-YP Merge), which is the core recursive case of Merge. In (28), the head H_1 will be the label of the new node created by Merge.

(28) Head-Phrase Merge (X-YP Merge)



(Rizzi (2015: 324))

In the configuration of (28), if H_1 is a D and $Phrase_2$ is an NP, the label of α will be straightforwardly determined as D, which is the closest head to α. A problem will arise when a pronominal subject is merged with a TP, as pointed out in Chomsky (2013: 46).

(29) A pronoun X can appear in a structure {X, YP}, as in S = "he left". But it cannot be a head, or it would label S incorrectly. Therefore it must be a more complex structure, perhaps D-pro. (Chomsky (2013: 46))

For this problematic case of the X-YP merger, I assume with Chomsky (2013) and without any discussion that a pronoun has a complex structure, e.g. D-pro, throughout the history of English.

3.3. Quantifier Phrase with Kase

Let us finally make an assumption about the status of the quantifier *all* in the history of English. Adapting Saito's (2018) assumptions, this paper assumes that case endings of quantifiers in OE are K heads and they are weak. The OE quantifier *eall* 'all' is realized like *eall-e*, *eall-ne*, *eall-es*, and *eall-um*, where *eall* is the Q[uantifier] head and *-e*/*-ne*/*-es*/*-um* is located at the K head.

Saito (2018) proposes the search mechanism with a weak K head, as in (30).

(30) Search {α, β} for a label. If α is a weak head or search into α yields a weak head, then search on the α side is suspended and it continues only on the β side.

(Saito (2018: 387))

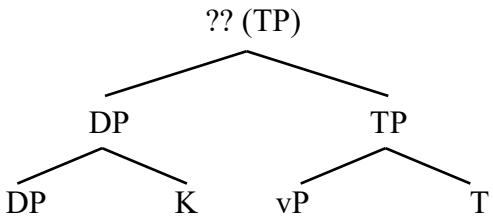
Let us explain the mechanism by using the structures in (31).

(31) a. {DP, K}

b. {{DP, K}, {vP, T}} (Saito (2018: 387))

(31a) is the structure of a Case-marked argument consisting of the DP and the K head. In this structure, if the K is weak, then search into the K will be suspended and shift to the DP. Therefore, the D head provides the label for the entire category. The structure in (31b) is illustrated in (32).

(32)



(Saito (2018: 387))

In (32), search into the DP is suspended as the K is a weak head; the search shifts to the TP. Since Saito assumes that T is a strong head in Japanese, T provides the label for the entire structure in (32).

4. Derivation of Cliticization

4.1. Long-distance Cliticization

Let us first discuss long-distance cliticization exemplified in Section 2.1. This type of cliticization was only observed in OE, and it became obsolete in later periods.[5] We will take example (9), repeated here as (33), for illustration purposes. Long-distance cliticization of subject pronoun proceeds as follows: a subject pronoun, e.g. *we* 'we' in (33), merges with vP at a stage of the derivation. The pronoun moves out of the vP and merges with TP. As the derivation continues, C merges with the TP, and the finite verb moves up to the C head and a topic phrase moves into the specifier of the CP. At this point, we would have the structure in (34).

(33) [Be ðæm] ***we*** magon suiðe swutule oncnawan ðæt
by that we may very clearly perceive that
'By that we can perceive very clearly that . . .' (CP,181,16/van Kemenade (1987: 111))

(34) [$_{CP}$ [by that] may [$_{TP}$ we [$_{vP}$ very clearly [$_{vP}$ perceive [$_{vP}$

In (34), the pronoun *we* 'we' is cliticized onto the finite verb or the C head. The final structure is given in (35).

(35) [$_{CP}$ [by that] ***we***-may [$_{TP}$ *t* [$_{vP}$ very clearly [$_{vP}$ perceive [$_{vP}$

[5] For studies of clitics in OE see Pintzuk (1996) and Yanagi (2001).

We next consider long-distance cliticization of object pronoun. Let us take example (11), repeated here as (36), for explanatory purposes.

(36) [on sumre stowe] ***hine*** man mihte mid heafde geræcan.
in some place it man might with head reach
'in one place a man might reach it with his head' (ÆCHom I 468.102)

The derivation proceeds like this: an object pronoun merges with V. If the pronoun were a head, both heads, pronoun and V, would be equally closest to the new node, and the new node would remain unlabeled. As assumed above, however, pronouns are DPs (D-pro in Chomsky (2013)) in the history of English. Thus, the closest head to the new node will be the V head, and it will be the label.

In the course of the derivation, the complement to a phase head is transferred when the phase is completed, as proposed in Chomsky (2008). If Transfer applies to the canonical vP structure, the V and object are both transferred and are not accessible to any later operations. Thus, an object pronoun must raise outside of the VP to be cliticized before Transfer. We assume that in OE an object pronoun is shifted to the outer specifier of vP. The object pronoun further moves up to the finite verb located at the C head, as in the case of subject pronoun. This is illustrated in (37) and (38).

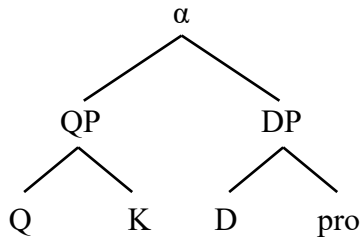
(37) [$_{CP}$ [in some place] one-might [$_{TP}$ [$_{vP}$ with head [$_{vP}$ ***it*** [$_{vP}$ reach [$_{VP}$
(38) [$_{CP}$ [in some place] ***it***-one-might [$_{TP}$ [$_{vP}$ with head [$_{vP}$ *t* [$_{vP}$ reach [$_{VP}$

In Middle English, object shift was getting unavailable and finally it became obsolete. If an object pronoun does not move out of the VP before Transfer applies, it is not accessible to later operations and it cannot be cliticized on a finite verb, unlike in OE. Consequently, long-distance cliticization became unavailable in English.

