Correlative constructions in earlier English

Clause structure and discourse organisation

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Correlative constructions in earlier English

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1 INTRODUCTION

The term ‘correlative’ is used for several related constructions found cross-linguistically. Often, these are constructions in which the relation between two clauses or other syntactic units is explicitly marked by means of (parallel) adverbs or combinations of a clause and a pronominal (Bhatt & Pancheva 2006, Lipták 2009). The term ‘correlative’ sometimes also refers to constructions like *the more, the merrier*, a comparative construction (e.g. Lipták 2009). In this thesis, it is used for constructions introduced by an adverbial or conditional subclause that is resumed by an initial adverb in a Verb-Second main clause. Consider the Dutch examples in (1–2).[1]

(1) […] ***toen*** *ik daar begon* **toen** had ik vijfde klas.
[…] then *I* there started then had I fifth grade
‘When I started [working] there, I had [was teaching] the fifth grade.’
fn000086.0015

(2) […] ***als*** *jij thuis zo zit* **dan** kan je dus niet naar buiten kijken.
[…] if you (at) home like this sit then can you thus not to outside see
‘If you sit like this at home, you cannot see outside.’
fn000250.0206

In (1) the adverbial subclause *toen ik daar begon* is initial. It is followed by a main clause with the resumptive adverb **toen** ‘then’ in main clause-initial position. The finite verb *had* (first person singular past tense of *hebben* ‘to have’) and the subject directly follow the resumptive adverb, also invariably in that order. Similarly, the conditional subclause *als jij zo thuis zit* in (2) is recapitulated by **dan** ‘then’ introducing the main clause consequence of satisfying the condition.

[1] All Dutch examples throughout this thesis labelled with ‘fn’ have been retrieved from the Corpus Gesproken Nederlands ((2014) – Corpus of Spoken Dutch).

This thesis investigates the development of a very similar and robustly attested type of correlative construction in Old English (OE) against the backdrop of the older Germanic languages. Consider the OE examples in (3–5) and the Middle English (ME) example in (6), all crucially showing the same structure as (1–2).

(3) ***þa₁*** *heo* ***þa₃*** *to þæm gemote ferdon,* **þa₂** cwomon heo ærest to summum aancoran,
then they then to that meeting went then came they first to some anchorite
'As they were on their way to the meeting, they came first to an anchorite,'
Bede_2:2.100.19.941

(4) ***ðonne₁*** *him se wiðerwearda gæsð on becom,* **ðonne₂** gefeng Dauid his hearpan,
then him the evil spirit on came then took David his harp
'When the evil spirit came upon him, David took his harp,'
CP:26.183.23.1216

(5) ***gif₁*** *he* ***ðonne₃*** *oðierne & orige weorðe,* **þonne₂** bið he wites scyldig
if he [the thief] then runs away and out of sight is then is he [the captor] punishment guilty
'If the thief then runs away and becomes out of sight, the captor shall be responsible for that fine.'
LawIne:28.1.78

(6) ***hwen₁*** *þe feont smit þiderwart.* **þenne₂** is iwis to dreden
when the devil fights in that direction then is certainly to fear
& naut for forwunden
and not to wound
'When the Devil fights like that, it is certainly to cause fear and not wounds.'
cm-ancriw-1 II.201.2884

Old English (3–5) exemplify adverbial and conditional *subclauses* in initial position introduced by the conjunctions ***þa*** 'then' in (3), ***þonne*** 'then' in (4) and ***gif*** 'if' in (5) (numbered with subscript 1). A corresponding resumptive adverb **þa** or **þonne** 'then' (numbered with subscript 2), originally a demonstrative and typically used for discourse linking, recapitulates the subclause. It also introduces the following main clause in which the finite verb is invariably in second position. A third use of ***þa***/***þonne*** as a discourse particle (numbered with subscript 3) in these correlative constructions is optional and illustrated in (3) and (5).[2] The effect of stacking conjunction and particle and/or resumptive adverb results in emphasis: correlatives, especially those with a discourse particle, emphasise the temporal narrative sequentiality in examples like (3); in conditionals such as (5), they emphasise the condition that has to be met.

Old English (and Dutch) correlative constructions are used for rhetorical purposes, in that they help writers get their message across by foregrounding the event in the main clause. Examples with *þa* or *þonne*, like (3–4), express temporal relations. Both often indicate a change in narrative (Traugott 1992: 259–60). *Þonne* correlatives can additionally also have a more causal, concessive or conditional sense, meaning 'whenever', but they always retain some temporal significance (Mitchell 1985b: 858). The temporal function of *þa* and *þonne* correlatives is taken over by ***when*** correlatives like (6) in ME (Fischer 1992: 352–3), initially still showing the same structural characteristics with a resumptive adverb and the finite verb directly following it.

[2] To achieve coherence throughout this thesis, the term 'modal particle' in the published articles that make up chapter 2 and 3 has been changed thoughout to 'discourse particle' as used in chapter 4.

Conditionals are part of the set of correlatives as their structure is identical to that of *þa* and *þonne* correlatives. Crosslinguistically, conditionals have often been analysed as either correlatives themselves or as historically deriving from correlative constructions (Bhatt & Pancheva 2006). Correlatives and conditionals also regularly share the same markers of subordination (Lipták 2009: 26–9). In OE examples with *gif* like (5), the accuracy of the proposition expressed in the main clause (or apodosis) depends on the fulfilment of the condition expressed in the subclause (or protasis). We also find OE verb-initial (V1) conditionals and those introduced by *and*, meaning 'if, suppose/provided that, on condition that' (OED). Both types are also structurally similar to *gif* conditionals, including resumptive adverb use, as can be seen in (7–8).

(7) *Gewite þæt ungesewenlice ut:* **þonne** fylð adune þæt gesewenlice. […]
departs that invisible out then fall down that visible […]
'If that which is invisible depart, then will the visible fall down; […]'
ÆCHom_I,_10:262.123.1914

(8) *And þou haue nede to ride upon þis same hors or þe corn be*
if you have need to ride on this same horse before the corn is
oute. **þen** make a þynne plaster of þe forseide snayles
out then make a thin plaster of the aforementioned snails
'If you need to ride this horse before the bruise on the sole of its hoof has cleared, make a thin plaster out of the aforementioned snails.'
cmhorses 121.349

The use of resumptive adverbs is in fact a key property of, and indeed the reason for calling these constructions correlatives. Resumptive adverbs recapitulate the previous clause and foreground the action/main event or consequence in the main clause; as such they remind the reader/listener to pay attention to the discourse that is to come (van der Horst 1981: 39–41, Enkvist 1986, van Kemenade & Los 2006, Baker 2007: 99, van der Horst 2008: 538–9, Wårvik 2013). Their use also establishes textual cohesion (Los 2009). Correlative constructions only manifest resumptive adverb use

when the adverbial or conditional subclause introduces the construction. This order also portrays their robust semantic-pragmatic relationship most accurately or iconically (cf. Dancygier & Sweetser 2005). In *þa* and *þonne* correlative constructions, this order reflects the temporal sequentiality: the initial subclause locates the event in time or discourse, presenting backgrounded information, essentially the context against which the information in the main clause is to be processed. The main clause itself relates the follow up, foregrounded event and carries the narrative forward. In conditional correlatives with initial subclauses, this order illustrates the consecutive order of the condition and result as they would happen in the real world. The conditional subclause provides the contextual assumption for the consequence in the main clause to be 'true' or relevant. Correlative constructions with initial subclauses thus also structure the discourse. Constructions with adverbial or conditional subclauses following the main clause do not have resumptive adverbs (or discourse particles), as illustrated in (9). Neither do they structure the discourse in a similar way, for which reason they are not considered to be correlative constructions.

(9) Wæs he Albanus hæðen ða gyt, ***þa*** *ðara treowleasra cyninga*
was he Albanus heathen then still then the faithless kings
beboda wið cristenum monnum grimsedon
command towards Christian men to-be-cruel
'Albanus was still a heathen, when the commands of the faithless kings burst forth in fury against Christians.'
Bede_1:7.34.12.274

The unmarked use of resumptive adverbs in correlative constructions as recapitulating discourse linkers in main clause-initial position is facilitated by a language-specific characteristic: Verb-Second (V2). V2 languages – like Dutch and German – typically have the finite verb directly following the first constituent in the main clause, which can be of any type (Fischer et al. 2000: 110–4). The name 'Verb-Second' refers to the fact that the verb is always in second constituent position in these languages. This leads to subject-verb inversion when a constituent other than the

subject – for example, a resumptive adverb – precedes the finite verb. For the West Germanic languages, including earlier English, correlative constructions and their use of resumptive adverbs are central to an understanding of the historical development of the clausal pre-field and the employment of V2 grammars in language use.

An example of a present-day V2 language is Dutch, in which the clause-initial constituent can be of almost any type (even an adverbial subclause as in (10) or a conditional subclause like (d) in table 1) as long as it is one constituent (Zwart 2011: 281, Broekhuis & Corver 2016: 1215, 1298–99). Table 1 illustrates this process, in which XP is a cover term for different types of clause-initial constituents.

Table 1. Verb-Second word order

	XP	Finite verb	Subject	Object	Adverbial	Subclause
a.	Ik	zie		hem	vandaag,	als hij thuis is
b.	Vandaag	zie	ik	hem,		als hij thuis is
c.	Hem	zie	ik		vandaag,	als hij thuis is
d.	Als hij thuis is,	zie	ik	hem	vandaag	

(10) *toen we hier pas kwamen* was het echt fijn
then we here just came was it really pleasant
'When we first came here, it was very pleasant.'
fn000971.0017

Although Dutch and English share (low) West Germanic as their ancestor, Present-day English is not a V2 language. It has Subject-Verb-Object (SVO) word order in both subordinate and main clauses. Of the possibilities shown in table 1, only subject-initial main clauses such as example (a) are unmarked in Present-day English. Other constituents can precede the subject, as shown in table 2 (b–c), but their use evokes a specific, often contrastive reading (Birner and Ward 2002 cited in Los 2009) and does not trigger the characteristic West Germanic subject-verb inversion.

Table 2. SVO word order

	XP	Subject	Finite verb	Object	Adverbial
a.		I	saw	him	today
b.	Today	I	saw	him	
c.	Him	I	saw		today

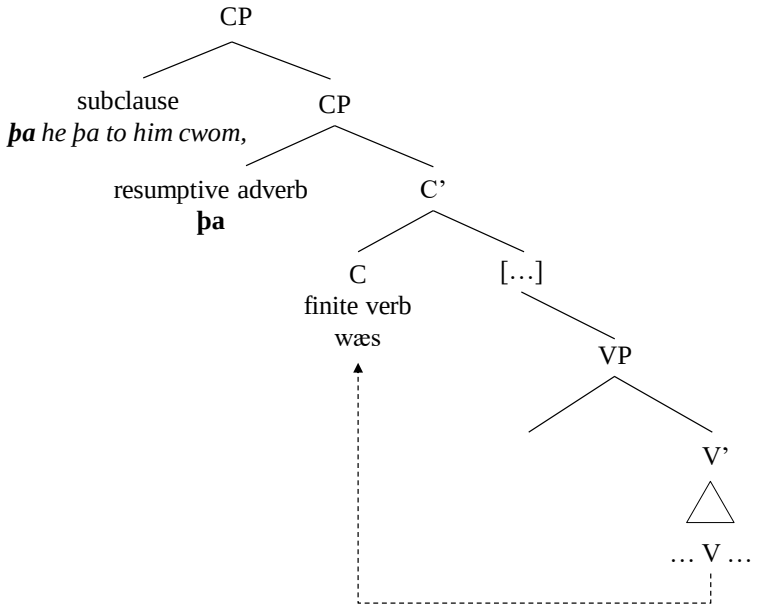
Old English, however, was a V2 language.[3] After clause-initial *wh*-elements, negative elements or adverbial *þa*/*þonne*, it shows invariable subject-verb inversion, as shown in table 3.

Table 3. Verb-Second in Old English

	XP	Finite verb	Subject		Literal translation
a.	hwi	wolde	God	…	Why would God …
b.	ne	sceal	he	…	Not shall he …
c.	þa	wæs	þæt folc	…	Then was the people …

The structure of the main clause of a correlative construction introduced by *þa*/*þonne* as in (3–8) is thus a typical characteristic of V2 in OE. Unlike Dutch (see table 1 (d)), OE adverbial/conditional subclauses do not trigger subject-verb inversion. In fact, the use of a resumptive adverb following the clause-initial subclause in an OE correlative construction indicates that these subclauses are adjoined to the main clause rather than embedded. This observation, combined with the standard analysis for this type of V2 in OE in which the verb moves from the verb phrase (VP) via intermediate positions to the second constituent position known as C (Fischer et al. 2000: 110–29), results in the structure presented in figure 1 for correlative constructions. A more detailed analysis of V2 in OE is given in section 1.2, but for now this brief introduction in combination with the structure for correlatives in figure 1 will suffice for discussing the origin of this structure in pre-OE times in section 1.1.

[3] Old English shows two types of Verb-Second: so-called Type 1 V2 with subject-verb inversion after *wh*-, negatives and *þa*/*þonne* (described here) and Type 2 V2 concerned with verb-movement following topics. Both types are discussed in detail in section 1.2.



þa *he þa to him cwom,* **þa** wæs he forht geworden.
'When he then came to him, he had become fearful.'
Bede_2:9.128.17.1222

Figure 1. Structure of Old English correlative constructions

The structural characteristics of OE facilitated the discourse structuring properties of both temporal and conditional correlatives, especially regarding the main clause-initial use of resumptive adverbs, which seems to be related to several internal and external factors. However, resumptive adverb use following initial adverbial and conditional subclauses is not obligatory, as is shown in example (11) with a subject-initial main clause. (11) is part of a group of constructions that are structurally similar to correlatives. These are referred to in this thesis as *non-correlative potentials*: constructions where an alternative with a resumptive adverb in main clause-initial position would be possible. Non-correlative potentials form the (low frequency) alternatives to correlatives. Section 1.2 will explain in detail how these non-correlative potentials fit the structure presented in figure 1. The cover term *potentials* will be used

for the complete set of correlatives and non-correlative potentials and reflects the envelope of variation.

(11) Subject-initial non-correlative potential

Þa *ða he ðegn wæs,* he mette his feond,
then then he servant was, he met his enemy,
'When he was a subject, he met his enemy,'
CP:50.393.4.2665

A puzzling peculiarity about correlative constructions is that they flourished in OE and largely and relatively abruptly disappeared in the transition from Old to Middle English, being replaced by non-correlative potentials. This timing is unexpected as correlatives benefit from the possibilities offered by V2 which itself was lost several centuries later (Fischer et al. 2000: 129–37, Haeberli 2002, Los 2009, van Kemenade & Westergaard 2012, Los 2012a). I will come back to this in section 2.

Although correlatives are mentioned in the literature on earlier English, their discussion is mostly limited to illustrating other OE structural phenomena and they are not dealt with in detail (cf. Fischer 1992, Traugott 1992, Los & van Kemenade forthcoming). Their most detailed discussion is by Mitchell (1985b) who carefully lists several types of correlative constructions in his substantial work on Old English syntax, but offers little explanation for their origin, structural properties or diachronic development. Recently, correlative constructions received some attention by Emonds and Faarlund (2014) who use correlatives to underpin their argument that Middle English is in fact what they call Anglicized Norse. They argue that correlative constructions are absent in Old Scandinavian and that, although they occurred in OE as what they incorrectly define as "two apparently coordinated clauses shar[ing] copies of the same constituent" (2014: 115), correlatives are absent from ME. As a diagnostic for analysing this construction as Norse, they use the word order of the subclause in the ME correlative example in (12) (from Emonds and Faarlund (2014: 116, ex. 85, originally from Fischer (1992: 286, ex. 203)). As this example does not show verb-final word order (which is common for OE subclauses), Emonds and

Faarlund argue that it resembles the grammar of Norse and is not a continuation of OE.

(12) […] *þa he lai an sleep in scip*, þa þestrede þe dæi ouer al landes.
[…] when he lay on sleep in ship then dimmed the day over all lands
'When he lay asleep in the ship, it became darker all over the land.'
PC (Ld)an.l 135; 54.2-3

However, word order in (correlative) subclauses (even in Old English) was not invariably verb-final (cf. Eythórsson 1995, Fischer et al. 2000, Bech & Walkden 2016). As such, there is nothing special about the example in (12): non-verb-final word order can in fact be found in abundance in both Old and Middle English subclauses in correlative constructions. I thus agree with Bech and Walkden's comment in their review of Emonds and Faarlund's book that "it is an early Middle English sentence which shows continuity from Old English, both as regards correlative adverbs and as regards word order." (2016: 88–9). Although the use of correlative constructions declines in ME, they still occur, especially in early ME where they are found exclusively in untranslated texts in my dataset.

In sum, correlative constructions are introduced by an adverbial or conditional subclause which is resumed by an adverbial in the following main clause. Correlatives can largely be found in OE and are replaced by non-correlative potentials in the later periods. Additionally, they can also be found in several (West) Germanic languages, for example in Present-day Dutch. Their correlative form is facilitated by the use of resumptive adverbs and the availability of V2 with a multifunctional clause-initial position (XP) that can hold resumptive adverbs in the OE main clause. The use of these constructions in earlier English not only provides us with knowledge on the development of this particular construction, but also provides insights into the historical development of the clausal pre-field in the Germanic languages, as well as into the development of the syntactic structure of English.

1 THE DEVELOPMENT OF THE CLAUSAL PRE-FIELD IN GERMANIC

The use of correlative constructions in the West Germanic languages and earlier English provides insights in the structure and function of the clausal pre-field of the main clause. The construction seems to have originated in the development of V2 during the early Germanic period. The structural possibilities provided by the V2 characteristic of earlier English, in combination with a distinct demonstrative pronoun paradigm used for discourse linking, facilitated the use of several left-peripheral constructions, including correlatives. This subsection will outline the development of the clausal pre-field, V2 and the demonstrative pronoun paradigm in early Germanic and Old English, as well as the continuation of correlative constructions into Middle English.

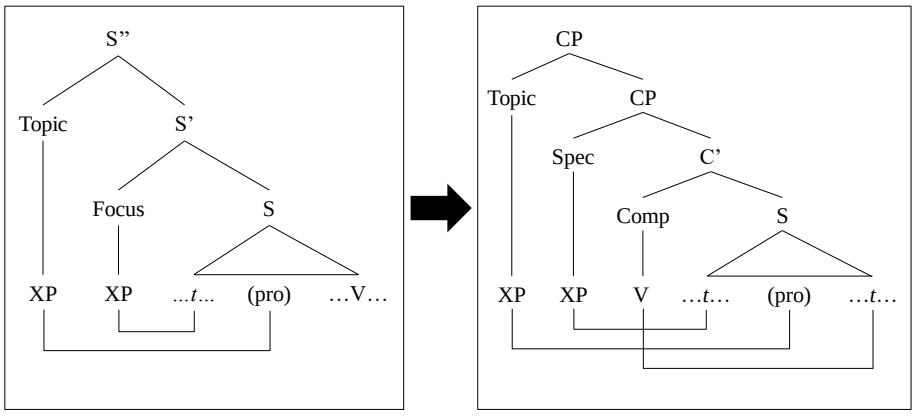
1.1 FROM PROTO INDO-EUROPEAN TO GERMANIC

The basic word order of the early Germanic languages has often been argued to be Subject-Object-Verb (SOV) (Eythórsson 1995, Kiparsky 1995, Los 2012a). The V2 word order found in most of the present-day and historical Germanic languages, including Old English, seems to be an innovation originating in the Indo-European proto-language. The runic inscriptions (ca. 150-450) and Gothic (evidenced by a surviving bible translation from the fourth century) provide the earliest evidence for verb-movement out of the verb-phrase (VP; in which (finite) verbs are base-generated[4]) in the Germanic languages (Eythórsson 1995).

I take as a starting point Kiparsky's analysis (1995) of early Germanic clause structure in relation to that of its ancestor Indo-European. Kiparsky's primary aim is to account for the rise of V2 in the Germanic languages.[5] He argues this to be closely related to the development from paratactic (or coordinated) to hypotactic (or subordinated) word order. Figure 2 represents the key development according to Kiparsky:

[4] Base-generation is the notion that an element originally occurs in a certain position (for example, the verb in the VP) as opposed to being moved to that position.

[5] Note that Kiparsky (1995) argues that verb-movement is not attested in the runic inscriptions and Gothic, contra Eythórsson (1995). This observation, however, has no consequences for the structural changes Kiparsky proposes other than a possibly earlier dating.



Note. From Kiparsky (1995: 153) *Note*. From Kiparsky (1995: 140)

Figure 2. Structural changes in Indo-European proto-language main clauses

Indo-European (figure 2 left) had two left-peripheral operator positions, but it lacked the category complementizer (conjunction) and, importantly, had no syntactically embedded clauses. Clauses expressing semantic/pragmatic information that would later come to be expressed by finite subordinate clauses, including relative clauses and sentential complements, were typically paratactically adjoined to the main clause. Of the two left peripheral positions in the main clause, the inner position hosted focal elements such as *wh*-phrases (relative and interrogative) or demonstratives (Hock 1989 cited in Kiparsky 1995). The leftmost position contained topics, in fact left-dislocations resumed by a (null) resumptive pronoun in argument position as indicated in figure 2 (Garrett 1992 cited in Kiparsky 1995). This Topic position is adjoined to the maximal sentence projection.

In the Indo-European daughter languages, including the Germanic languages, subordinate clauses became syntactically embedded. The frequent combination of two clauses sharing a semantic-pragmatic relationship not only led to their reanalysis as one construction, but ultimately over time to the hypotactic integration of the adjoined clause as a subclause into the second. Subclauses in the Germanic languages lost their main clause properties and became headed by complementizers (Comp in figure 2 on the right, more recently referred to as C) in a complementizer phrase (CP). In Kiparsky’s view (1995), the introduction of complementizers was thus a consequence

of the shift from adjoined to embedded subordination. Another dimension of this process was the rise of V2, i.e. verb-movement from V to C via intermediate positions (cf. figure 1) in the absence of a complementizer. The seminal observation that the finite verb in main clauses occupies the same position as the complementizer in a subclause (i.e. the Comp or C position), goes back to Den Besten (1983). This V-to-C movement distinguishes main clauses – in which the finite verb is in C – from subclauses in which the complementizer occupies C. As a consequence, we find SOV order in the subclauses of most Germanic languages since verb-movement is blocked by the complementizer. Verb-movement to C in main clauses is triggered by *wh*-constituents and other focused elements in Spec, CP, according to Kiparsky primarily negation and (adverbial and pronominal) demonstratives.

The pattern of verb-movement to C has largely been generalised in the present-day Germanic languages to include topics in Spec, CP. Kiparsky's earlier Topic position in figure 2 (right) is therefore interpreted as a landing site for different kinds of extra-clausal material. It is used for contrastive left-dislocates like *die jongen* 'that boy' in (13) as well as for correlative subclauses (cf. figure 1), both resumed by (adverbial) demonstratives in Spec, CP. Its use reflects the earlier paratactic structure in which such clauses were adjoined rather than embedded. Verb-movement to C also occurs in special modality related V1 word order patterns, such as imperatives or V1 conditionals like (7) (also see chapter 3).

(13) Die jongen, die mag ik niet.
that boy, that (DEM) like I not
'That boy I don't like.'

Although *wh*-constituents, negation and demonstratives are all clausal operators, these triggers for verb-movement to C do not form a uniform class: there is thus no a priori reason to assume that these elements attract the verb to C, as Kiparsky (1995) hypothesises. It is this observation that raises the question of the validity for postulating a reverse hypothesis that instead singles out the finite verb in C as the triggering element attracting *wh*-consituents, negation and demonstratives to Spec,

CP. While such an analysis might be attractive at first sight as it might explain the fact that the identified triggers do not form a uniform class, Eythórsson (1995) shows that in the northern part of the Germanic linguistic area and in Gothic, verb movement out of VP to a higher position was not only possible from a very early stage onwards, but also that it is variable between the Germanic daughter languages. His data not only establish movement of the finite verb, but offer insight into the variation between the Germanic languages: despite sharing many characteristics during the earlier stages, the daughter languages show some remarkable differences with respect to what initial constituents do and not trigger verb-movement to C. This indicates that V2 was still an ongoing development in early Germanic.

The earliest evidence for verb-movement is found in the runic inscriptions (ca. 150-450). Eythórsson (1995) establishes verb-movement to C on the basis of the enclitic subject pronoun *eka* (*ika*) 'I' in post-verbal position in constructions where a topicalised definite complement is moved to Spec, CP. An example can be seen in (14) (from Eythórsson 1995: 184, his 9). Here, both the finite verb *hait* 'am.called' and the subject clitic *ika* 'I' follow the proper name topic *hariuha*. The fact that "the verb occurs to the left of the subject clitic is a strong indication of movement" (Eythórsson 1995: 187), which indicates that – at least in the runic inscriptions – complement topics have become elements in Spec, CP attracting the finite verb to C.

(14) hariuha hait-ika farawisa
hariuha am.called.I(CL) the.one.who.knows.danger
'I am called Hariuha, the one who knows danger(?).'
Sjælland bracteate 2

The distribution of clitic particles also provides Eythórsson (1995) with evidence for verb-movement to C in Gothic, but their distribution also shows that not all types of topics are alike in attracting the finite verb. The distribution of the Gothic clause typing clitics *-uh* ('and', a clause-conjoining particle) and *-u* (an interrogative particle in questions) varies between several types of adjoined main clauses and interrogative clauses. Eythórsson argues that the clitics *-uh* and *-u* are base-generated in C, which

is supported by their absence in subclauses where a complementizer occupies C. They attach to the finite verb when certain operators attract the finite verb to C. This operator-element in Spec, CP could be a topicalised definite subject like *Iesus* 'Jesus' in (15) (adapted from Eythórsson 1995: 56, his (7a); clitic in bold), but also a topicalised null subjects. However, verb-movement to C does not occur with topicalised definite complements (unlike in the runic inscriptions) and clitics attach to the complement's head instead, as exemplified in (16) (adapted from Eythórsson 1995: 64, his (15a); clitic in bold). Neither does Eythórsson find evidence for clitics attaching to the finite verb when an indefinite subject precedes it, which he attributes to a structurally lower position (than CP) for indefinite subjects.[6] A similar approach in a Rizzi framework (1997) is found in Ferraresi (2005, see also Los 2012b).

(15) Iþ Iesus iddj-**uh** niþ im
'But Jesus went with them'
Lk 7:6

(16) […] Filipauz-**uh** þan broþrs is fidurragingja þis Ituraias
'[…] and his brother Philip being tetrarch of Ituraea'
Lk 3:1

Topics are not the only elements which can act as triggers for verb-movement. The Gothic finite verb also moves to C in imperatives and when a *wh*-element or negative is in clause-initial Spec, CP position (Eythórsson 1995). The position of verbal particles to the right of the finite verb in these latter two constructions suggests verb-movement out of VP, as verbal particles are generally assumed to be base-generated on the left of the verb in Gothic (and the other Germanic languages). The fact that

[6] Indefinite subject in Gothic occur in a position below CP (Eythórsson (1995) makes no assumptions as to what this position is). Finite verbs following indefinite subjects thus must also occur below C, which explains why the clitics in C do not attach to them. Differential placement of definite and indefinite subjects is not uncommon among the Germanic languages (cf. Fischer et al. (2000) or Warner (2007) for Old English; Eythórsson (1995) for Icelandic and the Welsh dialect of Pembrokeshire).

verbal particles in these constructions do not occur categorically on the right side of the finite verb indicates that V2 was still an ongoing development in Gothic.

Eythórsson's early data thus confirm verb-movement out of VP, but crucially show that verb-movement is not yet invariably restricted to C with those triggers (topics, *wh*-elements, negatives and demonstratives) that attract the finite verb to C in the present-day Germanic languages. Especially, the distribution of topics (including definite complements) acting as triggers for verb-movement during the earliest stages of the Germanic languages shows that V-to-C movement was still developing as several distinct patterns are attested. These observations falsify the reverse hypothesis postulated above: the differences between the runic inscriptions and Gothic regarding topics triggering verb-movement to C cannot be accounted for if the finite verb had instead been responsible for the placement of these elements in Spec, CP. The reason for this is that these elements do not form a uniform class across the languages, which would be required for the reverse hypothesis to hold. Eythórsson (1995) argues that verb-movement to C with topics started in North Germanic, spreading to the West Germanic linguistic area after the separation of Old English, in which they do not trigger V-to-C movement. The fact that in the Old High German *Isidor* topicalised complements do not always trigger verb-movement supports this pattern of spreading (Eythórsson 1995), although opinions vary here (see Axel 2007 and Schlachter 2012).[7] By contrast, V-to-C movement in all environments is standard in the present-day continental Germanic languages German and Dutch (Eythórsson 1995). It thus seems that V-to-C movement is truly an innovation that originated in the transition of Indo-European into its daughter languages. As such, it might be possible to find evidence for the earlier Indo European structure in the Germanic V2 languages. The variation between the Germanic langauages may hold clues to the earlier state(s). As we will see, the structure presented in figure 2 (right) provides, pragmatically and structurally, the optimal environment for correlatives.

[7] Note that Gothic as well as Old High German texts are highly dependent on the Latin *Vorlage* (Schlachter 2012).

1.2 VERB-SECOND AND CORRELATIVES IN ENGLISH

Verb-Second has largely been generalised in the continental Germanic languages for which the standard analysis is that the first element occurs in Spec, CP and the finite verb occupies C (Vikner 1995). This leads to subject-verb inversion when the initial constituent is something other than the subject (see table 1 above). For Old English, however, most authors differentiate between two types of V2 (cf. Fischer et al. 2000 following up on Pintzuk 1999). In Type 1 V2 or C-V2 the finite verb moves to C. This type was already briefly discussed above (cf. figure 1) as it facilitates the use of correlative constructions. Here, I will discuss it in detail, showing how (in combination with an extra-clausal position) it accommodates both correlative and non-correlative potentials. Type 2 V2 involves verb movement with topics. Although this type is not relevant for the discussion of correlatives, it is included to provide a full picture of Old English syntax.

1.2.1 TYPE 1 VERB-SECOND AND CORRELATIVES

Old English C-V2 is much like V2 in Present-day German or Dutch in the sense that the finite verb always moves to C. When *þa*/*þonne* 'then', question words (*wh*-) or a negator introduce the main clause, subject-verb inversion takes place invariably, as illustrated in (17–19) (examples from Fischer et al. 2000: 106, their (6–8)) and figure 3. The use of a resumptive adverb *þa*/*þonne* in the main clause of correlative constructions is thus part of the core characteristics of OE V-to-C movement. Type 2 V2 is furthermore what crucially differentiates main clauses from subclauses in OE. As both conjunction and finite verbs occur in C, movement of the finite verb to C in subclauses is blocked. Verb-fronting to C survives in PDE *wh*-initial and negative-initial clauses (Rizzi's 'residual verb-second' (1990)), where it is known as subject-auxiliary inversion.[8]

[8] Verb-movement to C became restricted to finite auxiliaries after the loss of V2 by late Middle English to Early Modern English (Fischer et al. 2000: 129–37) and following the auxiliation of the modals and the rise of auxiliary *do* during the sixteenth century (Ellegård 1953, Lightfoot 1979, Roberts 1985 and Kroch 1989).

(17) **Þa** wæs þæt folc þæs micclan welan ungemetlice brucende […]
then was the people that great prosperity excessively partaking […]
'Then the people were partaking excessively of the great prosperity […]'
Or_1.23.1

(18) **Hwi** wolde God swa lytles þinges him forwyrnan
why would God so small thing him deny
'Why would God deny him such a small thing?'
ÆCHom I, 1.14.2

(19) **Ne** sceal he naht unaliefdes don
Not shall he nothing unlawful do
'He shall not do anything unlawful.'
CP:10.61.14

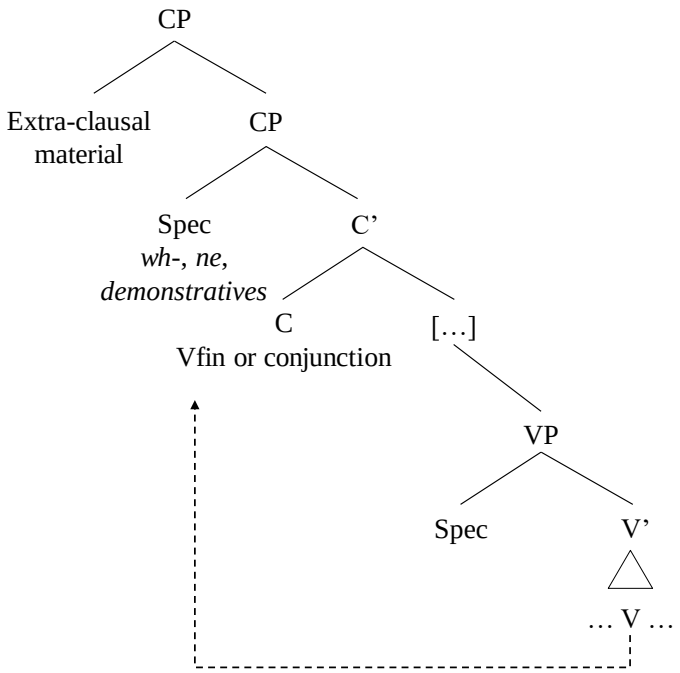


Figure 3. Verb-movement to C (through intermediate heads) in Old English[9]

Kiparsky's three types of focused elements in Spec, CP responsible for verb-movement in Germanic thus also account for the three core cases of V-to-C movement found in OE, but OE also provides evidence for the Indo-European structure with paratactically adjoined 'subclauses' from which V2 developed (cf. figure 2). This structure is crucial for the analysis of OE potentials.

The structure in figure 3 is based on Kiparsky (1995), combined with Fischer et al.'s analysis (2000: 126) of Type 1 V2 in Old English. I interpret Kiparsky's Topic position in the above figure 2 on the right as one for left-dislocation, since he uses the presence of a resumptive pronoun or adverb as a diagnostic for topichood. The resumption by a (possibly null) resumptive pronoun in argument position indicates

[9] The positions occupied by the subject and finite verb in Type 2 V2 (FP/AgrSP and TP) have not been included in figure 3 as correlative constructions only involve Type 1 or C-V2, that is verb-movement to C. The finite verb in correlative constructions does, however, move through these intermediate phrases. For more (detailed) discussion of verb movement to positions other than C, see the treatment of Type 2 V2 in section 1.2.2 or, for example, Fischer et al. (2000: 114–29), Los (2009), Warner (2007) or Haeberli (2000).

that left-dislocated constructions are adjoined rather than embedded, indicating that Kiparsky's topic position is extra-clausal and reflects the earlier parataxis. An OE example is (20).

(20) **Đone** ðe Drihten lufað. **þone** he đreað.
[$_{Topic}$ [$_{CP}$ object demonstrative [$_{S}$ S V…]]]
him who God loves, him he chastises
'God chastises those he loves.'
ÆCHom II, 21:188.247

I propose to treat OE correlatives in a similar manner: the adverbial or conditional subclause, introduced by complementizer *þa, þonne* or *gif* (and in Middle English *when*), is adjoined to the main clause CP, as shown in figure 4. The resumptive adverb preceding the finite verb 'counts' as the first constituent for V2 in Spec, CP and triggers verb-movement to C. The idea that correlative and conditional subclauses involve adjunction of the subclause instead of embedding has, in fact, been put forward for various languages (Haegeman 2003, Bhatt & Pancheva 2006, Lipták 2009, Haegeman 2012). (3–5) represent prototypical OE examples.

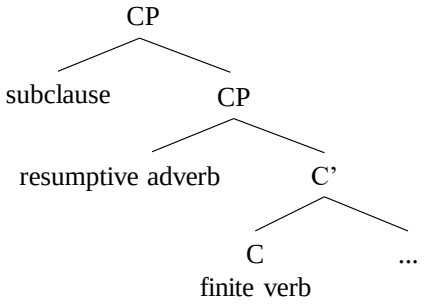


Figure 4. Structure of Old English correlatives

A similar analysis was proposed by Kiparsky for OE preposed subclauses which – unlike in Present-day Swedish, German or Dutch (see table 1 (d)) – fail to trigger V2, indicating that they are adjoined rather than embedded. His example is *þeah hie ær þæs ecan lifes orwene wæron, hie synt nu swiþe bliþe* ('Even though they were

formerly despairing of eternal life, they are now exceedingly joyful' (Blickling Homilies 85.27) (Kiparsky 1995: 157, his 46)), a pattern which is instantiated in 694 tokens (or 17.7%) in my OE dataset. It shows an early SVO minority pattern attested in – what I call – a non-correlative potential (see example (11), repeated here as (21d)). The structure in figure 4 crucially also accommodates for this and several attested types of non-correlative potentials.

The first type of non-correlative potential is exemplified by (21a), in which the initial subclause is immediately followed by the finite verb, similar to the Dutch example in (10). Here, a resumptive adverb can be added clause-initially before the finite verb *fylgað* 'follow' without making any changes to the remainder of the clause: *þonne fylgað ge him* (lit. 'then follow you him'). I dub this type of non-correlative potential in (21a) *verb-initial*.

(21a) Verb-initial non-correlative potential

Ondswarede he him: ***Gif*** *he Godes man sy,* fylgað ge him
answered he them: if he God's man is, follow you him
'He answered them: 'If he is a man of God, follow him.''
Bede_2:2.100.23.944

Although the occurrence of verb-initial examples like (21a) raises the question whether the subclause could be in Spec, CP rather than adjoined (as in Dutch), this is not the case. Such a hypothesis would imply that the subclause could trigger verb-movement to C. This is an unwarranted assumption for OE; V2 placement in C is triggered by specific types of first constituent, more specifically initial question constituents and preverbal negative as exemplified in (21b–c) (the second type of non-correlative potentials labelled *V2 other*) and the demonstrative resumptive adverbs discussed here (cf. Fischer et al. 2000). As the subclause is not a trigger, I assume that the subclause in examples like (21a) is adjoined, and that there is a null resumptive adverb in Spec, CP, triggering verb-movement to C.

(21b) V2 other non-correlative potential with initial question word

Gif ic soð secge. Hwi nelle ge me gelyfan?
if I true say. why not-will you me believe
'if I say the truth, why will you not believe me?'
ÆCHom_II,_13:127.13.2780

(21c) V2 other non-correlative potential with preverbal negative

gif *we hit forsuwiað* ne bið us geboregen.
if we it keep silent not is us save
'If we it keep silent, we are not safe.'
ÆCHom_I,_3:205.186.620

The third type of non-correlative potentials consists of a variety of initial constituents in the main clause. Example (21d) presents an example with an initial prepositional phrase, while (21e) has an initial subject. I assume that the initial constituent is in Spec, CP (see van Kemenade (1997)). These non-correlative potentials do not involve verb-movement to C, but rather to a position lower in the clause (see e.g. Fischer et al. 2000, Haeberli 2000, Warner 2007).[10] Note that the main clause word order in (21e) is SVO, as in Present-day English, but (as indicated above and in chapter 2) these subject-initial main clauses are a minority pattern within the OE potentials. These types of non-correlative potentials are labelled *XP-initial non-V2* and *subject-initial* here.[11]

[10] The position of the subject in subject-initial clauses in OE is disputable. Fischer et al. (2000) assume that it is Spec, CP. Discussion of this issue is beyond the scope of this thesis as it does not influence the analysis presented here.

[11] Note that *XP-initial non-V2* potentials are not limited to those introduced by prepositional phrases. The term non-V2 refers to the absence of what is known as C-V2 or type 1 V2. Type 2 V2 (to a position other than C; see section 1.2.2) is occasionally attested in examples like (21d), but not required.

(21d) XP-initial non-V2 non-correlative potential

Đonne he oferstæled bið, & him gereaht bið ðæt he oðrum mæg
then he convinced is and him explained is that he others may
nytt bion on ðam ðe him mon ðonne bebeodeð, mid his mode he
useful be on that that him man then commands with his mind he
hit sceal fleon
it must flee
'When he is convinced and it is shown to him that he may be useful to others in the post which is offered to him, he should flee it in his mind, […]'
CP:6.47.16.265

(21e) Subject-initial non-correlative potential

Þa *ða he ðegn wæs,* he mette his feond,
then then he servant was, he met his enemy,
'When he was a subject, he met his enemy,'
CP:50.393.4.2665

Finally, there are correlatives in which the resumptive adverb does not trigger subject-verb inversion. An early and quite rare OE example is given in (22), labelled *resumptive adverb non-V2*. This example portrays the later word order as it sometimes found in the Present-day English SVO potentials. Adding resumptive adverb *then* to Present-day English SVO potentials like (23–24) does not trigger subject-verb inversion, showing that the outward trappings of the construction have changed. Clause-initial *then* in these constructions would function as a frame-setter evoking a contrastive reading (Los & van Kemenade forthcoming). Its potential use in (23–24) furthermore fails to "make a specific connection with the time of the earlier clause" (Los & van Kemenade forthcoming: 19) as was achieved in examples (3–4) and (6).[12]

[12] In order to relate the two events in examples like (3–4) or (6), Present-day English uses clefts, pseudo-clefts and hanging topic left dislocations (Los 2009, Los & van Kemenade forthcoming).

(22) *Resumptive adverb non-V2 potential*[13]

Þa he ðis eal dyde, ða he stod æfter us gewend,
then he this all did then he stood after us turned
'When he did all this, he stood turned towards us, […]'
CP:52.405.35.2790

(23) If Philip is at the party, (then) I will leave.

(24) When his girlfriend left, (then) he became an alcoholic.

1.2.2 TYPE 2 VERB-SECOND

Old English Type 2 V2 involves verb movement with topics, for example *on twam þingum* 'with two things' in (25). In these constructions, subject-verb inversion takes place only with nominal subjects as in (25). Pronominal subjects precede the finite verb like in (26) (finite verbs underlined, subjects in bold).

