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DISSERTATION

Titel der Dissertation

Old English *se*: from demonstrative to article. A usage-based study of nominal determination and category emergence

Verfasserin

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to Claudia Wiskocil (1959 – 1999)
my first true mentor

"Change is inevitable –
except from a vending machine" (Robert C. Gallagher)

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List of Abbreviations

Gem	*German*
Gmc	*Germanic*
Got	*Gothic*
IE	*Indo European*
ME	*Middle English*
MHG	*Middle High German*
ModE	*Modern English*
OE	*Old English*
OF	*Old Frisian*
OHG	*Old High German*
ON	*Old Norse*
OS	*Old Saxon*
PA	*Parker Chronicle*
PB	*Peterborough Chronicle*
PDE	*Present Day English*
POSS	*Possessive Pronoun*
PreOE	*PreOldEnglish*
PrGem	*ProtoGermanic*
NP	*Noun Phrase*
Dem	*demonstrative*
CN	*common noun*
PN	*proper noun*

> *From around the sixth century on, all of the West Germanic languages began to use their distal ‚simple' demonstrative in functional and semantic slots which nowadays we would associate with the definite article. (McColl Millar 2000: 279)*

1. Introduction

This thesis is a usage-based study of the Old English demonstrative *se* and its development into the definite article *the*. In it, patterns of nominal determination in Old English and their influence on the phenomenon of category emergence will be discussed. I intend to hypothesize about the reasons behind a possible grammar change – from a grammar that has no definite article to a grammar that employs this functional category –, suggesting a possible WHEN and WHY. Overall, this thesis tries to contribute to the ongoing debate about the existence of a definite article in Old English. A central aim in this regard is to set up clear, testable criteria for 'articlehood' and to check if these criteria can be successfully applied to an older language stage. It will be shown that demarcating the category 'article' from other categories like the 'demonstrative' is by no means a simple task. Generally, my discussion of the emergence of the linguistic category 'article' will be embedded into a broader discussion of linguistic gradience, diachronic gradualness, grammaticalization and reanalysis.

Further, I will argue that the article category has developed due to the previous emergence of a positional, syntactic, lexically underspecified 'determination slot'. Based on the results of the empirical investigation, it will be suggested that the speakers of early Old English already employed this 'slot' in their grammars, which is seen as a necessary precondition and trigger for the development of the definite article. It will thus be suggested that the change from demonstrative to definite article is a change which was driven by a "lexically underspecified [syntactic] construction" (Van de Velde 2010: 291) – in other words, the grammaticalization of a schematic construction with a slot (Trousdale & Traugott 2010: 12; cf. Bybee 2003a,b, 2007; De Smet 2008).

Next to being influenced by semantic-pragmatic factors, the change is conceptualized as a so-called "form-driven change" (Fischer 2007: 66), where mostly formal 'system-internal' factors (e.g. structural regularization as a principle of economy, formal pattern recognition and transfer) are responsible for the grammaticalization of the demonstrative.

In addition to that, I will demonstrate that this grammaticalization of a schematic construction was mostly triggered by analogical reasoning (cf. Fischer 2007; De Smet 2010). Analogy will be treated as a "psychologically real phenomenon which has causal efficiency both in language as in culture" and is not simply a "descriptive device" (Itkonen 2005: xii). Analogy will be conceptualized in a wider sense[1] as 'rule generalization/ extension' at a higher meta-linguistic level (Traugott & Trousdale 2010: 36; Fischer 2007). Although the development of the article category is definitely a multi-causal phenomenon, it will be argued that complex analogy and frequency effects are the main motivating forces behind the observable linguistic change (Fischer 2007: 4, cf. Hawkins 2004). Especially the frequency of linguistic surface forms (i.e. concrete tokens), the influence of taxonomically related constructions and preferences in cognitive on-line processing will be discussed. It will be assumed that learning a language is schema-based rather than rule-based and that structural similarities (i.e. position and the overt shape of forms) can be a cause or stimulus of change (Fischer 2007: 326).

In English, the demonstrative and the definite article are essential parts of the noun phrase (henceforth also NP). As a matter of fact, however, the NP – despite its functional importance – has usually been relatively neglected as a topic of research.

> The English NP has always been treated as the lesser brother of the VP. It seems to be less problematic, simpler, and more straightforward than the VP, which consequently is taken to offer more exciting and more rewarding research questions. (Jucker 1993: 7)

Nevertheless, "the seeming simplicity of the NP offers the motivation – and the challenge – to dig deeper in an attempt to uncover the full breadth of the intricacies and

[1] In contrast to the classical concept of analogy which is now known as 'four-part' analogy and 'leveling' (Traugott & Trousdale 2010: 32).

complexities" (Jucker 1993: 7). In full agreement with this position, I am motivated to meet this challenge.

To introduce the phenomenon, some important synchronic, diachronic and typological facts about the definite article shall be mentioned. Today, the definite article is a functional element which, among other things[2], marks 'definite'[3] reference in a subset of NPs (cf. Christophersen 1939: 84; Mustanoja 1960: 169; Kisbye 1972: 1; Traugott 1972: 85-87; Mitchell 1985: 127ff). In Present Day English, singular count, plural count and non-count nouns are not supposed to occur 'bare' when they are used in a context where the speaker or hearer knows the entities from previous discourse, the intermediate or larger situation or general world knowledge; in other words, in all contexts that make it clear that the noun refers to a unique, identifiable entity. In those cases, the overt marking of definite reference is obligatory, and mostly this is realized by the definite article *the* as a default (cf. Quirk et al. 1985: 5.12).

According to some internet statistics, *the* is the most common word in the English language (followed by *of* and *to*)[4]. The definite article is such a central element of the modern NP that the rise of such a category may seem 'unavoidable' in retrospect. However, it is highly problematic and circular to explain the rise of any category by the sheer fact that it exists today. Therefore, one of the main questions examined in this thesis is what particular factors conditioned article emergence in the English language, especially when one takes into consideration that article usage is not a general tendency among languages and that "most of the world gets along quite well without being obliged to distinguish consistently between *the article* and *an article*" (Lyons 1999: 48).

Diachronically, it is established knowledge that the definite English article *the* developed out of the OE deictic demonstrative *se* and its forms (Mitchell 1985; Traugott 1992). Also typologically, a definite article often originates from a demonstrative. Still, there are many languages that have no article at all (e.g. Finnish, Kiswahili, Russian or most Slavic languages; cf. Giusti 1997: 102; McColl Millar 2000: 275).[5] Languages

[2] The definite article is also used to mark generic reference in Present Day English (see section 2.2).
[3] Note that it will have to be established what is meant by the term 'definite' (see section 2.2).
[4] http://www.world-english.org/english500.htm
[5] Some do not have an indefinite article (e.g. Icelandic, Bulgarian or Arabic).

may indicate definiteness in alternative ways: through position (e.g. in Chinese[6], cf. Diesing 1991), case (e.g. Finnish and Persian, cf. Karlsson 1983[1995]: 18; Buchholz 2004: 11; Chesterman 1991), or verbal aspect (see section 2.3.2). If definiteness is marked in a grammar by a determinative, this can also be done in various ways: one finds pre- vs. posthead or free vs. bound morphological forms. Moreover, articles have been shown not only to have developed out of demonstratives but also out of possessive pronouns, classifiers and other elements (Lyons 1999: 48). In other words, to mark definite reference by using a functional element like the article is just one option out of many options to mark definiteness.

It also has to be pointed out that within the Indo-European languages article emergence is a rather late development, especially in the Germanic languages. It is claimed that in Gothic (Got), Old High German (OHG), Old Saxon (OS) and Old English (OE) the definite article is only emerging (Philippi 1997: 62). The following sentences 1a) – d) show that all the listed Germanic languages did not obligatorily mark definite or indefinite reference.

(1)[7] a. iþ sa inngaggands þairh **daur** **hairdeis** ist **lambe**
but who goes *through* ***[the] door*** *is* ***[a] shepherd*** *for* ***[the] sheep***
Got (J.X.2)

b. uuantra giboran ist **man** in **mittilgart**
because (it) was born ***[a] man*** *in* ***[the] world***
OHG (Tatian.174.5)

c. stonc ða æfter **stane** **stearcheort** onfand feondes fotlast
jumped then behind ***[the] stone*** ***[the] stouthearted****, found* *enemy's footstep*
OE (Beo.2288)

d. ef eo **man** mid sulicun dadun **dodes** gesculdien
if sometimes ***[a] man*** *with such actions* ***[the] death*** *deserves*
OS (Heliand. 5244)

[6] Chinese sometimes uses classifiers as definite articles or position to indicate semantic definiteness.
[7] Examples (1) and (2) are taken from Philippi (1997: 62).

However, what we may find in these languages instead is the use of demonstratives in a similar way to that of the definite article in the modern Germanic languages (2).

(2) a. jah andhafjands **sa hundafaþs** qaþ
and answering ***the/that captain*** *said*

Got (M.VIII:8)

b. so er bifora wardh chichundit dhuruh **dhen forasagun**
so he before was forseen by ***the/those prophets***

OHG (Isidor.28.5.6)

c. that **all thia elilendun man** iro vothil suohtin
that ***all the/that strange men*** *their home looked-for*

OS (Heliand.345)

d. Men ne cunnon secgan to soðe…hwa **þæm hlæste** onfeng
people cannot say for sure …who ***the/that cargo*** *received*

OE (Beo.50)

These demonstratives are used rather restrictedly and cannot easily be labeled as articles (Philippi 1997: 63). As will be shown, the distribution of *se* in Old English differs from that of modern *the*.