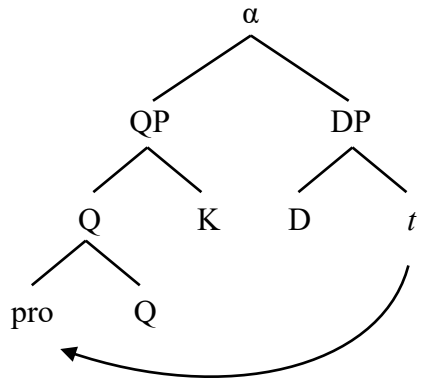
4.2. Short-distance Cliticization

We next discuss short-distance cliticization. In contrast to long-distance cliticization, short-distance cliticization takes place within a single category, and pronouns do not cross the phrase boundary. As assumed above, the structure of inflected quantifiers in OE is a QP with K. An inflected quantifier merges with a subject or object pronoun, which has a complex structure, D-pro. The structure obtained after the merger of quantifier and pronoun is illustrated in (39a), in which D-pro is tentatively labelled with DP.

(39) a.



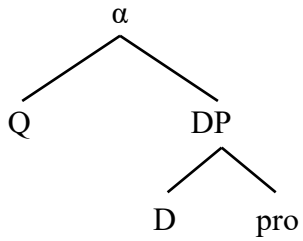
b.



In general, pronouns are phonologically weak, and such pronouns cannot remain at the end of the phrase. As described in (39b), thus, the pronoun is cliticized on the quantifier Q. Now the DP is phonologically null, and α is labeled as QP in (39b). This mechanism is applied to both subject and object pronouns, yielding the 'pronoun-quantifier' order in subject and object position, as provided in Section 2.2.

In course of time, inflectional endings in English was getting leveled, and finally got lost. As a result, the weak K head became unavailable in the QP. Then, the structure of QP changed from (39a) to (40a). In (40a), unlike (39a), the K head does not appear.

(40) a.



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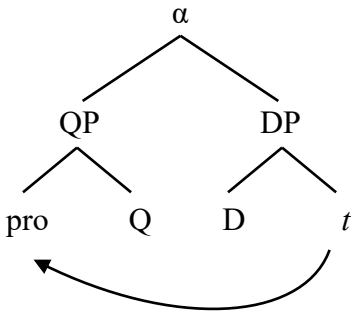

In contrast to the structure of (39a) in OE, in Middle English onward, a complex of quantifier and pronoun has the structure of (40a). In the {Q, DP} configuration of (40a), Q is a head, and the new node α is labeled as QP. While the structure of quantifiers changed from {Q, K} to simple {Q}, that of pronouns is the same throughout the history of English, i.e. D-pro. When pronouns are phonologically weak, they are cliticized on the quantifier Q as in (40b). As a result, the 'pronoun-quantifier' order is properly obtained.

4.3. Quantifier Stranding

It was proposed in the previous section that the structure of quantifiers changed from {Q, K} to {Q}. This section shows that the above syntactic change affects the availability of quantifier stranding in object position.

In present-day English, quantifier stranding in object position is not allowed as shown in (41). In OE, on the other hand, it was possible as indicated in (42), although quantifier stranding in object position was not so frequent (van Gelderen (2022)).

(41) *His misdeeds were not written ***all***. (van Gelderen (2022: 120))

(42) Soðlice þæt ic ***eow*** secge ***eallum***
truly that I you say all
'Truly, I say that to you all' (Mk (WSCp) 13:37/Bartnik (2011: 143))

This contrast can be accounted for if we assume that the quantifier has the {Q, K} configuration in OE and it has a simpler structure of {Q} in PE. In PE, the stranded quantifier (more precisely, the quantifier stranded after long-distance cliticization of object pronoun) is a head, and it is merged with the V head. This is Head-Head Merge (X-Y Merge). As often discussed in the literature, this configuration is problematic. Both heads, Q and V, are closest to the new node, and this configuration would cause a labeling problem.

The stranded quantifier in OE, by contrast, is an XP category, and it is merged with the V head. Here again, the quantifier is stranded after long-distance cliticization from object position. This is Head-Phrase Merge (X-YP Merge). In this case, the V head would be the label of the new node without any problem. van Gelderen (2022: 120) states that the contrast of grammaticality between (41) and (42) remains a mystery, but if the present analysis is on the right track, it should not be a mystery and can rather be accounted for straightforwardly.

5. Conclusion

It has been shown that there are two types of cliticization observed in the history of English: long-distance cliticization and short-distance cliticization. Long-distance cliticization was only observed in Old English, and it became unavailable due to the loss of object shift. Short-distance cliticization, by contrast, is available throughout the history of English, but its mechanism has been changed because of the loss of inflectional endings of the quantifier. It was proposed that whereas the quantifier *eall* 'all' is a QP with the weak K head in Old English, the quantifier *all* is a Q without K in present-day English. This change from phrase to head is compatible with van Gelderen's Head Preference Principle in (43).

(43) Be a head, rather than a phrase. (van Gelderen (2018: 119))

As a result of the change, quantifier stranding in object position was possible in Old English, but it is not allowed in present-day English.

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