(25) On twam þingum hæfde **God** þæs mannes sawle gegodod
in two things has God the man's soul endowed
'With two things God had endowed the man.'
ÆCHom I, 1.20.1

(26) Be ðæm **we** magon suiðe swutule oncnawan ðæt […]
by that we may very clearly perceive that […]
'By that, we may perceive very clearly that …'
CP:26.181.16

Topicalisation does not trigger V-to-C movement and as such Type 2 V2 is not attested in correlative constructions. The differences in subject placement in (25–26) lead van Kemenade (2000), Fischer et al. (2000: 127–8) and Haeberli (2000) to argue

[13] The example given in (22) is essentially a correlative construction without verb-movement to C. This type is attested very infrequently in OE (less than 1%), but gained ground in the transition to ME.

that while the position for topics in OE main clauses is Spec, CP, the finite verb does not move to the highest head available (C in CP), but rather to a position below C. This leads to the verb-third order in (26). This position has been identified in split IP proposals as the head of FP (Fischer et al. 2000: 127–8) or, more recently, as the head of AgrSP (Haeberli 2000, Warner 2007), a position above TP. Pronominal subjects occur in Spec, FP/AgrSP and precede the finite verb as in (26), whereas nominal subjects occupy Spec, TP, directly below F/AgrS as in (25) (Fischer et al. 2000, Haeberli 2000, Warner 2007).[14] Recent proposals (van Kemenade 2002, van

[14] The labels for the relevant phrases require some clarification here. The term 'split IP' refers to a further split of the inflection phrase (IP, which holds an auxiliary or the inflection of a verb) into several distinct phrases, each with their own function. Although a detailed discussion of the theory behind the split IP is beyond the scope of this thesis, some explanation of the terminology is given here. Fischer et al. (2000) postulate that pronominal subjects occupy Spec, FP, while the finite verb is in F. They remain neutral on its precise properties, hence the name FP (functional phrase). Haeberli (2000) and Warner (2007) argue that pronominal subjects occur in Spec, AgrSP, essentially the same position, but with its name indicating that is specifically a position for subject arguments: Agr(eement) S(ubject) P(hrase). Nominal subjects occur in a lower position, namely Spec, TP (Tense Phrase, characterised by tense inflection) (Fischer et al. 2000: 127–8, Haeberli 2000, Warner 2007). The relevant structure is given in figure A.

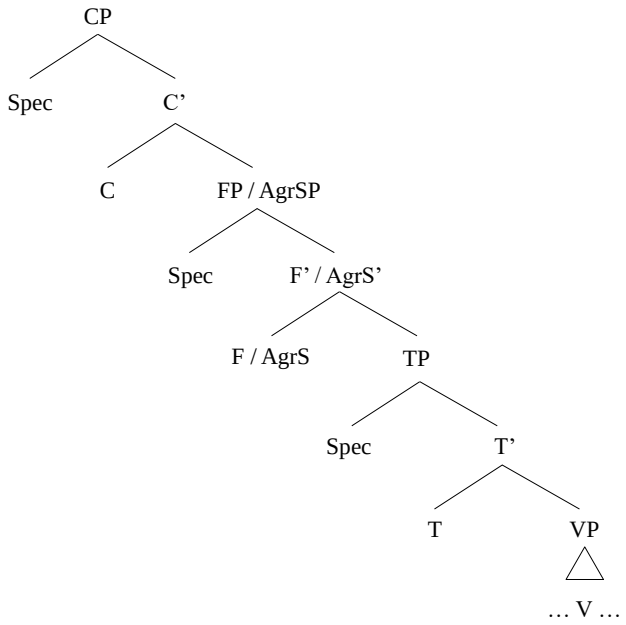


Figure A. Split IP structure

Kemenade & Westergaard 2012) have linked this word order variation to the information status of the subject: discourse old subjects (typically pronouns, as these are specific, definite and refer to an entity in the previous discourse) occur before the finite verb, while discourse-new subjects follow it. This relation between information-status and subject placement is well attested in OE. As we will see below, the differential placement of subjects surrounding clause-internal particles is also related to information-status (cf. van Kemenade, Milicev & Baayen 2008).

1.2.3 MULTIFUNCTIONAL ÞA AND ÞONNE

The view that resumptive adverbs and pronouns (the latter used in left-dislocations like (20)) typically occur in the multifunctional Spec, CP position combines well with the general characteristics of demonstrative pronouns and adverbs developed in Los & van Kemenade (forthcoming). Demonstratives, such as those of the OE *se* paradigm in table 4, and the etymologically related set of time, place and manner adverbs (*þa* 'then', *þonne* 'then', *þær* 'there', *þus* 'thus', *swa* 'so', *swylc* 'such') play a special role in clause linking and interclausal reference tracking in OE, most typically when they are in first position, i.e. in Spec, CP.

Table 4. Old English 'weak' demonstrative pronoun

	singular			plural
	masculine	feminine	neuter	
Nominative	se	sēo	þæt	þā
Accusative	þone	þā	þæt	þā
Genitive	þæs	þǣre	þæs	þāra
Dative	þǣm	þǣre	þǣm	þǣm

The demonstrative pronouns of the *se* paradigm not only occupy a multifunctional position, but they are themselves multifunctional as well. They can be used as demonstrative determiners, as (deictic) independent pronouns referring to human referents, or as relative pronouns. As clause-initial demonstratives, they tend to mark topic switch, predominantly when they are in first position. The fact that they are also

used as relative pronouns creates potential for ambiguity between a main clause and a relative subclause (a sign of ambiguity between parataxis and hypotaxis). Example (27) (from Los & van Kemenade forthcoming: 7, their 13) illustrates how the clause introduced by *seo* is interpretable as a main clause, continuing the discourse with a switch topic, or as a (non-restrictive) *se*-relative. This ambiguity is discussed in more detail in Los & van Kemenade (forthcoming).

(27) Þa wæs he sona gehrinen **lichomlicre untrymness** & **seo**
then was he at-once attacked (by) of-the-body infirmity-F and DEM-F
dæghwamlice weox & hefigade
daily increased and grow-worse
'Then he was attacked at once by bodily infirmity, and this grew worse daily/which grew worse daily.'
Bede_4 3.266.34

One thing that does, however, separate initial demonstrative resumptive adverbs from demonstrative pronouns is their syntactic effect: while resumptive adverbs trigger V-to-C movement (as shown in correlatives), demonstrative pronouns trigger V-movement to a position below C (cf. Type 2 V2) as shown in (20) (*Đone đe Drihten lufað. đone he đread*). As indicated above, the adverbs thus side with initial *wh-* and *ne* in being clausal operators in Spec, CP, whereas demonstrative pronouns refer to persons and entities, typically arguments, and do not trigger verb-movement to C.

Next to their use as complementizers in the subclause and as clausal operators in the main clause, *þa* and *þonne* also function as clause-internal discourse (focus) particles in OE, as in the subclauses of the correlatives in (3) and (5) above and in the main clause questions in (28–29) (van Kemenade, Milicev & Baayen 2008: 6, their (6a–b); particles in bold).

(28) Hu mæg he **ðonne** ðæt lof & ðone gilp fleon.
how may he then the praise and the vainglory avoid
'How, then, can he avoid praise and vainglory...?'
CP:9.57.18

(29) Hu gerades mæg **ðonne** se biscep brucan ðære hirdelican are.
how properly may then the bishop enjoy the pastoral dignity
'How, then, can the bishop properly enjoy the pastoral dignity?'
CP:18.133.3

Þa and *þonne* as discourse particles separate the topic domain from the focus domain of the clauses and are used as rhetorical devices (van Kemenade & Los 2006, van Kemenade, Milicev & Baayen 2008, van Kemenade & Milicev 2011, van Kemenade & Westergaard 2012). The topic domain to the left of *þa*/*þonne* typically contains personal pronouns (as in (28)), definite nominal subjects and contrastive topics, essentially specific, definite and discourse-linked elements. The focus domain to the right of *þa*/*þonne* holds indefinite subjects or discourse-new elements, but definite nominal subjects (as in (29)) without a direct discourse link (and a generic reading) can occur here as well. These definite nominal subjects are considered new material, in spite of their definiteness. This distribution can be seen in table 5 and 6 which show the relative order of pronominal and Full DP (determiner phrase[15]) subjects and discourse particles in OE main clause questions and subclauses (van Kemenade & Westergaard 2012: 89, their table 5.1 and 5.2). Chapter 4 discusses the use of discourse particles in the adverbial subclause of correlative constructions (and other constructions) in more detail.

[15] A determiner phrase constitutes of a determiner and a noun, for example *se biscep* 'the bishop' in (29).

Table 5. Order of subject and discourse marker in subclauses in Old English

	Pronominal subjects	Full DP (determiner phrase) subjects
Preceding *þa/þonne*	1116 (99.6%)	129 (36%)
Following *þa/þonne*	5 (0.4%)	229 (64%)
Total	1121 (100%)	358 (100%)

Table 6. Order of subject and discourse marker in main clause questions in Old English

	Pronominal subjects	Full DP (determiner phrase) subjects
Preceding *þa/þonne*	90 (98.9%)	11 (18%)
Following *þa/þonne*	1 (1.1%)	50 (82%)
Total	91 (100%)	61 (100%)

1.2.4 SUMMARY

OE correlative constructions (and conditionals) have a paratactic origin and find their niche in the availability of a CP-adjoined left dislocation position combined with a multifunctional Spec, CP position in V2 clauses, as well as a well-entrenched deictic system supplying discourse-linking elements for this clause-initial position (Shores 1971, Mitchell 1985a: 777, Kiparsky 1995, van Kemenade, Milicev & Baayen 2008, Los & van Kemenade forthcoming). The fact that both the resumption of extra-clausal material and operator elements/topics occur(s) in Spec, CP shows that this position can host marked (contrastive, prosodically prominent) as well as unmarked discourse links in early English (Los 2012a). Like in Present-day Dutch and German, Spec, CP is essentially a multifunctional position in OE, crucial for correlative constructions. Correlative constructions exploit the possibilities that developed in the shift from parataxis to hypotaxis, providing evidence for an earlier paratactic structure. The interplay between the adverbial/conditional subclause, the clause-initial position (Spec, CP), V2 and resumptive (discourse linking) adverbs allows correlative constructions to function as one of the strategies to explicitly structure discourse in OE.

2 TRANSITION TO MIDDLE ENGLISH

The transition to ME came with quite a few changes that gradually spread through the language, and influenced those language characteristics which facilitated the use of correlative constructions. As we will see (below and in the following chapters), the ME period shows a rather dramatic decline in the use of correlative constructions. Non-correlative potentials, however, continue to thrive, especially those that are subject-initial. *If*-conditionals persist in the transition to ME and throughout time. *When*-clauses take over from temporal non-correlative *þa* and *þonne* potentials. In all constructions, however, the use of resumptive adverbs (the defining property of correlatives) is vanishingly rare from the earliest ME onwards. The primary reason for this decline in correlative use seems to be the loss of *þa* and *þonne* as resumptive adverbs (and as discourse particles (cf. van Kemenade & Los 2006, van Kemenade 2009)) and not the loss of V2. This goes against initial expectations that the loss of V2 resulted in the abrupt decline and disappearance of correlatives, but as we will see the timing is off by several centuries.

The dwindling resumptive adverb use is part of the general decline in the use of the OE demonstrative adverbs and pronouns (Los & van Kemenade forthcoming). This heralded a shift in the system of clause-linking markers from 1250 onwards (Lenker 2007 cited in Los 2012a). The declining use of *þa* and *þonne* shows that demonstrative adverbs and pronouns were losing their discourse-linking properties by the end of the OE period and in the transition to ME. It indicates that specificity and definiteness – essentially those characteristics associated with the resumption of a topic by means of a demonstrative, as in OE example (20), and resumption by adverbs in structurally similar correlative constructions – no longer provided the crucial clue for the appearance of resumptive adverbs in clause-initial position (van Kemenade & Los 2006). This loss of discourse-linking properties can be related to the loss of inflections marking definiteness on noun phrases (NPs) which had already started in OE. Los (2009, 2012a) argues that changes in the demonstrative paradigm and the loss of gender made specific reference to a previously mentioned entity in the discourse by means of gendered demonstrative pronouns increasingly difficult. This ultimately led to a considerable loss of morphological marking in the language. The

paradigm of 'weak' demonstrative pronouns in table 4, which provided discourse linkers typically used in clause-initial position, was an early victim of this loss of inflection (van Kemenade & Los 2006, van Kemenade, Milicev & Baayen 2008, Los 2012a). The inflectional decline during ME was much more advanced in the north compared to the south, where it was completed a century later (Lass 1992, Allen 1995).[16] The only survivors of the original paradigm in PDE are the genitive 's' and the singular/plural distinction (Smith 1996).

The First Continuation (1121-1131) of the Peterborough Chronicle showcases an early example of the breakdown of the Old English case system (Lass 1992, Allen 1995, Smith 1996). By the beginning of the twelfth century, the distinctions between the OE grammatical genders have almost completely vanished. The scribe of the First Continuation only distinguished between historically masculine, feminine and neuter nouns as well as the singular/plural distinction in the accusative, genitive and dative case, as shown in table 7 (from Smith 1996: 148, his figure 7.4). The nominative forms *se* and *seo* were used interchangeably (Allen 1995).

[16] Allen (1995) argues that the more advanced deterioration of the case system in the north compared to the south in ME seems to be related to the interplay between Scandinavian influence in the north and phonological changes increasing syncretism in late OE, but indicates that it is difficult to single out a specific cause.

Table 7. Restructuring of the Old English Peterborough Chronicle demonstrative system

Old English system				
	singular			plural
	masculine	feminine	neuter	
Accusative	þone	þā	þæt	þā
Genitive	þæs	þǣre	þæs	þāra
Dative	þǣm	þǣre	þǣm	þǣm
First Continuation				
Accusative	þone →			þā
Genitive	þæs →	←	þæs	þāra
Dative	←	þǣre →		þǣm

This deficient system was the result of the fact that the scribe attempted to use an archaic system that was not part of the current language (Allen 1995, Smith 1996), and that in the words of Smith "[…] an attempt has been made to retain and reorganise the interphrasal tracking device, that is, the case-system." (1996: 147). The case system is even further reduced in the Final Continuation (1132-1154). Here, we find invariable use of *þe* indicating that case invariant forms had taken over by early ME (Smith 1996), leaving only *that* and *the* to survive into later Middle English (Fischer et al. 2000). Over time, deictic *þæt* 'that' again gives way to the pronoun *hit* 'it' in a number of functions in ME (van Kemenade 2009, Los 2009). This results in a further loss of elements used to establish textual cohesion.

The function of *þa* and *þonne* as conjunctions was taken over by *wh*-adverbs in ME to distinguish between the conjunction *when* and the resumptive adverb *then* (Fischer 1992: 352–3). The latter lost its foregrounding function in ME and became a simple sequencer (Brinton 2006) that was later frequently dropped altogether (Fischer 1992: 352–3) as the language developed its later SV(O) structure. Thus, *when*-clauses came to express temporal non-correlative potentials. In the rare cases in which a resumptive adverb is used, for example after longer subclauses as in *Whanne this was*

done that the kyng had stablisshed alle the countreyes aboute London, thenne he lete make syr Kay sencial of Englond, (cmmalory 11.316; late fifteenth century), this came to be *then(ne),* which derives historically from *þonne* (OED).

In terms of the structure of OE and the structure assumed for correlative constructions in figure 3 and 4 above, the loss of the lexical/functional items *þa* and *þonne* functioning as discourse linking resumptive adverbs (part of the OE clausal operators) removed the trigger for V to C movement.[17] The inevitable result of this was that the main clause was recast as a subject-initial clause from early ME onward, with low frequently alternative options as we will see in chapter 2. Non-correlative potentials like (21e) above and (30) below are thus early adopters of the SV(O) structure that became the default option after the loss of V2. These observations are unexpected when taking into consideration that V2 was not lost until late ME/Early Modern English (EModE) (Fischer et al. 2000: 129–37, Haeberli 2002, Los 2009, van Kemenade & Westergaard 2012, Los 2012a); the expectation being that correlative constructions, as typical V2 constructions, should have held on until the complete loss of V2. The fact that they do not, suggests that the deteriorating referentiality of resumptive adverb *þa* and *þonne* – a crucial characteristic for occurring in clause-initial position – plays a major role in their decline in the transition to ME.

(30) ac ðonne he nytwyrðne timan ongiet to sprecenne, he forsihð ða
but then he profitable time perceives to speak he neglect that
swigean, […]
silence […]
'But when he perceives that it is a profitable time for speaking, he disregards silence, […]'
CP:38.275.12.1789

[17] Note that relic forms of V-to-C movement following (non-resumptive) *then* can still be found during the ME period, but their use is on the decline. V-to-C movement following the adverb *then* is completely lost over the EModE period (van Kemenade 2012).

The SV(O) structure that became default after the loss of V2 further restricted the use of the resumptive adverb *then*. Of the possibilities shown in table 2, here repeated as table 8, only the word order in example (a) is unmarked in Present-day English. Constituents can precede the subject, as shown in table 8 (b–c), but their use evokes a specific, often contrastive reading (Birner and Ward 2002 cited in Los 2009).

Table 8. SVO word order

	XP	Subject	Finite verb	Object	Adverbial
a.		I	saw	him	today
b.	Today	I	saw	him	
c.	Him	I	saw		today

The discourse functions of the multifunctional first constituent position as they existed in OE became divided over time between the presubject XP position (pragmatically marked) and the subject (pragmatically unmarked) (Los 2009). Although PDE syntax still has a position for presubject adverbials (and clause-initial objects), this position can no longer be used to establish exhaustive identification and noun phrases (NPs) are responsible for the expression of cohesive relations (Los 2012a, Dreschler 2015, van Vuuren 2017). While adverbials often established discourse links in OE and ME, for example in correlatives, they tend to represent new information rather than old referential information in PDE (Pérez-Guerra 2005 cited in Los 2009) and function as frame-setters evoking a contrastive reading (Los & van Kemenade forthcoming).

Summarising, the declining use of resumptive adverbs in the transition to ME seems to be part of the general decline in use of the OE demonstrative pronouns and adverbs as discourse linking elements. This is related to the loss of inflection affecting both NPs and demonstrative adverbs and pronouns. The loss of inflection might thus be one of the causes of the loss of the multifunctional clause-initial position – where these items were typically positioned – and V2, especially since the loss of the OE demonstrative paradigm predates the loss of V2 by about 200 years (Smith 1996, Los 2012a).

3 RESEARCH QUESTIONS AND OUTLINE

The discussion above has shown that correlative constructions of the type considered here only feature their correlative characteristics when the subclause introduces the construction. Its occurrence thrives on the availability of a CP-adjoined left dislocated position for the subclause combined with a multifunctional Spec, CP position in the following V2 main clause and a well-entrenched deictic system providing discourse-linking elements. The key elements of correlative constructions are the adverbial/conditional subclause, the clause-internal position (Spec, CP), V2 and the (optionally) tripled use of multifunctional elements like *þa* and *þonne* (as conjunction, discourse particle and resumptive adverb). The use of resumptive adverbs is in fact the reason for calling these constructions correlatives. The interplay between these key elements allows correlative constructions to explicitly structure discourse in earlier English. The central aim of this thesis is to trace the diachronic development of correlative constructions and their characteristics in earlier English.

This thesis is divided into three chapters, each dealing with a different aspect of correlative constructions. Chapter 2 provides the larger picture, a qualitative and quantitative study of the properties of correlatives in earlier English, on the basis of their most frequent representatives: temporal correlatives introduced by *þa* and *þonne*, and conditionals introduced by *(g)if*. Building on earlier work on correlatives (most notably Mitchell (1985b)), it provides the backdrop for the following two chapters that focus on conditionals (a subset of potentials) and discourse particles. Together these chapters identify the discourse structuring strategies of correlative constructions.

Chapter 2 traces the diachronic development of *þa*, *þonne*, *(g)if* and *when* correlative constructions in a variationist study of the competition between these constructions in earlier English. The choice to only include *þa*, *þonne*, *(g)if* and *when* correlative and non-correlative potentials is based on their high frequency in OE. Building on an extensive dataset of correlative and non-correlative potentials, we identify the intra-linguistic (grammatical, lexical and functional) and extra-linguistic (genre, translation) factors which determine the preference for an overt resumptive adverb. The significance and (changing) weight of these factors gives us access into

the machinery of the morphosyntactic properties of these constructions. This chapter specifically answers three questions:

1) What are the properties of correlatives in Old English and which factors promote the use of a resumptive adverb?
2) How do correlatives and non-correlative potentials develop in relation to each other and over time?
3) How can we relate the properties of correlatives in earlier English and their subsequent loss to what we know about the historical development of the clausal pre-field in English?

Chapter 3 focusses on a specific type of correlative construction: conditionals. Using a substantial diachronic dataset covering Old to Early Modern English, it traces the development of three English conditionals with protasis-apodosis order: those introduced by *(g)if* as in (5) (gathered as part of the dataset in chapter 2), by *and* as in (8), known as conjunctional conditionals, and verb-initial (V1) conditionals like (7). I present the results of a quantitative as well as qualitative study on the division of labour between the two types of conditionals in terms of frequency, the use of open and counterfactual conditional subclauses in both types, the use of *then*, and distribution across genres in relation to two present-day Germanic languages: Swedish and German. As such, this chapter adds to the existing literature on (Old) English conditionals (cf. Iatridou & Embick 1994, Bhatt & Pancheva 2006, Van den Nest 2010, Auer & Lindström 2011). This chapter aims to answer four questions:

1) Can the observations for correlatives be expanded to conjunctional (*(g)if* & *and* conditionals) and verb-initial conditionals?
2) How does the division of labour between conjunctional (*(g)if* & *and*) and verb-initial conditionals develop over time?
3) Why and when did the present-day restrictions on verb-initial conditionals regarding choice of verb originate?

4) Which factors influence the (persisting) use of the resumptive adverb *then* in conditionals?

Chapter 4 presents a study into the use of (sub)clause-internal discourse particles *þa, þonne* 'then', *nu* 'now' and *la* 'lo', a relatively unexplored topic in OE. As such, it follows up an avenue for further research discovered in chapter 2: determining the role of discourse particles in correlative constructions. Using only OE texts from the ninth and tenth century, this chapter traces the use of these discourse particles in five clause types: main clause questions, *hwæt* exclamatives, imperatives, correlative subclauses and *that*-clauses. The results provide both a quantitative and qualitative insight in the use of discourse particles in OE. This chapter will answer the following three questions:

1) What is the function of discourse particles?
2) What is the meaning of each type of particle in relation to the clause types in which it occurs, their relation to discourse context, and their position in the clause?
3) How did discourse particles develop in the transition to Middle English and beyond?

Chapter 5 concludes this thesis with an overview of the findings, a discussion of overall conclusions, and some avenues for further research.

4 METHODOLOGY

In order to trace the diachronic development of correlative constructions introduced by the complementizers *þa, þonne, gif* and *when*, and that of V1 and *and* conditionals in English, I have extracted all correlative constructions and non-correlative potentials

from six subperiods of three syntactically annotated corpora of historical English.[18]

- York-Toronto-Helsinki Parsed Corpus of Old English Prose (YCOE, Taylor et al. 2003)
  - O2 (850-950) – 291,481 words
  - (O23 (850-1050) – 135,647 words)
  - O3 (950-1050) – 573,828 words

- Penn-Helsinki Parsed Corpus of Middle English, second edition (PPCME2, Kroch & Taylor 2000)
  - M1 (1150-1250) – 195,494 words
  - M3 (1350-1420) – 385,994 words
  - M4 (1420-1500) – 260,116 words

- Penn-Helsinki Parsed Corpus of Early Modern English (PPCEME, Kroch, Santorini & Delfs 2004)
  - E2 (1570-1639) – 628,463 words

The data selection does not cover all periods available in the corpora. The choice to leave out periods O1, O4, M2, E1 and E3 was based on several reasons. Period O1 (450-800), O4 (1050-1150) and M2 (1250-1350) have not been taken into account as their total word count is too low (O1 and M2) and/or the quality of the texts varies

[18] The full subperiods and their word count are given in table I (word counts obtained via CorpusStudio (Komen 2009, 2012).

Table I. Subperiods and word count YCOE, PPCME2 and PPCEME

Old English		Middle English		Early Modern English	
O1 (450-850)	1,753	M1 (1150-1250)	195,424	E1 (1500-1569)	567,363
O2 (850-950)	291,481	M2 (1250-1350)	93,999	E2 (1570-1639)	628,463
O3 (950-1050)	573,828	M3 (1350-1420)	385,994	E3 (1640-1710)	541,146
O4 (1050-1150)	1,237	M4 (1420-1500)	260,116		

(O4 only contains translated or adapted texts) (cf. Gisborne & Truswell 2017). The choice to include PPCEME period E2 (1570-1639) and not period E1 (1500-1569) or E3 (1640-1710) is motivated by the wish to have data posterior to the loss of V2, which has been timed around 1500 (Fischer et al. 2000: 129–37). I furthermore only selected prose texts. Verse texts have the disadvantage that the regular word order is sometimes sacrified to comply to metric requirements or to reflect stylistic choices. In addition, I have limited text choice to materials that are unambiguous in their periodisation. The use of texts originally composed earlier, but found in a manuscript written in a later period carries the risk of obscuring the dataset. For example, the use of coadrian.O34 (*Adrian and Ritheus*) in YCOE (Taylor et al. 2003), a text originally composed between 950 and 1050 (period O3), but preserved in a manuscript written in period O4 (1050-1150), could result in treating what are essentially earlier language features from period O3 as typical characteristics of the later O4 period. More detailed information of the texts in each corpus can be found on the respective websites of the corpora.[19]

The selected texts (that is, all the texts available in the selected subperiods) were searched using Xquery in CorpusStudio[20] (Komen 2009, 2012), a programme that allows user-adaptable features to be extracted from the corpora. Due to annotation differences between the corpora, it was impossible to base the data extraction on a single set of queries; finding the initial adverbial/conditional subclauses of potentials (including V1 conditionals) required different queries for each type and corpus. Correlative and non-correlative potentials were extracted by searching the corpora for constructions with initial subclauses introduced by the specific complementizers, followed by a main clause that could optionally contain a resumptive adverb. All queries included the different spelling variants of the complementizers *þa*, *þonne*, *(g)if*, *when* and *and* as given in the OED, Rissanen (1999, 2011) Hall (1960), Fischer (1992), Traugott (1992). A full overview over the spelling variants and their use in

[19] YCOE – http://www-users.york.ac.uk/~lang22/YCOE/YcoeHome.htm
PPCME2 & PPCEME – http://www.ling.upenn.edu/histcorpora/index.html
This thesis follows the standard reference format of these corpora in all examples provided.
[20] CorpusStudio is a programme building on CorpusSearch, the search programme that originally came with the corpora (Randall 2005-2007).

CorpusStudio is provided in appendix 1. The queries are further specified in the relevant chapters. Each of the potentials extracted was automatically labelled for the features assumed (on the basis of prior research) to determine the presence or absence of an overt resumptive (see appendix 2). This labelling was implemented on the basis of scripts (user defined Xquery functions using the available metadata and tagging in the corpora) in CorpusStudio.

After extracting all correlative and non-correlative potentials from the designated corpora, the datasets were converted into several Cesax databases (Komen 2011, 2012) which allow the data to be viewed, edited and prepared for (statistical) processing. The databases were checked manually to see whether the automatic labelling had been carried out correctly. Automatically extracted sentences which did not belong to either the category of correlatives or the category of non-correlative potentials were deleted, and adjustments to the automatically obtained features were made on the basis of manual checks.[21] Additionally, for a subset of the conditional potentials (all the non-imperative V1 conditionals, *and* conditionals, and a subset of 300 *gif* conditionals (a random sample distributed over the periods similarly to the V1 conditionals)), it was determined manually (although facilitated by verb tense) whether the condition in the subclause was open or counterfactual (that is, for which the speaker believes that the condition is not, cannot, or will not be fulfilled). V1 imperative conditionals were left out of this part of the analysis to avoid data skewing as these seem to always represent open conditions. The Cesax databases were then converted to Microsoft Excel format for further analysis by means of pivot tables to calculate frequencies for (the interplay between) the variables in appendix 2.

Ultimately, this process resulted in a dataset of 9,324 potentials of which 2,721 are genuine correlative constructions, i.e. containing a main clause introduced by a resumptive adverb. Table 9 presents the distribution of the data over the different complementizer types (y-axis) and over time (x-axis).[22] For each complementizer

[21] Between roughly 1–10% of the extracted data for *(g)if*, *þa*, *þonne* and *when* potentials was deleted. These percentages raise above 10% for *and* conditionals and between 90–95% for verb-initial conditionals.

[22] All totals of main clauses per period in the different tables throughout this thesis have been obtained via CorpusStudio (Komen, 2009, 2012).

type, the first row indicates the total number of potentials, and the second, indented row indicates the absolute frequency of genuine correlatives featuring a resumptive. For example: out of the total number of 479 *þa* potentials in period O2, 403 *þa* examples (84%) are actual correlatives as they feature the resumptive adverb *þa* in the main clause. This indicates that 76 examples (479 minus 403) are non-correlative potentials, i.e. these could also contain a resumptive in clause-initial position, but in fact do not. Note that although the resumptive adverb is given as *þa*, *þonne* or *þenne*, these 'standard' forms in fact comprise the whole range of spelling variants for the resumptive adverb with the meaning *then*, of which *þa*, *þonne*, *þenne*, *than* and *then* are the spelling variants most frequently found. Complementizer *(g)if* comprises both *gif* in OE as well as *yf*/*if* in later periods.

Table 9. Total potentials and correlatives

Type/Period	O2 (850-950)	%	O3 (950-1050)	%	M1 (1150-1250)	%	M3 (1350-1420)	%	M4 (1420-1500)	%	E2 (1570-1639)	%	Total	%
þa	479		871		48		3		1		0		1,402	
þa …, þa	403	84	529	61	28	58	0	0	0	0	0	0	960	69
þonne	320		257		20		18		38		0		653	
þonne …, þonne	198	66	91	35	10	50	5	28	1	3	0	0	305	47
(g)if	892		1,329		297		745		236		1,258		4,757	
(g)if …, þonne	252	28	291	22	28	9	78	11	17	7	200	16	866	18
when	0		0		70		866		565		676		2,177	
when …, þenne	0	0	0	0	15	21	85	10	59	10	53	8	212	10
and	0		0		0		11		33		6		50	
and …, þenne	0	0	0	0	0	0	3	27	1	3	1	17	5	10
Verb-initial	38		69		48		25		21		84		285	
Verb-initial …, ther	24	63	22	32	8	17	12	48	4	19	3	4	73	26
Total potentials	1,729		2,526		483		1,668		894		2,024		9,324	
Total correlatives	877	51	933	37	89	18	183	11	82	9	257	13	2,721	26
Total main clauses	20,315		50,204		12,621		26,326		19,846		23,635		152,947	

The dataset for the (sub)clause-internal discourse particles *þa*, *þonne*, *nu* and *la* used in chapter 4 was collected separately from and using a different methodology than the potentials described above.[23] Based on earlier work by van Kemenade (2009), van Kemenade & Los (2006), van Kemenade & Milicev (2011) and van Kemenade, Milicev & Baayen (2008), and the observation that particles in both correlative and non-correlative potentials largely occur in OE, the data collection was limited to period O2, O23 and O3, again using the YCOE corpus (Taylor et al. 2003). Although the use of an ambiguous period has several disadvantages (see above), the extra data it provides was decisive in including period O23.[24] All texts (see appendix 3) from period O2, O23 and O2 were searched using Xquery in CorpusStudio (Komen 2009, 2012). Since the literature on the West Germanic languages shows that there is a strong correlation between specific particles and clause type (see e.g. Thurmair 1989), the texts selected were first searched for different clauses types that frequently contain particles: main clause questions (both *wh-* and *yes*/*no*), *hwæt* exclamatives, imperatives, temporal and conditional correlative subclauses, and *that*-clauses. Each individual clause type was then searched for the four different particles. The query is further specified in chapter 4. Each of the extracted examples was automatically labelled for clause type, period, discourse particle, subject type and the relative position of subject and particle. As before, this labelling was implemented on the basis of scripts (user defined Xquery functions using the available metadata and tagging in the corpora) in CorpusStudio. The retrieved data was checked manually for cases where the semantics of the putative particle showed clear literal adverbial use. These cases were excluded.[25] This resulted in a dataset containing 1,962 clauses with discourse particle *þa*, *þonne*, *nu* or *la*. Table 10 presents the distribution of the data

[23] A pilot search initially also included the particles *eac* 'also', *þeah* 'though' and *giet* 'yet'. Closer inspection of *eac* revealed that it only occurred in its additive meaning. *Þeah* turned out to be used frequently in combination with other adverbs (most notably *swa* 'so') and was therefore left out. *Giet* yielded too few examples.

[24] Period O1 (450-800), O4 (1050-1150) as well as any other ambiguous periods have not been taken into account as their total word count is too low and/or the quality of the texts varies.

[25] Between roughly 1–5% of the extracted data for the discourse particles *þa*, *þonne*, *nu* and *la* was deleted.

over the different clause types (y-axis) and particle types (x-axis). The total numbers for the clause type are raw numbers.

Table 10. The use of particles in specific clause types in Old English texts 850-1050, attested frequency (normalised per 1,000 clauses within clause type)[26]

Clause type\particle	Total	*la*	*nu*	*þa*	*þonne*
Question	2,235	69	161	3	166
		(30)	(72)	(1)	(74)
Exclamative	438	3	13	289	20
		(7)	(30)	(660)	(46)
Imperative	3,479	12	260	0	182
		(3)	(75)	(0)	(52)
Preposed temporal adverbial	2,285	0	1	256	15
		(0)	(0)	(112)	(7)
Preposed conditional	2,369	0	50	5	349
		(0)	(21)	(5)	(147)
That-clause	11,671	1	17	73	17
		(0)	(1)	(6)	(1)
Subject-initial clause	14,724	1	17	73	17
		(0)	(1)	(5)	(1)
Total	37,201	86	519	699	766

1.4.1 DRAWBACKS OF USING HISTORICAL DATA

Although the present study can rely on a dataset that is extensive by all standards, working with historical materials in syntactic variation research is not without its drawbacks (cf. Milroy & Gordon 2003, Kohnen 2007). Historical syntactic variation research is more often than not hindered by token scarcity and random preservation of texts, although the available substantial computerised corpora help overcome this problem (Milroy & Gordon 2003: 176–7). Still, we find a geographical and dialectical

[26] Normalised figures were calculated by dividing the desired amount of clauses (1000) by the total number of attested clauses for a particular clause type listed in table 10. This provides a normalisation factor by which to multiply the actual number of attested particles in the clause type under investigation to get a normalised occurrence of a specific type per 1000 clauses. For example, particle *la* in questions: 1000/2235 = 0.45 → 69 x 0.45 = 30.15, rounded off to 30. The category *subject-initial clause* was added as a category for comparison. The query included subject-initial main clauses with a lexical subject.

clustering of texts as scribes were often concentrated in close proximity to people in power, for example around the Saxon kings in Winchester. In addition, the data often lack information on the demographic properties of the scribes, such as gender, age, regional provenance, linguistic profile and command of other languages.[27] More importantly, as Truswell & Gisborne (2015: 646) point out, "we do not have intuitions about OE meanings, and attempts to infer fairly subtle contrasts from overt contextual factors are invariably error-prone.". However, the authors of the YCOE, PPCME2 and PPCEME have shown great concern for the issues surrounding historical data, and developed well-balanced corpora for historical English. Thus, although "a certain amount of noise is ineliminable in work such as this" (Truswell & Gisborne 2015: 646), the large number of examples drawn from the different substantial computerised corpora available for earlier English (in relation to substantial earlier work on OE, ME and EModE) provide enough information to identify a number of clear patterns.

4.1 STATISTICAL TESTING

The dataset is sufficiently large and balanced to allow for a quantitative study of the development of correlatives in earlier English. In order to gauge the statistical significance and the individual and collective impact of the predictors which determine the presence or absence of a resumptive adverb, we have carried out a series of logistic regression analyses. This subsection briefly introduces the regression technique used in chapter 2. I will not go into the mathematical details, but simply explain the function and procedure of the test.[28] All tests were performed using IBM SPSS Statistical Data Editor version 22 and 23 on the Excel database generated from the created Cesax databases.

The logistic regression in chapter 2 allows us to determine which variables promote resumptive adverb use in correlative constructions introduced by *þa*, *þonne*, *(g)if* and *when*. In other words, by means of a logistic regression I aim to identify the

[27] It is generally assumed that most scribes were men and (at least) had command of Latin in addition to their own vernacular.

[28] For more information on the use of Pearson's chi-square, Pearson's correlation, the independent t-test and logistic regression, I refer the reader to, for example, Field (2009) or Burns & Burns (2008).

significance and weight of those factors that influence the choice between a correlative-potential and a non-correlative potential. To clarify the function, output and terminology of logistic regression, I will discuss a concrete example unrelated to the present research from Grondelaers, Geeraerts & Speelman (2007). This example starts from a simpler variant of regression, namely linear regression.

Grondelaers, Geeraerts & Speelman (2007: 158–60) present an example in which they want to model and predict the dynamics of renumeration (increases and decreases in salary) in a large company totalling 10,000 employees. In order to do so, researchers need to investigate and record some of the relevant characteristics (starting wage, seniority, incentives, bonuses, etc.) of a sample of the employees (assuming that the complete population cannot be studied). If, for example, an employee receives a 2% raise every two years, then the growth in salary will correlate systematically with the employee's seniority. This correlation can be expressed by the formula $y = a + bx$. Here, y is the dependent variable 'salary' whose outcome we want to predict; x represents the independent variable 'seniority', and a is a constant embodying the employee's starting wage, while b is an estimate mirroring the degree to which the independent variable 'seniority' contributes to the employee's salary at a given time. The '+' in the formula indicates a positive effect of seniority on salary. The possibility of seniority contributing to a decrease in salary would be represented by $y = a – bx$.

When the information gathered from the samples is entered in SPPS and analysed using a regression technique, the programme returns two types of findings. Based on the characteristics of the employees in the sample, SPSS not only computes an estimate for *b*, but also for *a*, as the latter does not need to be fixed. In this example, *a* can only be associated with 'starting wage', but if – in a different example – we include decreases in salary for older employees (based on seniority as well), *a* matches the maximum salary an employee received. SPSS also determines the statistical significance of *a* and *b*, reflected in a *p-value*. This *p-value* is used to determine whether the attested relation between the impact of seniority on salary is significant, as a result of which it can be generalised from the sample to the complete population, viz. the entire company. In many fields, including linguistics, a *p*-value lower than .05

indicates a genuine relation, which entails that the sample findings can be generalised to the whole population.

There are, however, very few phenomena that are driven by only one factor/trigger. Thus, when there is more than one independent variable, a different type of regression is used: *multiple linear regression*. Suppose that in the salary model occasional bonuses are included as well in addition to periodical raises. To accommodate this factor, the formula now changes to $y = a + bx1 + cx2$, where *x2* represents the bonus-variable. This model represents the simplest type of multiple regression. It has two independent variables (*x1* and *x2*) for which the regression computes the estimates *b* and *c*, and tests their significance.

Although the formula for multiple linear regression allows for the addition of in principle an unlimited number of extra independent variables, it cannot deal with the categorical variables (*text type*, *mood main clause*, etc.) expected to affect resumptive adverb use as presented in this thesis. Categorical independent variables do not allow a linear correlation with the categorical dependent variable 'resumptive adverb present or absent'.[29] To solve this problem, we use *logistic regression*: a regression model that looks for non-linear relations in the form of a logistic curve (for the mathematical equations behind logistic regression see, for example, Field (2009) or Burns & Burns (2008)). As with linear regression, the goal of logistic regression is to correctly predict the outcome – or rather the outcome category within the dependent variable – of each example using the most optimal model, i.e. the model explaining and predicting most of the variation. SPSS first calculates the percentage of explained variation without taking the independent variables into account, i.e. it assumes that all outcomes (100%) fall into the category that in reality holds most examples. It then adds the independent variables and presents a new percentage of explained variation based on the real distribution of the data over the two outcome categories (Field 2009). The independent variables can be added in two ways: stepwise (one-by-one) or simultaneously. The nature of the collected data and the related variables required that we entered all independent variables into the model simultaneously (Enter method) as

[29] An exception here is the variable *Subclause weight* which is a continuous variable (see chapter 2).

dummy coding was required for the categorical variables with more than two variants (Field 2009). Dummy coding involves the use of one outcome category within an independent variable as a baseline against which all others are assessed in terms of their impact on the dependent variable (Field 2009). In the logistic regression in chapter 2, summy coding was used for the independent variables *Subject type* and *Text type*.

The fit of the regression model including the independent variables is commonly assessed by using Pearson's chi-square and Nagelkerke's R^2 (Field 2009). Pearson's chi-square reflects the statistical significance of the overall model by a *p*-value where a value below .05 indicates that the new model fits the data significantly better than the earlier model. This indicates that at least one independent variable in the logistic regression is significantly related to the dependent variable. Nagelkerke's R^2 provides a value between 0 and 1 and reflects the proportion of variance in the dependent variable correctly predicted by the model. The logistic regression output reports *Odds Ratios* to reflect the effect of each independent variable on the dependent variable. Odds ratios represent the exponential function of the estimates *b* and *c* in the salary example above; in this thesis they reflect the extent to which the probability of a resumptive adverb is influenced by the independent variable when all other variables are controlled (Hinrichs & Szmrecsányi 2007, Burns & Burns 2008, Field 2009). In addition, a logistic regression can also yield insights into the relationships and strengths between the variables themselves (Burns & Burns 2008).

2 CORRELATIVES IN EARLIER ENGLISH: CHANGE AND CONTINUITY IN THE EXPRESSION OF INTERCLAUSAL DEPENDENCIES[30] [31]

ABSTRACT

A construction very widely used in Old English and Old Germanic more broadly are correlatives introduced by an adverbial or conditional subclause, as in *When you've done your homework, (**then**) you can come back* (Old English: '…, then can you come back'). Correlatives originate from a paratactic clause structure, making use of resumptive adverbs such as *then* belonging to the Old Germanic series of demonstrative adverbs, whose syntactic niche was the clause-initial position, particularly in Verb-Second main clauses. Paratactic structure in correlatives is diagnosed by the presence of a resumptive adverb. We show that the correlative use of resumptive adverbs is sensitive to both clause-internal and clause-external variables: mood, subclause-internal particles, negation, subject type, subclause weight, text type, translation. Correlatives decline from late Old English onward. Although it may seem tempting to attribute this to the loss of Verb-Second in English, it resulted primarily from the loss of the original Germanic resumptive adverbs.