This leads to the question if *se* and its forms already functioned as an article in Old English. Opinions differ on that question. Although this debate is far from being settled in the literature, two things have been taken for granted among most diachronic syntacticians. Firstly, researchers agree that the definite article developed out of an anaphoric or resumptive use of the demonstrative. Secondly, they agree that this process took place sometime between the Old English and Middle English period (cf. Christophersen 1939; Mustanoja 1960). However, the question as to when the definite article emerged in English heavily depends on how one defines demonstratives and articles in the first place, and what grammatical features one believes to be affected by the postulated change. In other words, it is necessary to define ‘true article usage’.

This directly relates to another essential point. Note that the term 'article' is often confused or used synonymously with the more modern term 'determiner'. Bloomfield introduced the concept determiner in 1933, while the term 'article' is much older.[8] However, a conceptual difference between those two exists. In this thesis, I will work with the following distinction: the term 'article' refers to a word category, i.e. a cover term for certain lexemes (e.g. PDE *the* or Gem *der*, *die*, *das*, whereas 'determination' denotes a function in the noun phrase which can be fulfilled by a set of elements ('determinatives') (this important distinction will be further elaborated in section 2.1.3).

Regarding potential causal factors, the diachronic emergence of the article has been interpreted as:

- triggered by the loss of nominal morphology especially in the adjective paradigm (cf. e.g. Philipsen 1887; Behaghel 1923; Christophersen 1939; Heinrich M. 1954; Mustanoja 1960; Giusti 1993; Holmberg 1993)

- influenced by language contact with Old Norse (McColl Millar 2000)

- as functional reanalysis towards or within Determiner-Phrase (DP) structure (cf. e.g. Philippi 1997; Lyons 1999; Roberts & Roussou 2003; Osawa 2007)

- as a grammaticalization path *par excellence* (cf. e.g. Traugott 1982, Lehmann 1982[95]; Himmelmann 1997; Lyons 1999; Hawkins 2004)

For example, Himmelmann (1997), based on Greenberg et al. (1978) and Lehmann (1982[95]), postulates the following grammaticalization path for deictic particles:

> Deictic Particle + Categorial Noun > Demonstrative Pronoun > Demonstrative Determiner > Weakly Demonstrative Definite Determiner > Definite Article > Affixal Article > Noun Marker (Himmelmann 1997: 23)

Generally, each of these lines of investigation has its merit. As a matter of fact, somewhere in the process some kind of reinterpretation of the grammar must have taken

[8] Lowth (1762) seems to be the first to take the articles as a separate word class; before that, they were considered particles.

place (whatever this grammar looks like), in order for a default marker to arise. Also, most of Lehmann's grammaticalization processes (1982[95]: 164) can be identified in article development in English (see section 3).

Nevertheless, some challenges remain. Although all of the accounts mentioned above provide schemes that more or less fit the phenomenon descriptively, they are explanatorily weak, because they do not really concentrate on the causes of the actuation of the change. Moreover, I will argue that reanalysis and grammaticalization are epiphenomenal descriptive terms rather than 'real' causal mechanisms and should be broken down "into more fundamental mechanisms of language change, including (among others) analogy" (De Smet 2009: 1730).

Therefore, regarding the rise of such a highly frequent linguistic element, this thesis in detail aims to answer two central questions: a) At what point in time "did the demonstrative cease being a demonstrative and become the article?" (Spamer 1979: 241) and b) What surrounding or preceding factors triggered this particular kind of development?

The first question relates to the necessity to formulate the observable change in a precise way, by setting up clear criteria for distinguishing between demonstrative and article. Otherwise, it will not be possible to describe the categorical change properly. The goal is to present an account of the change from an 'articleless' grammar ($G_{demonstrative}$ at t_1) to one that uses the article *the* as the default filler of an existing determination slot in the prehead to mark definite reference ($G_{article}$ at t_2). In other words, the first question relates to the WHEN (particular point in time) and HOW (categorical change). The second question aims at the WHY (causal trigger) of the development and points to a more general question, well framed by Hawkins:

> Why is it that grammaticalization clines are set in motion in some languages but not in others, or set in motion at some stage of language and not in others? (Hawkins 2004: 82)

Could the emergence of the article have been a coincidence? This seems highly unlikely if we consider the parallel development in the Germanic and even the Romance languages (cf. Philippi 1997). However, typologically, one gets the impression that there is also something arbitrary about article development, especially when we

consider that many languages function perfectly without it. It is especially this typological variation which makes the grammaticalization of the demonstrative in English such a highly interesting topic, and definitely one worth investigating.

This thesis, with all its tentative suggestions, is supposed to complement and add to current views on the subject. The rest of this introduction gives a preliminary account of the phenomenon (1.1) and the data used (1.2), briefly presents the approach taken (1.3) and discusses the overall goals and limitations of this thesis (1.4). Finally, an overview of the structure of this thesis will be given (1.5).

1.1 The phenomenon

Modern English *the* descends from *se*, the masculine nominative of what is known as the Old English simple demonstrative. Two members of the paradigm have survived in Modern English: the neuter nominative/accusative form *þæt* has preserved "its pure demonstrative signification" (Christophersen 1939: 96) and shows up as ModE *that*. The masculine nominative form *se* (employing the onset *þ-* from the other cases) developed into the definite article *the* (van Gelderen 2007: 297 cf. Christophersen 1939: 84; Mustanoja 1960: 169; Mitchell 1985: 127ff).

Concerning its Proto- and West-Germanic ancestors, the demonstrative *se* is a continuation of the Proto-Germanic pronominal stems **so, *sā, *þat, *tod (*Prokosch 1939: 269). Table 1 shows the Old English paradigm of *se*.

	singular			plural
	masc.	fem.	neuter.	all genders
N	*se, sē*	*sēo*	*þæt*	*þā*
A	*þone*	*þā*	*þæt*	*þā*
G	*þæs*	*þǣre, þāre*	*þæs*	*þāra, þǣra*
D	*þǣm, þām*	*þǣre, þāre*	*þǣm, þām*	*þǣm, þām*

Table 1: Declension of *se* in Early West Saxon (Hogg 1992: 143)

As can be seen, the demonstrative system is still quite elaborate in Old English. It displays an interesting feature which Old English has in common with Gothic (Got) and

Old Norse (ON): the simple demonstrative is formed from two stems, one with *s-* (*se, seo*) and one with *þ-* (*te/ to*) (Kisbye 1972: 141).[9]

Generally, Old English syntax (at least in its 'classical' West Saxon form) is constructed according to a complex relationship between gender, number and case. It is a system where number and case information is carried (primarily) by inflection (McColl Millar 2000: 27). Compared to Present Day English, Old English was highly inflected. Nouns, pronouns, demonstratives, interrogatives, and adjectives were inflected for nominative, genitive, dative, accusative case and for some remnants of an instrumental case still remaining in the demonstrative.[10] Pronouns, demonstratives and adjectives were also marked for number (singular *min, þin*, plural *urea, ewer* with a third category dual *under, inker* in the pronoun system) and gender (masc. *his*, fem. *hire*, neut.)[11] and agreed within the phrase[12] - a feature still present in Present Day German[13] but lost from English by the time of Chaucer.

(3)	**se**	adig-**a**	apostolat	Petrus
	DEM-NOM masc.	ADJ-NOM masc.	CN-NOM masc.	PN
	the/that	*blessed*	*apostle*	*Peter*

(cochronE,ChronE_[Plummer]:35.1.46)

[9] Other West Germanic dialects derive the simple demonstrative exclusively from the **to* stem. Compare OHG *der, diu, daz* (Gem *der, die, das*), OS *the, thiu, that* and OFris *thi, thiu, thet* with ON *sá, sú, þat*, and Got. *sa, sō, þata*) (cf. Kisbye 1972). According to Lass (1994: 143) the two-part construction in several of the listed languages reflects "a well-attested type of IE demonstrative system", including the idiosyncrasy of having an */s-/ stem for masculine and feminine nom.sg., and a */t-/ stem for neuter nom.sg. and all other forms (for further details on the IE system see Lass (1994: 143)).

[10] There was a masculine and neuter instrumental singular as well with the forms *þon* and *þy* but it is doubtful if the instrumental should be considered a real inflexional form. Hogg (1992:143) refers to it as a "fossilized relict at least partially detachable from the normal paradigm." Thus it is not listed in Table 1, though some grammarians list it as well.

[11] Verbs inflected for person and number and had an indicative, imperative and subjunctive mood.

[12] General agreement between modifiers and head in OE only shows a few exceptions. These are mainly motivated by two tendencies: a) the tendency to use natural gender rather than grammatical gender with human beings. b) The other is "to generalize *þæt* (neut.dem.) to objects, and *–ne* (masc.acc.) and *–es* (masc.neut.gen.), without regard to gender, to indicate accusative or genitive endings respectively" (Traugott 1992: 177)

[13] Compare *Das wunderbare Lächeln de**s** nett**en** Mann**es*** (MAS.SG.GEN) *beeindruckte mich* and *Das wunderbare Lächeln de**r** nett**en** Mädchen* (FEM.PL.GEN) *beeindruckte mich* with *The wonderful smile of the nice man/ of the nice girls impressed me.*

(4)	Ge furðon on	**þa**	wild**an**	fenn**as**	hi ferdon.
		DEM-ACC	ADJ - ACC	CN- ACC pl.	
	They even into the/those		*wild*	*marshes*	*travelled*

(cochronE,ChronE_[Plummer]:1010.11.1779)

NPs in Old English are definite or indefinite. Generally, a definite NP consists of a personal pronoun, a demonstrative pronoun, a noun with unique reference (proper noun) or a common noun marked by a possessive or demonstrative determinative. When it comes to the class of determinatives in Old English, one has to keep in mind that they "appeared in a considerable variety of forms, even within one dialect" (Hogg 1992: 142). The different spellings in Table 1 reflect some of the varieties which can be found, probably due to stressed and unstressed positions in the sentence.[14]

Finally, the contrast between the two demonstratives *se* and *þes* must be mentioned. The simple demonstrative *se* is distinct from the so-called compound demonstrative *þes*. *þes* is common to all Germanic dialects except Gothic and is formed from the simple demonstrative by the addition of the particle *-se/-si*.[15] In Old High German we have *dëse,* in Old Saxon *these* and in Old Norse *sja* (Kisbye 1972: 141; Lass 1994: 144ff).[16]

	singular			plural
	masc.	fem.	neuter.	all genders
N	*þes*	*þēos*	*þis*	*þās*
A	*þisne*	*þās*	*þis*	*þās*
G	*þisses*	*þisse, þisre*	*þisses*	*þissa, þisra*
D	*þissum*	*þisse*	*þissum*	*þissum*

Table 2: The declension of Old English *þes* (Mitchell and Robinson 2001: 18)

The semantic opposition between *se* and *þes* is not clear; it is claimed that *þes* often contrasts with *se* "by pointing to something near" (Mitchell 1985: 127) similar to today's *this*, but *se* can sometimes be translated as modern *this* and *þes* as *the*. However, already in Old English (but especially in Middle English) the sense of *þes* tended to include a stronger deictic notion contrasting with *se*'s developing anaphoric function.

[14] Brunner (1965: §§337) and Campell (1959: §708) offer overviews of various dialectal and diachronic (early and late) forms used during the period.
[15] Possibly related to the verb "see" (Gothic *sai*) (Kisbye 1972: 141).
[16] see Appendix IV for the declension of the OGH, the OS and the ON compound demonstratives.

The inflections of *þes* decayed together with those of the article; most forms marked for case were lost by the thirteenth century, although case-marked forms can be found longer in conservative texts, which generally keep up gender distinctions in their paradigms to a later point in time. However, *þes* is much less frequent[17] than *se* (Mustanoja 1960: 173; Mitchell 1985: 136; Lass 1992: 114).[18]

1.1.1 One for all and all for one? - The employment of *se* in Old English

The definite article had its origin in the demonstrative. This can be considered a frequent typological development, as both elements are always applied to referents that possess some quality of identifiability. The form *se* could either be used in two ways: as an independent element (comparable to PDE complementizer/relative pronoun *that/which/who*) heading an NP, or dependently as a determinative in combination with a noun. According to Mitchell (1985: 128ff), *se* could be used independently in the following ways[19]:

It is used in a second, subsequent sentence to avoid repetition of a preceding noun

(5)[20] and þær ða burh getimbrede, ⁊ þæs ilcan geares **þa**
*and there the burgh built, and in the same year **that***

æt Bricge
atBridgeworth

(ChronC 96.31 (912)

In this example, the antecedent functions as an object but *se* can also be found referring to a preceding or a following clause, as in

[17] Shannon (1964: 32) counted approximately 280 examples of *se* and four of *þes* in the Parker Chronicle from 734 to 891. For further information on the history of *þes* see Mustanoja (1960: 173); Mitchell (1985: 136); Lass (1992: 114).

[18] Note that Old English also had no grammaticalized proximal/distal contrast as in PDE *this* vs. *that*. Only after the 12th century does the old neuter nominative/accusative singular *þaet* begin to emerge with a clear distal sense (opposed to *þis*) (Mustanoja 1960: 168ff; Lass 1992: 114;). Also, the new plural types *þes-e* and *tho-se* emerge only after the 13th century.

[19] The following list is incomplete as it only lists the most important uses. All of the paragraphs (§) – if not indicated otherwise – refer to Mitchell's paragraphs. For a more detailed treatment of the Old English uses of the independent demonstrative see Mitchell (1985: 128ff).

[20] Examples (5) – (12) are taken from Mitchell (1985: 128ff).

(6) ðaða he wæs gebroht to geleafan mid ðære grapunge,
When he was brought to faith, with the touch,

þa wearð seo twynung þurh **þæt** us ætbroden
*then was the uncertainty by **that** from us taken*
(ÆCHom i. 234.23) (cf.§ 316)

Se may also sum up what has gone before. In this function it is frequently tautologic and anacoluthic as well, e.g.

(7) Seo ilce burg Babylonia, seo ðe mæst wæs ⁊ ærest ealra burga,
This same city Babylonia, that the greatest was, and first of all cities,

seo is nu læst ⁊ westast
***that/this/which** is now least and most deserted*
(Or 74.22)

(8) þa land þe man hæt Gallia Bellica, be eastan **þæm** is
*The land that one calls Gallia Bellica, by (the) east **of that** is*

sio ea þe man hæt Rin.
the river that one calls Rhine
(Or 22.22).(§317) (cf. Wülfing 1894: 372-4)

Se also has an emphasizing, special-subject-changing function. In such examples it is likely that *se* carried stress, e.g.

(9) [Herodes] ðohte gif he hi ealle ofsloge,
[Herodes] thought if he them all slaughtered,

þæt **se** an ne ætburste þe he sohte,
*that **that**-one should not escape whom he sought*
(ÆCHom i.82.12)

Here *se* indicates that the subject is no longer Herodes but the infant Christ. The use of *se* avoids the ambiguity which the use of the personal pronoun sometimes gives. Even when the pronoun is not ambiguous, *se* can be used where we expect *he* or *she* in PDE. Note that in (10), again a change in the subject can be observed.

(10) Hi habbað mid him awyriedne engel, mancynnes feond
They had with him corrupt angel, mankind's foe,

and **se** hæfð andweald on ðam mannum ðe heora cyppend forseoð
*and **that**-one has power over the men that their creator neglect*
(ÆCHom ii. 488.14).(§320, §321)

Sometimes a demonstrative can be used when a relative pronoun could also be used. (§322, §327). e.g.

(11) Abel, Adames sunu, rihtwis and Gode andfenge,
Abel, Adam's son, righteous and to God loyal,

þone ofsloh Cain his broðor
***whom/this-one** slew Cain, his brother*
(ÆCHom ii.58.25)

The demonstrative also appears in the Old English equivalent of the ModE parenthetic and explanatory "that is". Various forms like *þæt is*[21] or *þæt sind* can be followed by several possible complements (noun complement, prepositional phrase) (§323, §324, §325, §326) (cf. Wülfing 1901: 374-8). *Se* is also frequently used in cataphoric (forward-pointing) constructions where Present Day English prefers *this* (Traugott 1992: 172).[22] The oblique cases of the neuter demonstrative *þæt* can be used as adverbs and conjunctions, either alone, e.g. *þæs*, *þy* or with prepositions, e.g. *to þæs* and *forþon*. (§318, § 2418-20). As the definite article did not develop out of the independent use of *se*, this independent demonstrative usage will not be dealt with any further in this thesis, unless aspects of it are related to the development of dependent *se*.

Dependent *se* is by definition accompanied by a noun or noun equivalent (= 'determinative se'). It shows uses very similar to that of the ModE definite article *the* but also of the demonstrative *that*: As the examples (12 – 20) show, it is often possible to give *se* a deictic reading and interpret it as a demonstrative, but it can be translated by ModE *the* as well.

[21] *þæt is/ þæt wæs* is used with a singular noun complement irrespectively of its gender. With a plural complement we find *þæt sind* or *þa sind*.
[22] E.g. in Present Day English one might say: *He said this: (that) the king left*; in Old English *se* is used in this construction, *He that said: (that) the king had left*, where the demonstrative precedes the verb (Traugott 1992: 172).

(12) **se** deada cniht
the/that *dead boy/warrior /…*

(ÆCHom i. 492)

(13)[23] Men ne cunnon secgan to soðe …hwa **þæm hlæste** onfeng
*people cannot say for sure ….who **the/that cargo** received*

(Beowulf 50)

It can refer backwards, referring to something that has already been introduced, e.g.

(14) þa Eadmund clypode ænne bisceop þe him þa gehendost wæs
then Eadmund summoned a bishop who him then nearest was

þa forhtode **se bisceop**
*then was afraid **the/that bishop***

(Ælfric Saints XXXII.56)

(15) Genim ðe ane iserne hierstepannan… Ðurh **ða pannan** is getacnod
*take an iron frying pan by **the/ that pan** is signified*

se wielm ðæs modes
the fervour of the spirit

(CP 163.22)(§330)

It may point forward,

(16)[24] hie habbað **ða arodnesse¬ ða bieldo** ðaet hie magon anweald habban
*They have **the spirit** and **the courage** that they may power have*

(CP 41.17)

It can refer to something for which the reader must rely on outside knowledge, e.g.

(17) **se sealmscop** cuæð
the psalmist *says*

(CP 29.8) (cf. Hüllweck 1887: 1-14) (§330)

[23] Example (13 & 15) taken from Phillipi (1997: 85).
[24] Examples (14), (16) – (18) are taken from Mitchell (1985: 133ff.)

Se can occur with cardinal numbers, e.g. (18) and it may be expanded by an additional adjective (19 & 20).