1 INTRODUCTION

This chapter traces the parameters of variation and change in what we call correlative constructions in the history of English. The term *correlative* is usually reserved for constructions in which the relation between two clauses is explicitly marked by some pronominal or adverbial form (Bhatt & Pancheva 2006, Lipták 2009). We focus on a well-known and robustly attested type of correlative in Old English (OE) (and older Germanic languages; Auer & Lindström (2011), Van den Nest (2010)) involving an

[30] This chapter was published as Links, van Kemenade and Grondelaers (2017). *Correlatives in earlier English: Change and continuity in the expression of interclausal dependencies*. Language Variation and Change 29, 365–392. doi:10.1017/S0954394517000187

[31] We are grateful to Erwin Komen for his help in retrieving the data; Paul van Gent for his help with the logistic regression; Margit Rem and three anonymous reviewers for helpful comments on previous versions of this chapter; and the participants at ICEHL18, SHES12, SHES14 and the Outside the Clause Workshop.

initial adverbial or conditional subclause.[32] Its correlative character is rendered by a resumptive adverb as the initial element of the subsequent main clause. Some OE examples are given in (1):

(1a) **Þa**$_1$ he **þa**$_3$ in þæt ealond cwom, **þa**$_2$ getimbrede he þær mynster
then he then in that island came, then built he there monastery
'On coming to that island, he erected a monastery there.'
Bede_4:4.272.28.2779

(1b) ac **þonne**$_1$ heo mæg hi fram hyre lare geæmtigan, **þonne**$_2$ sænde ic
but then she may she from her learning be at leisure, then send I
eow word.
you word.
'But when she can find leisure from her learning, then I will send you word.'
ApT:21.21.457

(1c) **Gif**$_1$ he **ðonne**$_3$ sie idæges dead, **ðonne**$_2$ sitte sio scyld on him.
if he then is on the same day dead, then sit the guilt on him.
'If he should be dead that same day, the guilt rests on him.'
LawAfEl:17.44

[32] There is a second type of correlative clause in OE, one in which an extraposed complement clause is anticipated by a cataphoric pronoun. An example of this is (i), where the demonstrative pronoun *þæt* anticipates the complement clause *þæt seo nunne …*.

(i)	&	þa	sona	sændon	hi	ærendracan	to	þam
	and	then	at-once	send	they	messengers	to	the
	Godes	þeowe	Equitie	&	him	**þæt**	bodedon,	**þæt**
	God's	man	Equite	and	him	that	told,	that
	seo	**nunne**	wære	inhæted	mid	unmætum	feferadlum,	[…]
	the	nun	was	heated-up	by	excessive	fevers,	[…]

'They then at once sent messengers to the priest Equitius and told him that the nun was inflamed by excessive fevers, […]'
GD 1 (C) 4.29.7

We mention this type for the sake of completeness, but it is not the primary concern of this chapter, since we focus on subclause-initial correlatives.

The adverbial or conditional subclause has *þa* as a conjunction in (1a), *þonne* in (1b), and *gif* in (1c) (numbered with subscript 1). It presents backgrounded information, bringing to the fore the (temporal or conditional) setting, commenting on the action and providing the necessary backdrop (Enkvist 1986, van Kemenade & Los 2006). The subsequent main clause is introduced by a corresponding resumptive adverb (numbered with subscript 2) and followed by the finite verb in second position (Verb-Second, V2). The resumptive adverb is what crucially renders the correlative character of the construction. Its specific semantic contribution is to resume the previous clause as backgrounded, and to structure the discourse by foregrounding the action/event or consequence in the main clause; resumptive adverbs remind the reader/listener to pay attention (van der Horst 1981: 39–41, Enkvist 1986, van Kemenade & Los 2006, Baker 2007: 99, van der Horst 2008: 538–9, Wårvik 2013).

The examples in (1) also illustrate the dual use of *þa* and *þonne* as conjunction and (resumptive) adverb. The correlative impact may be given further rhetorical relief by a third use of *þa/þonne*: that of a discourse particle. The discourse particle use is illustrated by (1a) and (1c), and is marked with a subscript 3. The effect of stacking conjunction and particle and/or resumptive adverb is one of emphasis: correlatives, especially those with a discourse particle, emphasise the temporal narrative sequentiality in examples like (1a); in conditionals such as (1c), adding a particle emphasise the condition that has to be met.

The key property of correlatives is the adverbial resumption in the main clause (the prime reason for the term *correlative*), but the resumptive adverb is not obligatory: correlatives are a subset of what we call *potentials*, which include constructions with several alternative ways of expressing a similar relation between an initial adverbial or conditional subclause followed by a main clause. It is important to note that adverbial resumption, correlating with characteristics such as the use of a discourse particle, only occurs when the subclause introduces the construction, not when it follows the main clause. The properties of correlatives are thus part of a larger set of characteristics of the clausal pre-field. A puzzling peculiarity of this type of correlative is that it flourished in OE and largely and relatively abruptly disappeared in the transition from Old to Middle English.

The first aim of this chapter is to identify the properties of correlatives as a subset of the potentials in OE (building on Mitchell (1985b)), against the backdrop of an analysis of the clausal pre-field of OE that addresses functional properties such as the discourse function of correlatives, the role of V2 in main clauses, and the role of resumptive adverbs. The second aim is to provide a coherent account for how correlatives were lost. The main research questions thus are: 1) What are the properties of correlatives in OE and which factors promote the use of a resumptive adverb, that is the use of a correlative over a non-correlative potential?; 2) How do non-correlative potentials and correlatives develop in relation to each other and over time?; and 3) how can we relate the properties of correlatives in early English and their subsequent loss to what we know about the historical development of the clausal pre-field in English?

The chapter is organised as follows. The next section presents the correlative constructions investigated here, focusing primarily on their status in OE and summarising the results for subsequent periods. The section following outlines the methodology of the data analysis. We then turn to the properties of correlatives used as predictors in the logistic regression analysis modelling resumptive adverb use in the complete set of potentials, presenting the results and analysis before concluding.

1.1 THE STRUCTURE AND PROPERTIES OF OE CORRELATIVE CLAUSES

We first consider the structure of correlative constructions, starting from example (1a), which is repeated here for convenience:

(1a) **Þa$_1$** he þa in þæt ealond cwom, **þa$_2$** getimbrede he þær mynster
then he then in that island came, then built he there monastery
'On coming to that island, he erected a monastery there.'
Bede_4:4.272.28.2779

The first thing to note is that the main clause *þa getimbrode he þær mynster* is itself a complete clause featuring V2 placement of the finite verb, and a resumptive adverb that indicates that the subclause is external to the main clause, as in figure 1. Our

analysis of V2 is the generally accepted one for the parallel phenomenon in present-day West Germanic languages (e.g. Den Besten 1983 and, specifically for OE, Fischer et al. 2000 and van Kemenade 1987), and indeed for questions in Present-day English. Regardless of basic SVO or SOV word order, some constituent (in this case the resumptive adverb) can appear in Spec(ifier), CP, and the finite verb in C (CP here stands for Conjunction Phrase)[33]:

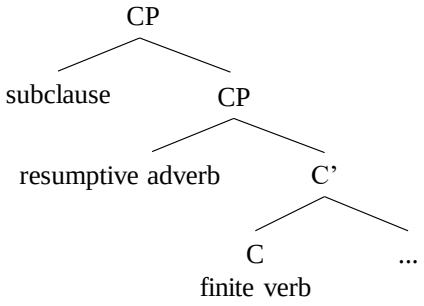


Figure 1. Structure of Old English correlative and non-correlative potentials.

Figure 1 represents an essentially paratactic structure, along the lines of Kiparsky (1995), in the sense that the subclause is adjoined to the main clause. It is on a par with left dislocation constructions such as (2), in which the left dislocate is adjoined to CP (parallel to the subclause in potentials), and the resumptive pronoun is in Spec, CP:

(2) **Done** ðe Drihten lufað. **þone** he ðreað.
[Topic [CP object demonstrative [S S V…]]]
him who God loves, him he chastises
'God chastises those he loves.'
ÆCHom II, 21:188.247

[33] The seminal observation that the finite verb in main clauses is in the same position as the conjunction in a subclause goes back to Den Besten (1983).

The examples in (1) illustrate the most frequent representatives of correlatives under study here, but they by no means exhaust them – a further instance is exemplified in (3): a correlative with *swa… swa*.

(3) Sona **swa**$_1$ he hit gedruncen hæfde, **swa**$_2$ aras he instepe
as soon (as) he it drunk had, (swa) arose he instantly
'As soon as he had drunk it, he got up at once.'
Bede_5:5.398.3.3973

We emphasise once more that the key property of correlatives is the adverbial resumption. There are several types of potentials that are non-correlative (without a resumptive adverb): they form the (low frequency) alternatives to correlatives, but they fit the same structure in figure 1. The first type is exemplified by (4), in which the initial subclause is immediately followed by the finite verb. Spec, CP seems to be empty. We dub this type *verb-initial*:

(4) **Þa** he onweg adrifen wæs, **cwom** he to Cent,
then he away driven was, came he to Kent
'When he was driven away, he came to Kent,'
Bede_2:5.112.25.1063

The occurrence of (4) raises the question whether the subclause could be in Spec, CP rather than adjoined, but this would imply that it is the subclause that triggers V2 placement in C. This is an unwarranted assumption for OE; V2 placement in C is triggered by specific types of first constituent, namely initial question constituents and preverbal negatives, labelled *V2 other* here, as exemplified by the non-correlative potentials in (5a) and (5b), and the demonstrative (resumptive) adverbs as in (1) (cf. Fischer et al. 2000).

(5a) **Gif** ðonne se sacerd bið ungerad ðæs lareowdomes, **hwæt** forstent
if then the teacher is unskilled in instruction what avails
ðonne his gehlyd?
then his cry
'But if the priest is unskilled in instruction, what avails his cry?'
CP:15.91.25

(5b) **gif** we hit forsuwiað **ne** bið us geboregen.
if we it keep silent not is us secure
'If we kept it in silence, we would not be secure.'
ÆCHom_I,_3:205.186.620

Given that the subclause is not a V2 trigger, we assume that the subclause in (4) is adjoined, and that there is a null resumptive adverb in Spec, CP, triggering V2 placement (see also Zwart (2011) for a similar account for Dutch).

The second type of non-correlative potentials consists of a variety of initial constituents in the main clause, exemplified by (6) with an initial preposition phrase and in (7) by an initial subject. These are labelled here *XP-initial non-V2* and *subject-initial*.

(6) **Ðonne** he oferstæled bið, & him gereaht bið ðæt he oðrum
then he convinced is and him explained is that he others
mæg nytt bion on ðam ðe him mon ðonne bebeodeð, **mid**
may useful be on that that him man then commands with
his mode he hit sceal fleon
his mind he it must flee
'When he is convinced and it is shown to him that he may be useful to others in the post which is offered to him, he should flee it in his mind, […]'
CP:6.47.16.265

(7) **Gif** ða earmscancan beoð begen forade, **sio bot** bið XXX
if the arm-bones are both broken the compensation is 30
scillinga.
shillings
'If both bones in the arm are broken, the compensation to be paid shall be 30 shillings.'
LawAf_1:55.173

The two categories of the second type have in common that, while it is reasonable to assume that the initial constituent is in Spec, CP (see van Kemenade 1997), they do not involve V2 placement in C, but rather in a position lower in the clause (see e.g. Fischer et al. 2000, Haeberli 2002).[34]

Finally, there are correlatives in which the resumptive adverb does not trigger V2 placement in C, especially in later stages, as in '*If we heare the voice of the Lord our God any more,* ***then we shall*** *die'* (authold-e2-p2). These are very rare in OE; they are labelled *resumptive adverb non-V2* here. They have the resumptive adverb in Spec, CP, without V2 placement in C.

The structure in figure 1 thus applies to all cases of potentials, including correlatives. The use of correlative constructions (and left dislocates) finds its niche in OE in the availability of a CP-adjoined position, in addition to the V2 structure, as in figure 1.

1.2 THE TRANSITION TO MIDDLE ENGLISH AND LATER PERIODS

The early Middle English (ME) period shows a rather dramatic decline of correlative use, even though non-correlative potentials continue to thrive. *If*-conditionals persist, and *when*-clauses take over from temporal potentials with *þa* and *þonne*, but the use of resumptive adverbs is vanishingly rare from the earliest ME onwards. The primary reason for this appears to be the loss of *þa* and *þonne* as resumptive adverbs (and as

[34] It is disputable what the position of the subject is in subject-initial main clauses in OE. Fischer et al. (2000) assume that it is Spec, CP. Discussion of this issue is beyond the scope of this work.

discourse particles, cf. van Kemenade & Los 2006, van Kemenade 2009), as part of the general decline of the OE demonstrative pronouns and adverbs (Los & van Kemenade forthcoming), which heralded a shift in the system of clause-linking markers. The function of these older clause linkers was taken over by *wh*-adverbs and *wh*-pronouns (Fischer 1992: 352–3). Thus, *when*-clauses came to express temporal potentials. In the rare cases with a resumptive adverb, this came to be *then*, which derives historically from *þonne* (OED). In terms of our structure for potentials in figure 1, the loss of resumptive adverbs removed the trigger for V2 placement in C, which had so far been the resumptive adverb, a clausal operator. The inevitable result of this was that the main clause was recast as a subject-initial clause from early ME onwards, with low-frequency alternative options. On the face of it, this suggests that the loss of correlatives goes hand in hand with the loss of V2, but this is not the case: V2, especially in clauses with initial adverbs such as (non-resumptive) *then*, continues to thrive up to the end of the ME period (van Kemenade 2012, van Kemenade & Westergaard 2012). The loss of resumptive adverbs, essentially a case of lexical/functional loss in the transition from OE to ME, is therefore a crucial step in the loss of correlatives, and forced these constructions to become early adopters of the SV structure that became the default after the actual loss of V2, which was several centuries later (cf. Fischer et al. 2000).

2 THE FUNCTIONS OF POTENTIALS AND CORRELATIVES IN OLD AND MIDDLE ENGLISH

In OE, *þa* and *þonne* correlatives like (1a) and (1b) are used to express a temporal relation. They often indicate a change in narrative (Traugott 1992), locating the backgrounded subclause event in time or discourse, and relating the follow up, foregrounded event that carries the narrative forward in the second clause (Enkvist 1972, 1986, van Kemenade & Los 2006, Wårvik 2013).

Þa potentials and especially *þa* correlatives like (1a) describe completed actions in the past (Mitchell 1985b: 308). Both are predominantly used in narrative texts. *Þa* has therefore been analysed by Brinton (1996: 9–12, 2006: 314–5) and Enkvist (1986) as a pragmatic marker, more specifically an action/episodic marker foregrounding the

main clause event in correlatives. It divides the discourse into narrative units and indicates the temporal sequencing of events regarding the main storyline (Enkvist 1986, Wårvik 2013). The latter function is further supported by the order subclause-main clause that most accurately depicts the iconical sequence of events. *Þa* loses its foregrounding function in ME and its successor becomes a simple sequencer (Brinton 2006: 314). Wårvik (2013) argued that the foregrounding role of *þa* in OE narratives is evidenced in its tendency to occur with participants that are information structurally given in the narrative, represented by pronouns, definite noun phrases and proper nouns. *Þa* as a foregrounding device thus keeps track of major participants and continues the narrative.

Þonne potentials and correlatives often refer to frequentative acts in the past, present or future, or to a single act yet to be completed at some indefinite time (Mitchell 1985b: 308; 320). They often indicate temporal narrative sequence (Traugott 1992: 260), like *þa* correlatives, but can also have a more causal, concessive or conditional sense (meaning 'whenever' and retaining some temporal significance), especially with subjunctive verbs (Mitchell 1985b: 308–12; 322), as in example (8). The possibility of a conditional reading for *þonne* constructions makes sense from the perspective of Lipták (2009: 26–9), who shows that conditionals and correlatives often share the same markers of subordination. *Þonne* potentials occur in a wider range of text genres than *þa* correlatives and potentials, including narrative, biblical and moral texts.

(8) **ðonne** þis tacen þislic þe tocyme, **þonne** gemyne þu þas tide
whenever this token such you come then remember you that time
uncres gespreces
our conversation
'When this token comes to you in this wise, then remember the time of our conversation,'
Bede_2:9.130.12.1242

The discourse functions of the OE temporal potentials and correlatives are taken over by *when* in ME, following the loss of *þa*. *When* potentials are mostly temporal, like example (9), denoting repeated actions and habits (Fischer 1992: 352–3), but conditional *when* potentials (and correlatives) can be found as well, such as (10). Like *þonne* in OE, *when* potentials occur in a wider variety of text types, including narrative, moral and biblical texts.

(9) **When** he hauid funden it, sa fain he was;
when he had found it, so happy he was
'When he found it, he was very happy.'
Cmbenrul 22.763

(10) **hwen** hit alles kimeð forð **þenne** is hit geoleu atter.
when/if it all comes out then is it yellow poison
'When it all comes out, it is yellow poison.'
Ancrene Riwle II.70.790

Gif correlatives are conditionals with a bi-clausal structure similar to that of the other potentials: the protasis (or conditional subclause) in conditionals is adjoined to the apodosis (or main clause) when it is introduced by a resumptive adverb, as in (11). This bi-clausal structure in which the subclause can be (CP-)adjoined persists into Present-day English (Quirk et al. 1985, Haegeman 2003, 2012). Resumptive adverb use persists longer in *gif* correlatives compared to other constructions (see table 1 and figure 2), especially in those conditionals where the connection between condition and result is inferential (Huddleston & Pullum 2002: 757–8). *Gif* potentials are mostly found in moral, science, biblical and law texts.

(11) **Gif** Sodome hira synne hælen, **ðonne** ne syngodon hi na
if the men of Sodom their sins conceal, then not sinned they not
buton ege,
without fear
'If the men of Sodom had concealed their sins, they would not have sinned without fear.'
CP:55.427.29.3008

The use of *þonne* – rather than *þa* – as both resumptive adverb and (optional) particle in *gif* conditionals may reflect a special status for *þonne*. Resumptive adverb/particle *þonne* is typically used in rhetorical (correlative) questions (as in (5a) above), as well as in conditionals, which are both negative polarity contexts (Giannakidou 1997, van der Wouden 1997, Postma 2002). This may suggest that the word *þonne* comprises a negative element *-ne* (Gertjan Postma, p.c.) and would account for the choice of *þonne* over *þa* as a resumptive adverb in conditional contexts.

3 DATA

In order to trace the development of correlative constructions introduced by the conjunctions *þa, þonne, gif* and *when*, we extracted all potentials from six subperiods of three corpora, selecting prose texts that are unambiguous in their periodization.[35]

- York-Toronto-Helsinki Parsed Corpus of Old English Prose (YCOE, Taylor et al. 2003)
  - O2 (850-950) – 291,481 words
  - O3 (950-1050) – 573,828 words

[35] Period O1 (up to 850), O4 (1050-1150), and M2 (1250-1350) have not been taken into account as their total word count is too low and/or it is well-known that the quality of the text varies. The choice for PPCEME period E2 (1570-1639) and not period E1 (1500-1569) is based on the timing of the loss of V2 around 150 (Fischer et al. 2000), thus providing us with data from a period after the loss of V2.

- Penn-Helsinki Parsed Corpus of Middle English, second edition (PPCME2, Kroch & Taylor 2000)
  - M1 (1150-1250) – 195,494 words
  - M3 (1350-1420) – 385,994 words
  - M4 (1420-1500) – 260,116 words
- Penn-Helsinki Parsed Corpus of Early Modern English (PPCEME, Kroch, Santorini & Delfs 2004)
  - E2 (1570-1639) – 628,463 words

We searched the texts for initial subclauses followed by a main clause that can optionally start with a resumptive adverb (i.e. potentials) using XQuery in CorpusStudio (Komen 2009, 2012), a programme that allows extraction of user-adaptable features from the corpora. Annotation differences between the corpora required different queries for each corpus. YCOE was searched for IP-* with an initial CP-ADV (adverbial CP) dominating a preposition (P) containing *þa*, *þonne* or *gif*, followed by an IP-SUB (subclause Inflection Phrase) on the same level as P. The PPCME2 and PPCEME corpora were searched for IP-* as well, but with an initial prepositional phrase (PP) dominating a P containing *þa*, *þonne*, *gif* or *when*, followed by a CP-ADV on the same level. For all corpora, the initial *þa*, *þonne*, *gif* or *when* clause had to be followed by a main clause attached to the same level as the CP-ADV (YCOE) or PP (PPCME2, PPCEME) containing the initial adverbial subclause. Spelling variants of the conjunctions were included in the search. The results were automatically labelled by means of scripts (user defined XQuery functions using the available metadata and tagging in the corpora) in CorpusStudio for the variables listed in table 3. The results were converted into three Cesax databases (Komen 2011, 2012), one for each language stage, which allow the data to be viewed, edited and prepared for (statistical) processing. The databases were checked manually to see whether the automatic labelling had been carried out correctly. Non-potential examples were deleted, and adjustments to the features were made as necessary. The three databases were converted to Excel format for further analysis by means of pivot tables, in order to diagram the impact of several independent variables on the dependent variable, that

is the variable that distinguishes correlatives from non-correlative potentials: the absence or presence of a resumptive adverb in the main clause.

The larger Excel database also formed the input for statistical testing across all periods using IBM SPSS Statistics Data Editor version 22. A logistic regression was used to determine the impact of several independent variables predicted to affect the use of resumptive adverbs (dependent variable).[36]

4 QUANTIFYING THE FORMAL AND FUNCTIONAL CHARACTERISTICS OF CORRELATIVES IN OLDER ENGLISH

OE is the period in which the (morphosyntactic) properties of correlatives with *þa* and *þonne* as resumptive adverbs initiating the V2 clause identify them as distinct from the set of potentials. The very frequency of correlatives in OE will allow us to draw robust and statistically quantifiable generalisations about the factors determining the use of a resumptive adverb below.

4.1 FREQUENCIES AND GENERAL CHARACTERISTICS

Table 1 and figure 2 give an initial overview of our data.[37] The potentials in table 1 are listed according to the conjunction of the adverbial/conditional subclause. The subsequent row indicates the absolute frequency of correlatives (labelled as *þa …, þa* etc.), and as a percentage of the complete set of the potentials. Note that although the resumptive adverb is given as *þa*, *þonne* or *þenne*, these in fact comprise the whole range of spelling variants for the resumptive adverb with the meaning *then*. Likewise, *þa*, *þonne*, *(g)if* and *when* include all spelling variants, for example, conjunction *(g)if* comprises both *gif* in OE as well as *yf/if* in later periods.[38]

[36] For more explanation of the method behind logistic regression, see, for example, Burns & Burns (2008), Field (2009) or Grondelaers, Geeraerts & Speelman (2007).
[37] All total main clauses per period in the different tables are obtained via CorpusStudio (Komen 2009, 2012).
[38] Note that a complete list of spelling variants for the resumptive adverb is not provided here, as the corpora allow for the search of resumptive adverbs by means of the label ADVP-TMP (temporal adverbial phrase) as a clause-initial element in main clauses. The spelling variants of the conjunctions were obtained from the Oxford English Dictionary (OED), Fischer (1992), Hall (1960), Rissanen (1999, 2011) and Traugott (1992), also see appendix 1.

Table 1. Absolute frequencies of potentials and correlatives per type per period

Type/Period	O2 (850-950)	%	O3 (950-1050)	%	Subtotal OE	%	M1 (1150-1250)	%	M3 (1350-1420)	%	M4 (1420-1500)	%	E2 (1570-1639)	%	Total	%
þa	479		871		1,350		48		3		1		0		1,402	
þa …, þa	403	84	529	61	932	69	28	58	0	0	0	0	0	0	960	69
þonne	320		257		577		20		18		38		0		653	
þonne …, þonne	198	66	91	35	289	50	10	50	5	28	1	3	0	0	305	47
(g)if	892		1,329		2,221		297		745		236		1,258		4,757	
(g)if …, þonne	252	28	291	22	543	24	28	9	78	11	17	7	200	16	866	18
when	0		0		0		70		866		565		676		2,177	
when …, þenne	0	0	0	0	0	0	15	21	85	10	59	10	53	8	212	10
Total potentials	1,691		2,457		4,148		435		1,632		840		1,934		8,989	
Total correlatives	853	50	911	37	1,764	43	81	19	168	10	77	10	253	13	2,343	26
Total main clauses	20,315		50,204		70,519		12,621		26,326		19,846		23,635		152,947	

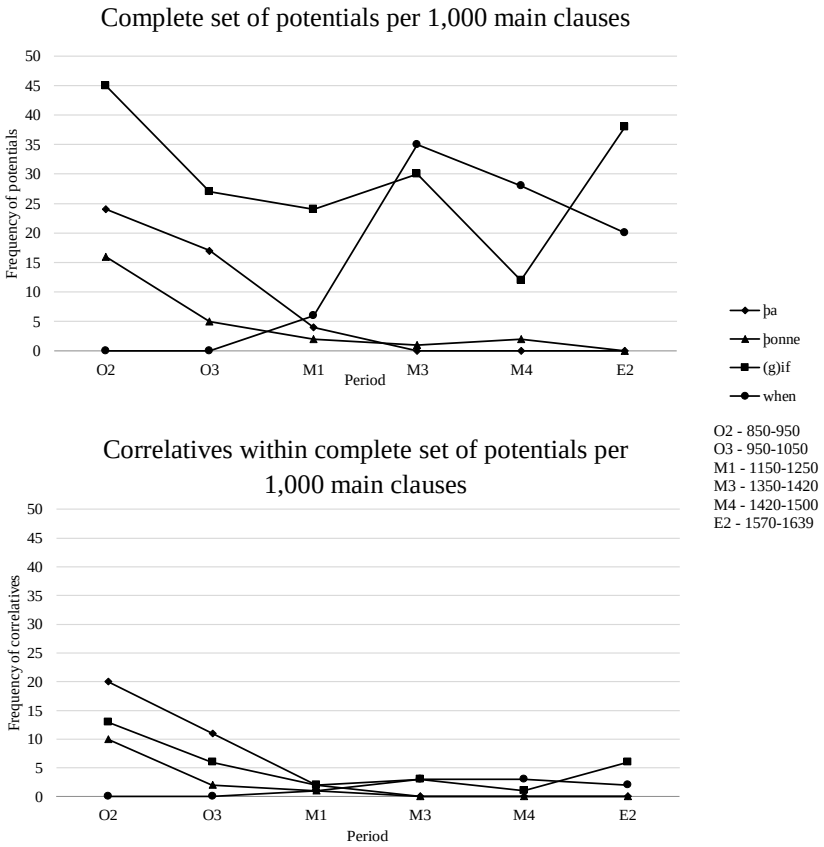


Figure 2. Normalised frequencies of potentials and correlatives within potentials in earlier English

Figure 2 shows the use of both potentials and correlatives normalised to their occurrence per 1000 main clauses.[39] The frequency of both is highest in period O2 and declines over time. In the course of OE, but especially in the transition to ME, their use decreases, but *þa* and *þonne* correlatives decline at a faster rate than their potential counterparts and have disappeared by period M3. The timing of these

[39] Normalisation of the data is required due to the differences in size of the subperiods. Normalised figures were calculated by dividing the desired amount of main clauses (1000) by the actual number of attested main clauses in the relevant subperiod of the corpus listed in table 1. This provides a normalisation factor by which to multiply the actual number of attested potentials in the period under investigation to get a normalised occurrence of a specific type per 1000 main clauses. For example, *(g)if* potentials in period O2: 1000/20315 = 0.05 → 892 x 0.05 = 44.6, rounded off to 45.

observations is in line with earlier findings on the declining use of *þa* and *þonne* as conjunctions, resumptive adverbs and discourse particles (Fischer 1992: 252–3, van Kemenade & Los 2006, van Kemenade & Milicev 2011). The discourse functions of *þa* and *þonne* potentials and correlatives are taken over by *when* from (early) ME onwards. For (*g)if* conditionals the conjunction remained the same (*if*) after OE.

Resumptive adverbs can still be found after the OE period although at a much lower rate. According to Fischer (1992: 252–3), *þa* and *þonne* as resumptive adverbs were lost as a result of their multifunctionality and the tendency to develop dissimilar forms in correlatives to avoid ambiguity. Figure 3 shows that potentials with subject-initial main clauses like (12) are used more and more frequently from the O2 period onwards.

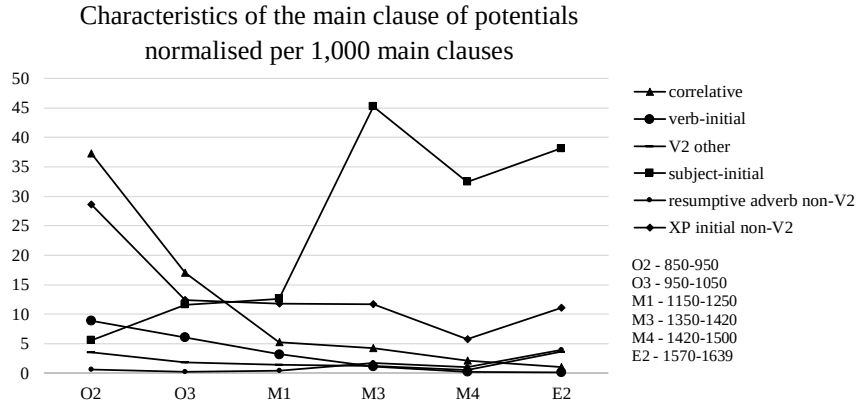


Figure 3. Normalised frequencies for the main clause characteristics of potentials in earlier English.

(12) When he came in and saw such a place, he was amazed,
armin-e2-h 43.270

When resumptive adverbs do occur in ME and Early Modern English (EModE), they seem to follow relatively long subclauses, hardly have any interpretive contribution (Bhatt & Pancheva 2006) and do not lead to subject-verb inversion as in OE, as in

(13). These developments reinforce the question of which features influence resumptive adverb use in OE and the later periods.

(13) If we heare the voyce of the Lord our God any more, **then** we shall die.
authold-e2-h 5.20D.503

4.2 MOTIVATING THE PROPERTIES OF CORRELATIVES AS FACTORS INFLUENCING RESUMPTIVE ADVERB USE

The key property that distinguishes correlatives from non-correlative potentials is the use of a resumptive adverb. Resumptive adverb use will therefore be the dependent variable against which we assess all other independent variables (the factors influencing resumptive adverb use) in the logistic regression. We motivate these independent variables in the following subsections.

4.2.1 RESUMPTIVE ADVERB USE (DEPENDENT VARIABLE)

Resumptive adverbs in correlative constructions resume the initial subclause, thereby foregrounding the main clause event, in correlatives introduced by temporal *þa* and *þonne*; in conditionals, they foreground the main clause which expresses the consequence that applies when the proposition in the *if*-clause is (not) satisfied. Resumptive adverbs thus also establish textual cohesion (Los 2009) and associate discourse linking with the syntactic structure of OE V2 main clauses introduced by *þa*/*þonne* (van Kemenade & Los 2006).

The highest incidence of resumptive adverbs in OE is found in *þa* constructions, probably because the strong foregrounding function of resumptive adverbs is primarily visible in narrative texts (Enkvist 1986, Wårvik 2013), the genre favoured by *þa* correlatives. Resumptive adverb *þonne* is used in both *gif* and *þonne* correlatives and in a broader set of genres. *Then*, the descendent of *þonne* (OED), became the default resumptive adverb in *(g)if* and *when* constructions in later language stages.

4.2.2 MOOD

The choice of conjunction, correlating with the resumptive adverb, is robustly related to the mood of both clauses in the correlative pair: *þa* correlative constructions almost always have indicative mood in both clauses (Mitchell 1985b: 308; 331).

Earlier research on *þonne* correlative constructions (and non-correlative (mostly) temporal) potentials reports that the prevailing mood in both clauses is indicative (cf. Mitchell 1985b: 308–13; 331), but the present study finds that this is only the case in *þonne* correlatives, whereas *þonne* potentials show much more variation in mood in both clauses. The use of subjunctive mood in the subclause of *þonne* potentials and correlatives expresses uncertainty, but when a *þonne* correlative is conditional in meaning, it does not necessarily have subjunctive mood (Mitchell 1985b: 335). An example of a *þonne* correlative with subjunctive mood is (8), repeated here as (14). (Unfortunately, no such observations can be made for the *when* correlative and non-correlative potentials taking over the discourse functions of *þa* and *þonne* in ME and EModE, as the annotation for mood in the PPCME2 and PPCEME does not distinguish between indicative and subjunctive mood.[40])

(14) ðonne þis tacen þislic þe **tocyme**, þonne gemyne þu þas tide
whenever this token such you come then remember you that time
uncres gespreces
our conversation
'When this token comes to you in this wise, then remember the time of our conversation,'
Bede_2:9.130.12.1242

[40] Note that the annotation for the mood of finite verbs within the corpora is only detailed in the YCOE corpus. The PPCME2 and PPCEME corpora manuals report that, while imperatives are annotated separately, subjunctive and indicative verbs are not (part-of-speech; POS-)tagged separately. While not mentioned specifically, this choice might be related to the disappearance of distinct endings for the different moods in the course of ME (Fischer 1992, Moessner 2006). Although our results thus indicate that *when* potentials and correlatives are overwhelmingly found with indicative verbs, other moods do occur.

For *gif* conditionals, it has often been observed that these favour the subjunctive in the subclause (cf. Mitchell 1985b: 780; 783–4; 788; 792–3; 797; 805). Our results show that *gif* potentials allow variation in mood in both clauses. Mitchell (1985b: 797) observes that the conjunction of the subclause expresses the modality sufficiently, rendering specification of mood unnecessary. The main clause of *gif* conditionals favours indicative mood.

In order to test the relation between mood and resumptive adverb use, both subclause and main clause mood have been added as independent variables in the logistic regression.

4.2.3 SUBCLAUSE-INTERNAL PARTICLES

The particle use of *þa* and *þonne* has been identified by van Kemenade (2002), van Kemenade & Los (2006), van Kemenade (2009), and van Kemenade & Milicev (2011) as a word order diagnostic, partitioning the subclause into a domain for discourse-given subjects (and pronominal objects) and a domain for subjects that are new, generic, or focused. We assume that *þa* and *þonne* are also discourse particles. Discourse particles generally express the speaker's attitude towards the utterance, and their interpretation is highly context-dependent (cf. Bayer & Obenauer 2011, Cardinaletti 2011, Coniglio 2011, Zimmermann 2011, Struckmeier 2014). The use of particle *þonne* in *gif* conditionals with resumptive adverbs emphasises the condition that must be met before the consequence expressed in the main clause can obtain, while the use of particle *þa* in *þa* correlative constructions emphasises the temporal sequentiality of subclause and main clause, backgrounding the subclause as a prior event, and foregrounding the main clause as a follow-up event, as we discussed previously. There is thus a clear relation between the use of particles and resumptive adverbs.

Table 2 lists the potentials with a subclause-internal particle according to the conjunction of the adverbial/conditional subclause, for example *þa..Part*, where the first *þa* is the conjunction and Part represents particle *þa*. The subsequent row indicates the number of correlatives within that set of potentials with particles and gives its percentage, for example *þa..Part …, ResAdv*, where *ResAdv* represents *þa*.

Table 2 shows that subclause-internal particles occur mostly in *þa* and *gif* potentials and correlatives and only sporadically in *þonne* potentials and correlatives. The vast majority of *þa* constructions with a particle in period O2 also have a resumptive adverb, such as (1a), but particle *þa* is hardly used in period O3. This may be due to the absence of those text types in period O3 that contain many *þa* potentials and correlatives with particles in period O2, namely historical (*Bede* and *Orosius*) and philosophical (*Boethius*) texts. *Gif* constructions with a particle are used frequently, but correlatives with both a particle and a resumptive adverb are less frequent than their *þa* counterparts: 45% in O2 and 32% in O3 of the examples with a particle also have a resumptive adverb.

Table 2. Absolute frequencies of potentials and correlatives with subclause-internal particles per period

Type/Period	O2 (850-950)	%	O3 (950-1050)	%	Total potentials with particle	Total correlatives with particle within potentials	%
þa..Part	193		4		197		
þa..Part … , ResAdv	178	92	4	100		182	92
þonne..Part	11		0		11		
þonne..Part … , ResAdv	10	91	0	0		10	91
gif..Part	179		152		331		
gif..Part … , ResAdv	81	45	48	32		129	39
Total					539	321	60
Overall total potentials	1,691		2,457				

4.2.4 NEGATION

Typical negative polarity item contexts such as *gif* conditionals and correlative questions (Giannakidou 1997, van der Wouden 1997, Postma 2002) often use resumptive adverb *þonne*. This raises the question of whether the presence of a negative element has an effect on resumptive adverb use, in particular for *þonne* in *þonne* correlatives and *gif* conditionals. For this reason, we included the general effect of negation as a variable.

4.2.5 SUBJECT TYPE MAIN CLAUSE AND SUBCLAUSE

Wårvik (2013) finds for *þa* clauses generally that the role of (resumptive) adverb *þa* as a main clause foregrounding device (cf. the section on functions of potentials and correlatives in Old and Middle English) in OE narrative texts is evidenced in its tendency to occur with participants that are contextually given. This includes pronouns and definite noun phrases, as well as proper nouns, which may introduce referents or reactivate them in the narrative. The relation between *þa* and discourse-given subjects might be epiphenomenal and could be a measure of foregroundedness more than anything else, or it could be genuinely related to the discourse status of the subject. On the latter assumption, we might postulate the reverse hypothesis, that non-correlative potentials are favoured by discourse-new subjects. We therefore include the discourse status of the main clause subject as an independent variable, extending Wårvik's observation to the resumptive adverb *þonne*.

By the hypothesis of a relationship between resumptive adverbs and discourse given subjects, we might further expect subclauses to display similar tendencies. Van Kemenade & Los (2006), van Kemenade, Milicev & Baayen (2008), van Kemenade (2009), and van Kemenade & Milicev (2011) show that the position of the subject in OE subclauses is related to its information status, which is visible when the subclause contains *þa*/*þonne* as a discourse particle. Our results indicate that resumptive adverb use is higher when a particle is used in the subclause. We therefore include the discourse status of the subject of the subclause as well to test a potential effect.

The two variables regarding the discourse status of the subject position are each divided into four categories: *Given*, *New*, *Other* and *Proper*. The category *Other* contains those examples without a subject or with subjects without a clear referent (for example, *it* or *there*). Proper nouns like *Dauid* or *Higa* are a separate category as their discourse status can be new or given.

4.2.6 WEIGHT OF THE SUBCLAUSE

Subclause length influences resumptive adverb use in the sense that longer subclauses are more often followed by a main clause with a resumptive adverb. We can make sense of this on the basis of the well-established psycholinguistic effect whereby the

length of utterances (in this case subclauses) forms a processing burden on the brain (e.g. Arnold et al. 2000). As the length of the subclause increases, a resumptive adverb can lighten the processing pressure and function as a placeholder. We therefore include *Subclause weight* as a variable influencing resumptive adverb use.

Subclause length, or its weight, can be measured both in the number of words and in terms of syntactic complexity, that is the number of complex constituents. A complex constituent is defined here as a phrase with more than one child, for example an NP that consists of both a determiner and a noun. Szmrecsányi (2004) notes that all numerical measures of calculating weight are highly correlated, showing that the most economic method – counting length in words – is as accurate as other methods. The data used here show a significant relationship between subclause length in words and syntactic complexity in correlative constructions, $r = .976$, p (one-tailed) = < .01. *Subclause weight* (i.e., subclause length in words) shares 95.26% of variation with *No constituents in subclause*. This indicates that the two measures can be used interchangeably. We discuss only the variable *Subclause weight* in the logistic regression results as it is the most economical measure.

4.2.7 TEXT TYPE

There are clear genre differences between the various types of potentials and correlatives: *þa* correlatives, for instance, occur most frequently in historical (*Bede* and *Orosius*) and philosophical (*Boethius*) texts. The genres listed in the Helsinki corpora were therefore regrouped into seven categories (*Law*, *Narrative*, *Moral*, *Science*, *Ego document*, *Bible* and *Spoken*) and added as a factor potentially influencing the use of a resumptive adverb.

4.2.8 TRANSLATION

A closer look at the OE correlatives shows that 69% are found in texts translated from Latin. Although we must keep in mind that translated texts make up 65% of all the OE data, two questions still arise: 1) are we dealing with a genuine OE construction here?; and 2) to what extent does translation influence resumptive adverb use, that is, do we find an increased use of resumptive adverbs in translated texts? Wårvik (2013)

points out that OE *þa* had no parallel in Latin, but Mitchell (1985b: 297) shows that correlatives in translated texts, especially those with *þa*, often have a Latin counterpart starting with *cum*, although this correspondence is not absolute. Inspection of the Latin source text for the *Heptateuch*, Ælfric's Treatise of the Old and New Testament, shows that although the Latin originals indeed often start with a subordinate *cum(que)* clause, as in (15), their main clauses have a different structure from those in OE and lack resumptive adverbs. Since the main clauses in OE correlatives employ the characteristics of OE in a way that cannot be found in Latin, we conclude that the construction and resumptive adverb use are genuine features of OE, especially since both translated and untranslated correlative constructions share the same structural characteristics as can be seen in the example (16) from the untranslated text *Ælfric's Lives of Saints*.

(15) Cumque obduxero nibilus cælum, apparebit arcus meus in nubibus
þonne ic oferteo heofonana mid wolcum, **ðonne** æteowað
then I draw over heaven with clouds then appears
min boga on ðam wolcum.
my arc in the clouds
'And when I obscure the sky with clouds, my arc will appear in the clouds.'
Gen:9.14.390

(16) **Þa þa** se sunu þæt geseah, **þa** gesohte he þæs preostes fet,
then when the son that saw, then sought he that priest's feet
'When the son saw that, he sought the priest's feet.'
ÆLS_[Sebastian]:303.1396

4.2.9 VARIABLES DETERMINING RESUMPTIVE ADVERB USE

Table 3 sums up the variables discussed in the previous subsections. Remember that our dependent variable is the presence or absence of a resumptive adverb, as we take this to distinguish correlatives from the set of potentials and to show whether the

adverbial/conditional subclause is paratactically adjoined to the main clause (see figure 1).

Table 3. Variables hypothesised to influence resumptive adverb use[41]

Variables	Observations (O) / Hypothesis (H)
Mood	Resumptive adverbs co-occur with indicative mood in the main clause (O)
	Resumptive adverbs co-occur with indicative mood in the subclause (O)
Subclause-internal particle	Resumptive adverbs occur with subclause-internal particles (O)
Negation	The use of a negated constituent in the main clause reduces resumptive adverb use (O)
	The use of a negated constituent in the subclause reduces resumptive adverb use (O)
Subject type	Resumptive adverbs co-occur with given subjects in main clause (H)
	Resumptive adverbs co-occur with given subjects in subclause (H)
Subclause weight	Resumptive adverbs occur more often after longer subclauses (O)
Text type	Some text types have a stronger preference for resumptive adverbs (O)
Translation	Resumptive adverbs occur more often in translated texts (O)

[41] The genres as listed in the Helsinki corpora (YCOE, PPCME2, and PPCEME) have been regrouped in the following manner to facilitate the logistic regression:
Law – charters and wills, law(s), proceedings trial;
Narrative – biography life saint, biography other, biography lives, fiction, history, romance;
Moral – homilies, religious treatise, rule, sermon;
Science – educational treatise, handbook astronomy;
Ego document – biography auto, diary private, letters non-private, letters private, travelogue;
Bible – bible;
Spoken – drama comedy.