(18) þa twa byrig… Sodome¬ Gomorre
the/those two cities… *Sodom & Gomorrah*
(Or 1.7)

(19) on þam ilcan dæge gefuhton wið Walas
*on **the/that same day*** *fought with the Welsh*
(cochronE,ChronE_[Plummer]:495.1.163)

(20) furðon on **þa wildan fennas** hi ferdon
even *into **the/those wild marshes*** *they traveled*
(cochronE,ChronE_[Plummer]:1010.11.1779)

In all the examples listed above, the usage of *se* is very similar to article usage in Present Day English. Nevertheless, as will be shown in the next section, the overall distribution of *se* differs significantly from that of modern *the*.

1.1.2 Is there an 'article' in Old English? – Problems of categorization

One of the main questions discussed in the literature is whether the form *se* already should be analyzed as an 'article' in the 9th century. Concerning this question, opinions differ. Early writers such as the German scholars Flamme (1885: 25) or Brunner (1942 [1965]: 261) positively state that the demonstrative *se* was indeed used as a "definite article":

> Das ursprüngliche einfache Demonstrativpronomen *se, sio, ðæt* hat im Ae.[Old English] meist nur noch die abgeschwächte Bedeutung des bestimmten Artikels. (Brunner 1965: 261 §337)

Philipsen (1887: 6, 10, 14) distinguishes between articles "mit starker Demonstration" mit "schwächerer Demonstration" and "ohne demonstrative Kraft". Also Christophersen is one of those who strongly believe in the existence of an article around 897 (cf. Christophersen 1939: 92; Kisbye 1972: 1).

Similarly, in more recent literature, Lass states that

> [t]he Old English equivalent of the definite article was a fully inflected deictic ('demonstrative') adjective/pronoun, quite elaborately marked for case, number and gender (Lass 1992: 112).

Thus, Lass interprets *se* as the "equivalent" of the definite article. However, on closer inspection, the case of *se* and its role as or development into an article is much more complicated than such statements suggest. Various problems arise if one simply equates OE *se* with ModE *the*. The distribution of *se* in Old English differs from that of modern *the* in various ways. Sometimes Old English fails to employ the demonstrative when one might expect an article in Present Day English and vice versa.

For example, in a short passage from *Ælfric's Colloquy*, an Old English dialogue between a schoolmaster and his pupils, it can be observed - as exemplified in line 6 and 11 (*oxan*) – that the NP remains bare and stays unmarked, although *oxan* has been introduced in the previous discourse (line 3) so that the referent is already known to the speaker and hearer. In Present Day English this is indicated by the use of the definite article or some other determinative.

1 [The teacher:] Hwæt cunnon **þas þine geferan**?	*1 What can **these your fellows** (do)?*
[…]	*[…]*
2 [Pupil B:] Eala, leof hlaford, þearle ic deorfe.	*Alas, dear lord, a lot I work. I go out at dawn*
3 Ic ga ut on dægræd þywende **oxan** to felda,	*driving **oxen** to (some) fields, and I tie them to*
4. ond iugie hie to syl; nys hit swa stearc winter	*a plough; there is no such strong winter that I*
5 þæt ic durre lutian æt ham for ege hlafordes	*would dare to hide at home for fear of my*
6 mines, ac geiukodan **oxan**, ond gefæstnodon	*lord, but when I yoked **the oxen** and fastened*
7 sceare ond cultre mid þære syl, ælce dæg ic	*the plough and the ploughshare to that*
8 sceal erian fulne æcer oþþe mare.	*plough, each day I must plow a full acre or more.*
[…]	*[…]*
9 [The teacher:] Hæfst þu ænigne geferan?	*Have you (got) any mates?*
10 [Pupil B:] Ic hæbbe sumne cnapan þywende	*I have one boy who drives **the oxen** with a*
11 **oxan** mid gadisene, þe eac swilce nu has is	*goad, who is now hoarse because of shouting*
12 for cylde ond hreame	*and the cold.*
[…]	*[…]*
13 [The teacher:] Eala, oxanhyrde, hwæt	*Alas, oxherd, what do you work?*
14 wyrcst þu?	
15 [Pupil D:] Eala, hlaford min, micel ic	*Oh, my lord, much I work.*
16 gedeorfe. Þænne **se yrthlingc** unscenþ	*When **the farmer** has unyoked **his/ the oxen** I*
17 **þa oxan**, ic læde hie to læse, ond ealle niht	*lead them to the pasture and all night I stand*
18 ic stande ofer hie waciende for þeofum, ond	*over them watching for thieves and again at*
19 eft on ærnemergen ic betæce hie **þæm**	*dawn I take them back **to the farmer** well fed*
20 **yrþlincge** wel gefylde ond gewæterod	*and watered.*

Table 3: *Ælfric's Colloquy* (Garmonsway 1938: 19ff.)

On the other hand, the oxen is marked overtly by a form of *se* in 17. Also the farmer (*se yrthling)* gets repeatedly marked by *se (line 16, 19).* So does the plough *(þære syl)* in line 7, which gets introduced for the first time in line 4. In other words, the system does not seem to follow a particular pattern here, and the use of *se* with common nouns appears to have been optional when it comes to marking definiteness.

Another interesting point is that *þa* in *þa oxan* (line 17) can even get a possessive reading, being translated as *his oxen*. This can also be seen in the following example where the possessive is more likely to be used in ModE:

(21)	hu	ælc sunu	bið gingra	þonne	**se fæder**	on ðisum life
	how	*every son*	*is younger*	*than*	***his father***	*in this life*

(ÆCHom i. 290)

Finally, in line 1 of Table 3 above, the demonstrative *þas* co-occurs with the possessive pronoun *þine* in the same NP; a pattern which is considered ungrammatical in PDE. Admittedly, *þas* is the compound demonstrative here, but similar cases with the simple demonstrative can be found in many Old English texts:

(22)	&	**his þæm godan willan**	wel gefultmode	Felix se biscop,
	and	***his that good will***	*well was seconded*	*(by)Felix the bishop*

(cobede,Bede_2:12.142.18.1372)

As a reaction to such patterns, one finds a debate in the literature about whether the demonstrative should already be analyzed as a definite article in Old English; or, to put it differently, about whether the usage of *se* in textual output really justifies the assumption that it already was an article in Old English.

In contrast to what the statements by Brunner or Philipsen above suggest, several recent studies do not postulate the existence of a definite article in Old English (Traugott 1992; Denison 2006; Osawa 2007; Van de Velde 2010; cf. chapter 3). Ackles elaborates:

> [T]he entire system for the expression of definiteness/ indefiniteness differed from Old English to Middle English. Old English contained elements to which the Middle and Modern English definite articles can be

> traced, at least phonologically, but the Old English elements did not function as definite or indefinite articles. (Ackles 1997: 27)

Generally, it is virtually impossible to pin down the exact moment in time when a linguistic element (a 'form') takes over a new 'function' (e.g. the overt 'grammatical' expression of 'semantic dimensions' like Time, Modality or – in this case – Definiteness). On top of that, researchers often do not work with the same categories and definitions, which often leads to confusion. When exactly the definite article is said to have emerged in English will depend on how one defines demonstratives and articles and what grammatical features one believes to be affected by the postulated change.

Unfortunately, proposals to define 'articlehood' have remained 'sketchy' so far. Most authors have avoided setting up criteria or a definition of the category. Some linguists categorize a word as a definite article when it is only used for individualization, while there are others who consider it a true article only when it is an obligatory satellite of the noun. For example, Mustanoja decides to treat *se* as an article at a stage when it is used to single out an individual and does not have "its full demonstrative or numeral power" (Mustanoja 1960: 231). On the other hand, grammarians like Christophersen point out that

> in point of principle we cannot recognize it [*se*] as an article until the development is completed and the word has become obligatory in all such cases. Till then, we have only extended use of a demonstrative pronoun. (Christophersen 1938: 83)

For other researchers, the 'demonstrative vs. article' discussion is beside the point and they regard it as a pseudo-problem created by the imposition of modern terminology on older structures (Mitchell 1985: 329; cf. Christophersen 1939; Quirk and Wrenn 1958: 70). Quirk and Wrenn (1958: 70) remind us that

> the existence of a 'definite article' in OE is a vexed question, but it seems to be one which has been raised largely by our desire to impose upon OE a terminology familiar in and suitable for ModE: where today we have three contrastive and formally distinct defining words, *the*, *that*, *this*, each with a name, in OE there were two, *se* and *þes*, and we are left as it were with a name to spare. The problem partly disappears when we reflect that in many instances of their use today, *the* and *that* are interchangeable ('Do you

> remember the/that man I was speaking to last night?') in OE *se* (*þæt, seo*) embrace practically the whole range of functions performed today, jointly or separately, by *the* and *that*.

Finally, Bruce Mitchell describes the search for article use in the Old English period as a "terminological will-o'-the-wisp" (1985: §329).[25] Still, the issue seems worthy of some investigation in so far as we might be dealing with a category change in the grammar. The essential point is that such a categorical change cannot be described properly unless 'article usage' is properly defined.