5 RESULTS OF THE LOGISTIC REGRESSION AND ITS INTERPRETATION

A logistic regression analysis was executed on the combined data samples of all three corpora to predict the use of resumptive adverbs in three models, each representing a language stage.[42] We entered all independent variables into the model simultaneously (Enter method), as dummy coding was required for some variables (Field 2009). Dummy coding (using one category within an independent variable as a reference against which all others are assessed in terms of their influence on the dependent variable) was used to determine the influence of those independent variables that contained more than two categories (Field 2009), here, *Subject type* and *Text type*.

In table 4, the first column presents the predictor variables used in the model. The following columns return the *Odds ratios* for each language stage. Odds ratios reflect the size of the effect an independent variable has on the dependent variable investigated (Hinrichs & Szmrecsányi 2007: 459, Burns & Burns 2008, Field 2009). When a parameter estimate is positive and has an odds ratio >1, the odds are predicted to increase by the odds ratio: the variable *Subclause-internal particle*, for example, has an odds ratio of 1.70 in period O2&O3 indicating that the probability of using a resumptive adverb is predicted to increase by 70% when a subclause-internal particle is used in the same construction. Likewise, when a parameter estimate is negative and has an odds ratio <1, the odds are predicted to decrease by the given odds ratio: the variable *Negation subclause* (O2&O3) is predicted to lower the odds of using a

[42] Table 5 indicates that most predictor variables are only significant for the OE period. In order to justify our decision to lump together the data for period O2 (850-950) and period O3 (950-1050), we carried out separate logistic regressions for these periods, using the Enter method and including confidence intervals as a diagnostic for overlap between the two models. Only two predictor variables in this comparison could be interpreted as raising concern, to the extent that their non-overlapping intervals in the models for O2 and O3 suggest a statistically different impact. These are *Subclause-internal particle* and *Translation*. The apparently different role of the presence of a subclause-internal particle is, however, not due to any pertinent linguistic change, but to the almost complete demise of *þa* constructions as in example (1a) in period O3, which in itself is a consequence of the reduced availability of historical and philosophical texts (also see the section on subclause-internal particles). This difference in corpus make-up reduces the possibility of variability. The unstable impact of *Translation* pertains to the different balance between translated and non-translated texts in the corpora for O2 (850-950), where translated texts contribute 83% (1397/1691) of the observations, and O3 (950-1050), where they contribute only 53% (1313/2457). In view of the fact that both deviant factors are a direct consequence of the (inevitably) different composition of the O2 and O3 datasets, there is no statistically sound reason to assess them as different data points.

resumptive adverb by 1.64 or 64% (1/.61 = 1.64). Significant variables are in bold, with asterisks indicating the level of significance. Subsequent columns give the number of observations corresponding to the category out of the complete dataset for that language stage, followed by its percentage. Also reported are the model's chi-square and Nagelkerke's R^2, which assess model fit.

Table 4. Logistic regression estimates: individual resumptive adverb predictors, in three language stages

	O2&O3 (850-1050) (*n* = 4,148)			M1 (1150-1250) (*n* = 435)			M3,M4&E2 (1350-1639) (*n* = 4,406)		
	Odds Ratio	*n*	%	Odds Ratio	*n*	%	Odds Ratio	*n*	%
Mood main clause									
Indicative	Reference category	2,810	68	Reference category	333	77	Reference category	4,053	92
Other	**.10*** **	1,338	32	.34	102	23	1.30	353	8
Mood subclause									
Indicative	Reference category	3,290	79	Reference category	435	100	Reference category	4,406	100
Other	1.17	858	21	—	—	—	—	—	—
Subclause-internal particle									
No	Reference category	3,604	87	Reference category	432	99	Reference category	4,392	100
Yes	**1.70*** **	544	13	2.22	3	1	.30	14	0
Negation main clause									
No	Reference category	3,518	85	Reference category	349	80	Reference category	3,893	88
Yes	**.47*** **	630	15	.86	86	20	.76	513	12
Negation subclause									
No	Reference category	3,628	87	Reference category	360	83	Reference category	4,026	97
Yes	**.61*** **	520	13	.69	75	17	1.09	380	3

Table 4. Logistic regression estimates: individual resumptive adverb predictors, in three language stages (continued)

	O2&O3 (850-1050) (*n* = 4,148)			M1 (1150-1250) (*n* = 435)			M3,M4&E2 (1350-1639) (*n* = 4,406)		
	Odds Ratio	*n*	%	Odds Ratio	*n*	%	Odds Ratio	*n*	%
Subject main clause									
New	Reference category	2,889	70	Reference category	312	72	Reference category	3,552	81
Given	**.58*** **	306	7	1.47	26	6	**.66***	278	6
Other	**.13*** **	851	21	.59	88	20	**.50***	443	10
Proper	1.62	102	2	4.09	9	2	.57	133	3
Subject subclause									
New	Reference category	3,141	76	Reference category	349	80	Reference category	3,328	76
Given	1.18	704	17	.83	64	15	.91	602	14
Other	**2.26****	94	2	.00	10	2	.89	102	2
Proper	**2.52*** **	209	5	.99	12	3	**.50****	374	8
Subclause weight	**1.11****	Continuous variable		1.05	Continuous variable		1.03	Continuous variable	
No constituents in subclause	**.91***	Continuous variable		.93	Continuous variable		1.02	Continuous variable	

Table 4. Logistic regression estimates: individual resumptive adverb predictors, in three language stages (continued)

	O2&O3 (850-1050) (*n* = 4,148)			M1 (1150-1250) (*n* = 435)			M3,M4&E2 (1350-1639) (*n* = 4,406)		
	Odds Ratio	*n*	%	Odds Ratio	*n*	%	Odds Ratio	*n*	%
Text type									
Moral	Reference category	1,234	30	Reference category	373	86	Reference category	1,114	25
Law	.73	519	12	—	—	—	1.08	347	8
Narrative	1.06	708	17	1.81	62	14	**.57*** **	**1267**	**29**
Science	**1.39***	646	16	—	—	—	**1.67*** **	**721**	**16**
Ego document	—	—	—	—	—	—	**.46****	**452**	**10**
Bible	**.27*** **	1,041	25	—	—	—	**.56***	**423**	**10**
Spoken	—	—	—	—	—	—	**.21***	**82**	**2**
Translation									
No	Reference category	1,438	35	Reference category			Reference category	3,289	75
Yes	**1.36****	2,710	65	—	—	—	1.18	1,117	25
Intercept	**1.54***			**.23***			**.15*** **		
Model's chi-square	1570.95(*df* =18)***			34.23(*df*=13)**			269.09(*df*=19)***		
Nagelkerke's R^2	.42			.12			.12		
Amount of potentials (correlatives)	4,148 (1,764)			435 (81)			4,406 (498)		

Note: Predicted odds are for the use of a resumptive adverb. Bold values are statistically significant.

*$p < .05$, ** $p < .01$, *** $p < .001$

Table 4 shows that a comparison of the full model with predictors and an intercept-only model was statistically significant for all three models, indicating that the predictor variables as a group can be used to distinguish between the presence vs. absence of a resumptive adverb in the main clause. Table 5 provides the percentages of correctly predicted outcomes. The decreased percentage for period M1 and the minimally improved percentage for period M3,M4&E2 indicate that those variables that are highly significant in period O2&O3 are no longer operative in later periods.

Table 5. Predicted outcomes

	O2&O3 (850-1050)	M1 (1150-1250)	M3,M4&E2 (1350-1639)
Constant only model	57.5%	81.4%	88.7%
Predictor model	75.7%	81.1%	88.9%

As most of the predictors are only significant in period O2&O3 (850-1050), we will primarily discuss the OE results, including significant predictors from the later periods to track diachronic developments where applicable (most notably *Subject main clause*, *Subject subclause* and *Text type*). The fact that the bulk of significant effects is attested in period O2&O3 is unsurprising since most predictors are related to OE syntax, which later underwent substantial changes, including the decline of resumptive adverbs, as shown in figure 3. We will start with the construction-internal variables, followed by the construction-external variables *Text type* and *Translation*.

5.1 MOOD

Mitchell (1985b: 308–13; 322; 331; 335; 780; 783–4; 788; 792–3; 797; 805) observes that *þa* and *þonne* correlatives favour indicative mood in both clauses, contra the widely held belief that conditionals (both potentials and correlatives) have a preference for the subjunctive, at least in the subclause. The results of the logistic regression confirm that resumptive adverbs are more frequent in indicative main clauses, but no (significant) effects were found for *Mood subclause*. The use of a non-indicative mood in the main clause is predicted to lower the odds of resumptive adverb

use by 10 (1/.10) in O2&O3. The relation between indicative mood and resumptive adverb use follows from the observation that both represent factual information. The absence of an effect for the later periods may be related to the fact that the part-of-speech (POS-) tagging of mood in the PPCME2 and PPCEME corpora is limited to imperative and indicative, the latter also including subjunctives.

5.2 SUBCLAUSE-INTERNAL PARTICLES

The observed relation between subclause-internal particles and the use of resumptive adverbs in terms of absolute frequencies in table 2 is confirmed by the logistic regression: resumptive adverb use is predicted to increase by 70% in O2&O3 when the subclause contains particle *þa/þonne*. We recall that the use of the particle emphasises the temporal sequentiality of the two clauses in correlative constructions that also contain a resumptive adverb of the same type, especially in *gif* correlatives where particle *þonne* emphasises the condition that has to be met. The fact that we find an effect only for the OE period can be attributed to the fact that the use of *þa* and *þonne* in all three functions (conjunction, particle, and resumptive adverb) declines in the transition to ME (van Kemenade & Los 2006).

5.3 NEGATION

The presence of a negative element does not promote the use of resumptive adverbs; it significantly lowers the probability of resumptive adverb use by 2.13 in main clauses and by 1.64 in subclauses in period O2&O3. It seems that the use of a negated element neutralises the emphasis function of resumptive adverbs, reducing the occurrence of resumptive adverbs. Negation and resumptive adverb use thus seem to be conflicting strategies in potentials. No significant effects were found for the later periods.

5.4 SUBJECT TYPE

The inclusion of *Subject main clause* as a predictor was based on Wårvik's observation (2013) that *þa* as a foregrounding device in main clauses in narratives often co-occurs with discourse-given subjects. As there are more than two categories,

dummy coding (Field 2009) is required. The decision to use *New* subjects as the reference category is based on the hypothesised relation between the use of *þa* and given subjects. The logistic regression shows significant results for period O2&O3 and M3,M4&E2, but not for period M1. In period O2&O3, the probability of a resumptive adverb decreases by 1.72 for *Given* and by 7.69 for *Other* subjects. No effect was found for the category *Proper*. Resumptive adverbs thus occur more often with *New* subjects, contra Wårvik's observation for *þa* in a smaller dataset (n = 267 in various types of *þa* constructions). In order to see whether these results do hold up for *þa* correlative and non-correlative potentials only (the basis for Wårvik's observation), we ran a chi-square analysis which further indicated that there is no significant relation (χ^2 (1) = 2.7499, p = > .05) between resumptive adverbs and *New/Given* subjects. The use of resumptive adverbs with *New* subjects is often attested in presentational constructions that introduce a new referent, which is then picked up as a given participant in the subsequent discourse, as in (17) for the new subject *an eald mon*, or simply introduced and not continued, as with *neddran* in (18). These subjects occur in a lower position than subjects in V2 inversion; the fact that they are new subjects in non-subject initial main clauses (like correlatives) is in line with earlier observations for OE regarding subject placement (cf. Warner 2007, Biberauer & van Kemenade 2011).

(17) þa Scipia hiene hamweard wende of þæm lande, þa com him
then Scipia him homeward turned of that land then come him
to **an eald mon**, se was Numentisc. þa frægn Scipia **hiene**
to an old man that was Numantine then ask Scipio him
an hwy hit gelang wære þæt Numentiæ swa raðe ahnescaden,
in what it depending were that Numantie as soon became weak
swa hearde swa hie longe wæron.
as hard as she long was
'When Scipio turned himself homeward from that land, then came to him an old man, who was a Numantine. Scipio asked him why Numantie became weak so quickly as she had long been strong.'
Or_5.3.117.16.2461/62

(18) gif mon hine on fyr deþ, þonne fleoþ þær **neddran** onweg.
if man him on fire put then flees there serpents away
'If one puts it into the fire, it drives away serpents.'
Bede_1:0.26.15.195

The same observations hold for period M3,M4&E2, where the probability of a resumptive adverb decreases by 1.52 for *Given* subjects and by 2 for *Other* subjects. Although differential subject positions in non-subject-initial main clauses were presumably lost (though see e.g. Kiss 1995, van Kemenade 2000), constructions with lower *New* subjects have been retained (Biberauer & van Kemenade 2011).

The hypothesis for the *Subject subclause* (dummy coded using *New* subjects as the reference category) is likewise not borne out: the probability of using a resumptive adverb increases by 2.26 with *Other* subjects and by 2.52 for *Proper* subjects in period O2&O3. In period M3,M4&E2 the probability of resumptive adverb use decreases by 2 for *Proper* subjects. No effect was found for *Given* and *Other* subjects. All findings for *Subject subclause* are post-hoc, as we had no specific hypotheses for the categories *Other* and *Proper*. Closer inspection of the data did not lead to new insights. Both categories seem to be able to represent given and new information. It might have

seemed desirable to exclude both subject categories, but a substantial amount of data would have been lost.

5.5 SUBCLAUSE WEIGHT

The logistic regression confirms that longer subclauses raise the probability of using a resumptive adverb by 11% in period O2&O3. An independent *t*-test shows that subclauses in potentials indeed contain more words when a resumptive adverb is used (M = 8.9, SE = .126) than when no resumptive adverb is used (M = 7.8, SE = .101). This difference was significant $t(3627.057) = -6.677$, p (one-tailed) < .001, albeit with a very small effect size $r = .11$. This effect confirms our hypothesis in the section on weight of the subclause. Finally, although it seemed that longer subclauses were more often followed by a resumptive adverb in the later periods as well, this observation is not confirmed here.

5.6 TEXT TYPE

The variable *Text type* was dummy coded using *Moral* texts as the reference category. This choice follows from the observation that moral texts occur in almost all subperiods in the dataset and contain all subtypes (*þa, þonne, gif* and *when*) and therefore may not be strongly associated with one type of potential/correlative. The results indicate that for period O2&O3 the probability of using a resumptive adverb increases by 39% for *Science* texts compared to *Moral* texts. Resumptive adverb use in *Moral* texts is 3.7 times higher than in *Bible* texts. No significant effect was found for *Narrative* and *Law* texts. The observation that resumptive adverb use increases in *Science* texts suggests that the strong rhetorical/argumentative character of philosophical texts and the instructive nature of handbooks and instructions is supported by resumptive adverbs, which may clarify arguments and elucidate discourse organisation. The higher probability of resumptive adverb use in *Moral* texts likewise seems to be related to their strong rhetorical character. Furthermore, both *Science* and *Moral* texts are (often) translated texts showing a higher use of resumptive adverbs in OE which might reflect “audience-designed overcoding” by the translator.

No significant effects were found for period M1, but the results for period M3,M4&E2 show that the probability of using a resumptive adverb in *Science* texts is 67% higher than in *Moral* texts. The same argument seems to apply here: the strong rhetorical/instructive character of *Science* texts facilitates resumptive adverb use. On the other hand, the likelihood of resumptive adverb use in *Moral* texts is 1.75 times higher than in *Narrative* texts, 1.79 times higher than in *Bible* texts, 2.17 times higher than in *Ego documents* and 4.76 times higher than in *Spoken* texts (plays). Again, the use of resumptive adverbs can be related to the argumentative nature of the text where less argumentative/more descriptive texts, like *Ego documents*, use fewer resumptive adverbs. No significant effect was found for *Law* texts.

5.7 TRANSLATED TEXTS

When a potential is found in a translated text, resumptive adverb use is predicted to increase by 36% in period O2&O3, which can be attributed to the fact that 65% of all OE data (and even 69% of the OE correlatives) comes from translated texts. The fact that resumptive adverbs and thus correlatives in OE are used more frequently in translated texts (χ^2 (1) = 17.58, $p < .01$) does suggest, in our view, that correlatives are used to reinforce the temporal and/or conditional sequentiality of the construction. Using a resumptive adverb (and in addition optionally a particle as well), progressively renders this sequentiality more explicit, a kind of 'audience-designed overcoding' that may be the result of a translator's aim to increase the 'Englishness' of the text. No effects were found for the later periods.

6 CONCLUSION

This study aimed to identify the properties of correlatives in OE and to present a coherent account for how correlatives were lost. We argued that OE correlative constructions and their non-correlative potential counterparts find their niche in the availability of a CP-adjoined position, in addition to the V2 structure of OE (Mitchell 1985a: 777, Kiparsky 1995, van Kemenade & Los 2006, Los & van Kemenade forthcoming). The use of resumptive adverbs is what distinguishes correlatives from non-correlative potentials. The key properties of OE correlative constructions

represent a phenomenon typical of the left periphery of main clauses, on a par with that of left dislocation constructions and V2 constructions.

Most of the correlations regarding resumptive adverb use are only valid for OE. The results of the logistic regression show that resumptive adverb use correlates with main clause-internal properties (*Mood*, *Subject type*, and *Negation*). In addition, length and the presence of a subclause-internal particle promote resumptive adverb use as well. The simultaneous use of subclause-internal particles and resumptive adverbs needs further investigation in light of what is known about OE subclause-internal particles in general, but seems to emphasise the temporal narrative sequentiality or condition that has to be met. Resumptive adverb use is furthermore related to the clause-external variables *Text type* and *Translation*. Especially in the later periods, the use of resumptive adverbs seems to be related to genre-internal preferences in which writers opt to establish explicit discourse relations.

Resumptive adverbs became increasingly rare in the later periods. The loss of resumptive adverbs, which happened largely in the transition from OE to ME, removed the trigger for V to C movement, which had so far been the resumptive adverb, a clausal operator. The main clause thus increasingly became subject-initial, and potentials became early adopters of the SV structure that became the default option after the loss of V2 (cf. Fischer et al. 2000, Haeberli 2002, Los 2009, van Kemenade & Westergaard 2012, Los 2012a). This change is reflected in the increase of subject-initial potentials in the transition from OE to ME and onward, as seen in figure 3, and predates the loss of V2 by several centuries, especially in clauses with initial adverbs like (non-resumptive) *then*, which are not lost until the end of the ME period (van Kemenade 2012, van Kemenade & Westergaard 2012). A crucial step in the loss of correlatives thus is the loss of resumptive adverbs in the transition from OE to ME resulting in the loss of typical V2 correlatives. This is why one would expect that the loss of correlatives would go hand in hand with the loss of V2, but what happened in fact is that the loss of resumptive adverbs removed a V2 trigger from correlatives. Concurrently, the use of *þa* and *þonne* as conjunctions (introducing the subclause) were lost. These essentially lexical losses make up the loss of correlatives, we claim. It was thus the morphosyntactic expression articulated by

resumptive adverbs and discourse particles that was lost, but the underlying relation between the two clauses does not seem to have undergone much change. This is also confirmed by Haegeman (2003, 2012) and Quirk et al. (1985), who argue that what we call conditional and temporal potentials here are still paratactic in Present-day English.

3 EXPRESSING CONDITIONALITY IN EARLIER ENGLISH[43] [44]

ABSTRACT

This chapter traces the diachronic development of English conditionals with clause-initial subclauses (*If you hurt the cat, (then) she will bite you*) by means of (frequency) data from three corpora (YCOE, PPCME2 and PPCEME). It investigates the division of labour between *(g)if, and* (meaning 'if, suppose/provided that, on condition that') and verb-initial conditionals from Old to Early Modern English. It is shown that conjunctional conditionals (e.g. *if* conditionals) have always been most frequent. The limitations on verb-initial conditionals (as they exist in Present-day English) develop diachronically and are related to restrictions on verb movement and choice of verb, and not frequency. Genre preferences, however, seem to exist. The use of *then* introducing the main clause will be shown to be a reflex of an earlier paratactic structure. Its use over time is influenced by mood and length, the latter being of influence especially in later periods.

1 INTRODUCTION

Present-day English (PDE), like most of its Germanic sister languages, has multiple ways to express conditionality (Van den Nest 2010, Auer & Lindström 2011). (1a–c) present run of the mill examples of both conjunctional (most notably *if*) and verb-initial (V1) conditionals.

(1a) If you work harder, (then) you will finish in time.
(1b) If you had worked harder, (then) you would have finished in time.
(1c) Had you worked harder, (then) you would have finished in time.

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Conjunctional conditionals can express conditions whose fulfilment is open, as in (1a), or counterfactual, i.e. for which the speaker believes that the condition is not, cannot, or will not be fulfilled as (1b) (Quirk et al. 1985: 1091–3, Iatridou & Embick 1994, Bhatt & Pancheva 2006).[45] V1 conditionals like (1c) are (largely) restricted to expressing counterfactuality in PDE. The use of *then* is optional in both types, as indicated by the brackets. Using *then* is however ungrammatical when the conditional subclause is clause-final, as in (2).

(2) (*Then) you will finish in time, if you work harder.

The constructions in (1) also occur in earlier English, as exemplified by the Old English (OE) *(g)if* conditional in (3). However, conditionals in earlier English show much more construction-internal variation, with respect to mood, verb choice, restrictions on open and counterfactual V1 conditionals, and in the structure of the clause expressing the result of the condition. I will come back to this below.

(3) Gif Sodome hira synne hælen, ðonne ne syngodon hi na
if the men of Sodom their sins conceal, then not sinned they not
buton ege,
without fear
'If the men of Sodom had concealed their sins, they would not have sinned without fear.'
CP:55.427.29.3008

[45] Quirk et al. (1985: 1092, fn. a) point out that different terminology exists to define the speaker's belief regarding the fulfilment of the protasis in conditionals. Open conditionals have also been referred to as *real*, *factual* and *neutral*. Iatridou & Embick (1994) refer to these as *indicative*, while Van den Nest (2010) and Auer & Lindström (2011) adopt the term *realis.* Counterfactual conditionals are sometimes defined as *closed*, *unreal*, *rejected*, *non-factual*, *marked* or *hypothetical*. They are referred to as *remote* conditions by Huddleston & Pullum (2002: 739) and as *potentialis* or *irrealis* (combined in the term *non-realis*) by Van den Nest (2010) and Auer & Lindström (2011). The terms *open* and *counterfactual* are adopted here, where *counterfactual* comprises both *hypothetical* (condition can potentially be fulfilled, but will not be fulfilled) and *counterfactual* (fulfilment is impossible) conditionals.

Most studies on conditionality in English are restricted to either conjunctional or V1 conditionals or are synchronic in nature (cf. Iatridou & Embick 1994, Bhatt & Pancheva 2006, Van den Nest 2010, Auer & Lindström 2011). This chapter traces the diachronic development of English conditionals with clause-initial conditions as in (1a–c) and (3), as well as the division of labour between conjunctional and V1 conditionals. I will furthermore study the factors that promote the use of resumptive adverb *then*. I will also answer the question why its use in conditionals declines over time, but never quite disappears while it does so in other constructions with clauses expressing a similar semantic-pragmatic relationship. The focus will be on conditionals introduced by *(g)if*, by the finite verb (V1), and by *and* (meaning 'if, suppose/provided that, on condition that' (OED)). These three have a context-independent conditional reading (contrary to, for example, *when*). I will show that conjunctional conditionals have always been preferred over V1 conditionals, which eventually became limited to counterfactual uses, as they became restricted to a subset of auxiliaries following the loss of preposing of lexical finite verbs. The results will furthermore be compared for both frequency and genre effects to earlier research on the division of labour between the two conditional types by Van den Nest (2010) on written OE and by Auer & Lindström (2011) on written German and Swedish. We will see that restrictions on V1 conditionals are not uncommon and that both conditional types have genre and modality preferences.

This chapter is organised as follows: section 2 discusses in detail the form and meaning of conditionals, the expression of conditionality in (earlier) English, the relation between conditionals and correlatives, and the role of *then*. Section 3 outlines the methodology for data collection and addresses the diachronic development and the use of the resumptive adverb *then*. Section 4 concludes.

2 TYPES OF CONDITIONALS: FORM AND MEANING

Conditionals are used to convey the message that the accuracy of the proposition expressed in the apodosis (or main clause) depends on the fulfilment of the condition expressed in the *protasis* (or conditional subclause) (Quirk et al. 1985: 1088, Bhatt &

Pancheva 2006). Together, the two clauses are a semantic-pragmatic unit expressing condition and result (Van den Nest 2010), as in (4).

(4) *If you hurt the cat*, she will bite you.

The truth of the prediction 'she will bite you' depends on the fulfilment of the condition '*if you hurt the cat*'. Example (4) is a so-called content conditional, involving actual real-world content, as opposed to epistemic conditionals which reflect logical reasoning processes or speech-act conditionals (Sweetser 1990: 113–21).[46] In many languages, the protasis can either be clause-initial, as in (4), or clause-final, as in (5) (Iatridou & Embick 1994, Bhatt & Pancheva 2006).

(5) The cat will bite you, *if you hurt her*.

Conditionals with clause-final protases like (5) generally allow less variation. In languages like Russian, "[…] the clause-final option is unavailable" (Comrie 1986 cited in Bhatt & Pancheva 2006: 646), while in other languages, as in PDE, German and Dutch, clause-final V1 protases are restricted to counterfactuality (Iatridou & Embick 1994). Predictably, clause-initial protases are more common cross-linguistically. The protasis-apodosis order expresses the consecutive order of the events most accurately or iconically (cf. Dancygier & Sweetser 2005: 173) and presumably facilitates interpretation.

Most Germanic languages have more than one morphosyntactic way of expressing condition-result semantics (Auer & Lindström 2011). Well-known strategies for overt marking of the protasis include inflectional marking by imperative/subjunctive morphology (Bhatt & Pancheva 2006), and the use of conditional conjunctions. The latter often find their origin in temporal *wh*-pronouns, like German *wenn* in (6), or interrogative conjunctions, like PDE *if* in (4) (also used

[46] Epistemic conditionals are constructions like *If he was here, he was not at university*, while speech-act conditionals are typically exemplified by *If I may say so, you are mistaken*. For a more detailed discussion of conditional linking, the reader is referred to Sweetser (1990), Dancygier & Sweetser (2005) or Quirk et al. (1985: 1094–7).

in embedded *yes*/*no* questions). As such, PDE *if* – but also Dutch *als* 'if' (Zwart 2011: 106, 282–5) – is generally analysed as a conjunction in C, the canonical position for conjunctions in CP (Conjunction Phrase) (see Kayne 1991 cited in Bhatt & Pancheva 2006: 652).

(6) German *wenn*-conditional

Wenn du müde bist, leg dich hin.
if you tired are, lay yourself down
'If you are tired, lie down.'

Another way of marking the conditional protasis is by fronting the finite verb (to C) in the absence of a conjunction (Iatridou & Embick 1994). These V1 conditionals, although often a characteristic of languages without other indicators of conditionality, can also be found side-by-side with other conditionality marking strategies. PDE V1 conditionals are (largely) restricted to counterfactuality as in (7a), whereas German also permits open V1 conditionals that are neutral towards the fulfilment of the condition, like example (7b).

(7a) PDE counterfactual V1 conditional

Had I known you were here, I would have stayed at home.

(7b) German open V1 conditional (Iatridou & Embick 1994: 190, ex. 2b)

Kommt Hans dann geht Susanne.
comes Hans then goes Susanne
'If Hans comes, then Susanne goes.'

For languages allowing multiple overt ways of expressing conditionality, the choice for a particular conditional type (conjunctional versus V1) not only depends on language-internal factors, but is also influenced by discourse function, genre and modality (Auer & Lindström 2011). Present-day Swedish, for example, seems to favour conjunctional (*om* 'if') protases in the written language, but instructive (legal,

scientific and regulatory) texts prefer V1 protases. The latter are also favoured in spoken Swedish and used by the speaker to establish an expert-status. Present-day written German also favours V1 over conjunctional protases in instructional texts, but shows an arbitrary distribution elsewhere. In spoken German, V1 conditionals are virtually absent. The division of labour between the different conditional types thus depends on the available morphosyntactic options along with genre and modality (Auer & Lindström 2011).

2.1 THE EXPRESSION OF CONDITIONALITY IN (EARLIER) ENGLISH

The order protasis-apodosis, as in (4), is the most common and versatile way to express conditionality in PDE. The subordinating conjunction *if* is the most frequent option, but *when* and *whenever* are used as well (Quirk et al. 1985: 1089). PDE V1 conditionals are (largely) restricted to presenting counterfactual information, as observed above. They are also restricted to a limited set of auxiliaries: *had*, *were* and *should*, the latter marking a high degree of uncertainty. In somewhat literary styles, *should* and *were* can sometimes also be used non-counterfactually (Quirk et al. 1985: 1094).[47] Resumptive adverb *then* can introduce the apodosis in both constructions.

OE, Middle English (ME) and Early Modern English (EModE) conditionals can be introduced by conjunctions like *(g)if* and *and*, as in examples (8–9), or by various types of V1 conditionals, as in (10) and (11).

(8) *(G)if* conditional

Gif he ðonne sie idæges dead, ðonne sitte sio scyld on him.
if he then is on the same day dead, then sit the guilt on him
'If he should be dead that same day, the guilt rests on him.'
LawAfEl:17.44

[47] Examples from Quirk et al. (1985: 1094):
(i) Were it to reveal its secrets, that house would collapse in shame.
(ii) Should you change your mind, no one would blame you.

(9) *And* conditional

And the Schottys ben trewe hyt moste nedys contynu so longe,
if the Scots are true it must necessarily continue so long
'If the Scots are true, it must necessarily continue so long,'
cmgregor 224.2242

Conjunction *and* is especially interesting as it can function as both a coordinator and as a subordinating conjunction in ME and EModE (conditionals). Its conditional use "may have arisen from a simplified correlative use in which *and* loosely expresses various relations between two clauses" (Rissanen 1999: 281). Such a paratactic origin is proposed here for all protasis-apodosis order conditionals.

OE V1 conditionals can present both counterfactual and open propositions (Iatridou & Embick 1994), as in examples (10–11). It has been suggested that – as in Icelandic – open OE conditionals require the subjunctive in the protasis, like *wurðe* in (11) (Bhatt & Pancheva 2006: 683, endnote 23). Conditionals can also be introduced by *when* and *þonne* (the latter meaning 'whenever' (Traugott 1992: 258)), originally temporal conjunctions which can induce a conditional interpretation depending on context, but always retain some temporality (Mitchell 1985b: 858, Fischer 1992: 349).

(10) Counterfactual V1 conditional

Hæfde ic ælteowe þenas, nære ic þus eaðelice oferwiðed
had I faithful servants not-were I thus easily overcome
'Had I faithful servants, I should not be thus easily overcome.'
ÆLS[Forty_Soldiers]:226.2623

(11) Open V1 conditional

wurðe hit þam casere cuþ ne canst þu þe nænne ræd
became it the emperor known not know you you not-one advantage
'Should it become known to the emperor, you will not know no advantage for yourself.'
ÆLS_[Chrysanthus]:31.7348

It is generally accepted in the literature that the embedded conjunction and the fronted finite verb in V1 conditionals target the same structural position (C) in the protasis (Den Besten 1983, Bhatt & Pancheva 2006, Zwart 2011: 106, 282–5), even in OE; see figure 1. This distribution dates back to the shift from parataxis to hypotaxis in (pre-)OE times (Kiparsky 1995). Both conjunctional and V1 conditionals in the protasis-apodosis order originate from a paratactic structure exhibiting a semantic-pragmatic (but not syntactic) relationship between two main clauses. Here, the relationship is one of condition and result, but it is also found in OE temporal correlative constructions and in OE left dislocations (see chapter 2). Routinely combined, such semantically-pragmatically related main clauses were ultimately interpreted as one construction, in which the first clause was hypotactically integrated as a subclause into the second. This facilitated the rise of typical subordination markers like conjunctions in C (e.g. conditional *if*). Another effect was verb-fronting to C, motivated by a need to distinguish main clauses from subclauses (Kiparsky 1995). This took the form of 1) special modality related V1 word order patterns (e.g. *yes*/*no* questions, imperatives and conditionals); and 2) Verb-Second (V2) in main clauses primarily triggered by certain types of constituents in Spec, CP (*wh*-constituents, negatives and demonstrative adverbs like *þa*/*þonne* 'then' in OE) (Kiparsky 1995, Fischer et al. 2000: 110–29, van Kemenade & Los 2006, Van den Nest 2010). The finite verb moves from V to C (via intermediate head positions) and is directly followed by the subject.[48] Figure 1 illustrates the structure.

[48] Verb-fronting to C survives as subject-auxiliary inversion in PDE *wh*-initial and negative initial clauses (Fischer et al. 2000: 136), and in counterfactual conditionals. For more (detailed) discussion of OE verb movement, including to positions other than C, see Fischer et al. (2000: 110–29) and Los (2009).

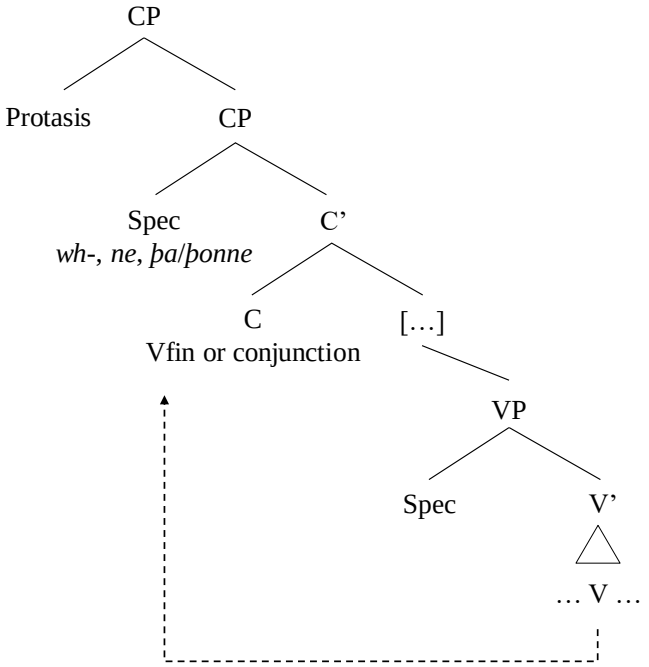


Figure 1. Old English clause structure [49]

The use of resumptive adverb *þa*/*þonne* in OE main clauses after a conditional protasis or adverbial subclause indicates that – at least in OE – these subclauses are non-integrated, extra-clausal material accounted for by an extra CP-adjoined position above the main clause CP in figure 1 (cf. chapter 2, section 1.1). As such, these constructions represent the stage in between parataxis and full hypotaxis.

Verb-fronting to C (see figure 1) differentiates main clauses from subclauses in OE. As conjunctions and finite verbs both occur in C, OE *(g)if* conditionals with *(g)if* directly followed by the finite verb are not found. The paratactic origin also explains why, with the exception of V1 conditionals, V1 subclauses seem to be rare in OE. If V1 conditionals, like conjunctional conditionals, indeed originally consisted of two semantically-pragmatically (but not syntactically) related main clauses (as established for Old Swedish (Wessén 1956 quoted in Auer & Lindström 2011: 223–4), this accounts naturally for why all other uses of V1 in OE are found in various types of

[49] Structure adapted from Fischer et al. (2000: 126) and Kiparsky (1995: 140).

main clauses: *yes*/*no* questions, imperatives and V1 declaratives (Fischer 1992: 278, Traugott 1992: 184, Fischer et al. 2000: 53, Ohkado 2004). In fact, V1 conditionals (in some Germanic languages at least) seem to have emerged out of other verb-fronting structures, most notably *yes/no* questions (Auer & Lindström 2011). Mitchell (1985b: 848–9) furthermore indicates that OE V1 imperatives can also function as conditionals.[50] Based on intonation patterns, he argues that these often take the form of two coordinated (paratactic) main clauses in PDE as in (12), but he does not hazard any guess towards their syntactic status in OE. As the second clause in (13), Mitchell's example (1985b: 849), is introduced by resumptive adverb *þonne*, it seems reasonable to assume that – at least in OE – V1 imperatives also fit the structure in figure 1 as *þonne* establishes a relation between the two clauses. The shared origin of conjunctional and V1 conditionals thus explains their complementary distribution, but not the restriction of PDE V1 conditionals to counterfactuality expressed by certain auxiliaries. This issue will be addressed in section 3.2.

(12) Wait a moment (and) I'll come down.

(13) **berað** eowre byrðenna gemænelice betwux iow **ðonne** gefylle ge
bear your burdens in common between to you then fulfil you
godes æ
God's law
'Bear your burdens in common between yourselves, then you will fulfil God's law.'
CP:51.395.33.2689

2.2 CONDITIONALS, CORRELATIVES AND THEN

It was observed above that OE conditionals with clause-initial protases (a conditional example is repeated for convenience in (14)) share the same structure with temporal correlative constructions like (15). Both constructions are introduced by a subclause

[50] As do Fischer (1992: 349) for ME and Rissanen (1999: 309) for EModE.

followed by a V2 main clause (optionally) introduced by resumptive adverb *þonne* or *þa* 'then'. In fact, conditionals are themselves either correlatives or are historically derived from correlative constructions in many languages (Bhatt & Pancheva 2006).

(14) **Gif** he ðonne sie idæges dead, **ðonne** sitte sio scyld on him.
if he then is on the same day dead, then set the guilt on him
'If he should be dead that same day, the guilt rests on him.'
LawAfEl:17.44

(15) **þa** he þa to him cwom, **þa** wæs he forht geworden.
then he then to him came, then was he fearful become
'When he then came to him, he had become fearful.'
Bede_2:9.128.17.1222

Resumptive adverb use in the apodosis reinforces the semantic-pragmatic relationship between the two clauses: *ðonne* 'then' in (14) is used in conditionals similarly to correlative proforms in correlative constructions like (15) (Bhatt & Pancheva 2006, see also chapter 2). Resumptive adverbs resume the previous clause as backgrounded and structure the discourse by foregrounding the consequence or temporal event in the main clause, establishing textual cohesion and reminding the reader/listener to pay attention to what is coming (van der Horst 1981: 39–41, Enkvist 1986, van Kemenade & Los 2006, Baker 2007: 99, van der Horst 2008: 538–9, Los 2009, Wårvik 2013). Their position is the multifunctional first position (Spec, CP) of the OE V2 main clause, which is pragmatically associated with discourse linking (van Kemenade & Los 2006, Los 2009, Los & van Kemenade forthcoming).

Conditionals followed by a main clause without a resumptive adverb like (16) are also extra-clausal, as in the structure presented in figure 1. Since the trigger for verb placement in C is the resumptive adverb (rather than the protasis itself), I postulate a null resumptive adverb in the Spec, CP of the main clause (for a more detailed discussion see chapter 2, section 1.1).

(16) Gif he ðonne stalie on gewitness ealles his hiredes, gongen his
if he then steal on knowledge all his household, go he
ealles on ðeowot.
all into slavery
'If he steal[s] with the knowledge of all his household let them all go into slavery.'
LawIne:7.1.27

Although subject-initial apodoses rapidly gain ground from ME onwards, PDE conditional clauses still have a bi-clausal structure in which the protasis is (CP-) adjoined to the apodosis (Kiparsky 1995, Haegeman 2003, 2012). Proform *then* (a descendent of OE *þonne* (OED)) can still introduce the apodosis in *if*-conditionals, as in (17), especially in those conditionals where the connection is inferential (Huddleston & Pullum 2002: 757–8). *Then* is, however, not obligatory: it has hardly any interpretive contribution (Bhatt & Pancheva 2006) and does not lead to subject-inversion as it did in OE, although its use might come with a certain (intonational) emphasis. As resumptive adverb use is optional in both OE and PDE, the question arises which factors influence their use. This issue will be addressed in section 3.3.

(17) If you hurt the cat, (then) she will bite you.

3 DEVELOPMENT OVER TIME

As many of the earlier studies on conditionals in English restrict themselves to either OE or PDE, I will now consider the diachronic development of conditionals. The results will add to the observations presented in chapter 2 for (structurally similar) correlatives and the insights regarding the development of V2. They will also be compared to Van den Nest's findings (2010) for OE regarding frequency and to Auer & Lindström's findings (2011) regarding genre effects in (written) German and Swedish. The focus will be on 1) the division of labour between conjunctional and V1 conditionals; 2) structural developments in the main clause; 3) the use of resumptive

adverbs in conditionals and the factors that contribute to this, especially in EModE; and 4) the effects of genre.

3.1 METHODOLOGY

In order to trace the development of conditionals in English over time, all potential context-independent conditionals with clause-initial protasis introduced by *(g)if*, *and* or an initial finite verb were extracted from six subperiods of three corpora. Conditionals introduced by *when* or OE *þonne* have not been taken into account as they have a context-dependent conditional reading and they always retain some temporality (Mitchell 1985b: 858, Fischer 1992: 349). The inclusion of *and* is based on its use as both a coordinating and subordinating conjunction in ME and EModE (Rissanen 1999: 281, Denison 2008: 302), which is interesting as conditionals with a protasis-apodosis order reflect an earlier paratactic structure. The text selection included prose texts that are unambiguous in their periodization. Period O1 (450-850), O4 (1050-1150) and M2 (1250-1350) were left out due to low word counts and varying text quality. PPCEME period E2 (1570-1639) was chosen over E1 (1500-1569) based on the timing of the loss of V2 by late ME to EModE (Fischer et al. 2000: 129–38), thus providing data from a period after the loss of V2.