1.2 The data

The empirical part of this thesis includes a qualitative and quantitative analysis of definite NP types in various Old English prose texts in the *York-Toronto-Helsinki Parsed Corpus of Old English Prose (YCOE*)[26]. For analysis, the *CorpusSearch Program*[27] and *AntConc*[28] were used. For the empirical investigation, I have tried to focus on written records which, among other things, fulfill the following criteria:

a) coverage of the period of interest
b) original text rather than translation
c) prose rather than poetry

Ad a) To investigate change in progress, it is obviously a prerequisite to use textual evidence which covers the period of interest. Written evidence needs to be dealt with which linguistically mirrors the *terminus post quem* of article emergence or demonstrative usage. As this lies in prehistoric times, where we unfortunately lack textual evidence, one at least needs to go as far back as possible and deal with the

[25] Also, Fischer warns us of the following: "Another danger inherent in the comparison of syntactic structures, which is much less likely to occur in a diachronic comparison of phonological and morphological forms, is that there is a natural tendency to interpret an older construction very much from the point of view of the modern system […] This happens especially when the form of the construction has remained more or less the same" (Fischer 2007: 18).
[26] http://www-users.york.ac.uk/~lang22/YCOE/YcoeHome.htm
[27] http://corpussearch.sourceforge.net/index.html
[28] http://www.antlab.sci.waseda.ac.jp/software/AntConc_Help_3.1.2/AntConc_Help.htm

earliest available texts in Old English, as the change from demonstrative to article possibly started there already.

ad b) A second influential factor which has to be considered is whether the text is a Latin translation or not. Working on a Latin translation might be a problem as the translator might subconsciously take over syntactic constructions from the source language. This does not necessarily have to be the case, but the chosen translation will have to be checked for its Latin influence in advance. Thus, I concentrated primarily on all those texts available which do not constitute translations. Unfortunately, in the given literature of those days originals are scarce.

ad c) Finally, I support the proposition that prose has to be preferred to poetry because the artificiality of verse form entails the preservation of linguistic archaisms. Poetry is said to be more or less archaic in style. This in itself is not detrimental as those archaisms may be telling us something about older language stages. However, it can be the case that in poetry a linguistic pattern is found which might only occur due to rhythmic considerations or ornamentation. Conclusions drawn from metrical texts can, from that point of view, be deceptive as they tell us more about poetic conventions of the time than about unmarked grammatical structures. For example, demonstrative usage is said to be lower in poetry due to metrical considerations and *se* is undoubtedly more frequent in natural prose (Christophersen 1939: 86). Of course, prose is by no means a second-class genre and should not be ignored completely. Linguistic patterns found in poetry can be very informative as well and should be analyzed extensively. This will definitely be the aim of future investigations, but for this thesis I will limit myself to prose texts.

Regarding those prose texts, it has to be said that, in the development of literature, prose generally tends to come late. Old English prose first appears in the 9th century and continues to be recorded from then onwards. The majority of the surviving prose is Latin translations, sermons, saints' lives and religious works. However, also secular prose exists, as for example legal documents, laws, wills, or works on medicine and geography. Secular prose is especially interesting because one can expect a certain originality in the text type here (i.e. the text will not be modeled on Latin examples). Bately points out that

> [o]ne of the most significant literary achievements of the Anglo-Saxons was the establishment of vernacular prose as an acceptable medium both for the dissemination of knowledge on a wider range of subjects and for the provision of moral instruction and entertainment. By the time of the Norman Conquest, English was being used for scientific and medical works, legal documents, historical records and religious instruction of all kinds[…]. Translations and reworkings of Latin texts had made available to educated laymen and clergy alike key works on philosophy and theology, world history and geography […]. Much of the surviving Old English prose corpus in anonymous, and some of it is strictly utilitarian, but the status which it achieved is indicated by the fact that its authors included a king (Alfred), an archbishop (Wulfstan), two bishops (Werferth and Ælthelwold) and an abbot (Ælfric). (Bately 1991: 71)

Besides, two other practical factors were taken into consideration when choosing written records to be analyzed. To analyze a large amount of data, using a certain search program seems a necessity. Additionally, as the question of interest is a syntactic one, syntactic annotation is most welcome in order to be able to search for certain structures.

In the end, the *Anglo-Saxon Chronicles* were chosen as a starting point for empirical analysis because they qualified on all points – especially the *Parker* and the *Peterborough* manuscript. Those prose texts cover the period of interest, are no mere translations of some Latin original and they are syntactically annotated in the YCOE corpus. Moreover, the *Anglo-Saxon Chronicles* is a secular category (cf. Greenfield and Calder 1986; Treharne and Pulsiano 2001; see further section 4.1). This is the reason why these manuscripts were used as textual evidence (5.1). Especially for some detailed qualitative analysis of the data, I will mostly rely on the two chronicles. In the course of my research, however, it turned out to be necessary to extend the database and to study several other early prose texts as well. It turned out that the two Chronicles yield results which are simply not conclusive enough to postulate the article's (non-)existence (5.2). Moreover, both texts belong to the same genre. Thus, the findings in the two manuscripts tell us nothing about the situation of nominal determination in other genres. Therefore, it was necessary to include other manuscripts in this investigation.

In the end the following were used as a source:

Manuscripts	**period**	**word count**	**Latin Translation**[29]	**manuscript in YCOE**
Peterborough Chronicle	o.3/4	40,641w	no	cochronE.o34
Ælfric's Catholic Homilies	o.3	106,173w	no	cocathom1.o3
Ælfric's Life of Saints	o.3	100,193w	no	coalelive.o3
Bede's History of the English Church	o.2	80,767 w	yes	cobede.o2
Boethius	o.2	48,443 w.	yes	coboeth.o2
Cura pastoralis / The Pastoral Care	o.2	68, 556w	yes	cocura.o2
Orosius	o.2	51,020w.	yes	coorosiu.o2
Parker Chronicle	o.2	14,583w	no	cochronA.o23
Laws of Alfred	o.2	3314w	no	colawaf.o2
Laws of Alfred Introduction	o.2	1,966w	no	colawafint.o2
Laws of Ine	o.2	2,755w	no	colawine.ox2

Table 4: Early Old English manuscripts (o.2 and o.3 period)[30] investigated

Note that some of these texts are indeed Latin translations. As mentioned before, Latin translations can be very different from originals, and for an investigation like this original texts should be preferred. Unfortunately, most of the manuscripts which have survived from the earliest stage (o.2) are translations. How this may affect the results will be discussed later on (section 5.2). Also note that the texts show regional variety and belong to different genres. This is the reason why we should not understand these texts as one corpus sample, but rather interpret them as separate texts being investigated individually (cf. section 4.2).

Dealing with historical data, it is also necessary to briefly remark on the issue of reliability. The problem is that in Proto-Germanic or even Old English textual evidence is regional and rare. Generally, not much is know about the Old English dialect situation.[31] Toon (1992: 415 - 428) reminds us of the chance survival of OE documents and the scarcity of homogenous texts:

[29] see YCOE manual: http://www-users.york.ac.uk/~lang22/YCOE/info/YcoeTextInfo.htm#coadrian.o34

[30] In the YCOE corpus, "texts from the Helsinki Corpus have the Helsinki period attached as an extension following PPCME2 practice. […]. When Helsinki provides two periods, the first being period of composition, and second, period of manuscript, both periods are included in the filename" (YCOE manual http://www-users.york.ac.uk/~lang22/YCOE/YcoeFiles.htm).

[31] There are four main dialects in Old English: Northumbrian in the North, Mercian spoken in the east midland and the northern two-thirds of the west midlands, West Saxon spoken in the South West and the southern third of the west midlands, and Kentish in the southeast. Due to these "dialectological complexities and the fact that the bulk of surviving Old English […]is West Saxon" (Lass 1992:35), most forms presented are from West Saxon.

> Even when Old English patterns are quite distinct, we still have data for only one limited set of styles and registers. […] Our statements about English before AD 800 are essentially reconstructions informed by a smattering of information. (Toon 1992: 428)

Without enough textual evidence, it is very difficult to reconstruct syntax, and "any claims about changes between PrGem and OE must be considered only tentative" (Traugott 1992: 169). Of course, linguists are eager to believe that it is possible to observe linguistic change in the Old English period, but often these changes rather represent inconclusive tendencies. What can be observed is rather the greater or the lesser use of a construction. Additionally, for the particular use of *se,* its use in prose texts is conditioned by various factors that influence its observable frequency in the data. For example, rhythmical considerations do not only play an important role in poetry, but also in prose, depending on the writer's style and subject matter. Moreover, it seems likely that a genre like law texts will potentially include fewer definite contexts than some other text type because in law texts the referent is often indefinite.[32]

To trace the demonstratives' development seems to get easier in the Middle English period as this is a period which is accessible through extensive material. However, it is still difficult to draw up a comprehensive picture of what happened exactly from Old English to Middle English. The language recorded in the manuscripts from the end of the Old English period is very different from the one in the early years of Middle English. Nevertheless, one cannot assume that the language itself generally changed as drastically and suddenly as the written records suggest. Linguistic and political dominance, which formerly had been situated in Wessex in the southwest, shifted to the southeast and especially the southeast midlands. The manuscripts written before 1100 are for the most part West Saxon, but the records of Middle English can be found farther to the North. Today's modern standard geographically has its historical bias in the southeast midlands, especially in the prestige dialects of the capital and the Home Countries, not in West Saxon (Lass 1992: 23-32). According to Lass (1992:33),

[32] (e.g. gif **hund mon** toslite oððe abite, æt forman misdæde geselle VI scillinga (colawaf,LawAf_1:23.86_ID) *If **a dog** tears **someone** apart or bites him, this first offence costs seven shillings.*

the 'Englishes' of the fourteenth-fifteenth century "which are roughly precursors of 'our English', do not have a detailed Old English ancestry."