- York-Toronto-Helsinki Parsed Corpus of Old English Prose (YCOE, Taylor et al. 2003)
  - O2 (850-950) – 291,481 words
  - O3 (950-1050) – 573,828 words

- Penn-Helsinki Parsed Corpus of Middle English, second edition (PPCME2, Kroch & Taylor 2000)
  - M1 (1150-1250) – 195,494 words
  - M3 (1350-1420) – 385,994 words
  - M4 (1420-1500) – 260,116 words

- Penn-Helsinki Parsed Corpus of Early Modern English (PPCEME, Kroch, Santorini & Delfs 2004)
  - E2 (1570-1639) – 628,463 words

The texts were searched using XQuery in CorpusStudio (Komen 2009, 2012), a programme that allows user-adaptable features to be extracted from the corpora. Due to annotation differences between the corpora, searching for *(g)if* and *and* conditionals required different queries for each corpus. V1 conditionals received the same annotation across the corpora, but were annotated as two separate clauses throughout.[51] The results were automatically labelled by means of scripts (user defined XQuery functions using the available metadata and tagging in the corpora) for the features resumptive adverb use, mood and genre (based on the results presented in chapter 2 for correlative constructions, also see section 3.3 of this chapter) as well as for the verb tense, verb type and the orthographic representation of the verb (e.g. *give*, *had*) in the protasis. The results were converted into four Cesax databases (Komen 2011, 2012), one for each language stage for conjunctional conditionals and one for V1 conditionals diachronically. The Cesax databases allow the data to be viewed, edited and prepared for (statistical) processing. The databases were checked manually to see whether the automatic labelling had been carried out correctly. Non-conditional examples were deleted, and adjustments to the features made as necessary. The four databases were converted to Excel format and subsequently combined for further analysis by means of pivot tables and statistical testing using IBM SPSS

[51] Conjunctional conditionals – YCOE was searched for initial adverbial subclauses in the form of a CP-ADV with a P containing *(g)if* or *and* followed by an IP-SUB on the same level as P, all directly under IP-*. PPCME2 and PPCEME were also searched for initial adverbial subclauses, here a PP with P containing *(g)if* or *and* and a CP-ADV on the same level, all directly under IP-*. For all corpora the initial conditional subclause had to be followed by a main clause attached to the same level as the CP-ADV or PP containing the initial adverbial subclause. Spelling variants were included in the search.

V1 conditionals – V1 conditionals are annotated as two separate clauses in all corpora. Initial conditional subclauses are annotated in two ways: 1) an IP-MAT* with a CP-ADV* as the first child which itself needs to have as its first child an IP-SUB* with the finite verb as the first constituent; 2) an IP-MAT* with an imperative verb as its first child. Both types of conditional subclause had to be followed by another IP-MAT* expressing the apodosis.

Statistics Data Editor version 22 and 23 in order to analyse the development of conditionals over time.

Additionally, it was determined manually for all the non-imperative V1 conditionals, *and* conditionals, and a subset of 300 *(g)if* conditionals (a random sample distributed over the periods similarly to the V1 conditionals) whether the protasis was open or counterfactual. The choice to analyse a sample of *(g)if* conditionals and not the entire dataset was based on the observation that, although verb tense might provide an indication of whether a conditional is open or counterfactual, it is not a foolproof method. Example (18) indicates that although the past tense *gewilnast* is used in the protasis (an indication of counterfactuality (Fischer 1992: 349–50, Traugott 1992: 257, Van den Nest 2010)), the condition is open. The reverse hypothesis does not hold either: not all present tense protases are open, as shown in the *and* conditional (19). Although it at first seems from (19) that the hawk is lost, the context shows that the hawk is currently missing and later retrieved, indicating that the protasis is in fact counterfactual. As such, the textual context had to be taken into account for each individual *(g)if*, *and* and V1 example. V1 imperative conditionals were left out of this part of the analysis to avoid data skewing as these seem to always represent open conditions.

(18) witodlice gif ðu ðæs ne **gewilnast**. ne becymst ðu næfre to ðam
certainly if you that not want not become you never to that
pleolicum leahtre
perilous crime
'For if you do not desire her, you will never commit that dangerous crime.'
ÆCHom_II,_12.1:119.329.2612

(19) for and my hauke be loste my lorde wolde destroy me,
cmmalory 2.053.351

3.2 FREQUENCY

Table 1 and figure 2 give an overview of the data for *(g)if*, *and* and V1 conditionals, the latter split by the mood of the finite verb in the protasis.[52] Note that complementizer *(g)if* comprises both *gif* in Old English as well as *yf*/*if* in later periods.

[52] Total main clauses per period obtained via CorpusStudio (Komen 2009, 2012).

Table 1. Absolute frequencies of conditionals over time

	O2 (850-950)	O3 (950-1050)	M1 (1150-1250)	M3 (1350-1420)	M4 (1420-1500)	E2 (1570-1639)	Total
(g)if	892	1,329	297	745	236	1,258	4,757
and	0	0	0	11	33	6	50
Verb-initial (total)	38	69	48	25	21	84	285
V1 indicative	2	7	25	11	12	48	105
V1 subjunctive	4	13	—	—	—	—	17
V1 imperative	32	49	23	14	9	36	163
Total	930	1,398	345	781	290	1,348	5,092
Total main clauses	20,315	50,204	12,621	26,326	19,846	23,635	152,947

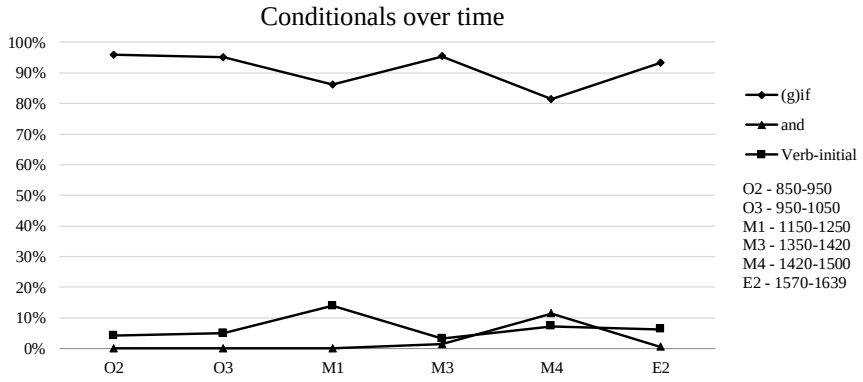


Figure 2. Conditionals over time

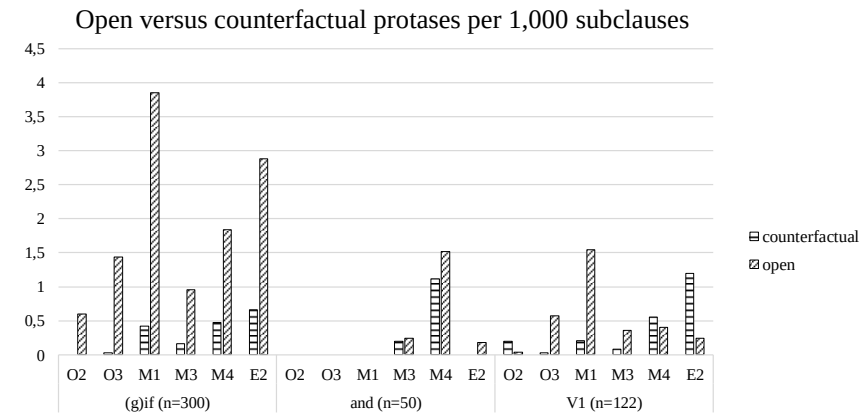


Figure 3. Distribution of open and counterfactual protases per 1,000 subclauses in a subset of the data

Table 1 and figure 2 show that *(g)if* conditionals are more frequent than *and* and V1 conditionals in earlier English. Figure 3 indicates that counterfactual *(g)if* conditionals are (virtually) absent in OE, although this might be simply a feature of this particular sample. A quick look at the complete OE *(g)if* data, using the past subjunctive in the protasis as an indication of counterfactuality (Traugott 1992: 257, Van den Nest 2010 for non-imperative V1 conditionals), results in 59 examples. It thus seems reasonable to conclude that *(g)if* protases can be both open or counterfactual, even in OE. Over time, *(g)if* protases most frequently contain lexical

verbs. Frequently found are forms of *ofslean* 'to kill' as in (20), *secgan* 'to say', *þurhwunian* 'to continue' and *dón* 'to do/make/cause' in OE. The choice for these particular types of verbs is unsurprising as 31% of OE *(g)if* examples come from legal and moral texts both frequently discussing the consequences of actions. In later periods the lexical verbs *come*, *find*, *know*, *make*, *please* and *say* are frequently found, but their use declines from ME onwards in favour of forms of *be*, *do* and modal auxiliaries.

(20) Gif hine mon **ofslea**, licgge he orgilde.
if him man kills lies he unpaid
'If he is killed, no wergild shall be paid for him.'
LawAf_1:1.5.10

The use of conditional *and* is marginal in all periods and indeed does not seem to be productive at all before the late thirteenth century (OED, Rissanen 1999: 281): the firm establishment of *(g)if* conditionals by ME likely restrained their use. Mitchell (1985b: 843–5) and the *Dictionary of Old English* (cited in the OED) do present a few OE examples, but Mitchell argues that these also allow a different non-conditional interpretation or can be interpreted as scribal errors. Figure 3 indicates that *and* conditionals can have both open and counterfactual protases. The syntactic-semantic category of the verb in the protasis is evenly distributed over *be* as in (9) above, *have*, lexical verbs and modals. The small peak in M4 (figure 2) is related to 28 occurrences in Malory's *Morte D'Arthur*, a narrative text with many dialogues in which their use generally flourishes (also see section 3.4).

V1 conditionals were never in serious competition with conjunctional conditionals throughout earlier English (see figure 2), unlike their counterparts in (spoken) Present-day Swedish and German (Auer & Lindström 2011). The results confirm Van den Nest's observations (2010) that V1 conditionals are marginal in OE.[53] The present study does find more inverted conditionals (in YCOE), but this higher frequency also

[53] Van den Nest's study (2010) of V1 conditionals used the YCOE and the British National Corpus.

includes the imperative V1 conditionals not taken into account by Van den Nest (2010). His analysis relates the marginal use of non-imperative V1 conditionals in OE to their establishment as counterfactuals early on, suggesting that this perhaps took place in (early) ME, although he does not provide any evidence. Figure 3, however, indicates that we find both counterfactual and open V1 conditionals in OE and ME. Only after period M4 (1420-1500) do we find more counterfactual than open non-imperative V1 conditionals. The diachronically low frequency of V1 conditionals must thus be related to different factors, namely 1) the already firm establishment of the more versatile conjunctional *if*-conditional in early OE as seen in figure 2; and 2) the limitation to counterfactuality caused by evolving restrictions on verb-fronting to C related to modality that arose in English over time (cf. Ellegård 1953, Lightfoot 1979, Roberts 1985, Kroch 1989).

Although the restrictions on verb-movement to C are essentially a main clause phenomenon, its extension to V1 subclauses follows from their (paratactic) origin as a main clause that became reanalysed as a non-integrated subclause, see figure 1. In OE, the finite lexical verb could still be fronted to C (i.e. V2; Fischer et al. 2000: 110–29), as in example (21).

(21) *Old English V1 conditional with a lexical verb*

[…]	and	**bring**	þæt	word	þam	cynge	to	blisse:	þonne hafast
[…]	and	bring	that	word	that	king	to	rejoice:	then have
þu	mede	and	eac	clæne	handa	fram	þæs	unscæðþigan	blode
you	reward	and	also	clean	hands	from	that	innocent	blood

'[…] and bring these words for the king's delight: then you will have reward and also hands that are clean of the blood of the innocent.'
ApT:8.23.145

Verb-fronting to C became restricted to finite auxiliaries after the loss of V2 by late ME/EModE (Fischer et al. 2000: 129–37, Haeberli 2002, Los 2009, van Kemenade 2012, Los 2012a) and following the auxiliation of the modals and the rise of auxiliary *do* during the sixteenth century (Ellegård 1953, Lightfoot 1979, Roberts 1985, Kroch

1989). As a result, V1 (sub)clauses became specialised for modal auxiliaries, presumably those uses replaced the loss of subjunctive mood marking on the lexical verb. A further semantic limitation arose after the mid nineteenth century (Denison 2008: 296–304), which restricted V1 subclause word order to the auxiliaries *had* and *should* and the past subjunctive form *were*, which all express tentativeness, possibilities and probabilities and seem thus semantically linked to counterfactual conditions. Figure 4 shows how these restrictions developed diachronically. Note especially that *should* first appears in period E2. The lexical verbs used in non-imperative V1 conditionals furthermore do not overlap with those most frequently used in *(g)if* conditionals.

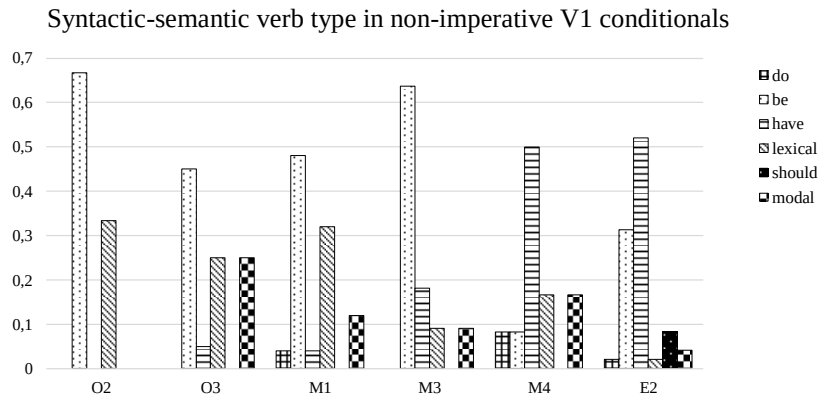


Figure 4. Syntactic-semantic verb type in non-imperative V1 conditionals[54]

The combination of syntactic and strong semantic restrictions also accounts for Van den Nest's observation (2010) regarding the absence of PDE open V1 conditionals like **Does the sun shine, then we'll go for a swim*: auxiliary *do* is semantically empty. The fact that these restrictions do not apply in other West Germanic languages like Dutch (Zwart 2011: 283, ex. 10.7, Broekhuis & Corver 2016: 1298, ex. 125b) and German (Iatridou & Embick 1994: 190, ex. 2b), as in the open V1 conditionals in (22) and (7b) with lexical verbs, supports the idea that they

[54] The syntactic-semantic verb type was determined using the available POS-tagging. *Should* was manually extracted from the category modal.

do not merely stem from frequency effects. Auer & Lindström (2011) do however indicate that spoken Present-day German is getting closer to PDE by restricting counterfactuals to certain auxiliaries, showing that restrictions on the expression of counterfactuality are not uncommon.

(22) *Dutch open V1 conditional*

Komt Hans dan gaat Susanne.
comes Hans then goes Susanne
'If Hans comes, then Susanne goes.'

The data presented in table 1 also contains imperative open V1 conditionals. This type is mentioned by Mitchell (1985b: 848–51), but not by Van den Nest (2010). Imperative V1 conditionals are more frequent than non-imperative V1 conditionals, accounting for 57% of the total V1 dataset and 76% of the OE V1 dataset. They seem to partially overlap in meaning with subjunctive V1 conditionals, which can also express obligation along with tentativeness (Traugott 1992: 184). Imperative V1 conditionals present the condition as an order, using lexical verbs even in EModE, indicating that the restrictions on non-imperative V1 conditionals do not apply. The main clause usually expresses the consequence of not following this order, but we also find examples of what will happen if the order is carried out, as in example (23).

(23) He andwyrde. **Weorpað** me oferbord. **þonne** geswicð þeos gedreccednyss.
he answered throw me overboard then stops this affliction
'He answered, Cast me overboard, then will this affliction cease.'
ÆCHom_I_18:318.24.3404 / 3405

In sum, conjunctional and V1 conditionals were never in competition in terms of frequency in the periods investigated here, but – as we will see – each conditional type has its own genre preferences.

3.3 THE USE OF THEN

The apodosis of both OE conjunctional and V1 conditionals is often introduced by the resumptive adverb *þonne* 'then' whose descendant *then* we still find in PDE conditionals. The similarities between conditionals and correlative constructions as discussed in section 2.2 raise the question whether the use of *þonne* in both conjunctional and V1 conditionals follows a similar path as resumptives in correlatives for which a relation exists between resumptive adverb use and the availability of V2, the use of indicative mood and subclause length (see chapter 2).[55]

Resumptive adverb use in correlatives has virtually disappeared by the end of ME. Table 2 and figure 5 show that this observation also holds for the use of resumptive adverbs in conditionals.[56] Note that resumptive adverb *then* in fact comprises the whole range of spelling variants of which *þonne*, *þenne*, *than* and *then* are found most frequently.

[55] We included *(g)if* conditionals in our set of correlatives as presented in chapter 2, but only present observations for the full dataset: no distinction is made between different types, nor are *and* and V1 conditionals included.

[56] Resumptive adverb use in conditionals is given as a normalised figure per 1,000 main clauses as visualisation by means of percentages is skewed by low frequencies for some conditional types resulting in the false impression that resumptive adverb use is higher from one period to the next.

Table 2. Absolute frequencies of conditionals with resumptive adverbs over time

	O2 (850-950)	O3 (950-1050)	M1 (1150-1250)	M3 (1350-1420)	M4 (1420-1500)	E2 (1570-1639)	Total
(g)if	892	1,329	297	745	236	1,258	4,757
(g)if ... then	252	291	28	78	17	200	866
and	0	0	0	11	33	6	50
and ... then	0	0	0	3	1	1	5
Verb-initial	38	69	48	25	21	84	285
Verb-initial ... then	24	22	8	12	4	3	73
Total conditionals	930	1,398	345	781	290	1,348	5,092
Total resumptive *then*	276	313	36	93	22	204	944
Total main clauses	20,315	50,204	12,621	26,326	19,846	23,635	152,947

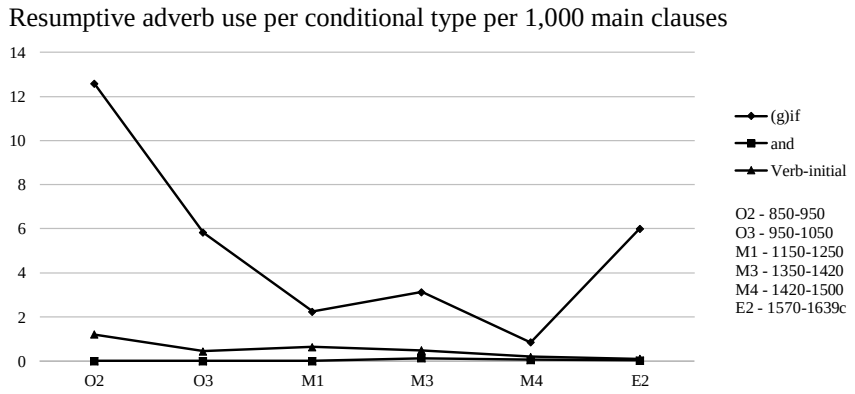


Figure 5. Resumptive adverb use in *(g)if, and* & V1 conditionals over time

Figure 5 shows that resumptive adverb use is highest in OE *(g)if*-conditionals in which it declines over the ME period to about one instance per 1,000 main clauses by 1500. The use of *then* after *if*-protases rises again in EModE and is still found in PDE (Bhatt & Pancheva 2006). Section 3.3.3 discusses these developments in detail.

And conditionals are not attested in OE. They only occur from 1350 (period M3) onwards, but they make little use of (the already declining) resumptive adverbs: only five out of the 50 examples found have a resumptive adverb. As their low frequency makes it impossible to draw generalised conclusions, *and* conditionals will not be discussed in detail here.

Resumptive adverb use following V1 protases is much lower compared to *(g)if*-conditionals: about half of the V1 conditionals have a resumptive adverb in all periods. Imperative V1 conditionals use more resumptive adverbs in OE and early ME than non-imperatives, but their use declines soon after. The higher frequency of resumptives in imperative open V1 conditionals can be explained by the fact that resumptives seem to have an additional role in these. Resumptive adverbs not only introduce the apodosis, but also seem to emphasise the conditionality of the construction in the sense that the resumptive reinforces that the preceding proposition must be interpreted as a condition and not as merely an imperative statement.

3.3.1 RELATION TO VERB-SECOND

The use of resumptive *þonne* strengthens the relationship between protasis and apodosis, and establishes textual cohesion (van Kemenade & Los 2006, Los 2009, Los & van Kemenade forthcoming, also see chapter 2). Its use is facilitated by the availability of a multifunctional clause-initial position (Spec, CP) in the OE V2 main clause (see sections 2.1 and 2.2). The question is how these main clause characteristics developed over time.

Figure 6 shows that the decline of V2 environments is in line with the loss of resumptive adverbs. The employment of V2 environments with a multifunctional Spec, CP position in conditionals gradually declines and has virtually disappeared before the loss of V2 by late ME to EModE (Fischer et al. 2000: 129–37, Haeberli 2002, Los 2009, van Kemenade & Westergaard 2012, Los 2012a). The declining use of resumptive adverbs in the transition from OE to ME removed the trigger for V2 placement in C, resulting in the apodosis becoming an early adopter of the SV order that arose after the loss of V2 (Fischer et al. 2000: 129–37, van Kemenade 2012, see also chapter 2). The new subject-initial environment rises from O2 onwards, becoming the most frequent order after period M1. Most competition is found between period O3 and M1. Examples are (24) and (25). The decrease in subject-initial main clauses between period M4 and E2 is related to the increase in the word order resumptive adverb – subject – finite verb, as in (26). This word order option becomes more established after the loss of V2 and is still used in PDE.

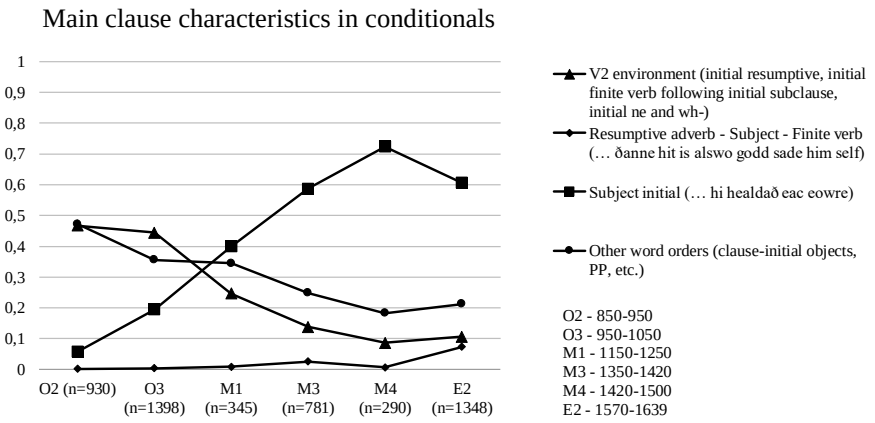


Figure 6. Development of V2 and SVO in conditionals[57]

(24) If any man eate of this bread, he shall liue for euer:
'If any man eats this bread, he shall live forever.'
Authnew-e2-h t,40J.772

(25) Had Jack kept his owne counsell, the cooke had beene still out of service,
'Had Jack kept quiet, the cook would still have been out of a job, […]'
Armin-e2-h 15.247

(26) Gif he spekð of sennes and of sothades, ðanne hit is alswo godd sade
if he speaks of sins and of foolishness then it is also God said
him self:
him self
'If he speaks of sins and foolishness, then it is as if God said Himself:'
Cmvices1_101.1207

[57] No distinction has been made between conjunctional and V1 conditionals here as both have the same paratactic origin and thrive on the availability of the same features.

3.3.2 CONDITIONALS, RESUMPTIVE ADVERBS AND MOOD

We have shown in chapter 2 that in OE correlatives specific *Mood* choices (indicative mood in the main clause) promote resumptive adverb use in both temporal and conditional correlatives. A similar relation seems to exist between mood and conditionality in general. Although it has often been put forward that conditionals favour the subjunctive in at least one of the two clauses (Mitchell 1985b: 780; 783–4; 788; 792–3; 797; 805, Fischer 1992: 349–50, Bhatt & Pancheva 2006, Van den Nest 2010), Traugott (1992: 256) argues that the prototypical OE *(g)if …þonne* conditional has the indicative in both clauses.

Table 3 shows that both conjunctional and non-imperative V1 conditionals favour the indicative over the subjunctive in the protasis as in (27), even in OE: 63% of protases are indicative. All 789 conditionals with subjunctive verbs are found in OE where the subjunctive is used to express tentativeness, obligations, desires, etc. as in (14) (Traugott 1992: 184).[58]

(27) Gif hig **beoð** on Sunnandæg, þonne **byð** an;
if it are on Sunday then is one
'If it is a Sunday, it is one.'
ByrM_1_[Baker-Lapidge]:1.4.27.543

[58] The PPCME2 and PPCEME corpora manuals indicate that, while imperatives are still annotated separately, subjunctive verbs are (POS-)tagged together with indicative verbs. While not mentioned specifically, this choice might be related to the disappearance of the distinctive endings for the different moods in the course of ME (Fischer 1992, Moessner 2006). No attempt has been made here to add a separate annotation for subjunctives as this has to be done manually and cannot be accomplished objectively. The absence of data in table 3 does not entail that the subjunctive is absent from ME or EModE.

Table 3. Mood of finite verbs in clause-initial protases (absolute frequencies)

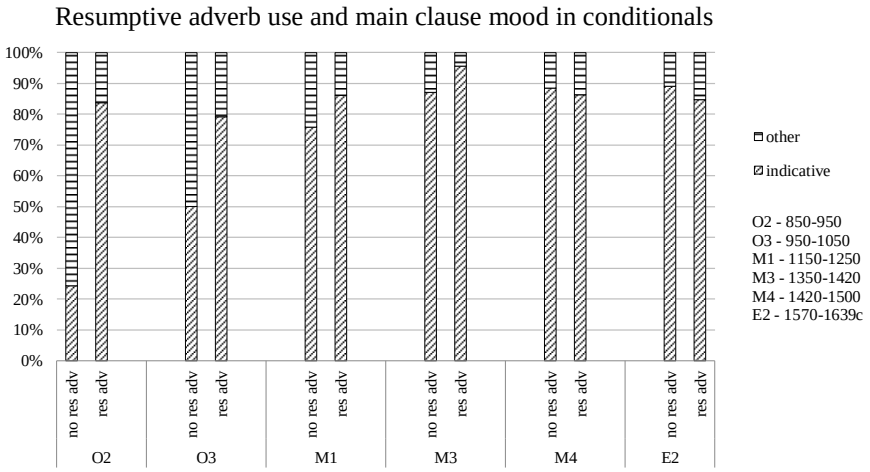
	O2 (850-950)	O3 (950-1050)	M1 (1150-1250)	M3 (1350-1420)	M4 (1420-1500)	E2 (1570-1639)	Total
(g)if							
indicative	480	968	297	745	236	1,258	3,984
subjunctive	411	361	—	—	—	—	772
imperative	1	—	—	—	—	—	1
and							
indicative	—	—	—	11	33	6	50
subjunctive	—	—	—	—	—	—	0
imperative	—	—	—	—	—	—	0
Verb-initial							
indicative	2	7	25	11	12	48	105
subjunctive	4	13	—	—	—	—	17
imperative	32	49	23	14	9	36	163

The suggestion that open OE non-imperative V1 conditionals have the subjunctive does not hold: out of the 20 open V1 conditionals, only fourteen have the subjunctive. The results indicate that the need for a specific mood marking conditionality in OE is unnecessary: the conjunction in C already sufficiently expresses the conditional modality in *(g)if*-conditionals (Mitchell 1985b: 797, Iatridou & Zeijlstra 2014) as does the use of initial verbs in V1 conditionals.

Regarding verbal mood in the main clause, the observation for correlatives that less variation in mood is found in combination with a resumptive adverb (cf. chapter 2) also holds for conditionals: indicative mood is preferred in main clauses with resumptive adverbs, as shown in figure 7 and exemplified in (27). This observation is significant for period O2 (χ^2 (1) = 218.0906 $p < .001$), period O3 (χ^2 (1) = 115.547 $p < .001$) and period M3 (χ^2 (1) = 9.0047 $p < .01$) when we take all conditional data together and reduce the variable main clause mood to two categories: *indicative* vs *other*. The correlation between the indicative and resumptive adverb use follows from

the observation that both represent factual information. The results are largely influenced by the vast amount of *(g)if* conditionals, especially in period M3 where resumptive adverb use increases slightly as most examples occur in genres (science, moral and narrative) favouring resumptive adverb use (see chapter 2). The same tendency can be observed for V1 conditionals like (28), but their frequency is too low to test to this observation statistically. *And* conditionals hardly use any resumptive adverbs and no correlation was found.

(28) Gewite þæt ungesewenlice ut: þonne **fylð** adune þæt gesewenlice. […]
departs that invisible out then fall down that visible […]
'If that which is invisible departs, then will the visible fall down; […]'
ÆCHom_I,_10:262.123.1914



Note. The category *other* includes the moods imperative, subjunctive, ambiguous, question (i.e. the main clause is a question)

Figure 7. Resumptive adverb use and the mood of the finite verb in the apodosis of conditionals

3.3.3 THEN IN EMODE

Figure 5 shows that resumptive adverb use increases again in EModE *if*-conditionals, but this rise cannot be attributed to the same features (V2 and *Mood*) facilitating resumptive adverb use in OE. Resumptive adverb use in EModE and PDE conditionals is (still) optional, but when used, resumptives seem to have a certain (intonational) emphasis related to a change in discourse function. Over time, clause-initial adverbials in English decline in anaphoric reference. While clause-initial adverbials often establish discourse links in OE and ME, they tend to represent new rather than old referential information in PDE (Pérez-Guerra 2005 cited in Los 2009: 112, Los 2012a: 27) and function as frame-setters evoking a contrastive reading (Los & van Kemenade forthcoming).

Resumptive adverbs are used in EModE and PDE only when they serve a clear function, either that of signalling to the reader/listener that something important is coming up (what happens when (not) satisfying the *if*-clause proposition), or clarifying an inferential connection (Huddleston & Pullum 2002: 757–8). It is thus unsurprising that their use in EModE is related to subclause length measured in words:[59] long utterances (in this case protases) increase the processing burden on the human brain (cf. Arnold et al. 2000) which can be lightened by using a summarising, signalling and supporting element like a resumptive adverb. Diachronically, resumptive adverb use increases with the length of the protasis in both conjunctional *(g)if* and V1 conditionals.

In OE (*g)if* conditionals, the protasis is significantly longer when a resumptive adverb is used, but only by an average of 1.68 words (t(843.932) = -6.069, p (one-tailed) < .001 with a small effect size r = .20; period O2 and O3 taken together). This difference increases to an average of 11.64 words in period E2 (1570-1639) where protases are twice as long when followed by a resumptive (M = 22.59, SE = 2.268) compared to conditionals without one (M = 10.95, SE = .351). This difference was significant at t(208.621) = -5.068, p (one-tailed) < .001 with a medium effect size r =

[59] Subclause length can be calculated in several ways. See chapter 2, section 4.2.6 for a detailed discussion.

.33.[60] An example can be seen in (29). These observations do not hold for *and* conditionals as these use very few resumptive adverbs.

(29) But **if** the LORD make a new thing, and the earth open her mouth, and swallow them vp, with all that appertaine vnto them, and they go downe quicke into the pit: **then** ye shall vnderstand that these men haue prouoked the LORD.
authold-e2-h 16,20N.1129

The correlation between subclause length and resumptive adverb use also holds for the complete set of V1 conditionals, but not diachronically. Subclause length significantly influences resumptive adverb use in only two periods: O3 and M3. V1 conditionals in the later periods use too few resumptive adverbs to obtain any meaningful results. Again, the observation is that subclauses become longer over time. Subclauses in period O3 are also longer when a resumptive adverb is used, but only by an average of 2.21 words ($t(67) = -2.361$, p (one-tailed) < .05 with a medium effect size $r = .28$). In period M3, subclauses in inverted conditionals are more than twice as long when a resumptive adverb is used (M = 12.92, SE = 2.8853) compared to when no resumptive adverb is used (M = 5.54, SE = .852) and this difference was significant at $t(12.912) = -2.452$, p (one-tailed) < .05 with a medium effect size $r = .56$. (30) gives an example.

(30) and **lokis**, when ye sing, þat yure herte acorde wid yure
and behold when you sing that your heart agrees with your
voice **þan** sing ye riht.
voice then sing you right
'Ensure that when you sing that your heart agrees with your voice, then you will singright.'
cmbenrul19,658

[60] No significant effect was found for period M1 and M4.

3.4 GENRE

Auer and Lindström's study (2011) on conditionality has shown that for the present-day V2 languages German and Swedish the choice between spoken/written language and genre influences the choice between conjunctional and V1 conditionals. It was observed that spoken Swedish prefers V1 conditionals, whereas these are virtually absent in German. Written Swedish favours conjunctional over V1 conditionals, while German written texts in general show no such preference with the exception of newspaper articles which do favour conjunctional conditionals. V1 conditionals in both German and Swedish favour legal, regulatory (instructions or rules), scientific (law-like regulatories) and instructive texts when used. As it is impossible to investigate the spoken language, the focus here will be on conditionals in written texts in earlier English, some of which were intended to be spoken, such as Shakespeare's plays from period E2.

(G)if conditionals, being chosen between 81% and 96% of the time (see table 1 and figure 2), have always been more frequent than *and* or V1 conditionals, thus patterning with Present-day Swedish. They are also diachronically favoured in all (occurring) genres, occurring most frequently in legal, moral, bible and scientific texts which are typically aimed at discussing actions and their (possible) consequences.

More interesting is thus the distribution across genre of *and* and V1 conditionals, as shown in figure 8.[61]

[61] Any genres that do not contain texts in a particular period have been left out, for example *Law* in early Middle English. The genres consist of the following text types (as given in YCOE, PPCME2 and PPCEME):

- Spoken – drama comedy;
- Bible – bible;
- Ego document – biography auto, diary private, letters non-private, letters private, travelogue;
- Science – educational treatise, handbook astronomy, handbook medicine, handbook other, philosophy, science, science medicine, science other, science astronomy;
- Moral – homilies, religious treatise, rule, sermon;
- Narrative – biography life saint, biography other, biography lives, fiction, history, romance;
- Law – charters and wills, law(s), proceedings trial.

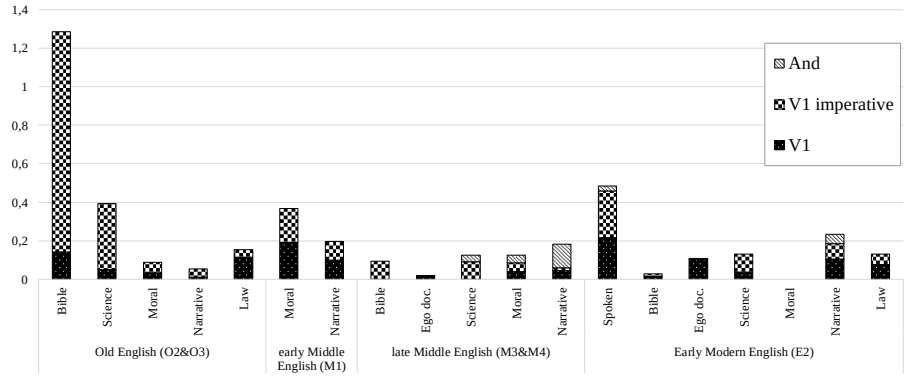


Figure 8. Genre preferences in and & V1 conditionals

When used, *and* conditionals only occur in scientific, moral, narrative, ego documents and spoken (the latter two only in EModE) texts. A clear genre preference for narratives exists in late ME, but this seems influenced by 28 examples from Malory's romance *Morte D'Arthur* (recall that the overall total of *and* conditionals is fifty). *And* conditionals are not used in the surviving bible or legal texts, thus showing a genre preference during their brief usage period.

Non-imperative V1 conditionals favour spoken texts, but since this genre is only attested in in EModE texts, this observation does not hold diachronically. Throughout OE and ME they prefer bible, moral, narrative and legal texts. Imperative V1 constructions are most often found in OE and late ME bible texts, OE scientific texts, as well as early ME moral texts and late ME bible and scientific texts. Like their non-imperative counterparts, they are mostly found in EModE spoken texts. V1 conditionals, thus seem to pattern with German and Swedish in preferring scientific (especially imperative V1 conditionals) and legal/instructive (moral or bible) texts when used, although *(g)if* conditionals are always preferred over V1 conditionals. For spoken texts in EModE, we do not find a division as in Swedish. Although used most frequently in spoken texts, V1 conditionals are not favoured over *(g)if* conditionals here. The overall results thus show that certain genre preferences are stable across languages and cannot be attributed to frequency effects.

4 CONCLUSION

This chapter presented a diachronic perspective on the expression of conditionality in earlier English. My examination of historical data from three corpora (YCOE, PPCME2 and PPCEME) shows that conjunctional conditionals have always been used most frequently, while V1 conditionals have always played a marginal role. The restriction of V1 conditionals to counterfactuality was shown not to be a frequency effect as argued by Van den Nest (2010), but related to restrictions on verb-movement to C following the loss of V2 and to a further semantic restriction to *had*, *were* and *should*. The (optional) use of the resumptive adverb *then*, in both conjunctional and V1 conditionals, reflects the paratactic origin of the construction as two semantic-pragmatic related main clauses that were interpreted as one construction containing a non-integrated subclause and a main clause. Its declining use in ME forced conditionals (but also correlatives) to become early adopters of the SV order arising after the loss of V2. It was shown that resumptive adverb use in both conditional types is influenced by the availability of V2 and indicative mood. In later periods, especially EModE, subclause length plays a key role. When it comes to genre preferences, conjunctional *(g)if* conditionals are always favoured over *and* and V1 conditionals, but each type does show certain preferences similar to modern V2 languages.

4 DISCOURSE PARTICLES IN EARLY ENGLISH, AND WHAT THEY TELL US ABOUT CLAUSE TYPES, ILLOCUTION AND INFORMATION STRUCTURE

ABSTRACT

This chapter presents a detailed corpus-based study of the Old English elements *þa*, *þonne*, *nu* and *la*, arguing that they are what we call discourse particles: discourse-cohesive devices grammaticalized from adverbs and interjections. We present the following arguments for this, drawing on the extensive literature on Present-day Dutch and German, and on van Kemenade & Los (2006) and subsequent work: 1) discourse particles express the response of the speaker to the context/common ground shared by speaker and hearer, and thus play a pivotal role in common ground management; 2) their pragmatic meanings are co-determined by the illocutionary force of specific clause types in which they occur, here including main clause questions, imperatives, *hwæt* exclamatives, correlatives and complement *that*-clauses; 3) they occur in a relatively fixed position in the clause that separates discourse-given from discourse-new information. Discourse particles thus form a subtle lynchpin between pragmatics, discourse management and clause structure. The study is based on the ninth and tenth century texts from the York-Toronto-Helsinki Parsed Corpus of Old English Prose (Taylor et al. 2003). The use of discourse particles declines from Middle English onwards, but can still be found in imperatives and questions.

1 INTRODUCTION

This chapter presents a detailed treatment of what we will call ‘discourse particles’ in Old English (OE), and it sketches their subsequent loss in Middle English (ME) and beyond.

An example of a discourse particle is the use of *þonne* in questions as in (1–2)[62] [63]:

(1) Hu gerades mæg **ðonne** se biscep brucan ðære hirdelican are, …
how properly may PRT the bishop enjoy the pastoral dignity …
'How, then, can the bishop properly enjoy the pastoral dignity, …?'
CP:18.133.3.898

(2) Hwæt mæg hit **þonne** beon. þæt þu forgan sceole.
what may it PRT be that you forgo must
'What can it be that you must forgo?'
ÆCHom_I,1:181.78.73

The meaning of *þonne* as in (1–2) is not its literal meaning as a temporal adverb, since there is no temporal connection. The particle, we will claim, has a pragmatic meaning: it represents a response to the context: *þonne* expresses surprise on the part of the speaker (writer), and perhaps a degree of exasperation about the circumstances expressed in the context. We will argue in section 3.2 that the particles under discussion here have such a pragmatic meaning contribution.

Our starting point is the analysis of *þa* and *þonne* in a subclause internal position in van Kemenade & Los (2006). They dub *þa* and *þonne* 'discourse adverbs' and show that they occur in a fixed position in OE subclauses, dividing the initial part of the clause into two domains, one for discourse-given (mainly pronominal) subjects and, optionally, pronominal objects, and a further one for discourse-new (mainly nominal) subjects. This conclusion seems to be valid for the use of *þonne* in questions as well: *se biscep* in (1) is generic (it refers to those in the priesthood rather than a specific person) and follows *þonne*; the pronominal subject *hit* in (2) precedes *þonne*. Van Kemenade & Los's facts (2006) are confirmed statistically by van Kemenade, Milicev

[62] The data references are from the York-Toronto-Helsinki Parsed Corpus of Old English Prose (YCOE, Taylor et al. 2003). The glosses and translations are based where available on the text editions used. The translations of the examples from Boethius are from Irvine & Godden (2012).
[63] Throughout the article, the presumed particle is glossed as PRT.

& Baayen (2008), and further analysed by van Kemenade (2009) and van Kemenade & Milicev (2011). This analysis does not, however, address the nature of 'discourse adverbs', which are, as far as we can tell, identical to adverbial uses of *þa* and *þonne*. They also seem to be similar in behaviour, however, to their Present-day Dutch and German counterparts (Dutch *dan*, German *denn*), which are representatives of what are often called 'modal particles' or 'discourse particles' (Coniglio 2011, Zimmermann 2011). These particles in Dutch and German come with special properties and restrictions: 1) they have context-sensitive meanings which are semantically bleached with respect to their adverbial counterparts; 2) they occur in some types of subclauses but dominantly in main clauses, each of them in specific clause types such as questions, imperatives, exclamatives and are thus taken to be related to the illocutionary force of the clause; 3) they divide the clause into domains for discourse-given and discourse-new information. It is the aim of this chapter to come to a more comprehensive characterization of OE discourse particles that is informed and inspired by the literature on Present-day Dutch and German.

In this spirit, we will present a corpus-based study of the texts from 850-1050 of the parsed York-Toronto-Helsinki Parsed Corpus of Old English Prose (YCOE, Taylor et al. 2003) with a detailed description and analysis of four OE discourse particles: *þa*, *þonne*, *nu* and *la* (we will motivate this choice in section 3). The chapter is organized as follows: section 2 will first define the term 'discourse particle' and discuss the properties of particles in Present-day Dutch and German, as background and input for our analysis of OE. Section 3 will be concerned with OE particles. It will first outline how we arrived at our choice of particles, followed by a detailed discussion of the meaning of particles in relation to the clause types in which they occur, their position in the clause, and an analysis of particles in OE clauses in relation to their discourse context. Section 4 will summarise, conclude and outline some further avenues of research.

2 BACKGROUND: THE PROPERTIES OF DISCOURSE PARTICLES

Grosz (2016: 336) characterizes German discourse particles as "a closed class of functional (= grammatical [ML&AvK]) elements that contribute to common ground

management in the spirit of Krifka (2008)". This means that they encode pragmatic instructions to the addressee on the relation between the propositional content of the clause and the common ground. Particles are used abundantly in spoken Dutch and German. They are presuppositional in the sense that they express the speaker's response to shared knowledge between speaker and audience in the common ground/context. Particles form a closed word class, they have an invariant form and are uninflected. They are typically unstressed, and they occur in fixed positions in the clause. The particles under study here are optional in the sense that they can be left out without causing ungrammaticality, but they do add pragmatic meaning when used. A recent literature survey is Bayer & Struckmeier (2017). The terms 'discourse particle' and 'modal particle' are often used for the same elements by different authors (e.g. Coniglio 2011, Zimmermann 2011).

The starting point for our discussion of the relation between particles and the common ground is Thurmair (1989), who gives a detailed discussion and inventory of the contextual meaning of individual particles in Present-day German, with survey tables of the meaning components of particles, and their occurrence in clause types. Her general take on particles is stated on p. 2 (our translation):

> Modal particles essentially serve to tie in an utterance with the cohesion of the interaction. They serve to refer the interlocutors to shared knowledge, to assumptions or expectations on the part of the speaker or hearer; it can be shown that there is a reference to a previous utterance, or that it allows a characterisation of the point of view contributed to the utterance by the speaker. It is to this extent that modal particles each specifically modify illocutionary types (Thurmair 1989: 2)[64]

[64] The German version of the text is: "Im wesentlichen dienen Modalpartikeln dazu, eine Äußerung in den Interaktionszusammenhang einzubinden. Mit ihnen kann auf den Gesprächspartnern gemeinsames Wissen verwiesen werden, auf Annahmen oder Erwartungen von Sprecher oder Hörer, es kann ein bestimmter Bezug zu einer vorangegangenen Äußerung angezeigt werden, oder es kann der Stellenwert, den der Sprecher der Äußerung beimißt, gekennzeichnet werden. Insofern modifizieren die Modalpartikeln auf je spezifische Weise Illokutionstypen."

These general observations are best illustrated by some examples of individual particles. We discuss two of these, which will both turn out to be particularly relevant for OE as well. Thurmair (1989: 163) observes that the use of *denn* 'then', the cognate of present day English *then*, Dutch *dan*, Old English *þonne*, marks reference to the immediate context, and is used when something unexpected is questioned. This is evident from the fact that *denn* is rare in questions that open a dialogue (Thurmair 1989: 165). Example (3) presents a question with *denn*:

(3) Jo: Willst du morgen mitkommen zum Baden?
will you tomorrow come-along to-the pool
Mia: Hast du **DENN** zur Zeit Urlaub?
have you PRT at-that time holiday
Jo: 'Will you come to the pool tomorrow?'
Mia: 'Do you have time off then?'

The use of *denn* marks surprise on the part of Mia that Jo would have time to go to the pool. This can easily shade into disapproval/reproach, as in (4):

(4) Du bist **JA** immer noch nicht angezogen! Wir wollten **DOCH** heute
you are PRT ever still not dressed we wanted PRT today
etwas früher los. Hast du das **DENN** vergessen?
a little earlier off have you that PRT forgotten
'You are still not dressed! We were planning to leave a little earlier today. Have you forgotten?'

Questions with *denn* are often rhetorical. This fits in with Thurmair's account, given that the answer to a rhetorical question is assumed to be obvious from the context.

Foolen (1995, 2006) presents some observations on Present-day Dutch that are based in part on Thurmair (1989). He characterizes Dutch particles, too, as having context-dependent meanings, serving to navigate the common ground between speaker and hearer. They belong to a closed class of elements, are unstressed, and are

positioned between given and new information. For the particle *nu*/*nou* (lit. 'now'), the cognate of OE *nu*, Foolen (1995: 65) observes that it indicates impatience on the part of the speaker, as in the imperative in (5):

(5)	Kom binnen.	Kom **nou** binnen.
	come in	come PRT in
	'Come in.'	'Do come in.'

Vismans (1994) notes that *nou* occurs in questions and imperatives, and he arrives at a similar meaning characterisation. The meaning of *nu*/*nou* in (6) is thus semantically bleached: a concrete indication of this is that *nu*/*nou* need not always refer to 'this moment', as it can be used in combination with a another temporal adverb like *morgen* 'tomorrow', expressing future tense (Vismans 1994: 64).

We will follow up the spirit of the literature discussed in this section in our approach to OE, more especially because particles in OE are relatively uncharted territory and require some careful description first.

3 OLD ENGLISH PARTICLES

Discourse particles in English have not been particularly well-studied so far. Present-day English has no clear cases of discourse particles in the sense studied here. Van Gelderen (2001) deals specifically with what she calls 'mood particles' in the history of English, which in her treatment seem to include a broader category of adverbs that may express speaker attitude, in particular epistemic adverbs such as *no doubt*, *realistically*, *truly*, *certainly*. Our notion of particle here is distinct from epistemic adverbs in that they form a closed class of grammatical words with a specific position in the clause, and they are generally taken to be short forms derived (grammaticalized) from adverbs (e.g. Abraham 1991, 1995, Cardinaletti 2011, Coniglio 2011, Abraham 2012, Struckmeier 2014 and many others). This distinguishes them from epistemic adverbs. Haselow (2011, 2012) argues that utterance-final *then* in questions in present-day spoken English has many of the properties identified here for discourse

particles in OE (purportedly acquired since late ME), even though their position is essentially different. We will come back to this in section 4.

There is, to our knowledge, no treatment of the OE particles under study here that addresses their properties in a comprehensive, systematic, and corpus-based way. Mitchell in his monumental (1985b) work makes no mention of the particle use, and he does not distinguish the particle use, as we discuss it here, from the adverbial use. The forms *þa* and *þonne* have at least three uses, however. Let's consider some examples in which all these three uses are attested:

(6) Þa$_1$ he **þa$_3$** in þæt ealond cwom, þa$_2$ getimbrede he þær mynster
then he PRT in that island came, then built he there monastery
'On coming to that island, he erected a monastery there.'
Bede_4:4.272.28.2779

(7) þonne$_1$ hio **þonne$_3$** ymbe hire scippend smeað, þonne$_2$ bið hio ofer
then she PRT about her Creator thinks then is she above
hire selfre;
her self
'When it thinks of its creator, then it is above itself.'
Bo:33.81.29.1549

(8) Gif$_1$ he **ðonne$_3$** sie idæges dead, ðonne$_2$ sitte sio scyld on him.
if he PRT is on the same day dead, then set the guilt on him
'If he should be dead that same day, the guilt rests on him.'
LawAfEl:17.44

(6–8) are examples of correlative clauses. They are introduced by a temporal adverbial subclause (in (6–7)) or conditional subclause (in (8)). *Þa*$_1$ (in (6)), *þonne*$_1$ (in (7)) and *gif*$_1$ (in (8)) are conjunctions introducing the adverbial/conditional subclause. *þa*$_2$ (in (6)) and *þonne*$_2$ (in (7–8)) are resumptive adverbs introducing the main clause; *þa*$_3$ (in (6)) and *þonne*$_3$ (in (7–8)) represent what we call the particle use here. The crucial

property distinguishing particle use from the adverbial and conjunctional uses thus is that the particle is in a clause-internal rather than a clause-initial position.

There is no watertight way of distinguishing particle uses from adverbial uses. The clearest evidence for particle status is their relatively uniform position in the relevant clause types. A further important fact is that the choice of particle co-depends on the clause type, as we will see below. This would be entirely unexpected if particles were adverbs. Particle uses feature particularly in the special clause (illocution) types under consideration here, rather than in, for instance, subject-initial main clauses, which are often pragmatically neutral. Assessing the meaning of particles in OE texts is of course to some extent a question of interpretation. We will discuss their meaning in detail with specific examples in context for each clause type.

3.1 THE CHOICE OF PARTICLES AND CLAUSE TYPES

The two most obvious particles to consider are *þa* and *þonne*, as their particle status has already been established on syntactic grounds in previous work. An obvious further choice is *la* 'lo', since it occurs only as an expressive element, and even though its behaviour is not fully consistent across clause types, Kato (1995) shows that it is like *þa* and *þonne* positionally (the latter as in van Kemenade & Los (2006) and further work). We considered several rather practical criteria to come to an appropriate choice of particles beside *þa, þonne* and *la*. The first is whether the potential particle has a cognate in Dutch and/or German which has particle uses. The second is whether we could pinpoint pragmatic meanings. The third is whether its position in the clause is similar to that of *þa* and *þonne*.

We did an exploratory pilot study in order to trace further potential particles in the OE texts, considering four plausible candidates: *eac* (lit. 'also', cf. German *auch*, Dutch *ook*), *nu* (lit.'now', cf. Dutch *nu/nou*), *þeah* (lit. 'though', cf. German *doch*, Dutch *toch*), *giet* ('lit. 'yet' overlapping in meaning with German *doch*, Dutch *toch*). *Nu* does appear to meet these criteria, and it is thus included here – we will present more detail in section 3.2. *Þeah* is most often used in combination with other adverbs (in particular in the combination *swa þeah* 'as though, as if', often a conjunctional use). We therefore decided to leave it for further research. *Giet* used in isolation

yielded few examples; also, *giet* often co-occurs with *þa* (*þa giet*, lit. 'then yet, then still', with a strong temporal connotation). We leave this, too, for further research. Closer inspection of contexts in which *eac* occurs showed that it really only occurs in its additive meaning. We thus decided to concentrate on the four particles *þa* (lit. 'then'), *þonne* (lit. 'then'), *nu* (lit. 'now'), and exclamative *la* ('lo').

We now turn to discussion of the clause types included. Thurmair (1989) distinguishes the following main clause types for German: *wh*-questions and *yes/no* questions, imperatives, optatives, exclamatives and *wh*-exclamatives. These constitute the special illocution types in which we should be likely to find particle uses: the illocutionary force of inquiring for questions, ordering for imperatives, wishing for optatives, exclamation for the types of exclamatives (cf. Searle & Vanderveken 1985). We have simplified this set of main clause types to make them more workable for the OE data drawn from the YCOE corpus: 1) we did not distinguish the two question types in our searches, as the number of examples is relatively limited and the same particles occur in both; 2) Exclamatives needed some special consideration. The total number of *wh*-exclamatives in the YCOE corpus is very limited and we therefore left them out.[65] The only way of achieving a robust and internally consistent set of exclamatives was the set of declarative main clauses introduced by the interjection *hwæt*; 3) We left out optatives, since these are not tagged as a category in the YCOE corpus and therefore cannot be distinguished in any straightforward way. We have thus included three types of main clause: questions, imperatives, *hwæt* exclamatives. We also included two types of subclause: 1) correlative clauses which are known to feature *þa* and *þonne* quite prominently, as exemplified by (6–8) above. Potential correlatives are coded in the YCOE corpus as adverbial subclauses that directly precede a main clause. These include temporal adverbial clauses with *þa* or *þonne* as the conjunction, as in (6–7), as well as *gif* conditionals with *þonne*, as in (8). They have a discourse-structuring function, which is reinforced by the use of particles (cf. chapter 2); 2) complement *that*-clauses. These

[65] To avoid any confusion, an example of a *wh*-exclamatives is: *what a lovely coat you're wearing!*, in which *what a lovely coat* is a constituent in the clause, the object. These are not to be confused with exclamatives introduced by *hwæt* used as an interjection.

tend to be main clause-like, particularly when they complement a bridge verb (including verbs of saying), since these may feature main clause-like V2 placement, but it is also the case more generally, as complement clauses have a relatively high degree of assertion in Cristofaro's subordination deranking hierarchy (2003: 229).

3.1.1 A NOTE ON THE DATA

The data are based on detailed searches in the syntactically annotated YCOE corpus. We have included the texts from the O2 period (850-950), the O3 period (950-1050), and those dated O23 (texts composed in O2, but the manuscript dates from O3). They are specified in appendix 3. This choice was made in order to be able to search a sizeable part of the corpus, including all the major ninth and tenth century prose texts, while avoiding the O4 texts (1050-1150), because it is unclear in many cases whether they represent 'real' OE, as they are translations and/or adaptations from earlier texts. The particles studied here occur robustly in the ninth century texts translated at the court of King Alfred the Great. We believe, however, that they are a thoroughly Germanic phenomenon: they have cognates with very similar properties in the present-day West Germanic languages, and this section will show that they are Germanic in their historical origin as well as their meaning and behaviour. We have nevertheless made some attempt to ascertain whether there may be a question of calque effects. Particle use features particularly prominently in the OE *Boethius*, which famously represents a non-slavish translation from Latin with frequent gaps, so that the *Vorlage* can often not be straightforwardly found. Its robust use of particles may also be reinforced by the fact that it contains a lot of dialogue, the favoured context of particles. The OE translation of Bede's *Ecclesiastical History*, on the other hand, is known as a relatively literal translation. In this text, particle use does indeed translate meaningful elements in the Latin *Vorlage*, but these seem to be quite adequate translations of the original, as discussed with some examples in appendix 4.

We used xml versions of the texts in the YCOE corpus, searching them with XQuery in CorpusStudio (Komen 2009, 2012), creating features for clause type, period, particle, subject type, and the relative position of particle and subject. We queried for clause types as follows:

- main clause questions: CP-QUE which does not contain a complementizer C.
- imperatives: IP-MAT (matrix clause) whose verb is coded as imperative (I).
- *hwæt* exclamatives: IP-MAT that is introduced by an interjection phrase INTJP that dominates a W-pronoun.
- correlatives: adverbial subclauses CP-ADV, which dominate a P, which in turn dominates *gif*, *þa*, or *þonne* as the conjunction introducing the subclause. More specifically, these adverbial subclauses precede the main clause they are part of.
- that-clauses: CP-THT.

For each of these clause types, we searched for particles within the clause: *þa*, *þonne* and *nu* are coded as ADV^T (temporal adverbs), *la* is coded as INTJ (interjection). Our searches yield the results presented in table 1. The total numbers for the clause type are raw numbers. The number for particles within the clause type was established after some manual correction, eliminating invalid results due to the internal complexity of some clauses comprising a large number of adjuncts, appositions and the like.

Table 1. The use of particles in specific clause types in Old English texts 850-1050, attested frequency (normalised per 1,000 clauses within clause type)[66]

Clause type\particle	Total	*la*	*nu*	*þa*	*þonne*
Question	2,235	69	161	3	166
		(30)	(72)	(1)	(74)
Exclamative	438	3	13	289	20
		(7)	(30)	(660)	(46)
Imperative	3,479	12	260	0	182
		(3)	(75)	(0)	(52)
Preposed temporal adverbial[67]	2,285	0	1	256	15
		(0)	(0)	(112)	(7)
Preposed conditional[68]	2,369	0	50	5	349
		(0)	(21)	(5)	(147)
That-clause[69]	11,671	1	17	73	17
		(0)	(1)	(6)	(1)
Total	22,477	85	502	626	749

3.2 THE MEANING OF OLD ENGLISH PARTICLES IN CONTEXT

We will now consider the various particles in turn and discuss their contribution to the meaning and the discourse cohesion of the clauses they occur in, including the question of the choice of particle in relation to clause type. Table 1 shows that individual particles have clear preferences for clause types. This supports our hypothesis that their meaning contribution is non-lexical and relates to illocutionary force and common ground management: these preferences would be entirely unexpected if they were adverbs rather than particles.

[66] Normalised figures were calculated by dividing the desired amount of clauses (1000) by the total number of attested clauses for a particular clause type listed in table 1. This provides a normalisation factor by which to multiply the actual number of attested particles in the clause type under investigation to get a normalised occurrence of a specific type per 1000 clauses. For example, particle *la* in questions: 1000/2235 = 0.45 → 69 x 0.45 = 30.15, rounded off to 30.

[67] The number of examples here comprises preposed adverbial CP-clauses in which the conjunction (coded as P) is *þa* or *þonne* 'then'.

[68] The number of examples here comprises preposed conditional CP-clauses in which the conjunction (coded as P) is *gif* 'if'.

[69] *That*-clauses contain many preposed adverbial or conditional subclauses internal to the *that*-clause. These were first removed by an interim step in the query, because they confuse the number of particles used in the *that*-clause itself. The overall number of *that*-clauses does comprise embedded correlatives.

We start our discussion with a semantic comparison of *þa* and *þonne*, which is important because they are etymologically related and have identical literal meanings. Yet, table 1 shows that they are largely complementary in their choice of clause type: *þa* occurs dominantly in temporal correlatives, *hwæt* exclamatives, and *that*-clauses, whereas *þonne* occurs in questions, imperatives and in preposed conditional clauses. According to the OED (entry *thenne*, *then*, adv.), their base form is the demonstrative pronominal stem *þa*. *Þonne* (and related Germanic forms) is derived by the addition of particles such as *ne*. This shared etymology in a deictic form fits naturally with the notion that particles refer to the context. The *–ne* part of *þonne* plausibly finds its origin in a negation element. This makes semantic sense as the clause types in which *þonne* occurs are negative polarity contexts (Gertjan Postma p.c.): questions, conditionals, comparatives, negatives (Giannakidou 1997). *Þa* and *þonne* also share a niche in temporal correlative clauses, where *þa* is very frequent, *þonne* very much less so. *Þonne* is the particle robustly used in correlative conditionals.

The idea that *þonne* includes a negative element in its etymology provides an important clue to the distinct distributions of *þa* and *þonne*. We hypothesise that *þa* finds its origin in an exclusively temporal meaning which was bleached to an exclamative meaning, and, in temporal correlatives, to an action marker, drawing attention to the important new information to come (cf. Enkvist 1972, Enkvist 1986, see also chapter 2). A key point about *þa* is that its temporal origin implies that the events that it sequences have actually happened: they are factual. Mitchell (1985b: 308) refers to them as actions completed in the past. *Þa* is, by the same token, descriptive, and it structures narrative discourse, in line with observations about *þa* as an adverb in the literature, e.g. Enkvist (1986), Brinton (1996), Wårvik (2013). *Þonne* is used in contexts that are non-factual: questions, conditionals, and imperatives. We will exemplify this in detail in the following subsections.

Nu is found in the same clause types as *þonne*, but its original temporal meaning ‘at this moment, straightaway’ ensures that it occurs predominantly in interaction contexts in the first and second person (questions and imperatives). We hypothesise that it was grammaticalized to a reinforcer expressing surprise or irritation in questions, and impatience in imperatives, which may shade into requests. *La* is an

interjection primarily used in questions, its meaning there resembling that of *nu* and *þonne*. It is striking that *la* is hardly ever used in *hwæt* exclamatives. This suggests that *la* as an interjection is not used in clauses that are themselves exclamative. Rather, *þa* is used to reinforce the exclamative character of the clause. This would take us too far afield, however.

3.2.1 ÞONNE

Recall that the German counterpart of *þonne* is *denn* and occurs in questions where it marks surprise/unexpectedness on the part of the speaker. This reading sits well with the robust use of *þonne* in questions in OE. An example is (9).[70]

(9) [Then said Mary to the angel, "how may that be that I have a child, for I have known no man? I had resolved to end my life in maidenhood;"]
hu mæg it **þonne** gewurðan þæt ic butan weres gemanan
how can it PRT happen that I without man's connection
cynnan scyle?
bring forth shall
'So how can it be that I, without connection to man, will give birth?'
ÆCHom_I,_13:285.127.2466

Þonne in (9) expresses surprise on Mary's part at being pregnant, since she had no contact with a man.

Þonne occurs on a rather smaller scale in exclamatives. An example is (10), where the same reference to context seems to be at work: *þonne* refers, we claim, to the argument in the preceding context, stated as a (rhetorical) question. It could almost be interpreted as a causal link, with a (non-factual) reading like 'this might easily lead you to think'.

[70] The preceding context is added in Present-day English between square brackets.

(10) [How much greater then is the difference between the body of a human being and the mind, than between the mouse and the human being.]
Hwæt, ge **þonne** magon eaðe geþencan, gif ge hit georne ymbe
indeed you PRT may easily think if you it carefully about
smeagan willað and aefter spyrigan, þæt …
think wish and after inquire that …
'Indeed you can easily think, if you are willing to consider it carefully and inquire into it, that … [no creature's body is weaker than a human being's.]'
Bo:16.36.4.651

The same holds for the imperative exemplified in (11). *Þonne* refers to the follow-up of the (non-factual) context: the perception is the expected result of the preceding discussion. This example again allows an almost causal reading.

(11) [Then I said: "Why should I not think so?" Then he said: "It is good that you think so.]
Ongit **þonne** mid innewearde mode þæt ða yflan habbað symle
see PRT with inner mind that the evil have always
hwæthwugu godes on gemong hiora yfle
something good in among their evil
'(This will allow you to) see with your inner mind that the evil always have something good in among their evil.'
Bo:38.119.9.2371

Ðonne is the privileged particle in *gif* conditionals. (12) illustrates that *þonne* introduces the (possibly negative) expected result which needs to be acted upon, and what needs to be done in that case; it seems to strengthen the condition and could be paraphrased as 'in case that':

(12) [Let us lock up this church, and seal the lock, and do ye all afterward watch three nights, continuing in prayer, and if the church be opened through your prayers, ye shall have it ever afterward, and give no thanks to us.]
Gif **þone** se ælmihtiga God nelle hi eow geopenian, þonne
if PRT the almighty God not-wille it you open then
wacie we ane niht, þone ælmihtigan biddende þæt he us
wake we one night the almighty praying that he us
geopenige þa geinsæglodan cyrcan
open the sealed church
'If the almighty God will not open it to you, then we will watch one night, praying to the Almighty that he will open to us the sealed church.'
ÆLS_[Basil]:333.672

That-clauses may host *þonne* as a particle, as (13) illustrates: *ðonne* in the *that*-clause signals the expected consequence if 'he' sins unnecessarily of his own desire.

(13) [He who only does good because he fears the evil of some correction, wishes not to have cause to fear anything, that he may the more carelessly dare to do useless and unlawful things.]
Þonne bið suiðe sweatol ðætte him **ðonne** losað beforan Gode his
then is very clear that to-him PRT is-lost before God his
ryhtwisnes, …
righteousness …
'It is very evident that his righteousness before God is lost, [when he sins unnecessarily of his own desire].'
CP:37.265.10.1723

The previous examples show that *þonne* refers to the context in all clause types; it marks surprise/disapproval in questions, and it establishes a causal link in imperatives, indicating the consequence suggested by the context. The context is non-factual,

however, and the potential result in the follow-up context is dependent on whether the situation in the context actually obtains.

3.2.2 ÞA

There is only a handful of questions with *þa*, 6 in total, which seems to constitute a blurred area in the distribution of *þa* and *þonne*. Consider (14):

(14) [Would you have paid for that when you had most felicity, and thought that fate went wholly with your desires?]
mid hu micelan feo woldest þu **þa** habban geboht þæt ðu
with how much property would you PRT have bought that you
switole mihtest tocnawan þine frind & ðine fynd?
clearly might recognize your friend and your enemy
'How much treasure would you then have paid that you might distinguish your friends and enemies?'
Bo:20.48.14.868

The context is an open question, expressing disbelief, perhaps surprise, and *þa* has a clear reference to it, with a reading like 'in that case'. We conclude that sparsely used *þa* in questions is markedly like *þonne* although *þonne* is overwhelmingly preferred.

Þa is robustly attested in *hwæt* exclamatives, and its meaning in that context is derived from its temporal meaning: (15) on the one hand shows the temporal sequencing, but it also draws attention to the new information that is the result of the message of the Magi:

(15) [Then came from the east three magi to the city of Jerusalem, thus asking: Where is the king of the Jewish people, who was born? We truly saw his star in the east and we have come to pray for him.]
Hwæt **ða** Herodes cyning þis gehyrende wearð micclum astyred
lo PRT Herod king this hearing was greatly disturbed
& eal seo burhwaru samod mid him.
and all the citizens together with him
'Lo, King Herod, hearing this, was greatly troubled, and all the citizens with him.'
ÆCHom_I,_5:217.13.897

Þa is overwhelmingly preferred in preposed temporal adverbial clauses. (6), repeated here as (16), is a temporal correlative with the first *þa* a subordinating conjunction, the second a particle, and the third a resumptive adverb. Such correlatives have a temporal, discourse-sequencing, effect: the subclause is in initial position; the particle reinforces the temporal sequencing of the whole event, while the resumptive adverb introduces the main clause presenting the new information; that is the subsequent building of the monastery. Chapter 2 has shown statistically that adding a particle to the temporal adverbial subclause promotes the use of the third *þa*, the resumptive adverb. This construction thus has a strong discourse-structuring function promoted by the use of a particle.

(16) Þa he **þa** in þæt ealond cwom, þa getimbrede he þær mynster
then he PRT in that island came, then built he there monastery
'On coming to that island, he erected a monastery there.'
Bede_4:4.272.28.2779

There are five instances of *gif* conditionals with *þa* as the particle. Interestingly, these conditionals are part of narratives in the past tense. The narrative factuality that inspires the use of *þa* thus seems to override the conditional character of the clause. An example is (17).

(17) [They said, “If he be the king of Israel, then let him now descend from the cross, and we will believe in him.”]
Gif he **þa** of þære rode astige: & nolde heora
if he PRT from the cross descended and not-wanted their
hosp forberan þonne buton twyn ne sealde
mockery endure then without doubt not gave
he us nane bysne his geþyldes,
he us no example of-his patience
‘If he had descended from the cross, and would not have borne their mockery, he had certainly not given any example of his patience.’
ÆCHom_I,_15:304.146.2872

An example of a *that*-clause with *þa* is given in (18). The meaning is on the one hand temporal, although it also calls attention to the prominent information that his death was near: this ‘indeed’ meaning is one often attested in lively narrative.

(18) þa ferde he ðyder mid his discipulum, þeah þe he wiste þæt
then travelled he there with his disciples though that he knew that
hit **ða** æt his daga ende wære,
it PRT at his days’ end were
‘Then would he go thither with his disciples, though he knew that the end of his days was indeed approaching.’
[MartinMor[BlHom_17]]:225.241.2876

We conclude that particle *þa* in questions is like *þonne*. In other contexts, it refers to a factual, temporally sequenced context in exclamatives and correlatives, drawing attention to the following events in these constructions.

3.2.3 Nu

Nu occurs largely in questions and imperatives. An example of a question with *nu* is (19): *nu* in this context expresses irritation, yielding a reading like ‘is this all?’, which

in this example is reinforced by the exclamative *hwæt la hwæt*, and by the fact that two further parallel questions with *nu* are added in the following context.

(19) [And if you so are willing to repent of your folly, I will begin to carry you immediately and bring you to heaven.]
þa andsworode him þæt unrote Mod and cwæð: **Hwæt la**
then answered him the sorrowful Mind and said: EXCL PRT
hwæt, sint þis **nu** þa god and þa edlean þe
EXCL are these PRT the benefits and the rewards that
þu ealne weg gehete þam monnum þe þe heorsumian woldan.
you all way promised those people that you obey would
'Then the sorrowful Mind answered him and said: "Lo, are these now the benefits and the rewards which you always promised to those people who would obey you?"'
Bo:3.9.19.111

In imperatives, *nu* at first glance appears to have a purely temporal reading. Imperatives, however, while basically directive, often shade into requests, and *nu* seems to contribute to this. A parallel Dutch request might be *Ga nou mee*, lit. come now along 'please come along', which is a request rather than a directive. An OE example of this is (20), which allows a reading 'at this moment', but this reading is not compelling. It could also be interpreted as context-linked request, allowing a reading like 'since you can ask anything of God, please ask that I may know Greek'. The status of request is reinforced by the fact that the latter seems a hypothetical situation rather than a factual one.

(20) [I pray thee, venerable father, to grant me one thing; I know that thou art a dispenser of whatsoever thou askest of God.]
Bide **nu** æt Gode þæt ic grecisc cunne.
pray PRT to God that I Greek know
'Pray now to God that I may know Greek.'
ÆLS_[Basil]:514.817

A concrete indication that the meaning of *nu* need not always refer to 'this moment' is that, like in Present-day Dutch (Vismans 1994: 64), it is occasionally accompanied by another temporal adverb, sometimes expressing future tense (we found *today*, *tomorrow*, *for six days*, *as long as*, and *henceforth* as in (21)):

(21) [Afterwards, the Lord saw the man in the temple and said to him: "even now that you are healed,]
Heald þe **nu** heonon forð, þæt þu ne syngie, þy læs
keep yourself PRT hence forth that you not sin you lest
þe þe sum þing wyrse gelimpe;
that that some thing worse happen
'Keep yourself from sinning henceforth, lest something worse should happen to you.'
ÆHom_2:53.276

Nu in this context thus seems more like a friendly reinforcer of the imperative.

Exclamatives occasionally feature *nu*, as exemplified by (22).

(22) [Know this for a truth, that no good thing harms the one who possesses it.]
Hwæt, þu wast **nu** þæt ic þe ne leoge,
truly you know PRT that I you not lie
'Truly, you know that I do not lie to you, [don't you?].'
Bo:14.32.32.586

It is tempting to interpret *nu* in the exclamative (22) as the equivalent of *þa* or *la*, since the context seems intended as factual. This interpretation is facilitated by (23), where the interjection *hwæt* and the particle *nu* seem to be extra-clausal.

(23) [If you were now bigger than the elephant and stronger than the lion or bull and swifter than that wild animal the tiger, and ….., then you would be able to understand clearly that all the powers and qualities that we mentioned before are not to be compared with one of the qualities of the soul.]
Hwæt **nu**, wisdom is an anlepe cræft þære swale,
truly PRT wisdom is a single quality of-the soul
'Wisdom is tryly a single quality of the soul.'
Bo:32.72.13.1340

In correlatives, *nu* occurs with some frequency in *gif* conditionals. Its meaning is very close to that of *þonne* in *gif* conditionals: it introduces the potentially negative condition which, in case it is not met, has an ensuing result.

(24) [Then he said to the kinsfolk who were seducing the martyrs,]
gif **nu** þas gebroðra be eowrum benum gebugað fram heora
if PRT these brothers by your prayers turn-back from their
hælende to eowrum hæðenscype, þonne beoð hi mid eow on
Saviour to your heathenism then be they with you in
sceortere blysse
shorter bliss
'If now these brothers, at your prayers, turn back from their Saviour to your heathenism, then they shall be with you in a short bliss,'
ÆLS_[Sebastian]:69.1252

Nu also occurs on a modest scale in *that*-clauses, where its meaning tends to be temporal. An example is (25):

(25) & cwæð to þan Mode: Ic geseo þæt þe is **nu** frofres mare
and said to the Mood I see that you is PRT of-consolation more
þearf þonne unrotnesse.
need than of-sadness
'and said to Mood: I see that you need consolation more than sadness now.'
Bo:3.9.15.107

Summing up, *nu* in questions marks surprise and/or irritation on the part of the speaker. *Nu* in imperatives is a reinforcer of the order, which may shade into a request. In correlatives, *nu* introduces the condition that needs to be met, very like *þonne*. *Nu* in *that*-clauses seems to be temporal.

3.2.4 LA

La has no literal meaning; it is an interjection with an exclamative effect, which can however occur in various clause types, although it is very sparsely attested in clauses that feature *hwæt* as an exclamative interjection.

A question with *la* is (26), in which *la* seems to be very similar in meaning to that of *þonne*, in expressing surprise relative to the context: it expresses surprise (not to say dismay) that with all his misfortunes, his friends still call him a happy man.

(26) [Faithless prosperity has dimmed my sight, blinding me and forsaking me in this dim hole, and those who I always trusted most have robbed me of all my joy. They have turned their backs to me and utterly fled from me.]
To hwon sceoldan **la** mine friend seggan þæt ic geælig mon
to why should PRT my friends say that I happy man
wære?
were
'So how [on earth] can my friends say that I am a happy man?'
Bo:2.8.12.80

The use of *la* is very limited in exclamatives introduced by h*wæt.* (27) is one of three examples. It also includes *þa*, the preferred particle in exclamatives.

(27) Hwæt **ða la** ongunnon þa Godes cempan hnexian
what PRT PRT began PRT God's champions yield
'Well, then, behold! God's champions began to yield.'
ÆLS_[Sebastian]:48.1238

An imperative with *la* is exemplified in (28): *la* seems to draw attention to the following context, in which Abner (rather dramatically) responds to the threats of Asahel.

(28) [We can explain it more clearly, if we meanwhile recount some of Abner's doings, how Asahel rashly and with violence threatened and pursued him.]
Hit is awriten ðæt Æfnere cwæde to Assaele: Gecier **la**, &
it is written that Abner said to Asahel: turn PRT and
gesuic, ne folga me, ðæt ic ðe ne dyrre ofstingan.
cease not follow me that it you not dare pierce
'It is written that Abner said to Asahel: "[and now] Turn, and cease, don't follow me, that I you not dare pierce.'
CP:40.295.14.1946

La thus expresses surprise in questions. In other contexts, it is an interjection that draws attention to the following context.

To conclude this section, we have shown that particles are typically responses to the context, and their meaning interacts with clause type. Our four particles all mean roughly the same when they are used in questions, expressing surprise/disapproval/irritation. The illocutionary force of questions thus seems to override the meaning contribution of the particle. The fact that they seem to be interchangeable in some contexts supports our hypothesis that they are particles rather than adverbs in most cases: their meaning is bleached with respect to their literal

meaning. Likewise, *þonne* and *nu* seem to be very similar in meaning and use in conditional correlatives, roughly meaning "in case that" the condition is (not) fulfilled. In imperatives, the meaning of *þonne* and *nu* is distinct, *þonne* yielding a result reading, whereas *nu* reinforces the directive (adding impatience), or toning it down, shading into a request. Exclamatives and temporal correlatives prefer *þa* to affirm the exclamation, drawing attention to the new information following *þa*, whereas *þonne* is occasionally used in exclamatives for result readings. The meanings closest to the adverbial meaning are found in *that*-clauses, which is also the clause type in which particles are least frequent.

3.3 CLAUSE TYPES: PARTICLES IN MAIN AND SUBCLAUSES

A final point we wish to address is the question of the distribution of particles in main clauses vs. subclauses. In Present-day Dutch and German, they are used a good deal more frequently in main clauses than in subclauses.

We have seen that the particles *þa* and *þonne* occur in relatively high proportions in the subclause of correlatives, as can be seen in table 1. The use of particles in correlative clauses is closely related to the special status of these clauses as paratactic. We have shown in chapter 2 that they are paratactically adjoined to the main clause. Haegeman (2003, 2012) and Quirk et al. (1985) argue that this is still the case at least for what Haegeman calls peripheral adverbial and conditional clauses in Present-day English (2012: 160–1).[71] Correlatives show multiple uses of *þa* and *þonne*, as discussed above in connection with the examples (6–8): they are introduced by *þa*/*þonne* as conjunctions, and when they feature a particle use of *þa* and *þonne*, this robustly triggers the use of *þa* and *þonne* as a resumptive adverb, as shown in chapter 2 on statistical grounds. A plausible analysis of this state of affairs is that correlatives have independent illocutionary force, like main clauses (even though they are clearly subclauses in terms of word order), and that this is why they readily accommodate the use of particles. Particle use may be further promoted by the fact that correlatives have

[71] We do not wish to venture a claim that Haegeman's treatment of peripheral adverbial and conditional clauses in Present-day English carries over straightforwardly to Old English correlatives. We leave this matter for further research.

a discourse-structuring function: the preposed adverbial or conditional subclause creates the context against which the main clause is to be interpreted. It is against this backdrop that the threefold use of *þa* and *þonne*, as conjunction, as particle, and as resumptive adverb, provides a coherent rationale to the discourse sequence.

A slightly more restricted argument can be made for *that*-clauses. Like correlatives, *that*-clauses show more main clause-like behaviour. This is evident from the fact that they may feature embedded V2 placement. More generally, complement *that*-clauses are marked by a relatively high degree of assertion in Christofaro's subordination deranking hierarchy (2003: 229), which implies that they have a degree of independent assertion, that is, illocutionary force, allowing the use of particles.

3.4 THE POSITION OF PARTICLES

The position of particles is rather fixed, as discussed before. This was established for subclauses by van Kemenade & Los (2006) and van Kemenade, Milicev & Baayen (2008). Table 2 presents the results of van Kemenade & Los (2006), as corrected to exclude questions in van Kemenade & Westergaard (2012). Table 2 shows that pronominal subjects near-categorically precede the particle in subclauses. Nominal subjects are more mixed in their position and at some 36% precede the particle, with some 64% following the particle.

Table 2. Order of subject and particle *þa, þonne* in embedded clauses in Old English

	Pronominal subjects	Nominal subjects
Preceding *þa/þonne*	99.6% (1,116/1,121)	36% (129/358)
Following *þa/þonne*	0.4% (5/1,121)	64% (229/358)

It was also established that nominal subjects preceding the particle are most typically discourse-given subjects, such as demonstrative pronouns, definite NPs, and specific indefinite NPs (and optionally pronominal objects). Those following the particle are discourse-new, such as indefinite, generic or focused NP subjects (van Kemenade & Milicev 2011). Van Kemenade, Milicev & Baayen (2008) show that these generalisations are robustly significant. We will consider in this section whether they

extend to the other clause types examined here, in particular questions and exclamatives. Subclauses, including correlative subclauses and *that*-clauses, are covered in the results of van Kemenade and associates, in particular in van Kemenade, Milicev & Baayen (2008) and van Kemenade & Milicev (2011). Imperatives are not included because the subject is usually omitted there.

Let us first take a look at questions. Table 3 give the numbers for questions with *þa*, *þonne* and *nu*. We discuss *la* in questions separately below, since *la* is less uniform in its behaviour and this would blur the figures.

Table 3. The position of subjects in questions with *þa*, *þonne* and *nu*[72]

Type of subject\word order	Subject-particle		Particle-subject		Total
Subject personal pro	165	98.2 %	3	1.8 %	168
Nominal	88	58.7 %	62	41.3 %	150
Total	253	79.6 %	65	20.4 %	318

The results in table 3 are fully in line with earlier findings and thus extend these to questions. We give examples with a nominal subject preceding *þa* in (29) (with specific reference to the context), with a pronominal object preceding *nu* in (30), and with a (generic) nominal subject following *nu* in (31).

(29) Hwi com *se halga gast* **ða** on fyres hiwe ofer ðam apostolon,
why came the holy ghost PRT in Fire's colour over the apostles
and ofer Criste on his fulluhte on culfran Gelicnysse?
and over Christ on his baptism in to-dove likeness
'Why did the Holy Ghost come in the colour of fire and in the likeness of a dove over the apostles and over Christ upon his baptism.'
ÆCHom_II,_3:23.150.555

[72] The total number (318) here does not add up to the total number of questions with particle *þa*, *þonne* and *nu* in table 1 (330). This is because we had to eliminate some sub-patterns such as subject-initial questions and questions with empty expletive subjects, which do not yield information about the position of subjects with respect to the particle.

(30) Hu wolde *þe* **nu** lician gif hwilc swiðe rice cyning wære &
how would you PRT please if which some rich king were and
næfde nænne freone mon on eallum his rice, ac wæren ealle
not-had no free man in all his kingdom but were all
þiowe?
slaves
'How would it please you now if there were some very rich king who had not-one free man in all his kingdom, but only slaves.'
Bo:41.142.2.2833

(31) Hwæt is **nu** *mare* ymbe þæt to sprecanne buton þæt cyningas
what is PRT more about that to speak except that king
æghwano coman and ealdormen for ðam ungelifedlican wlite
from-everywhere came and aldermen for the incredible beauty
þæs mædesnes,
of-the maiden
'What more is there to say except that kings and princes from everywhere hurried there because of the girl's incredible beauty.'
ApT:3.10.32

Table 4 gives the results for *la*, which are more mixed.

Table 4. The position of subjects in questions with *la*[73]

Type of subject\word order	Subject-particle		Particle-subject		Total
Subject personal pro	25	64.1%	14	35.9%	39
Object personal pro	1	33.3%	2	66.6%	3
Nominal	10	43.5%	13	56.5%	23
Total	36	55.5%	29	44.5%	65

[73] The total number of examples is 65 (rather than 69 in table 1), because four of the examples have empty expletive subjects.

The results in table 4 diverge from the patterns in Tables 2 and 3 in particular with respect to the position of pronominal subjects: 35.9% of the pronominal subjects occurs on the right of *la*, whereas this is 1.8% in questions with *þa*, *þonne* and *nu*. The results for *la* include some special cases, however, which account for these discrepant figures. The fourteen cases of particle-pronominal subject order are all examples of questions introduced by an (extra-clausal) exclamative combination including *la*, including *hwæt la*, *hu la,*and *la hu*. As discussed above, *la* is often clause-external. (32) is an example:

(32) Hu **la**. ne wurpe we þry chihtas into ðam
how PRT not throw we three youths into the
fyre?
fire [rather that the four they see]
'How is this? Didn't we throw three youths into the fire?'
ÆCHom_II,_1:10.249.217

Note that these questions are distinct from *hwæt* exclamatives, which are declarative clauses. Since the exclamative in (32) is not itself part of the question, the pronominal subject follows *la* as well as the finite verb.

Table 5 gives the results for exclamatives introduced by *hwæt*. These present a picture that is in line with the above observations about the position of subjects with respect to particles. It is perhaps not as simple as that, however. Remarkably, the 289 instances of subjects following the particle include quite a few given subjects, beside predominantly names. An example of this is given in (33):

Table 5. *Hwæt* exclamatives with *þa*, *þonne*, and *nu*

Type of subject\word order	Subject-particle		Particle-subject		Total
Subject personal pro	32	100.0 %	0	0.0 %	32
Object personal pro	1	2.5 %	39	97.5 %	40
Nominal	39	13.5 %	250	86.5 %	289
Total	72	20.0 %	289	80.0 %	361

(33) [Then said he holy man to the hateful devil, 'Christ, who hath power over them all, rebuke thee, thou lying fiend, and author of wickedness.']
Hwæt **ða** se sceocca sona fordwan of his gesihðe mid swiðlicum
lo PRT the devil soon vanished of his sight with mighty
reame,
outcry
'So then the devil straightaway vanished out of his sight with a mighty outcry.'
ÆLS_[Maur]:315.1678

The results for pronominal subjects are in line with the observations for subclauses in tables 2 and 3, but those for nominal subjects are not. This indicates that the picture for *hwæt* exclamatives is more complex than for questions, at least for nominal subjects. We tentatively suggest that the particle is often part of the interjection and thus may be extra-clausal, as in questions introduced by *hwæt la*, discussed above. This cannot be the whole picture, given that this is not the case when the subject is pronominal. We leave this for further research.