In other words, some of the suddenness of the observable linguistic changes may be a textual and geographical artifact. It is also true that various elements of the Old English system were preserved longer in some dialects than others. In other words, it remains difficult to trace the article's first appearance in any straight fashion down to the later stage, where it is fully implemented into the system (Ackles 1997: 32). For now, it is important that the statements made in the following sections about the condition of the demonstrative in early English should be evaluated in the light of these reservations and that an exact course of article development cannot be ascertained. Yet,

> [n]one of this means that the linguist has to give up. But it does mean that the process of linguistic investigation must proceed by deductive inference to a much greater degree than is necessary with a present-day language and, of course, that the results achieved must necessarily be that much less certain. (Hogg 1992: 20)

1.3 The approach

As far as the theoretical implications of this thesis are concerned, they are based on the hypothesis that languages "have conventionalized syntactic structures in proportion to their degrees of preference in performance" (Hawkins 2004: xii). If performance changes (for whatever reasons) and usage patterns become used more frequently or less frequently or if they become ambiguous, this can make a speaker[33] interpret the underlying grammatical structures differently.

From this point of view, grammar is usage-based, and all grammatical generalizations are basically variable and probabilistic and are derived from the user's experience with language (Bybee & Hopper 2001: 18; cf. Pierrehumbert 1994a). Grammatical (or linguistic) structure emerges through repetition, categorization and conventionalization rather than "being the result of a pre-existent matrix" and the emergence of grammar must be understood as an economical response to the "pressure of discourse" (Bybee 2001: 3). The speaker's experience with language and the

[33] No matter if child or adult speaker.

frequency with which one encounters certain linguistic items affects "cognitive representations and categorization and thus the internalized grammar of language users" (Bybee & Hopper 2001: 2). In other words, "language users are assumed to generalize patterns of language from their everyday experience; picking out and storing the regularities they come across" (De Smet 2008: 64). Thus,"[e]very utterance, including every historical innovation, is sanctioned both by the regularities that constitute grammar and by more general functional, cognitive and pragmatic factors and constraints" (De Smet 2008: 86).

The approach presented here is generally compatible with functional, non-nativist theories of language, like Construction Grammar (as developed by Hopper 1988; Langacker 2003; Goldberg 2006; Tomasello 2006), Hawkins' Performance Grammar (2004), and Emergent Grammar theory (MacWhinney 1999). These are usage-based theories of language, where grammar is considered to be "the cognitive organization of one's experience with language" (Bybee 2006: 711) and where it is argued that processing has tremendous influence on the grammatical system. Grammar is "simply the name for certain categories of observed repetitions in discourse" (Hopper 1998: 156) and it "is not to be seen as the *source* of regularity, but instead as what results when formulas are rearranged, or dismantled and reassembled, in different ways" (Hopper 1998: 167).

Additionally, my present thesis treats language as a system of culturally evolving constituents whose properties largely depend on the mechanisms that underlie its transmission. Transmission among speakers and generations is driven by an imitation instinct that manifests itself most prominently in 'accommodation'. The properties of English as well as any other language are therefore best understood if the language is regarded as a historical Complex Adaptive System (cf. Gell-Mann 1992).

Some claims and assumptions for this thesis are:

- Speakers accommodate their style of speaking to become more like that of their addressees based on a universal, perennial need for social approval and mutual intelligibility.

- Mostly, speakers imitate linguistic strings which have a certain input frequency, so that frequency has an influence on the way imitation takes place (i.e. perfect or altered).
- A change in the frequency of certain linguistic patterns and ambiguous linguistic input can lead speakers to analyze their linguistic input differently than the previous generation did.
- Generally, speakers are cognitively highly capable of analogical reasoning, pattern recognition and pattern abstraction on many levels simultaneously. They tend to recognize similarities between structures and often extend a salient productive schema analogically to new linguistic environments. In other words, influenced by the frequent repetition of certain linguistic feature combinations, speakers are able to extract certain schema that can be extended to new formations.
- The general structure of nominal determination in Old English and various developments within the NP prehead had a severe effect on the particular emergence of the article.
- The observable reinterpretation of the demonstrative as default article seems to have led to the increased production of the very types of definite NP patterns that had been frequent in the first place due to a complex multi-level frequency and analogy effect.
- Linguistic categories are an epiphenomenon, their membership is historically unstable and category boundaries are fuzzy.[34] Still, if one wants to employ categories in grammatical description, clear demarcation criteria have to be set up.

The proposed framework bases its assumptions on findings in frequency studies which postulate that it is high token frequency which provides the triggering device for many changes (cf. e.g. Haiman 1994; Boyland 1996; Bybee & Hopper 2001; Bybee 2003a,b; Krug 2003) and also on studies on analogical reasoning (cf. Hofstadter 1995; Gentler et al. 2001; Anttila 2003; Itkonen 2005; Fischer 2007).

Although analogy has long been understood as an important factor in linguistic change, it has not been positioned as a primary driving force of grammaticalization. However, the notion of ’analogical extension’ and its importance in many instances of

[34] In diachronic processes of category change (often a grammaticalization process whereby elements are ‘recruited’ for a new function), elements show differences in progress in this transition. Often an element acquires all characteristics of a category in a step-wise manner.

grammaticalization has led to "significant rethinking of the role of analogy" (Traugott & Trousdale 2010: 32f):

> Whereas much work on analogy has focused on individual changes, and attraction to exemplars, a recurring theme in later work has been the possibility of conceptualizing rule generalization/ extension (or, more recently constraint optimization) as analogy at a higher metalinguistic level of analysis. (Traugott & Trousdale 2010: 36)

Pushing the argument further, Givon points out that

> [a]lmost all creative-elaborate diachronic change in language, be it phonological, morpho-syntactic, semantic or discourse-pragmatic, is in principal analogical. That is, it involves the language user's recognition – conscious or subliminal – of similarities between two structural or functional contexts. (Givon 1991: 258, emphasis original)

Especially Fischer (2007) stresses that analogical thinking and reasoning cause linguistic change (cf. Itkonen 2005). Thus, observable reanalyzes will only be seen as the epiphenomenal results of previous analogical processes which take place in the minds of speakers. In chapter (6) of the present thesis, it will therefore be argued that, from that point of view, reanalysis becomes a useful but secondary descriptive device. Analogy will be considered to be the primary driving force in linguistic change. Inspired by Givon's reductionist cycle of language development (1979: 33)[35], I will present the following cycle for speaker-internal processes which take place during the grammaticalization process: (1) MEMORIZATION/IMITATION > (2) ANALOGY > (3) CATEGORIZATION > (4) ALIGNMENT (cf. section 6.1.3).

Discussing the emergence of the definite article should also be embedded into the broader discussion of notions like gradience and gradualness (cf. Denison, 2001, 2006; Aarts 2004, 2007a, 2007b; Rosenbach 2006, 2007; Croft 2007, Trousdale & Traugott 2010). I will argue that the change from demonstrative to article shows that the phenomenon of synchronic gradience (i.e. the organization of members within a category and the nature of boundaries between categories) is a result of diachronic gradualness and grammaticalization. Thus a diachronic perspective is the key for

[35] "DISCOURSE > SYNTAX > MORPHOLOGY > MORPHOPHONEMICS > ZERO"

gaining a better understanding of a form's "step-wise acquisition of [semantic/ distributional/ categorical] properties" (Denison 2006: 300; cf. DeLancey 1997).

Moreover, it will be argued that in language change we might find so called form-driven phenomena, where the motivation for change is not always driven by discourse-pragmatic needs. It actually might be the case that a change occurs for 'formal', system-internal, psychological reasons (e.g. ritualization, Automatisation, effective processing and structural simplification) (Haiman 1998: 161; Fischer 2007: 66).

Additionally, a proper understanding of language change has to take into account the driving force of lexically underspecified constructions (Van de Velde 2010: 291 cf. Bybee 2003a,b, 2007; Traugott 2006). Construction Grammar in particular has long been aware of the fact that syntactic constructions can exert influence on other taxonomically related constructions (Traugott 2007: 525; cf. Hopper 1988; Goldberg 2003, 2006; Tomasello 2003a,b , 2006; Croft & Cruise 2004; Fischer & Stefanowitsch 2007; Bergs & Diewald 2008; Trousdale & Gisborne 2008). Thus, the formal and functional development of linguistic forms and constructions is often influenced "by the analogical links to other constructions in a larger taxonomic network" (Kaltenböck 2010: 21). How such a network conceptualization with its assumed analogical transfer between various constructions may also exert influence on the development of the determination slot in Old English shall therefore also be discussed. Finally, the proposed ideas are also compatible with research on human learning abilities in first language acquisition and Artificial Intelligence (e.g. Aslin et al 1998, 1999; Bates & Goodman 1999; Steels et al. 2002; Tomasello 2003a,b).[36]

Obviously, each linguist has an own point of view, which s/he believes is "true", but one should not forget that we manipulate the linguistic landscape "depending on the kind of pictures we happen to be interested in seeing" (Lass 1997: 3). Investigating linguistic change is essentially "the adventure of linguistic time-travel, and the manipulations we perform on the scenery to make it 'scenery' rather than just confused images whizzing by" (Lass 1997: 3).

[36] Moreover, it is also compatible with a generalized Darwinian approach to language evolution and change (cf. Dawkins 1989; Dennett 1995; Lass 1997; Ritt 2004), in which constituents of linguistic competence are regarded as neural association patterns that replicate (cf. Rumelhart & McClelland 1986; Pulvermüller 2002).

As a matter of fact, every linguistic theoretical model is nothing more than "a heuristic device" which "cuts away some reality, as facts are cleaned up" (Fischer 2007: 56; 82) and "linguistic rules are meta-descriptive devices that exist only in the minds of linguists" (Skousen 1989: 139-40). Being fully aware of these contingencies, this thesis nevertheless aims to present some explanations which contribute to the research conducted so far.