We conclude the position of particles is consistent across clause types. An exception are cases where the particle *þa* or *la* is part of an exclamative combination. The earlier finding for subclauses, viz. that the particle typically follows discourse-given subjects and pronominal objects, and precedes discourse-new nominal subjects, is further confirmed for questions and, in part, for *hwæt* exclamatives. This in turn confirms the clause structure proposed in earlier work (see below), as adapted in the template (34), with the structure in figure 1:

(34)

Main clauses	first constituent	finite verb	given subj.	PRT	new subj.	…
Ex. (19) *Yes*/*no* question	(Hwæt (la))	Sint	þis	nu		þa god and *þa* edlean
Sub-clauses		**conjunction**	**given subj.**	**PRT**	**new subj.**	**…**
Ex. (12) *If*-conditional		Gif		þone	se ælmihtiga God	nelle hi eow geopenian

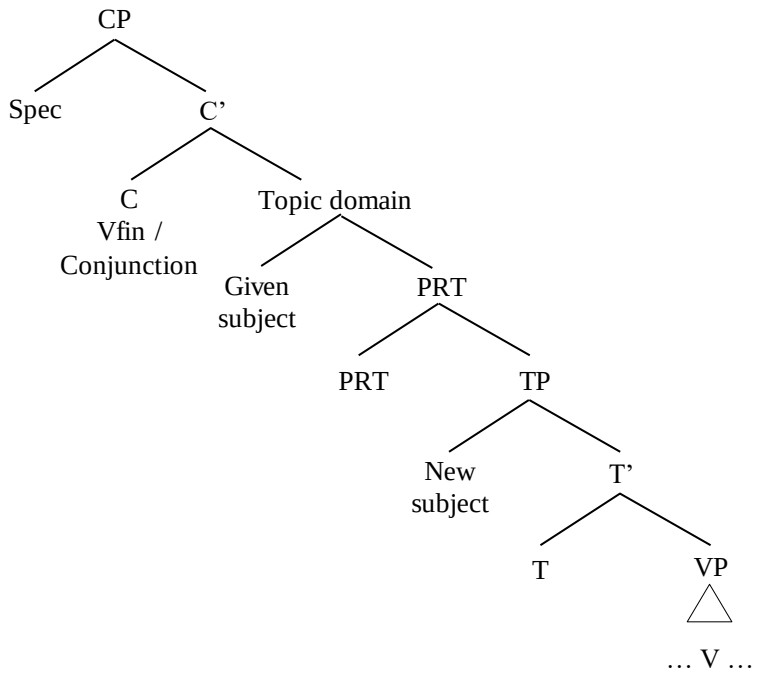


Figure 1. Old English clause structure

In main clauses questioned constituents and clause-initial adverbs like *þa* and *þonne*, are in the first position, Spec, CP. The finite verb is C, the position occupied by

conjunctions in subclauses (cf. Den Besten 1983). The higher subject position precedes the particle (*þa*, *þonne*, *nu*, *la*,), whereas the lower subject position follows the particle. A proviso for *la*, and for *þa* in *hwæt* exclamatives, is that *la/þa* can be part of the exclamation.

There is a good deal of independent evidence for (34) and figure 1, which has been analysed as the key structure underlying the position of secondary negators (van Kemenade 1999, Haeberli 2000, van Kemenade 2000, 2002, 2011); the position of *þa* in Beowulf (van Kemenade 2002); particles *þa* and *þonne* in subclauses (van Kemenade and associates, op. cit.); the mixed nature of finite verb placement in main clauses (van Kemenade 2012, van Kemenade & Westergaard 2012), the agreement asymmetry in the Northern Subject Rule (de Haas & van Kemenade 2015), and it is further confirmed for questions and, in part, for *hwæt*-exclamatives here.

4 CONCLUSIONS AND OUTLOOK

We have shown in the previous section that discourse particles are discourse-cohesive devices that refer to the common ground shared by speaker and audience. Individual particles form a link to the context, reflecting the speaker's response to the context, in interaction with the clause type in which they occur. They form the final element of the discourse-given domain in the clause. Pronominal subjects and discourse-given nominal subjects typically precede the particle and are part of the given domain. Discourse-new subjects follow it. Particles thus form a class of grammatical elements that are at the interface of clause structure and discourse management, as suggested by van Kemenade & Los (2006).

We now turn to a brief consideration of what happened to the particles after the OE period. Space does not permit a detailed discussion here. This brief section should therefore be taken as an indication of avenues for further research. The transition from Old to Middle English saw massive losses of the Old Germanic discourse-cohesive devices, as discussed in van Kemenade (2009) and Los & van Kemenade (forthcoming). Importantly, the earlier Germanic series of demonstrative pronouns and adverbs was largely lost. This included the *se* paradigm of demonstrative pronouns and determiners, which expressed deixis and provided a separate strategy

for pronominal reference. It also included the etymologically related set of time, place and manner adverbs (*þa* 'then', *þonne* 'then', *þær* 'there', *þus* 'thus', *swa* 'so', *swylc* 'such') (Los & van Kemenade forthcoming). *Þa* was lost altogether, according to Fischer (1992) because of its highly polysemous use, which is identified by van Kemenade & Los (2006) and in chapter 2 as a conjunction, particle and resumptive adverb. *Þonne* developed into 'then', but it lost its use as a conjunction (this was taken over by *when*), as a resumptive adverb (except sporadically in conditionals), and it survived in the language robustly as temporal adverb rather than a particle. The particle use of *nu* was also lost. *Nu* survives as a temporal adverb, especially in imperatives. *La* became a relic form that is used sporadically in clause-initial position throughout the further history of English. We suggest, following van Kemenade (2009), that these losses were primarily due to the massive population changes resulting from the Scandinavian and French invasions, which had a strong phonological and (in the case of Scandinavian) grammatical impact on the language. It is to be expected that discourse-cohesive devices such as particles, which are unstressed elements and have subtle pragmatic meanings, would be lost under language contact, particularly in the case of substrate influence.

There are indications, however, that particle use was continued on a less robust scale over the ME period and beyond, particularly in questions and imperatives, which are two of the illocution types in which particles were identified here for the OE period. Some ME examples are given in (35):

(35a) is hit **nu** wisdom to do swa him seoluen;
is it PRT wisdom to do like him self
'Is it wisdom to do like himself?'
CMANCRIW-2,II.268.3925

(35b) How myght þou **þan** wyt it?
how might you PRT know it
'How would you know it then?'
CMROLLEP,63.40

(35c) If he sette the on the right syde, what ioye shalt tow **than** haue?
if he put you on the right side what joy shall you PRT have
'If he puts you on the right side, what joy shall you have then?'
CMAELR4,24.752

Recent work by Haselow (2012) gives an interesting analysis of clause-final *then* in present-day spoken English, arguing that there are two uses of final *then*, including that of a discourse marker *then*, which is used to link the utterance it accompanies to a preceding utterance. Clearly, clause-final *then* is in a very different position from that of *þonne* in OE. Haselow (2012) makes a case that the origin of final *then* is in late ME, and he argues that it originates from the optional conjunct then in *if…then…* constructions in which the conditional protasis is not expressed in a subordinated *if*-clause, but is implied in a preceding utterance. It will be of considerable interest to see in future work how these two ends in the history of English might meet.

A further and larger issue beyond the scope of this chapter is to address in detail the reconstruction of the grammaticalization path that particles underwent, in relation to their syntactic status in the particular clause types they occur in, and in relation to the development of the relation between syntax and discourse organization in OE. Such a study is likely to throw more light on the early development of paratactic and hypotactic clause linking in OE and Old Germanic more broadly, following up work by Kiparsky (1995) and the results presented in chapter 2.

A final avenue for further research is the paratactic nature of preposed temporal and conditional clauses, which feature particles quite prominently in Old English, and which according to Quirk et al. (1985) and Haegeman (2003, 2012) are still paratactic in Present-day English. Here too, it will be interesting to see how their properties in OE relate to their further historical development to Present-day English.

5 CONCLUSION

This thesis has aimed to trace the diachronic development of correlative constructions and their characteristics in Old English (OE). It has offered a quantitative and qualitative analysis of correlative constructions introduced by *þa*, *þonne*, *(g)if* and *when* as well as an analysis of conditionals as a subset of correlatives, and an analysis of the use of discourse particles in correlatives and other constructions.

Taking earlier work by Kiparsky (1995) on Indo-European and Eythórsson (1995) on early Germanic as a starting point, OE correlative constructions like (1) are analysed as having a paratactic origin which still persists in the (non-correlative) potentials like (2) found in Present-day English (PDE) (cf. Quirk et al. 1985, Haegeman 2003, 2012).

(1) **þa** heo **þa** to þæm gemote ferdon, **þa** cwomon heo ærest to
then they then to that meeting went then came they first to
summum aancoran,
some anchorite
'As they were on their way to the meeting, they came first to an anchorite,'
Bede_2:2.100.19.941

(2) If you like this cat, (then) you should adopt her.

Old English correlatives like (1) find their niche in the availability of a CP-adjoined left dislocation position combined with a multifunctional clause-initial (Spec, CP) position in Verb-Second (V2) clauses (cf. figure 1 in chapter 1). Their use is furthermore supported by a well-entrenched deictic system that supplies the resumptive adverbs functioning as discourse-linkers in clause-initial position (Kiparsky 1995, van Kemenade, Milicev & Baayen 2008, Los & van Kemenade forthcoming). Resumptive adverb use is what distinguishes correlatives from non-correlative potentials: their use is in fact the key property of, and the reason for calling

these constructions correlatives. Resumptive adverbs recapitulate the previous clause and foreground the event in the main clause, drawing the attention of the reader/listener while establishing textual cohesion (van der Horst 1981: 39–41, Enkvist 1986, van Kemenade & Los 2006, Baker 2007: 99, van der Horst 2008: 538–9, Los 2009, Wårvik 2013). Correlative constructions essentially find a structural niche in the shift from parataxis to hypotaxis. At the same time, they also provide evidence for an earlier paratactic structure themselves. Key elements for correlative constructions are the preposed adverbial/conditional subclause, the clause-initial position (Spec, CP), V2 and the (optionally) tripled use of multifunctional elements like *þa* and *þonne* (as conjunction, discourse particle and resumptive adverb). The interplay between these elements allows correlative constructions to function as one of the rhetorical strategies used to explicitly structure discourse in OE: they help writers get their message across by using the initial subclause to present the context – backgrounded information – while foregrounding the event in the main clause that carries the narrative forward. Crucially, correlative constructions only portray these (correlative) characteristics when the adverbial/conditional subclause introduces the construction. This order also most accurately or iconically depicts their robust semantic-pragmatic relationship (cf. Dancygier & Sweetser 2005).

The key language characteristics which boost the occurrence of correlative constructions were only available throughout the OE period. Each chapter in this thesis, however, takes both a diachronic and synchronic perspective. Chapter 2 deals with correlatives and with non-correlative potentials with subclauses introduced by *þa*, *þonne, (g)if* and *when* in OE, Middle English (ME) and Early Modern English (EModE). The choice to include *(g)if* conditionals is motivated by the fact that they have a structure identical to that of *þa* and *þonne* correlatives. The choice to only include *þa*, *þonne, (g)if* and *when* potentials is based on their high frequency compared to other possible potentials introduced by elements such as *swa* 'as' or *þeah* 'although'. These four often display resumptive adverb and discourse particle use, and *if* and *when* potentials persist over time. These joint considerations make them prime candidates for tracing the (diachronic) development of correlative constructions.

Chapter 2 analyses the larger picture by identifying those construction-internal and construction-external features that influence the presence of a resumptive adverb: the key feature that distinguishes correlatives from non-correlative potentials and contributes to their role as discourse structuring devices. Although Mitchell (1985b) carefully lists several types of correlative constructions, the present study is the first to venture into their origin, structural properties, diachronic development and detailed analysis of their resumptive adverb use. This chapter presents an elaborate variationist study (building on a logistic regression) of the competition between correlatives and non-correlative potentials, and how this competition is determined by a number of construction-internal properties such as the use of discourse particles, mood and word order.

Chapter 3 focusses on conditionals, a specific type within the larger set of correlative constructions in which resumptive adverbs can optionally be used even in PDE, like in (2). This chapter adds to the existing literature on (Old) English conditionals (cf. Iatridou & Embick 1994, Bhatt & Pancheva 2006, Van den Nest 2010, Auer & Lindström 2011) by taking into consideration the division of labour between *(g)if, and* and verb-initial conditionals from Old to Early Modern English. It provides a detailed analysis of their origin and later restrictions, the use of open and counterfactual conditional subclauses, their distribution across genre and features influencing the persisting resumptive adverb use.

Chapter 4 concentrates on the use and characteristics of discourse particles – which were shown to significantly increase resumptive adverb use in chapter 2 – within the adverbial/conditional subclause of OE correlatives, as well as their use in several other (related) clause types. Discourse particles in OE are a relatively unexplored territory that provides insight into the structuring of OE discourse through several constructions. The following subsections present a detailed account of the findings and specific research questions answered in each chapter.

1 CORRELATIVE CONSTRUCTIONS IN GENERAL

Chapter 2 presents the results of the variationist study of the competition between *þa*, *þonne*, *(g)if* and *when* correlative constructions as well as their diachronic

development and subsequent loss throughout Old, Middle and Early Modern English. It aims to answer the following three questions:

1) What are the properties of correlatives in Old English and which factors promote the use of a resumptive adverb?
2) How do correlatives and non-correlative potentials develop in relation to each other and over time?
3) How can we relate the properties of correlatives in earlier English and their subsequent loss to what we know about the historical development of the clausal pre-field in English?

Querying of the YCOE (Taylor et al. 2003), PPCME2 (Kroch & Taylor 2000) and PPCEME (Kroch, Santorini & Delfs 2004) corpora for occurrences of correlative and non-correlative potentials yields a substantial dataset of 8,989 examples in total. In the earliest timeslot, *þa* correlatives are found to express mostly temporal relations in narratives and describe completed actions in the past (cf. Mitchell 1985b: 308). *Þonne* correlatives also often indicate temporal sequences, but they can also have a more causal, concessive or conditional reading (cf. Mitchell 1985b: 308; 320). They are found mostly in narrative, biblical and moral texts. From ME onwards, *when* takes over the discourse functions and genre preferences of temporal *þa* and *þonne* correlatives. Structurally similar *(g)if* correlatives present conditional relations (i.e. are conditionals) and often occur in texts with an instructional or legal nature.

The structural analysis of the examples reveals that OE correlative constructions and their non-correlative potential counterparts find their (structural) niche in the availability of a CP-adjoined position in combination with the Old English V2 structure. The combination of these structural properties and resumptive adverb use represents a phenomenon typical of the left periphery of main clauses, parallel to left dislocation and V2 constructions.

Our analysis of the dataset reveals several intra-linguistic (grammatical, lexical and functional) and extra-linguistic (genre, translation) factors that influence the use of a resumptive adverb, i.e. the choice between a correlative and non-correlative

potential. The significance and (changing) weight of these factors in a series of logistic regression analyses shows how the morpho-syntactic and internal properties of correlative constructions play out, and how they change, leading to the decrease in correlative use from ME onwards. The results show that resumptive adverb use correlates with several properties, most of them only valid during the OE period. Resumptive adverb use is significantly more frequent in indicative main clauses as well as subclauses containing a discourse particle (as in (1) above). The simultaneous use of a subclause-internal particle and a resumptive adverb emphasises the temporal narrative sequentiality in temporal correlatives or, in conditionals, the condition that has to be met as presented in the subclause. Other properties that significantly increase resumptive adverb use are information-structurally *New* subjects in main clauses and *Other* (no subject or no clear referent) or *Proper* (proper noun) subjects in subclauses. This shows that Wårvik (2013) was incorrect in postulating a relation between the use of *þa* and givenness of the subject. Weight of the subclause (i.e. its length) also significantly boosts resumptive adverb use. The significance of the clause-external factor *Text Type* reveals that resumptive adverb use is significantly more frequent in texts with a strong rhetorical/argumentative character, such as texts of a scientific or moral nature. Resumptive adverbs are also used significantly more often in translated texts which may be the results of the translator's aim to increase the 'Englishness' of the text to cater to the needs of its audience.

The analysis presented also shows that resumptive adverb use becomes increasingly rare in the later periods, and their use is shown to be mainly related to genre-internal preferences in which writers opt to establish explicit discourse relations, for example in scientific texts. Resumptive adverbs are largely lost in the transition from Old to Middle English as part of the general decline of the OE demonstrative pronouns and adverbs as discourse linkers. We show that their loss removes the trigger for V2 in this construction, which had so far been the resumptive adverb, and forces the main clauses of potentials to become early adopters of the Subject-Verb structure that became the default option after the loss of V2 by late ME/EModE (see Fischer et al. 2000, Haeberli 2002, Allen 2006, Los 2009, van Kemenade & Westergaard 2012, Los 2012a). This change is reflected in the observed

increase of subject-initial potentials that starts during the transitional period between Old and Middle English and persists into EModE. The observed loss of typical V2 correlatives like (1) with a resumptive adverb introducing the main clause, however, unexpectedly predates the overall loss of V2 by several centuries, especially in clauses with initial adverbs such as (non-resumptive) *then*. The latter construction is not lost until the end of the ME period (van Kemenade 2012, van Kemenade & Westergaard 2012). At the same time, the use of *þa* and *þonne* as conjunctions (introducing the subclause) are lost. We thus conclude that essentially lexical losses make up the loss of correlative constructions in the transition from Old to Middle English. The morphosyntactic expression articulated by resumptive adverbs (and discourse particles) is lost over time, but the underlying relation between the two clauses does not seem to have undergone much change as – what we call – conditional and temporal potentials are still paratactic in PDE (cf. Quirk et al. 1985, Haegeman 2003, 2012).

2 CONDITIONALS

Chapter 3 focusses on conditionals. This study traces the diachronic development of conditionals that have a context-independent conditional reading over time. This chapter aims to answer four questions:

1) Can the observations for correlatives be expanded to conjunctional (*(g)if* & *and* conditionals) and verb-initial conditionals?
2) How does the division of labour between conjunctional (*(g)if* & *and*) and verb-initial conditionals develop over time?
3) Why and when did the present-day restrictions on verb-initial conditionals regarding choice of verb originate?
4) Which factors influence the (persisting) use of the resumptive adverb *then* in conditionals?

The chapter uses the data for conditionals gathered in chapter 2, supplemented by additional data for conditionals introduced by *and* and verb-initial conditionals gathered from the same corpora (by means of additional queries). The complete

dataset yields 5,092 examples. For a sample of 472 examples I determined manually – based on the context – whether the condition expressed in the protasis was open or counterfactual. The results provide quantitative as well as qualitative insight into the division of labour between conjunctional and verb-initial conditionals in terms of frequency, the use of open and counterfactual conditional subclauses, the use of resumptive adverb *then*, and the distribution across genres. The results for the latter are also compared to the two present-day Germanic V2 languages Swedish and German.

Conditionals are found to be structurally identical to correlative and non-correlative potentials as analysed in chapters 1 and 2. In OE the protasis (or conditional subclause) is CP-adjoined to the V2 apodosis (or main clause), most clearly visible when the latter is introduced by a resumptive adverb in Spec, CP. Together the two clauses form a semantic-pragmatic unit which in the protasis-apodosis order expresses the linear conditional consecutive order of condition and result most accurately (cf. Dancygier & Sweetser 2005, Van den Nest 2010). Resumptive adverbs again resume the previous discourse, signal to the reader/listener to pay attention and establish textual cohesion. Their declining use in both conjunctional and verb-initial conditionals from OE onward and in the transition to ME – as in correlatives – forces both types of conditionals to become early embracer of the Subject-Verb order that becomes the norm after the loss of V2.

The diachronic division of conjunctional and verb-initial conditionals presented in this chapter shows that conjunctional conditionals are used most frequently across all periods and that the use of *(g)if* conditionals by far outnumbers that of *and* conditionals. *(G)if* conditionals present both open and counterfactual protases, even in OE. They frequently contain lexical verbs which gradually gave way to forms of *be*, *do* and modal auxiliaries in ME. Verb-initial conditionals have always played a marginal role diachronically compared to their conjunctional counterparts.

The results furthermore indicate that the restriction of verb-initial conditionals to counterfactuality as it exists in PDE is not the result of a frequency effect (cf. Van den Nest 2010). Instead I show that it is related to 1) the already firm establishment of *(g)if* conditionals from Old English onward; 2) the developing restrictions on verb-

movement to C following the loss of V2 by late ME/EModE (Fischer et al. 2000, Haeberli 2002, Allen 2006, Los 2009, van Kemenade & Westergaard 2012, Los 2012a); and 3) the auxiliation of the modals and the rise of auxiliary *do* during the sixteenth century (Ellegård 1953, Lightfoot 1979, Roberts 1985, Kroch 1989). A further semantic restriction after the mid-nineteenth century limits verb-initial conditional protases to *had*, *were* and *should* (Denison 2008), indicating counterfactuality. These restrictions do not, however, apply to imperative verb-initial conditionals which use lexical verbs even in PDE.

Working from the results gathered in chapter 2, I identified several factors that influence the (persisting) use of the resumptive adverb *then* in *(g)if* and verb-initial conditionals (*and* conditionals were not taken into account as these used very few resumptive adverbs). Although it has often been put forward that conditionals favour the subjunctive in at least one of the two clauses (Mitchell 1985b: 780; 783–4; 788; 792–3; 797; 805, Fischer 1992, Bhatt & Pancheva 2006, Van den Nest 2010), my findings indicate that there is no need for a specific mood to signal conditionality. Like in correlative constructions, less variation in main clause mood is found when a resumptive adverb is used and the indicative mood is preferred (no distinction was made between conjunctional and verb-initial conditionals). During the later periods, especially during EModE, subclause length also significantly influences resumptive adverb use, which is found to increase significantly with the length of the protasis in both *(g)if* and verb-initial conditionals. Resumptive adverbs are only used in EModE (and PDE) when they serve a clear function: signalling to the reader/listener that something important will follow or clarifying an inferential connection (cf. Huddleston & Pullum 2002). These observations are not unexpected on the basis of a well-established psycholinguistic effect: the length of an utterance (here, subclause) increases the processing burden on the human brain (see Arnold et al. 2000 for similar evidence on word order variation). A resumptive adverb, as a signalling, summarising and supporting element can lighten this processing load. When it comes to genre preferences, conjunctional conditionals are always favoured over verb-initial conditionals. *(G)if* conditionals diachronically favour biblical, legal, moral and scientific texts, while *and* conditionals occur only in narrative, moral, scientific and

spoken (only in EModE) texts. Verb-initial conditionals pattern with the modern V2 languages Swedish and German in having a preference for scientific and instructive/regulatory texts (cf. Auer & Lindström 2011). This shows that certain preferences are stable across languages and cannot be ascribed to frequency effects.

3 DISCOURSE PARTICLES

Chapter 4 presents an analysis on the use of the (sub)clause-internal discourse particles *þa, þonne* 'then', *nu* 'now' and the interjection *la* 'lo' in OE, which is a relatively uncharted area of research. The primary function of these discourse particles has been found to be related to discourse management, viz. management of the common ground by reference to the context, as well as marking the division between given and new information within the clause (cf. Thurmair (1989), van Kemenade & Los (2006), Grosz (2016)). As such their use in correlative (and other) constructions is not unexpected. This chapter provides a qualitative exploratory study aimed at a more comprehensive characterisation of these discourse particles in OE. It seeks to answer three questions:

1) What is the function of discourse particles?
2) What is the meaning of each type of particle in relation to the clause types in which it occurs, their relation to discourse context, and their position in the clause?
3) How did discourse particles develop in the transition to Middle English and beyond?

Using only those parts of the YCOE corpus that included texts from periods O2 (850-950), O3 (950-1050), and O23, the use of particles was traced in five clause types: main clause questions, *hwæt* exclamatives, imperatives, correlative subclauses and *that*-clauses. This resulted in 1,962 examples. The results provide a qualitative insight in the use of discourse particles *þa, þonne, nu* and *la* in OE.

Our results indicate that these OE discourse particles show strong parallelisms to their Dutch (Vismans 1994, Foolen 1995, 2006) and German counterparts (Thurmair

1989, Coniglio 2011 and references cited there, Zimmermann 2011 and references cited there). *Þa*, *þonne*, *nu* and also *la* contribute semantically bleached meanings that support common ground management between speaker and audience, although the behaviour of *la* is more diverse. As discourse-cohesive devices they form a link to the context. We found that each discourse particle encodes a specific attitude on the speaker's part that co-depends on the clause type in which they occur, as related to their illocutionary status. *Þonne* is used across all clause types in non-factual contexts. It expresses surprise or disapproval in questions, impatience in imperatives, and it confirms an (un)expected result in conditional correlatives while strengthening the condition. Its use in temporal correlatives is limited. *Þa* is predominantly used in factual contexts like exclamatives and temporal correlatives. It calls attention to the events that follow it in these constructions. *Nu*, like *þonne*, expresses surprise or disapproval/irritation in questions. In imperatives, *nu* may function as a reinforcer in the sense that the imperative poses a request rather than a directive. *Nu* in correlatives behaves much like *þonne* and introduces the condition to be met. In *that*-clauses, *nu* is temporal. Discourse particle *la* also expresses surprise or disapproval in questions. In the other clause types *la* is used infrequently. It is in an interjection with an exclamative meaning used to mark a link to the context, but it is very sporadically attested in clauses with *hwæt* as an exclamative interjection. The only clause type in which discourse particles are not distinct in meaning are questions: in questions the use of *þonne*, *nu* and *la* (but not *þa*) has the effect of turning the question into one marking surprise or disapproval.

Our structural analysis of the discourse particles reveals that their position is consistent across clause types with the exception of those cases in which *þa* or *la* is part of an exclamative combination in clause-initial position. For questions and *hwæt* exclamatives, our results furthermore confirm earlier observations by van Kemenade & Los (2006) on the distribution of discourse-given and discourse-new subjects, and the function of these particles as the 'demarcator' of the given and new domain: the particle typically follows discourse-given subjects and precedes discourse-new nominal subjects.

This combination of a fixed syntactic position, subtle pragmatic meanings related to the illocutionary force of the clause they occur in, and a strong discourse-cohesive function was lost in the transition to Middle English. The deictic system, including the etymologically related set of time, place and manner adverbs, collapsed and took with it the separate possibility for pronominal reference. At the same time, the use of polysemous elements decreased: *þa* was lost as a conjunction, particle and resumptive adverb (Fischer 1992, see also chapter 2), while *þonne* developed into *then* and only (occasionally) surfaces as a resumptive adverb in conditionals, like in (2) above. Its other uses as discourse particle and conjunction were lost completely. We suggest that these developments, combined with massive population changes as a result from the Scandinavian and French invasion that had a phonological and grammatical impact (in the case of Scandinavian) on the language (van Kemenade 2009), trigger the loss of unstressed elements with subtle pragmatic meanings like discourse particles.

4 OVERALL CONCLUSIONS AND IMPLICATIONS

Correlative constructions in earlier English illustrate the existing interaction between discourse and syntax. We showed that correlative constructions – making use of morphosyntactic characteristics only available during the OE period – overtly structure the discourse on a sentential and textual level via a subtle interplay between the available clause structure and discourse structuring elements that function as reminders, explicit discourse linkers and illocution managers, like resumptive adverbs and discourse particles. This observation sits well with the fact that correlative constructions have the tendency to occur in texts with a strong rhetorical or argumentative character when compared to non-correlative potentials (cf. chapter 2).

We have established that correlative constructions support writers and speakers in getting their message across to their audience: the initial adverbial/conditional subclause presents the context (backgrounded information) against which the main clause is to be examined. This discourse structuring function is typical of constructions with preposed adverbial and conditional subclauses (cf. Haegeman (2003, 2012)). For the correlative constructions and conditionals (as a subset of correlatives) investigated in this thesis, this order also portrays the robust semantic-

pragmatic relationship between the two clauses most accurately or iconically (cf. Dancygier & Sweetser 2005) and facilitates their interpretation as the events are presented in the order in which they would take place in the real world. In *þa* and *þonne* correlative constructions, this order reflects temporal sequentiality: the initial subclause locates the event in time/discourse, presenting backgrounded information, essentially the context against which the audience needs to process the information in the main clause. The main clause itself relates the following, foregrounded event and carries the narrative forward. In conditional correlatives, this order illustrates the successive order of the condition and result as portrayed in the real world. The conditional subclause provides the contextual assumption for the consequence in the main clause to apply. We found that this discourse structuring function provides a fruitful ground for the use of elements (resumptive adverb, discourse particle) promoting discourse-cohesion, (sometimes) reinforced by the available structural possibilities. Both are absent when the adverbial/conditional subclause follows the main clause.

This thesis has shown that correlatives thrive on the (structural) possibilities arising from the development of V2 during the shift from parataxis to hypotaxis as presented by Kiparsky (1995). We have established that the OE correlative subclause is CP-adjoined to the main clause, much like left dislocation constructions. This idea that clause-initial correlative (including conditional) subclauses involve (CP-) adjunction instead of syntactic embedding has been put forward for various languages, including PDE (Haegeman 2003, Bhatt & Pancheva 2006, Lipták 2009, Haegeman 2012). The availability of Spec, CP as a main clause initial position paves the way for resumptive adverbs used to link the CP-adjoined subclause to the main clause. But even without a resumptive adverb, we proposed that non-correlative potentials like *þa ða he ðegn wæs, he mette his feond*, 'When he was a subject, he met his enemy.' (CP:50.393.4.2665) are best analysed as being CP-adjoined.

At the clause level, resumptive adverbs use Spec, CP to support the discourse structuring function of correlatives. Like other OE deictic discourse linking elements – such as the OE *se* paradigm and the etymologically related set of time, place and manner adverbs (see chapter 1) – resumptive adverbs explicitly link the content of the

main clause to the subclause. They recapitulate the preceding (backgrounded) subclause (i.e. function as a reminder for the reader/listener) and foreground the event or consequence (in conditionals) in the main clause. On a textual level, resumptive adverbs establish textual cohesion (Los 2009) by functioning as a kind of guide for the reader, especially in translated texts which show a more frequent use of resumptive adverbs. We found this increased use to be unrelated to elements in the original (Latin) text. As such, it is probably the result of the translator's aim to adapt the text to fit its English audience. This overinsistence on cohesive devices might lead to an impression of overcoding.

We found resumptive adverb use to correlate with several clause-external and clause-internal variables. Among all the clause-internal triggers, the use of a discourse particle holds pride of place as the most potent predictor of resumptive adverb use. Like resumptive adverbs, discourse particles occur in a fixed syntactic position (in the correlative subclause). They contribute subtle pragmatic meanings related to the illocutionary force of the clause they occur in. In temporal correlatives they call attention to the events that follow, whereas these elements strengthen the condition and confirm an (un)expected result in conditionals. Discourse particles thus function as discourse-cohesive elements in their own right. Discourse particles form the border between the discourse-given and discoures-new domain in the subclause: pronominal subjects and discourse-given nominal subjects typically precede the particle. Subjects that are newly introduced into the discourse follow it. Like resumptive adverbs, particles help the audience in processing the clause by explicitly structuring the discourse and functioning as reminder. This process is reinforced by the simultaneous use of a resumptive adverb, especially when the subclause is relatively long.

The idea that occurrence of the resumptive adverb in Spec, CP is a crucial factor in the use of correlative constructions might lead one to postulate the hypothesis that the rather dramatic decline in the use of correlatives as it was observed in ME would go hand in hand with the loss of V2. This thesis has however shown that this is not the case. Rather, the loss of correlative constructions resulted primarily from the loss of resumptive adverbs which is part of the general demise of the Old English paradigms of demonstrative adverbs and pronouns (Los & van Kemenade

forthcoming). This caused a shift in the system of clause-linking markers from 1250 onwards (Lenker 2007 cited in Los 2012a). Their loss essentially meant that the original trigger for V2 in this specific construction, the adverb, was lost. This forced main clauses in potentials to become subject-initial several centuries before subject-initial clause structure became the default structure after the loss of V2 by late ME/EModE (as established by Fischer et al. 2000, Haeberli 2002, Allen 2006, Los 2009, van Kemenade & Westergaard 2012, Los 2012a). Our results show that the use of non-correlative potentials, especially those that have subject-initial main clauses like (3), increase during the transition from Old to Middle English and are used abundantly throughout ME and beyond, although low frequency alternative options do exist (see chapter 2 and 3).

(3) When he came in and saw such a place, he was amazed,
armin-e2-h-43.270

At the same time, the use of *þa* and *þonne* as conjunctions (introducing the subclause) and discourse particles were lost. The loss of correlative constructions was thus made up essentially by lexical losses in the transition from OE to ME. Since – what we call – temporal and conditional potentials are still paratactic in PDE (cf. Quirk et al. 1985, Haegeman 2003, 2012), the underlying relation seems to remain stable over time. Resumptive adverbs are still found in PDE, but they no longer trigger subject-verb inversion as in OE. Their use in later periods is related to genre-internal preferences in which writes want to establish explicit discourse relations.

5 FUTURE RESEARCH

The previous sections have summed up the contribution of this thesis. They also suggest a number of avenues of further work. I will start with those related to the three main chapters before turning to some more general future directions.

Chapter 2 identified several clause-internal and clause-external factors individually contributing to resumptive adverb use. An interesting extension would be to try and identify more factors that influence resumptive adverb use, especially in

ME and beyond, as well as look into whether interaction between several factors (for example, discourse particle use and mood of the subclause) has any additional effects on resumptive adverb use. Although this thesis has identified the major contributing factors, such a study would perhaps provide access to the (more delicate) morphosyntactic properties of correlative constructions and non-correlative potentials in OE and especially beyond. Chapter 2 also brought to light that correlative constructions were lost earlier than expected, that is, earlier than the established general loss of V2 by late ME/EModE (cf. Fischer et al. 2000, Haeberli 2002, Allen 2006, Los 2009, van Kemenade & Westergaard 2012, Los 2012a). These results might have some implication for dating the onset of the loss of V2. This needs to be investigated further.

Chapter 3 dealt exclusively with conditionals. Here it would be interesting to see how our results hold up in PDE and other West Germanic languages in order to possibly identify any trends, especially because the other (West) Germanic languages retained their V2 character. The present study could furthermore be expanded by investigating to what extent the factors identified as influencing resumptive adverb use in chapter 2 apply to conditionals as only a subset was looked at in chapter 3. This would yield a full quantitative logistic regression analysis as presented in chapter 2. In addition, it seems necessary to investigate more closely which (additional) factors influence resumptive adverb use in EModE beside subclause length. When it comes to genre, we compared the historical data for earlier English to data from present-day German and Swedish. It would thus be interesting to see whether the results for earlier English can be matched in historical German and Swedish as these languages share the same ancestor. Conversely, studying whether the observations for present-day German and Swedish carry over to PDE can tell us more about the (different) paths these languages have taken. Combined this would provide a clearer picture of the use of conditionals, both conjunctional and verb-initial, in (earlier) Germanic.

Chapter 4 identified several avenues of future research. As the study presented was exploratory, the first suggestion would be to further extend the set of discourse particles beyond *þa*, *þonne*, *nu* and *la*. It would furthermore be interesting to address in detail the reconstruction of the grammaticalization path that discourse particles

underwent, both in relation to their syntactic status in the particular clause types, and in relation to the development of the interplay between syntax and discourse organization in Old English. A study like this can throw more light on the early development of paratactic and hypotactic clause linking in Old English and Old Germanic more broadly, essentially following up the work presented in chapter 2.

From a more general perspective expansion of the periods under study – i.e. including all Old, Middle and Early Modern English data available in the respective corpora – could lead to additional insights in the development of correlative constructions and non-correlative potentials. Although the inclusion of especially the remaining OE and ME data has some disadvantages (see chapter 1, section 4), it could provide valuable information, especially on the development of these constructions in the EModE periods E1 (1500-1569) and E3 (1640-1710). The inclusion of PDE, to infer paths of change from the endpoint of the change, could possibly complete the picture. Here a closer investigation of Haegeman's (structural) treatment (2003, 2012) of PDE peripheral adverbial and conditional clauses and how this carries over to (OE) correlative constructions and non-correlative potentials is warranted as well.

A final question is how correlative constructions – and possibly their non-correlative potential counterparts – develop in related West Germanic V2 languages like Dutch and German, especially from a diachronic perspective. Axel (2007) already identifies the use of correlative constructions in Old High German, analysing them in a similar fashion as the Old English correlative constructions presented here, but other languages seem to be rather unexplored ground on this topic. The same applies to the use of correlative constructions in the present-day V2 languages. An initial glance at some data from Present-day Dutch (retrieved from the Corpus Gesproken Nederlands 2014)) indicates that not all factors influencing resumptive adverb use that have been identified for earlier English influence their use in Dutch: only subclause length seems to influence resumptive adverb use in the spoken language. Furthermore, the status of the first constituent is different than in OE as almost any first constituent can trigger V2 (cf. Zwart 2011, Broekhuis & Corver 2016). Here, further research could also venture into the field of psycholinguistic experiments. Native speakers of Dutch (and German) can be queried for their use of resumptive adverbs and other discourse

linking strategies in order to identify additional factors that influence resumptive adverb use. The results of such studies on correlative constructions in both earlier and present-day V2 language (stages) would significantly contribute to our knowledge of the (earlier) Germanic languages.

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APPENDIX 1

SPELLING VARIANTS

Table 1, 2 and 3 provide the spelling variants of the complementizers (conjunctions) *þa*, *þonne*, *(g)if*, *when* and *and* as given in the OED, Rissanen (1999, 2011) Hall (1960), Fischer (1992), Traugott (1992). The spelling variants are listed in the CorpusStudio format. The characters thorn 'þ', eth 'ð', ash 'æ' and yogh 'ȝ' are represented by +t, +d, +a and +g. The use of square brackets '[]' indicates that the complementizer could start with any of the given characters. The vertical bar '|' is used as a separator between the different spelling variants. The asterisk indicates that any character may precede or follow.