1.4 Goals and limitations

Dealing with the definite article in English and its diachronic development, one needs to be aware of the multi-layered character of the phenomenon. On the level of linguistic description, it is obviously necessary to study the various diachronic stages of English and its ancestors, to get a feeling for when and where linguistic changes originated or ended. A deeper understanding of Old and Middle English is compulsory as these periods set the stage for the rise of the article. Additionally, the researcher should have acquired general morphosyntactic knowledge regarding the English NP and its characteristics (especially nominal determination). What is more, the definite article should always be put in relation to the indefinite article as both make up the English article system. It also has to be put in relation to the other central determinatives.

Outside the target language, the situation of the definite article in other Germanic languages at that time should be of interest. According to some, language contact might have influenced the development (McColl Millar 2000). Although the development of the article in the Germanic languages seems similar on the surface level, it is not completely identical. Thus, the differences might also tell us something about the catalysts behind article formation. Moreover, as the very term suggests, a central and possibly defining function of a definite article is to mark the NP as 'definite'. Therefore, the notion of definiteness will also have to be discussed.

Various linguists interpret the development of the article as a grammaticalization process *par excellence;* others as reanalysis or parameter change. This puts us on a meta-theoretical level as these processes are general schemata for the description of linguistic change. The hypothesis that conceptual analogy plays an important role links the phenomenon to the field of cognition and how the human mind conceptualizes the

world schematically. As this thesis is a corpus-based study, the domain of Corpus Linguistics also becomes important, with all its problems regarding the representation and reliability of data. In short, dealing with the English definite article turns out to be a risky business! Discussing all the issues at once is simply impossible. It would go far beyond the scope of even a PhD thesis to present all the important insights of related areas sufficiently.

Due to length restrictions and to avoid unnecessary diffusion, this paper does not discuss the development of the indefinite article *a/an*[37], although I am aware of the fact that the development is closely related and cannot be separated from the definite one. This thesis also excludes a detailed account of the OE compound demonstrative *þes* and its potential development into *this*. Still, the compound demonstrative will be investigated to a certain extent, as its development seems to be linked to the development of *se* into the definite article. Moreover, this study does not consider the parallel developments in related languages, although I am aware that such typological research has to be carried out in the future. Additionally, there is no intention to give a complete analysis of NP intricacies. This thesis does not want to be an in-depth analysis or authoritative treatment of English NP syntax or a comprehensive discussion of the concept of definiteness. However, it tries to be as rich as possible when it comes to references and links to other fields of interest.

What this thesis tries to do is to shed light on one particular phenomenon and explain it from a particular perspective. This raises enough questions on its own. The overall goal of the thesis is to trace the development of *se* diachronically from early to late Old English and to discuss the status of the form in early Old English. It will be investigated if and when the usage of *se* in Old English warrants speaking of the existence of an article. In order to be able to answer that question, I will analyze early demonstrative usage and its role in the process and set up clear criteria for articlehood which will be tested on Old English. Moreover, I will present a potential explanation for category emergence and give a potential answer to what triggered the

[37] As far as I can see, the indefinite article has been studied in more detail already. (cf. e.g Christophersen 1939; Heltveit1967; Hüllweck1887; Rissanen 1967; Süsskand 1935; Wülfing 1894)

grammaticalization process/ functional reanalysis of the demonstrative.[38] Here, I will link the emergence of the article to surrounding systemic conditions (e.g. taxonomically related constructions, the overall frequency of linguistic surface forms).

Another main goal of this thesis is to provide a descriptive basis and check claims that have repeatedly been made in the grammar books on Old English (e.g. Mitchell 1985; Hogg 1992) by investigating a large data set qualitatively and quantitatively. To the best of my knowledge, no existing study on the article tests its assumptions against a large text sample using a computer accessible corpus. Consequently, I would like to fill this fill the empirical gap and analyze texts using a corpus search program.

1.5 The agenda

The present study is organized as follows: In the present Part I, theoretical background information shall be provided. Chapter (2) of Part I thus establishes basic facts regarding the English NP and nominal determination in particular (2.1 & 2.2). Terminological and conceptual clarity are a prerequisite before we can discuss *se*, its OE usage, and its diachronic development. Thus the chapter tries to set up clear criteria for distinguishing between demonstrative and article (2.3). In particular, it will be necessary to introduce and discuss the determination function.

In chapter (3), traditional explanations of English article emergence will be discussed. Starting with traditional philological views on the development of the article (3.1) and a subsequent discussion of a language contact scenario (3.2), I will continue to present functionalist and formalist proposals for the development of the demonstrative. Studies will be compared which either conceptualize article emergence as a grammaticalization phenomenon (3.3) or as categorical reanalysis (3.4). In (3.5), the most important facts from the previous sections will be summarized and once again the major research questions of this thesis will be outlined.

Part II of this thesis constitutes the empirical investigation. Here, several new empirical studies will be presented which describe nominal determination in Old

[38] Generally, the need for a theoretical alternative emerges when current theories are somehow found to be unsatisfying. The reasons for which I consider some of the current theories as insufficient will hopefully become apparent in the following chapters.

English and the role of *se* on a qualitative but also quantitative basis (5.1 & 5.2). First, however, some information about the examined manuscripts will be provided in chapter (4) of Part II.

In chapter (5), *se* and its usage will be investigated. First, some basic determination patterns in the *Anglo-Saxon Chronicle*s will be discussed. Afterwards, I will split up the *Parker* and *Peterborough manuscript* into various diachronic subperiods (5.1). Then, I move on to check the criteria for articlehood which have been set up in the theoretical part (2.3.2), with the main aim of deciding whether or not *se* is already used as a definite article in Old English (5.2). The manuscript which will be analyzed as an example in detail in (5.1) is the *Peterborough Chronicle*. After analyzing it in detail, I will extend my investigation to several of the earliest available texts in Old English. It will be necessary to analyze other texts as sometimes findings in the *Anglo-Saxon Chronicles* are inconclusive or suggest a comparison with other and older manuscripts. On top of this, it is very much desirable to investigate more than two Old English manuscripts in order to make general claims about the status of Old English nominal determination. The established criteria for articlehood will also be tested in those manuscripts, in order to see if changes from an early to a later Old English stage can be observed. As a conclusion to chapter (5), a possible WHEN for category emergence will be proposed.

Chapter (6) hypothesizes about the reasons behind the potential grammar change, suggesting a possible WHY. In particular, the role and fate of the demonstrative as well as surrounding conditions in the NP in general will be studied that may have led to the emergence of a 'determination slot' and, as a consequence, the functional category 'article'. In section (6.1), it will be argued that multi-level frequency and analogy effects are responsible for the emergence of a lexically underspecified determination slot. Additionally, the change can be seen as an example of structural simplification. In section (6.2), additional factors which may have also led to the grammaticalization of the demonstrative will be discussed. Among them are processing efficiency, prosody and the 'heaviness' of the prehead.

After I draw my conclusions in chapter (7), the reader finds the references used in this thesis as well as several appendices with further information about the manuscripts (Appendix I), the YCOE annotation (Appendix II), the functions of the CorpusSearch

Programme (Appendix III), Old Germanic forms of the compound demonstrative (Appendix IV), an English and a German Abstract (Appendix V & VI) and my personal Curriculum Vitae (Appendix VII). Also note the CD-Rom which is attached to the back cover. It includes all the search queries and output files used for analysis.

PART I

In every phenomenon the beginning remains always the most notable moment. (Thomas Carlyle)

Giving a phenomenon a label does not explain it. (Taylor Caldwell)

The guises and disguises of grammatical categories are more intricate than the common view of an ideal one-to one correspondence of form and function makes us believe. (Leiss 2007: 74)

2. Nominal determination

In this thesis I try to answer the question of WHEN and WHY the demonstrative ceases to be a demonstrative and develops into the definite article. However, the question as to when the definite article developed in English heavily depends on how one defines demonstratives and articles in the first place and what grammatical features one believes to be affected by the postulated change. In other words, it is necessary to define 'articlehood'. Unfortunately, proposals to define the category have remained vague so far. Most authors have avoided setting up demarcation criteria or a definition of the category. Additionally, researchers who work on nominal determination often use different terminology and definitions, based on the individual model they work with. This has often led to confusion and misunderstandings when discussing the topic of article development. Thus the following section presents the basic terms and concepts related to nominal determination which will be employed in this thesis. Terminological clarity is a necessary precondition for a proper description of the categorical change observed. Moreover, in this chapter I will especially try to set up clear testable criteria for distinguishing between demonstrative and article (2.3).

To define a linguistic category is generally a difficult task. Categories are epiphenomenal "notational tools" which are "abstract idealized means of reflecting syntactic and pragmatic differences between seemingly similar constructions" (Keizer 2007: 3). A clear categorization of an element is often simply impossible, and it is mostly debatable which categories should be used to model a particular grammar. This relates to the concept of diachronic 'gradualness' and synchronic 'gradience'. Not every member of a category displays every syntactic or semantic property ascribed to the category because category membership is historically unstable. Elements can change their category status in time (see further 2.3.1). It remains to been seen if it is possible at

all to clearly demarcate the category 'article' from other categories like demonstrative or adjective, and it also needs to be checked if those criteria can successfully be applied to an older language stage (chapter 5).

The demonstrative and the definite article are essential parts of the English NP. Both elements mostly occur with common nouns and have been classified as 'determinatives'. Determinatives are dependents only found in the prehead of NPs and function to mark definite/ indefinite reference. In order to understand this class better and in order to understand what is meant by 'functions to mark definite reference', several NP features shall be discussed in the following subsections: the concept of head and dependent (2.1.1), referentiality (2.1.2), the difference between word class and function (2.1.3), the semantic notion of definiteness (2.2) and finally the distinction between determination and modification (2.3). Note that I am well aware that most of the 'hard facts' being presented here are still highly disputed among grammarians. Especially the classification of words or the structure of underlying representations is a matter of heated debate. Due to length restrictions only those structures, concepts and terms will be presented which are relevant for further analysis.