Table 1. Spelling variants Old English query

Conjunction	Spelling variants
þa	+[tTdD][aA]*|$+[tTdD][aA]\|+[tTdD]h[aA]*\|$+[tTdD]h[aA]
þonne	+[TtDd]onne|+[TtDd]on|+[TtDd]one|&+[TtDd]onne|+[TtDd]anne|+[TD]ONNE|+[TtDd]+anne|+[TtDd]enne|+[TtDd]en|+[TtDd]ene|[TtDd]onne|[TtDd]enne|[TtDd]anne
gif	*gif|*gyf|*Gif|*Gyf|*gief|*Gief|*GYF|*GIF|*gef|*Gef|*GEF|*gife|*Gife|*GIFE|*gib|*Gib|*GIB
when	*wh*n*|*hw*n*
and	[oO]nd|[aA]nd|[aA]d|[aA]n+t|[aA]n+d|[aA]nde|[aA]nt|[yY]and|[aA]ndd|[aA]end|+[aA]nd|[eE]nd|+[aA]nde|[eE]nt

Table 2. Spelling variants Middle English query

Conjunction	Spelling variants
þa	+[tTdD][aA]*|$+[tTdD][aA]*\|+[tTdD]h[aA]*\|$+[tTdD]h[aA]*|[TtDd]h[aA]|[TtDd][aA]|+[tTdD][oO]*|$+[tTdD][oO]\|+[tTdD]h[oO]*\|$+[tTdD]h[oO]*|[TtDd]h[oO]|[TtDd][oO]|+[TtDd]eo|+[TtDd]eoa

þonne	[TtDd]onne|+[TtDd]on*|+[TtDd]one|&+[TtDd]onne|+[TD]ONNE|+[TdDd]onn|$+[TtDd]onn|$+[TtDd]onne|[TtDd]hoen*|[TtDd]hon*|+[TtDd]an*|+[TtDd]+an*|[TtDd]an*|+[TtDd]han*|+[TtDd]anon|+[TtDd]anan|+[TtDd]anun|+[TtDd]anen|[TtDd]han*|[TtDd]ain]+[TtDd]han*|[TtDd]aun*|+[TtDd]ai|+[TtDd]am|+[TtDd]enne|+[TtDd]en*|+[TtDd]ene|+[TtDd]eon*|[TtDd]hen*|+[TtDd]eyne|[TtDd]heynne|[TtDd]en*|[TtDd]hein*|[TtDd]eon*|+[TtDt]yn*|[TtDd]yn*|[TtDd]hyn|[TtDd]in*|[TtDd]hin*|[Yy]an|[Yy]ain|[Yy]en*|[Yy]hen|[Yy]han|[Aa]n|[Aa]nd|+[Gg]an*|[Zz]an*
gif	*[Gg]if*|*[Gg]ib|*[Gg]ief|*GIB|*GIF*|*GIFE|+[Gg]if*|+[Gg]ief|+[Gg]iue|[Gg]iwe|[Gg]iue|+[Gg]ive|+[Gg]ihf|*[Gg]yf*||*GYF|+[Gg]yf*|*[Gg]yve|*[Gg]ef|*GEF|+[Gg]ef*|+[Gg]eif|+[Gg]eue|[Gg]eif|[Gg]eve|[Gg]ewe|+[Gg]eve|+[Gg]hef|+[Gg]uf|[Yy]ef*|[Yy]if*|[Yy]hef*|[Yy]eue|[Yy]f*|[Ii]f*|[Hh]if|+[TtDd]if|+[TtDd]iff|[Ee]f|[Nn]if
when	*wh*n*|[Ww]on*|[Ww]hone|[Ww]+ane|[Ww]an*|[Ww]hane|[Ww]en*|[Ww]eonne|[Ww]+gon|[Ww]hain|[Ww]haun|[Ww]aen|[Ww]ahan|[Ww]eh*|[Ww]+gon|[Ww]hyn*|[Ww]yhane|*hw*n*|*hu*n*|[Qq]uhone|[Qq]uan*|[Qq]uuan*|[Qq]uhan*|[Qq]uen*|[Qq]wen*|[Qq]when*|[Qq]uhen*|[Qq]won|[Qq]u+an|[Qq]wheyn|[Qq]whan*|[Qq]wan*|[Qq]wuan|[Qq]ien|[Qq]vane|[Qq]hwan*|[Qq]hwen*|+[Gg]wan*|+[Gg]wen|+[Gg]wan*|[Vv]an|[Vv]hen|[Vv]han*|[Vv]ien|[Uu]an|+[TtDd]wen|[Hh]enne|[Hh]+tenne
and	[oO]nd|[aA]nd|[aA]d|[aA]n+t|[aA]n+d|[aA]nde|[aA]nt|[yY]and|[aA]ndd|[aA]end|+[aA]nd|[eE]nd|+[aA]nde|[eE]nt

Table 3. Spelling variants Early Modern English query

Conjunction	Spelling variants
þa	+[tTdD][aA]*|$+[tTdD][aA]*|+[tTdD]h[aA]*|$+[tTdD]h[aA]*|[TtDd]h[aA]|[TtDd][aA]|+[tTdD][oO]*|$+[tTdD][oO]|+[tTdD]h[

	oO]*|$+[tTdD]h[oO]*|[TtDd]h[oO]|[TtDd][oO]|+[TtDd]eo|+[TtDd]eoa
þonne	+[TtDd]onne|+[TtDd]on*|+[TtDd]one|&+[TtDd]onne|+[TD]ONNE|+[TdDd]onn|$+[TtDd]onn|$+[TtDd]onne|[TtDd]hoen*|[TtDd]hon*|+[TtDd]an*|+[TtDd]+an*|[TtDd]an*|+[TtDd]han*|+[TtDd]anon|+[TtDd]anan|+[TtDd]anun|+[TtDd]anen|[TtDd]han*|[TtDd]ain]+[TtDd]han*|[TtDd]aun*|+[TtDd]ai|+[TtDd]am|+[TtDd]enne|+[TtDd]en*|+[TtDd]ene|+[TtDd]eon*|[TtDd]hen*|+[TtDd]eyne|[TtDd]heynne|[TtDd]en*|[TtDd]hein*|[TtDd]eon*|+[TtDt]yn*|[TtDd]yn*|[TtDd]hyn|[TtDd]in*|[TtDd]hin*|[Yy]an|[Yy]ain|[Yy]en*|[Yy]hen|[Yy]han|[Aa]n|[Aa]nd|+[Gg]an*|[Zz]an*
gif	*[Gg]if*|*[Gg]ib|*[Gg]ief|*GIB|*GIF*|*GIFE|+[Gg]if*|+[Gg]ief|+[Gg]iue|[Gg]iwe|[Gg]iue|+[Gg]ive|+[Gg]ihf|*[Gg]yf*||*GYF|+[Gg]yf*|*[Gg]yve|*[Gg]ef|*GEF|+[Gg]ef*|+[Gg]eif|+[Gg]eue|[Gg]eif|[Gg]eve|[Gg]ewe|+[Gg]eve|+[Gg]hef|+[Gg]uf|[Yy]ef*|[Yy]if*|[Yy]hef*|[Yy]eue|[Yy]f*|[Ii]f*|[Hh]if|+[TtDd]if|+[TtDd]iff|[Ee]f|[Nn]if|an if
when	*wh*n*|[Ww]on*|[Ww]hone|[Ww]+ane|[Ww]an*|[Ww]hane|[Ww]en*|[Ww]eonne|[Ww]+gon|[Ww]hain|[Ww]haun|[Ww]aen|[Ww]ahan|[Ww]eh*|[Ww]+gon|[Ww]hyn*|[Ww]yhane|*hw*n*|*hu*n*|[Qq]uhone|[Qq]uan*|[Qq]uuan*|[Qq]uhan*|[Qq]uen*|[Qq]wen*|[Qq]when*|[Qq]uhen*|[Qq]won|[Qq]u+an|[Qq]wheyn|[Qq]whan*|[Qq]wan*|[Qq]wuan|[Qq]ien|[Qq]vane|[Qq]hwan*|[Qq]hwen*|+[Gg]wan*|+[Gg]wen|+[Gg]wan*|[Vv]an|[Vv]hen|[Vv]han*|[Vv]ien|[Uu]an|+[TtDd]wen|[Hh]enne|[Hh]+tenne|whel|wile|whell|vhol|wol
and	*ad|an+t|an+d|ande|ant|yand|andd|ande|and|ond|end|+ande|ent

APPENDIX 2

FEATURES/VARIABLES

Variable	Description
Text type	Text type according to corpora websites
Date	Date (of manuscript) according to corpora websites
Latin translation	Is the text a translation from Latin? Yes/no.
AdvType	Conjunction type at the beginning of the subclause: *þa, þonne, gif, when, and* & Verb-initial (V1).
NegSub	Are any negated elements present in the clause? Yes/no.
PrtSub	Is there a particle present in the subclause? Yes/no.
SbjPosSub	Only if PrtSub is 'yes'. Position of subject and subclause particle: prt-sbj, sbj-prt, prt (no subject).
SbjTypeSub	Type of subject in the subclause.
MoodSub	Mood of the verb in the subclause: indicative, imperative, subjunctive, question, ambiguous.
VerbSub	Position of the finite verb: final/other.
LinkSub	Type of clausal link: conditional (*gif*), temporal (*þa*), other (causal, etc.).
SubWords	Length of the subclause in words including the conjunction.
SubConst	Length of the subclause in constituents, calculated as the number of nodes below CP-ADV that have more than one child.
NegMain	Are any negated elements present in the clause? Yes/no.
PrtMain	Is there a resumptive adverb present in the clause? Yes/no.
TypePrtMain	Only if PrtMain is 'yes'. Type of resumptive adverb in the main clause: *þa, þonne, other* (such as *swa, nu, siþþan, sona, þærrihte, þeah, ðær, eft, forðon*).
SbjMain	Type of subject in the main clause.

SbjPosMain	Order of resumptive adverb, finite verb and subject: VS, SV, VPrt, PV, V, SVPrt, SPV, PVS, PSV, VPrtS, VSPrt NB. This does not mean that the resumptive adverb (P), finite verb (V), particle (Prt) and subject (S) are adjacent in any of these possible orders. It indicates their order regardless of any intervening constituents.
Verb2Main	Replaced by structural type.
Mood	Mood of the verb in the main clause: indicative, imperative, subjunctive, question, ambiguous
Structural type	Structural type of the main clause: • V2 Res-Vfin (subclause, resumptive adverb – finite verb – subject …) • V2 WH-Vfin (subclause, wh-element – finite verb – subject…) • V2 Subclause-Vfin (subclause, finite verb – subject – …) • V2 Subclause-Vfin-Q (subclause, finite verb – subject – … QUESTION) • V2 Other (any other word orders that are V2: ne – Vfin – Acc/Obj, but not *Res – Vfin – Acc/Obj) • Res-Sbj-Vfin (subclause, resumptive adverb – subject (both Pro and NP) – finite verb – …) • Sbj-Vfin (subclause, subject – finite verb – …) • Other (any other word orders)
Translation	Translation of the Old English example.

APPENDIX 3

TEXTS USED IN CHAPTER 4

Text ID YCOE	Title
coaelhom.o3	Ælfric, Supplemental Homilies
coaelive.o3	Ælfric's Lives of Saints
coalex.o23	Alexander's Letter to Aristotle
coapollo.o3	Apollonius of Tyre
cobede.o2	Bede's History of the English Church
cobenrul.o3	Benedictine Rule
coblick.o23	Blickling Homilies
coboeth.o2	Boethius' Consolation of Philosophy
cobyrhtf.o3	Byrhtferth's Manual
cocathom1.o3	Ælfric's Catholic Homilies I
cocathom2.o3	Ælfric's Catholic Homilies II
cochronA.o23	Anglo-Saxon Chronicle A
cocura.o2	Cura Pastoralis
coducu2.o2	Documents 2 (O2)
coducu3.o23	Documents 3 (O2/O3)
coducu3.o3	Documents 3 (O3)
coepigen.o3	Ælfric's Epilogue to Genesis
cogregdH.o23	Gregory's Dialogues (H)
colacnu.o23	Lacnunga
colaece.o2	Leechdoms
colaw1cn.o3	Laws, Cnut I
colaw2cn.o3	Laws, Cnut II
colaw5ar.o3	Laws, Æthelred V
colaw6atr.o3	Laws, Æthelred VI
colawaf.o2	Laws, Alfred
colawafint.o2	Alfred's Introduction to Laws

colawnorthu.o3	Northumbra Preosta Lagu
colsigef.o3	Ælfric's Letter to Sigefyrth
colwstan1.o3	Ælfric's Letter to Wulfstan I
colwstan2.o3	Ælfric's Letter to Wulfstan II
comart3.o23	Martyrology, III
comarvel.o23	Marvels of the East
coorosiu.o2	Orosius
cootest.o3	Heptateuch
coprefcath1.o3	Ælfric's Preface to Catholic Homilies I
coprefcath2.o3	Ælfric's Preface to Catholic Homilies II
coprefcura.o2	Preface to the Cura Pastoralis
coprefgen.o3	Ælfric's Preface to Genesis
copreflives.o3	Ælfric's Preface to Lives of Saints
coquadru.o23	Pseudo-Apuleius, Medicina de quadrupedibus
cotempo.o3	Ælfric's De Temporibus Anni
cowsgosp.o3	West-Saxon Gospels

APPENDIX 4

SOME EXAMPLES OF PARTICLE TRANSLATIONS IN BEDE'S ECCLESIASTICAL HISTORY

We compare some examples from the Old English (OE) version of Bede's *Ecclesiastical history of the English Church and People* with the Latin original, to see whether the use of the particle *þonne* could in some sense be an overly slavish following of the Latin *Vorlage*, rather than an appropriate translation. Two of the three OE examples (i, ii) translate the adverb *ergo* 'therefore', which may also be used as a particle marking discourse management relations (Kroon 2011: 193). Interestingly, *ergo* represents a causal link in Latin, which fits well with the reference to the context that we argue for in this article, but *þonne* is a perfectly adequate OE rendering of it.

(i) Ono þætte þære menniscan geynde of ælmehteges Godes
if that to-the human nature by almighty God's
gefe gehealden æs, hwelce rehte mæg **þonne** bewered
gift reserved was by-what reason may PRT prohibited
beon from gife þæs halgan fulwihtes?
be from grace of-the holy baptism
Bede_1:16.76.1.698
Quod **ergo** naturae humanae ex omnipotentis Dei dono
what therfore nature human by almighty God gift
servatum est qua raione poterit a sacri baptismatis
reserved be what reason can from holy baptism
gratia prohibere?
privilege forbid
'On what account then can that which is preserved to the human race, by the free gift of Almighty God, be excluded from the privilege of baptism?'

(ii) Ono nu þæm mete ne bið clæne, þam þet mod ne bið
if PRT the food not is clean to-him the mood not is
clean, forhwon **þonne** þæt wiif þæt heo clæne mode of
belan why PRT thae woman that she with-clean mind by
gecynde þrowað, sceal hire in unclænnesse geteled beon?
nature suffered shall her in uncleanness accounted be
Bede_1:16.80.19.740
Si **ergo** ei cibus inmundus non est, cui mens
if therefore he food unclean not is who mind
inmunda non fuerit; cur quod munda mente mulier ex
unclean not be why what clean mind woman by
natura patitur, ei in inmunditiam reputetur?
nature suffer she in uncleanliness deem
'If then meat is not clean to him whose mind is unclean, why should that be accounted to the woman as uncleanness, which she with clean mind suffers by nature?'

In example (iii), *þonne* appears to be a translation of the Latin discourse particle *uero*, which is generally regarded as an adversative particle, although Kroon (1995: chapter 11) nuances this view considerably. An adversative meaning matches this context well, since the conditional stipulates what needs to be done if the rule set in the context is violated. *Þonne* thus seems an appropriate OE rendering of the Latin.

(iii) Gif **þonne** hwylce preostas & Godes þeowas synd butan
if PRT any priests and God's servants are outside
halgum hadum gesette, þa ðe heo from wiffum ahabban
holy orders situated which that she from wives have
ne mæge, nimen heom wiif & heorea ondleofiene utan
not may take themselves wifves and their stipends without
onfongen
receive
Bede_1:16.64.25.605
Siqui uero sunt clerici extra sacros ordines constitute, qui
if however are clerics outside holy orders appointed who
se continere non possunt, sortiri uxores debent, et stipendia
themselves restrain not can choose wife must and stipends
sua exterius accipere
their external obtain
'If then any priests and servants of God, not included in the holy brotherhoods, cannot live without wives, let them take to them wives and receive a maintenance without.'

SAMENVATTING

In dit proefschrift onderzoek ik de diachrone ontwikkeling en karakteristieke kenmerken van correlatieve constructies beginnend met *þa* ‘toen’, *þonne* ‘toen’, *(g)if* ‘als’ en *when* ‘als, wanneer’ vanaf het Oudengels (450-1150). De constructies in (1–2) geven twee voorbeelden weer met *þa* en *(g)if*.

(1) ***þa₁*** *heo* ***þa₃*** *to þæm gemote ferdon,* **þa₂** cwomon heo ærest
toen zij toen naar die ontmoeting gingen toen kwamen zij eerst
to summum aancoran,
bij een kluizenaar
‘Toen zij onderweg waren naar de ontmoeting, kwamen zij eerst aan bij een kluizenaar,’
Bede_2:2.100.19.941

(2) ***gif₁*** *he* ***ðonne₃*** *oðierne & orige weorðe,* **þonne₂** bið
als hij [de dief] dan wegrent en verdwenen is dan is
he wites scyldig
hij [de vanger] straf schuldig
‘Als de dief dan wegrent en verdwijnt, is de vanger verantwoordelijk voor de boete.’
LawIne:28.1.78

Voorbeeld (1) is een bijwoordelijke bijzin met conjunctie *þa* in de aanloop (genummerd met subscript 1). Voorbeeld (2) begint met een conditionele *(g)if*-bijzin. In beide voorbeelden wordt de bijzin gevolgd door een zogenoemde Verb-Second (V2) hoofdzin met in de eerste positie een resumptief bijwoord, *þa* of *þonne* (genummerd met subscript 2). V2-talen, zoals het Nederlands en Duits, maar ook het Oudengels, plaatsen de persoonsvorm op de tweede positie in hoofdzinnen. De eerste positie is multifunctioneel en kan in plaats van het onderwerp onder andere ook een

tijdsbepaling, lijdend voorwerp of bijzin bevatten, zolang deze bestaat uit slechts één constituent (Fischer et al. 2000: 110–4, Zwart 2011: 281, Broekhuis & Corver 2016: 1215, 1298–99). Een derde (optioneel) gebruik van *þa* en *þonne* in correlatieve constructies is als discourse partikel (genummerd met subscript 3). Het gestapeld gebruik van conjunctie, resumptief bijwoord en discourse partikel zorgt ervoor dat de temporele narratieve volgorde in voorbeeld (1) extra wordt benadrukt. In conditionele correlatieve constructies zoals in voorbeeld (2) benadrukt deze opstapeling de conditie waaraan moet worden voldaan.

Oudengelse correlatieve constructies van het bovengenoemde type voelen zich dus zeer thuis in een V2-grammatica (met multifunctionele eerste positie, Spec, CP): de bijwoordelijke bijzin wordt geadjungeerd aan CP. Het goedontwikkelde deiktische systeem waaruit de resumptieve bijwoorden voortkomen die functioneren als discourseverbindende elementen in de eerste positie van de hoofdzin ondersteunt het gebruik van correlatieve constructies (Kiparsky 1995, van Kemenade, Milicev & Baayen 2008, Los & van Kemenade forthcoming). Het gebruik van resumptieve bijwoorden onderscheidt correlatieve constructies van vergelijkbare niet-correlatieve constructies zoals voorbeeld (3) of het Oudengelse voorbeeld (4) waarin de hoofdzin begint met een voorzetselcombinatie. Het gebruik van resumptieve bijwoorden is het belangrijkste karakteristiek van en de hoofdreden om deze constructies als correlatief te bestempelen. Resumptieve bijwoorden vatten de voorgaande zin samen en plaatsen de gebeurtenis in de hoofdzin op de voorgrond. Ze trekken de aandacht van de lezer/toehoorder en dwingen tekstuele samenhang af (van der Horst 1981: 39–41, Enkvist 1986, van Kemenade & Los 2006, Baker 2007: 99, van der Horst 2008: 538–9, Los 2009, Wårvik 2013).

(3) If you like this cat, (then) you should adopt her.
als je leuk.vinden deze kat dan je moet adopteren haar
'Als je deze kat leuk vindt, moet je haar adopteren.'

(4) *Đonne he oferstæled bið, & him gereaht bið ðæt he oðrum mæg*
toen hij overtuigd is en him uitgelegd is dat hij anderen mag
nytt bion on ðam ðe him mon ðonne bebeodeð, mid his mode
nuttig zijn in dat dat hem man dan commandeert met zijn geest
he hit sceal fleon
hij het moet vluchten
'Als hij is overtuigd en het is hem aangetoond dat hij van nut kan zijn voor anderen in de positie die hem wordt aangeboden, moet hij het ontvluchten in zijn geest, […]'
CP:6.47.16.265

In het licht van eerder onderzoek naar de oudere Germaanse talen door Kiparsky (1995) en Eythórsson (1995) analyseer ik correlatieve constructies als constructies met een paratactische oorsprong, die voortbestaat in vergelijkbare niet-correlatieve constructies zoals voorbeeld (3) uit het hedendaags Engels (Quirk et al. 1985, Haegeman 2003, 2012). De structurele kenmerken van correlatieve constructies ontstaan in de verschuiving van een paratactische (nevenschikkend) naar een hypotactische (onderschikkende) zinsstructuur (Kiparsky 1995). Tegelijkertijd leveren correlatieve constructies zelf ook bewijs voor de eerdere paratactische structuur in de vroege Germaanse talen. Het samenspel tussen de vooropstaande bijzin, de eerste positie in de V2 hoofdzin (Spec, CP), en het (optionele) drievoudige gebruik van de multifunctionele elementen *þa* en *þonne*, zorgen ervoor dat correlatieve constructies kunnen functioneren als één van de retorische strategieën waarmee de Oudengelse discourse wordt gestructureerd. Correlatieve constructies ondersteunen schrijvers in het overbrengen van hun boodschap: de vooropstaande bijzin presenteert de context waartegen de gebeurtenis in de hoofdzin moet worden afgezet. Deze (correlatieve) karakteristieken van de constructie komen echter alleen voor wanneer de bijwoordelijke of conditionele bijzin voorop staat: deze volgorde geeft de robuuste semantisch-pragmatische samenhang tussen de bij- en hoofdzin het meest accuraat of iconisch weer (zie ook Dancygier & Sweetser 2005).

De taalkarakteristieken die het gebruik van correlatieven constructies faciliteren waren echter alleen beschikbaar gedurende de Oudengelse periode. Elk hoofdstuk in dit proefschrift behandelt de verschillende typen en/of kenmerken vanuit zowel een diachroon als synchroon perspectief.

CORRELATIEVE CONSTRUCTIES EN HET GEBRUIK VAN RESUMPTIEVE BIJWOORDEN IN HET VROEGERE ENGELS

In **hoofdstuk 2** onderzoek ik correlatieve constructies en vergelijkbare niet-correlatieve constructies waarin de bijzin begint met *þa*, *þonne*, *(g)if* en *when* in het Oudengels, Middelengels en Vroegmodern Engels. Hierbij heb ik gebruik gemaakt van data uit drie corpora (in totaal 8.989 voorbeelden): het *York-Toronto-Helsinki Parsed Corpus of Old English Prose* (YCOE, Taylor et al. 2003), het *Penn-Helsinki Parsed Corpus of Middle English*, tweede editie (PPCME2, Kroch & Taylor 2000) en het *Penn-Helsinki Parsed Corpus of Early Modern English* (PPCEME, Kroch, Santorini & Delfs 2004). In het hoofdstuk identificeer ik de constructie-interne en -externe variabelen die het gebruik van resumptieve bijwoorden beïnvloeden en presenteer ik een gedetailleerde analyse van hun gebruik. Hoewel Mitchell (1985a, b) in zijn monumentale werk over het Oudengels verschillende typen correlatieve constructies behandelt, is hoofdstuk 2 het verslag van het eerste onderzoek naar de oorsprong, structurele kenmerken en diachronische ontwikkeling van correlatieve constructies.

De resultaten laten zien dat *þa* correlatieve constructies in het Oudengels meestal temporele relaties in narratieve teksten beschrijven waarin zij voltooide gebeurtenissen in het verleden weergeven (zie ook Mitchell 1985b). *Þonne* correlatieve constructies kunnen naast temporele ook meer causale, concessieve en conditionele relaties weergeven. Zij komen zowel voor in narratieve als Bijbelse en morele teksten, waarbij de laatste teksten teksten zijn waarin vaak moreel juist gedrag wordt beschreven. Tijdens de Middelengelse periode nemen correlatieve constructies beginnend met *when* de discourse functie en genrevoorkeuren van *þa* en *þonne* correlatieven over. De structureel vergelijkbare *(g)if* correlatieve constructies geven conditionele relaties weer in teksten van een instructieve of juridische aard.

Door middel van een uitgebreid variationistisch onderzoek (gebruikmakend van logistische regressies) heb ik verschillende constructie-interne en -externe variabelen geïdentificeerd die invloed hebben op het gebruik van resumptieve bijwoorden (dat wil zeggen de keuze tussen een correlatieve constructie en hun niet-correlatieve tegenhanger), met name in het Oudengels. De significantie en het (veranderende) gewicht van deze variabelen in een serie van logistische regressieanalyses heeft laten zien hoe de morfosyntactische en interne kenmerken van correlatieve constructies vorm krijgen en veranderen, waardoor het gebruik van correlatieve constructies afneemt vanaf het Middelengels. Resumptieve bijwoorden worden significant vaker gebruikt in hoofdzinnen met de persoonsvorm in de indicatief/aantonende wijs. Ook worden zij significant vaker gebruikt wanneer de bijzin een discourse partikel bevat, als in voorbeelden (1–2) hierboven. Daarnaast neemt bij het gebruik van nieuwe subjecten, subjecten zonder duidelijke referent, eigennamen of wanneer het subject ontbreekt het gebruik van resumptieve bijwoorden significant toe. De lengte van de bijzin bevordert tevens significant het gebruik van resumptieve bijwoorden. De significantie van de constructie-externe variabele *tekst type* laat zien dat resumptieve bijwoorden significant vaker voorkomen in teksten met een sterk retorisch/argumentatief karakter, zoals wetenschappelijke teksten of teksten die moralistisch van aard zijn. Daarnaast worden ook in vertaalde teksten significant meer resumptieve bijwoorden gebruikt. Mogelijk wilde de vertaler de tekst verengelsen om hiermee de lezer tegemoet te komen.

Het gebruik van resumptieve bijwoorden gaat grotendeels verloren in de overgang naar het Middelengels en is onderdeel van het algehele verval van het gebruik van de Oudengelse demonstratieve pronomina en bijwoorden als elementen die discourserelaties benadrukken. Hun verval zorgt ervoor dat de aanleiding voor het gebruik van V2 in deze constructie verdwijnt. Dit dwingt de hoofdzinnen in correlatieve constructies en hun niet-correlatieve tegenhangers al vroeg gebruik te gaan maken van de hoofdzinvolgorde Subject-Persoonvorm die de overhand krijgt na het verval van V2 in het laat Middelengels/Vroegmodern Engels (zie ook Fischer et al. 2000, Haeberli 2002, Allen 2006, Los 2009, van Kemenade & Westergaard 2012, Los 2012a). Het gebruik van resumptieve bijwoorden vanaf het Middelengels is met

name gerelateerd aan voorkeuren binnen bepaalde genres waarin schrijvers ervoor kiezen om expliciete discourserelaties te benadrukken, zoals in wetenschappelijke teksten.

CONDITIONELE CONSTRUCTIES IN HET VROEGERE ENGELS

In **hoofdstuk 3** besteed ik aandacht aan conditionelen, een specifiek type binnen de grotere groep van correlatieve constructies waarin het (optionele) gebruik van resumptieve bijwoorden ook in het hedendaags Engels nog voorkomt, zie voorbeeld (3). Dit hoofdstuk bouwt voort op de bestaande literatuur over conditionelen (onder andere Iatridou & Embick 1994, Bhatt & Pancheva 2006, Van den Nest 2010 en Auer & Lindström 2011) door onderzoek te doen naar de verdeling in gebruik tussen *(g)if* conditionelen, *and* conditionelen (met als betekenis 'als, vooronderstel(t) dat, onder de voorwaarde dat') en conditionelen waarin het werkwoord voorop staat (zogenoemde V1-conditionelen) in het Oudengels, Middelengels en Vroegmodern Engels. Daarnaast geeft het een gedetailleerde kwantitatieve en kwalitatieve analyse van hun oorsprong en latere beperkingen, het gebruik van open versus onwaarschijnlijke/hypothetische voorwaardelijke bijzinnen, hun distributie binnen genres en de variabelen die het gebruik van het resumptief bijwoord *þonne*/*then* beïnvloeden.[74] Het hoofdstuk maakt gebruik van de dataset van *(g)if* conditionelen zoals verzameld in hoofdstuk 2. De bestaande dataset is verder uitgebreid met *and* en V1-conditionelen uit dezelfde corpora en beslaat in totaal 5.092 voorbeelden. Daarnaast heb ik voor een steekproef van 472 voorbeelden uit deze dataset handmatig bepaald – gebaseerd op de context – of de conditie weergegeven in de voorwaardelijke bijzin open of onwaarschijnlijk/hypothetisch was.

De diachrone analyse van zowel conjunctieve als V1-condtionelen laat zien dat conjunctieve conditionelen over alle periodes het meest frequent worden gebruikt. Daarnaast overtreft het aantal *(g)if* conditionelen altijd het aantal *and* conditionelen. *(G)if* conditionelen kunnen zowel open als onwaarschijnlijke/hypothetische

[74] In open voorwaardelijke bijzinnen staat de volbrenging van de voorwaarde niet vooraf vast. In onwaarschijnlijke/hypothetische voorwaardelijke bijzinnen kan de voorwaarde mogelijk worden volbracht, maar zal dit niet gebeuren óf is volbrenging van de voorwaarde onmogelijk.

voorwaardelijke bijzinnen bevatten, zelfs in het Oudengels. Vergeleken met hun conjunctieve tegenhangers, spelen V1-condtionelen een marginale rol in diachroon opzicht. De resultaten laten daarnaast zien dat de restrictie van V1-conditionelen in het hedendaags Engels tot onwaarschijnlijke/hypothetische voorwaardelijke bijzinnen niet het gevolg is van het feit dat V1-conditionelen minder vaak werden gebruikt in het vroegere Engels (zie ook Van den Nest 2010). In dit hoofdstuk verbind ik deze observatie aan 1) de sterke positie van de *(g)if* condionelen vanaf het Oudengels; 2) de opkomende beperkingen op verplaatsing naar C volgend op het verval van V2 in het laat Middelengels/Vroeg Modernengels (Fischer et al. 2000, Haeberli 2002, Allen 2006, Los 2009, van Kemenade & Westergaard 2012, Los 2012a); en 3) de ontwikkeling van de modale hulpwerkwoorden en de opkomst van het hulpwerkwoord *do* in de zestiende eeuw (Ellegård 1953, Lightfoot 1979, Roberts 1985, Kroch 1989). Een hierop volgende verdere ontwikkeling na de negentiende eeuw beperkt de hulpwerkwoordkeuze in de voorwaardelijke bijzin in V1-conditionelen verder tot *had*, *were* en *should* (Denison 2008), waardoor de voorwaardelijke bijzin alleen nog een onwaarschijnlijke/hypothetische situatie kan weergeven.

Het gebruik van het resumptieve bijwoord *then* in *(g)if* en V1-conditionelen wordt – net zoals in correlatieve constructies – beïnvloed door verschillende factoren en loopt vanaf de overgang naar het Middelengels terug.[75] Voortbouwend op de resultaten uit hoofdstuk 2, identificeer ik (aantonende, gebiedende, aanvoegende) *Wijs* en *Lengte* als twee invloedrijke factoren. Hoewel er vaak is geopperd dat conditionelen een voorkeur hebben voor de aanvoegende wijs in de bij- of hoofdzin (Mitchell 1985b, Fischer 1992, Bhatt & Pancheva 2006, Van den Nest 2010), tonen mijn bevindingen aan dat conditionaliteit niet hoeft te worden ondersteund door een specifieke wijs. In de hoofdzin wordt er minder variatie in wijs geobserveerd bij het gebruik van een resumptief bijwoord: de aantonende wijs geniet de voorkeur. In de latere periodes, met name in het Vroegmodern Engels, beïnvloedt de toenemende lengte van de voorwaardelijke bijzin significant het gebruik van *then* in zowel *(g)if*

[75] Resumptieve bijwoorden komen zeer weinig voor in *and* conditionelen, die in dit deel van het onderzoek verder buiten beschouwing zijn gelaten.

als V1-conditionelen. Resumptieve bijwoorden worden in het Vroegmodern en Hedendaags Engels alleen gebruikt wanneer zij een duidelijke functie hebben als signaal naar de lezer/toehoorder dat er iets belangrijks zal volgen of als verduidelijking van een afleidbare relatie tussen bij- en hoofdzin (zie ook Huddleston & Pullum 2002). Bekeken vanuit een reeds vastgesteld psycholinguïstisch effect zijn deze observaties niet onverwacht: de lengte van een uiting (hier, de voorwaardelijke bijzin) vergroot de verwerkingslast op het menselijk brein (zie ook Arnold et al. 2000 met betrekking tot woordvolgordevariatie). Een resumptief bijwoord kan deze verwerkingslast verlagen. De resultaten laten daarnaast zien dat wanneer het aankomt op voorkeuren binnen genres, conjunctieve conditionelen altijd de voorkeur genieten boven V1-conditionelen. In alle periodes heeft het gebruik van *(g)if* conditionelen een voorkeur voor gebruik in Bijbelse, morele, wetenschappelijke en wetsteksten. *And* conditionelen komen vaker voor in narratieve, morele, wetenschappelijke en gesproken teksten, met name in het Vroegmodern Engels. Het gebruik van V1-conditionelen laat overeenkomsten zien met de hedendaagse V2-talen Zweeds en Duits met een voorkeur voor gebruik in wetenschappelijke en instructieve/regulatorische teksten (zie ook Auer & Lindström 2011). Deze observaties laten zien dat er bepaalde genrevoorkeuren bestaan die niet kunnen worden toegeschreven aan de gebruikte taal of gebruiksfrequentie.

DISCOURSE PARTIKELS IN HET OUDENGELS

Hoofdstuk 4 presenteert een analyse van het gebruik van de (bij-)zin-interne Oudengelse discourse partikels *þa*, *þonne* ‘toen’, *nu* ‘nu’ en de interjectie *la* ‘lo/kijk!’, een relatief weinig onderzocht fenomeen. De hoofdfunctie van deze discourse partikels is gerelateerd aan discourse management, dat wil zeggen het beheer van de zogeheten *common ground* (gedeelde kennis) door middel van verwijzingen naar de context. Ook markeren discourse partikels de scheidslijn tussen oude en nieuwe informatie binnen de zin (zie ook Thurmair 1989, van Kemenade & Los 2006, Grosz 2016). Hun gebruik in correlatieve (en andere) constructies is daarom niet onverwacht. Hoofdstuk 4 biedt een kwalitatieve verkennende studie gericht op het verkrijgen van een uitgebreider karakterisering van deze discourse partikels in het

Oudengels. Hiervoor heb ik het gebruik van discourse partikels onderzocht in vijf zinstypen binnen periodes O2 (850-950), O3 (950-1050) en O23 van het YCOE corpus: 1) vragende hoofdzinnen; 2) *hwæt* 'wat' exclamatieven; 3) imperatieven; 4) correlatieve bijzinnen; en 5) zinnen beginnend met *that* 'dat'. De totale dataset beslaat 1.962 voorbeelden. De resultaten geven kwalitatief inzicht in het gebruik van de discourse partikels *þa*, *þonne*, *nu* en *la* in het Oudengels.

Uit de resultaten blijkt dat de Oudengelse discourse partikels sterke overeenkomsten vertonen met hun Nederlandse (Vismans 1994, Foolen, 1995, 2006) en Duitse tegenhangers (Thurmair 1989, Coniglio 2011 Zimmerman 2011). *Þa*, *þonne*, *nu* en *la* versterken het beheer van de *common ground* tussen spreker en toehoorder(s), hoewel het gebruik van *la* diverser is. De partikels vormen een link naar de context. Uit de analyse blijkt dat elk discourse partikel een specifieke houding van de spreker weergeeft die samenhangt met het zinstype (en de illocutionaire status daarvan) waarin het partikel voorkomt. Het enige zinstype waarin de verschillende discourse partikels geen verschil in betekenis laten zien, zijn vraagzinnen: hierin heeft het gebruik van *þonne*, *nu* en *la* (maar niet *þa*) als effect dat de vraagzin verrassing of afkeuring uitdrukt.

Uit de structurele analyse van de discourse partikels blijkt dat hun positie binnen de verschillende zinstypes hetzelfde is. Een uitzondering hierop zijn die gevallen waarin *þa* of *la* onderdeel uitmaakt van een exclamatieve combinatie aan het begin van de zin. De resultaten voor vraagzinnen en *hwæt* exclamatieven bevestigen daarnaast de observaties uit van Kemenade & Los (2006) betreffende de distributie van discourse-oude en discourse-nieuwe subjecten en de functie van deze partikels als 'afbakening' van het domein van oude en nieuwe informatie binnen de zin: het partikel volgt discourse-oude subjecten en gaat vooraf aan subjecten die nieuw in de discourse zijn geïntroduceerd.

De combinatie van een vaste syntactische positie, subtiele pragmatische betekenissen gerelateerd aan de illocutionare status van de zin, en een sterke discourse verbindende functie ging verloren in de overgang naar het Middelengels. Het deiktische systeem verviel, inclusief de etymologisch verwante set van bijwoorden van tijd, plaats en wijze. Tegelijkertijd daalde ook het gebruik van polyseme

elementen: het gebruik van *þa* als conjunctie, partikel en resumptief bijwoord verdween (Fischer 1992, zie ook hoofdstuk 2), terwijl *þonne* zich ontwikkelde tot *then* en (van tijd tot tijd) nog wordt gebruikt als resumptief bijwoord in conditionelen zoals in voorbeeld (3) hierboven. Het gebruik van *þonne* als discourse partikel en conjunctie zijn goeddeels verloren gegaan. Deze ontwikkelingen – in combinatie met de enorme veranderingen in de populatie als gevolg van de Scandinavische en Franse invasies die zowel een fonologische als grammatikale impact (in het geval van het Scandinavisch) op de taal hadden (van Kemenade 2009) – veroorzaken de verdwijning van onbenadrukte elementen met subtiele pragmatische betekenissen zoals discourse partikels.

CONCLUSIE

De onderzoeken in hoofdstuk 2, 4 en 4 leiden tot een aantal algemene conclusies. Het gebruik van correlatieve constructies in het vroegere Engels illustreert de bestaande interactie tussen discourse en syntaxis. Mijn onderzoek heeft aangetoond dat correlatieve constructies – gebruikmakend van morfosyntactische karakteristieken die alleen beschikbaar waren gedurende de Oudengelse periode – structuur aanbrengen in de discourse op zowel zins- als tekstniveau. Dit gebeurt door middel van een subtiel samenspel tussen de beschikbare zinsstructuur en de discourse structurerende elementen die worden gebruikt als geheugensteuntje, expliciete discourse linkers en illocutiemanagers, zoals resumptieve bijwoorden en discourse partikels.

Dit proefschrift heeft vastgesteld dat correlatieve constructies schrijvers en sprekers ondersteunen in het overbrengen van hun boodschap: de vooropgeplaatste bijwoordelijke/voorwaardelijke bijzin geeft de (achterliggende) context waartegen de hoofdzin moet worden geïnterpreteerd. Niet voor niks komen correlatieve constructies (vergeleken met hun niet-correlatieve tegenhangers) vaker voor in teksten met een sterk retorisch of argumentatief karakter (zie ook hoofdstuk 2). Deze discourse structurerende functie komt juist typisch voor in constructies met vooropgeplaatste bijwoordelijke en voorwaardelijke bijzinnen (zie ook Haegeman 2003, 2012). In de correlatieve en conditionele constructies die onderzocht zijn in dit proefschrift geeft deze volgorde tevens de robuuste semantisch-pragmatische relatie tussen de twee

zinnen het meest nauwkeurig weer (zie ook Dancygier & Sweetser 2005). Daarnaast vergemakkelijkt het hun interpretatie omdat de gebeurtenissen worden weergegeven in de volgorde waarin deze zouden plaatsvinden in de tijd. Dit onderzoek heeft aangetoond dat deze manier van structuur aanbrengen in de discourse het gebruik van elementen die samenhang promoten, zoals resumptieve bijwoorden, discourse partikels en soms de structurele mogelijkheden, ondersteunt. Dit alles ontbreekt wanneer de bijzin volgt op de hoofdzin.

Correlatieve constructies maken gretig gebruik van de (structurele) mogelijkheden die voortkomen uit het ontstaan van V2 in de overgang van parataxis naar hypotaxis (Kiparsky 1995). Oudengels correlatieve bijzinnen (inclusief voorwaardelijke bijzinnen) zijn CP-gerelateerd aan de hoofdzin. Het idee dat vooropgeplaatste correlatieve bijzinnen gebruik maken van gerelateerdheid (aan CP) in plaats van syntactische onderschikking bestaat voor vele talen, waaronder het Hedendaags Engels (Haegeman 2003, Bhatt & Pancheva 2006, Lipták 2009, Haegeman 2012). De beschikbaarheid van de zinsinitiële positie Spec, CP maakt het mogelijk om resumptieve bijwoorden te gebruiken om de CP-gerelateerde bijzin (semantisch) te verbinden aan de hoofdzin. Maar zelfs zonder resumptieve bijwoord kunnen vergelijkbare niet-correlatieve constructies zoals het Oudengelse voorbeeld (5) het beste als CP-gerelateerd worden geanalyseerd.

(5) þa ða he ðagn wæs, he mette his feond,
toen toen hij onderdaan was hij ontmoette zijn vijand
‘Toen hij een onderdaan was, ontmoette hij zijn vijand.’
CP:50.393.4.2665

Op zinsniveau ondersteunen resumptieve bijwoorden in Spec, CP de structurerende functie van correlatieve constructies. Net zoals andere Oudengelse discourseverbindende elementen – zoals het Oudengelse *se* ‘de, dat’ paradigma en de etymologische verwante set van bijwoorden van tijd, plaats en wijze – verbinden resumptieve bijwoorden de inhoud van hoofdzin aan die van de voorafgaande bijzin. Ze vatten de voorgaande context samen en brengen de gebeurtenis of consequentie (in

conditionelen) in de hoofdzin naar voren. Op tekstniveau bewerkstelligen resumptieve bijwoorden tekstuele cohesie (Los 2009) door te functioneren als leidraad voor de lezer, met name in vertaalde teksten waarin resumptieve bijwoorden significant vaker worden gebruikt. Mijn onderzoek heeft laten zien dat deze toename los staat van de originele (Latijnse) tekst en waarschijnlijk het gevolg is van een poging van de vertaler om de tekst te verengelsen. Deze overdreven focus op het creëren van samenhang kan daarom leiden tot de impressie van overcodering.

Vanuit de gedachte dat het gebruik van het resumptieve bijwoord in Spec, CP cruciaal is voor het gebruik van correlatieve constructies (inclusief conditionelen) zou men kunnen veronderstellen dat het dramatische verval van deze constructie in het Middelengels hand in hand gaat met het verval van V2. Dit proefschrift heeft echter laten zien dat dit niet het geval is: het geobserveerde verval van typisch correlatieve constructies zoals (1) waarin een resumptief bijwoord de hoofdzin introduceert, gaat verassend genoeg enkele eeuwen vooraf aan het verval van V2. De verdwijning van correlatieve constructies is het gevolg van het verval van de resumptieve bijwoorden als onderdeel van de ineenstorting van het Oudengelse paradigma van demonstratieve bijwoorden en pronomina (Los & van Kemendade forthcoming). Dit veroorzaakte vanaf 1250 een verschuiving in het systeem van zinsverbindende elementen (Lenker 2007 aangehaald in Los 2012a). Hierdoor kon V2 niet langer worden gebruikt in correlatieve constructies. Het gevolg hiervan is dat correlatieve constructies gedwongen werden de hoofdzin te beginnen met het subject en de nieuw Subject-Persoonvorm-volgorde te omarmen voordat deze de regel werd na het verval van V2 in het laat Middelengels/Vroegmodern Engels (zoals vastgesteld door Fischer et al. 2000, Haeberli 2002, Allen 2006, Los 2009, van Kemenade & Westergaard 2012, Los 2012a). Mijn resultaten hebben laten zien dat het gebruik van de vergelijkbare niet-correlatieve constructies – met name die constructies die beginnen met het subject, zie ook voorbeeld (6) – toeneemt in de overgang van het Oudengels naar het Middelengels. Deze constructies komen zeer frequent voor in het Middelengels en de latere periodes, hoewel er ook laagfrequente andere opties bestaan.

(6) When he came in and saw such a place, he was amazed,
toen hij kwam binnen en zag zo een plek hij was verbaasd
'Toen hij binnenkwam en deze plek zag, was hij verbaasd'
armin-e2-h-43.270

Tegelijkertijd verdwijnt het gebruik van *þa* en *þonne* als discourse partikels en als conjuncties aan het begin van de bijzin. Een in essentie lexicaal verlies van *þa* en *þonne* in de overgang van het Oudengels naar het Middengels veroorzaakte dus het verval van correlatieve constructies. Omdat – wat ik benoem als – temporele en conditionele vergelijkbare niet-correlatieve constructies nog steeds paratactische zijn in het Hedendaags Engels lijkt de onderliggende relatie tussen de twee zinnen onaangetast te zijn. Resumptieve bijwoorden komen nog steeds voor in het Hedendaags Engels, maar hun gebruik veroorzaakt geen inversie van het subject en de persoonsvorm (V2) zoals het dit wel deed in het Oudengels. Het gebruik van resumptieve bijwoorden in de later periode is gerelateerd aan voorkeuren binnen genres waarin schrijvers expliciete relaties binnen de discourse willen weergeven.

CURRICULUM VITAE

Meta Links was born in Delft (the Netherlands) on 28 August 1985 and grew up in Nootdorp. After attending secondary school in Voorburg (1997-2003), she studied Cultural and Social Development at the Hogeschool Leiden (Higher Vocational Eduation) between 2003-2005. She moved to Nijmegen in 2005 to start her BA in English Language and Culture (2008, with distinction) at the Radboud University, followed by her MA in Engish Language and Culture (2010, with distinction) and her MA in teaching English at secondary school level (2011). In the year that followed, she worked as a teacher at the Stedelijke Scholengemeenschap Nijmegen and as a translator for technical/medical texts. Meta started her PhD on correlative constructions in earlier English at department of English Language and Culture (Radboud University) in September 2012. During her PhD, she also taught the courses *Grammar and Translation*, *Writing English*, and *Language Change*, and helped organise several meetings for PhD students and two conferences. In October 2017, Meta started working as the official secretary for the Examinations Board and Programme Committee of the College and Graduate School of Child Development and Education at the University of Amsterdam.