2.1 The noun phrase[39]

In most contemporary models of grammar, sentences are composed of constituents which can have smaller constituents themselves. Such constituents can differ in their structure and also in their grammatical function. Thus, they can be subsumed under different categories. Constituents, which contain "a central and most important word augmented by appropriate accompanying words that elaborate its contribution to the sentence" are called phrases and "are assigned to phrasal categories" (Huddleston & Pullum 2002: 22). A phrase normally has an obligatory head and various dependents. The head may also function "in a manner equivalent to the whole construction of which it is part" (Quirk et al. 1985: 61). Usually, phrases are named after their heads (Huddleston & Pullum 2002: 24). As the demonstrative and article are part of the noun phrase (NP), I will exclusively focus on the structure of that phrase.

[39] The following information will be based on Quirk et al.'s *A comprehensive grammar of the English language* (1985) and Huddleston and Pullum's *The Cambridge grammar of the English language* (2002).

2.1.1 Heads and dependents

The lexical category which primarily functions as NP head is that of nouns. Nouns can be divided into different semantic classes:

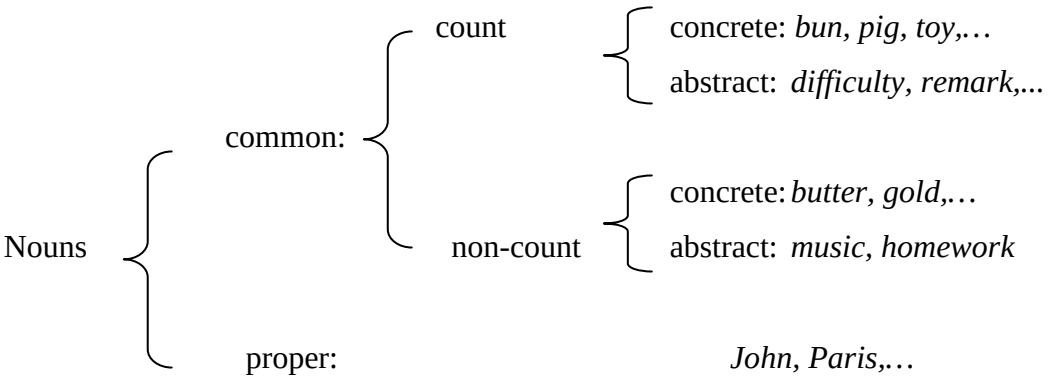

Figure 1: The most important noun classes (Quirk et al. 1985: 247)

Grammarians distinguish between proper nouns and common nouns. Common nouns are the largest class which comprises words denoting all kinds of physical objects, substances and abstract entities (Huddleston & Pullum 2002: 107). The class of common nouns is traditionally separated further into count nouns, denoting bounded countable entities and non-count nouns, denoting unbounded mass.[40] Both of them are further divisible into concrete (accessible to the senses, observable) and abstract nouns (typically non-observable and non-measurable). Count nouns can either be singular or plural, whereas non-count nouns are normally singular.[41]

Proper nouns are normally names of specific people, places, months, days, etc. and differ from common nouns in several ways.[42] Proper nouns generally have "unique

[40] There are also nouns with dual class member ship as for example *stone*. Whereas in a) *The house is made of stone* one deals with the non count material in b) *He collected five stones* one is confronted with the countable object. For further information on reclassification, partitive constructions, dual class membership, see Quirk et al. (1985: §§ 5.4-5.9).

[41] Generally, not all nouns have singular and plural form. There are plural-only nouns including the large group of bipartites as well as singular-only nouns (Huddleston & Pullum 2002: 3.1-3.3).

[42] A further distinction can be made between proper nouns and names. A name functions as a single unit with respect to grammar even if it may consist of more than one word. If a composite name (*King's college*) consists of more than one word and is grammatically analyzable that structure cannot be varied by the insertion of words or change of inflection. *The Hague* cannot be transformed into **The beautiful Hague* (cf. Quirk et al. 1985: 288)

denotation" (Quirk et al. 1985: 288), are usually written with a capital letter, have no plural form and in the case of Present Day English usually take no adnominal dependents.[43]

Note that the structure of an NP does not have to follow the classical pattern with a noun as the head. The head of an NP can also be a pronoun (*he*) or even an adjective (*the poor*) or an existential (*I need some screws but can't find any*) (cf. Huddleston & Pullum 2002: 56; 410-424). Concerning the dependents in the phrase, Huddleston and Pullum (2002: 326) state that an NP consists of "a noun as head, alone or accompanied by one or more dependents" which may be added to the head (either obligatorily or optionally) in pre- or posthead position and which are usually divided into three groups: determinatives, modifiers and complements (cf. Quirk et al. 1985: 62). The following table gives a first overview which helps to understand the English NP-structure better. It can be seen that determinatives precede modifiers in the Modern English NP.

[43] However, occasional exceptions occur. There are circumstances in which proper nouns take on the characteristics of common nouns (Quirk et al. 1985: 288). In a sentence like *All of them wanted to be Shakespeares* the proper noun is 'reclassified' into a common noun. Similarly, in a sentence like *The old Dr. Brown I know* we find modification and determination of the proper noun.

PREHEAD			HEAD	POSTHEAD[44]
Function	Determination	Modification	Head	Modification/ Complementation
cover term	Determinatives	Modifiers	Nouns	
word class: lexemes/ elements (which can be used in a particular function)	Articles Demonstratives Personal/Possessive Pronouns Universals Existentials Numerals/cardinal numbers Disjunctives Distributives Interrogatives Genitive phrases	Adjectives Adjective Phrase Genitive Phrase Participle Ordinal number noun/ nominal VP	Common Noun Proper Noun Pronoun Adjectives Existential	Prepositional Phrase Non-finite clause, etc. Appositive NP Non-appositive NP Finite clause (e.g. Relative Clause)

Table 5: Modern English NP Structure (adapted from Collins & Hollo (2000) and Huddleston & Pullum (2005))

The following elements are considered to be determinatives in Modern English: the articles *the* and *a/an*, the demonstratives *this/that*, *these/those*, personal pronouns *we*, *you*, etc. possessive pronouns *my*, *her*, etc. universal determinatives *all*, *both*, existential determinatives *some*, *any*, cardinal numbers, *one*, *two three*, etc. the negative particle

[44] Within the modification function, there is premodification where modifiers precede the head and postmodification where elements follow. Generally, post-head dependents may be complements, modifiers or peripheral dependents. The function complementation will be reserved to a part of a phrase or clause which follows a word and completes the specification of a meaning relationship which that word implies. Several phrases can function as complements: prepositional phrases, relative clauses, infinitival clauses. As such, complementation may be obligatory or optional on the syntactic level. Complementation also overlaps with other functions, such as adverbials and modifiers (Quirk et al. 1985: 245ff.)

no, disjunctive determinatives *either, neither* distributive determinatives *each, every*, etc. [45] Also other elements (interrogative, genitive construction) can be determinatives.

An important distinction which is often not being made in syntactic description is the distinction between word classes and functions. Following Huddleston and Pullum (2002), I will make a distinction between determination, a function performed by elements in NP structure, and determinatives, which is the cover term used for all elements which can perform that function. Similar to the determination/determinative distinction, I also differentiate between the function 'modification' and the class of 'modifiers', i.e. the lexemes or word classes that can fulfill the function. Pre-head modifiers may be attributive adjectives (*the latest gossip)*, nouns (*brick walls)*, participles (*the looming crises)*, ordinal numerals (*my second accident)* or genitive phrases (*a gentleman's club)* (Collins and Hollo 2000: 57).[46]

To conclude, it is essential to understand that the dependents categorized in Table 5 can fulfill different functions in the NP; one of them (the determination function) is to define what 'reference' an NP has.

2.1.2 Referentiality

Determination is linked to the pragmatic concept of 'reference'. Every noun has a certain denotation, a meaning inherent in its lexical entry. In linguistic discourse however, most NPs are also 'referential', which means that they refer to entities in the linguistic or situational context. They either refer to an independently distinguishable entity (set of entities) in the outside world (real or fictional) or to an earlier or later part of the discourse. Here, it is important to conceptually distinguish between the referential phrase and the referent (in the outside world) which they refer to.

What kind of reference a noun phrase has is determined by determinatives which are dependents found exclusively in NPs and which overtly mark reference (Quirk et al.

[45] see Huddleston and Pullum (2005: 356) for a complete list. Also note that in PDE certain co-occurrence restrictions between determinatives and noun classes exist. See Quirk et al. (1985: 257-264) for further information.

[46] In contrast to Huddleston and Pullum's proposal (2002: 355f.), I will not assume that determinatives can also function as modifiers or that modifiers can fulfil the function of determination as this would mix up different levels of investigation (cf. Van de Velde 2010: 294).

1985: 64). Reference can be definite (*the*), indefinite (*a/an*), partitive (*some*) or universal (*all*). Semantically most NPs are determined somehow even if no element marks the NP overtly; either they are definite or indefinite in their meaning (which can be inferred from the individual context). In Modern English, however, the overt indication of referentiality is obligatory with singular count nouns in definite and indefinite contexts. Almost all singular count nouns require a determinative when they are used referentially (Quirk et al. 1985: 64; 5.12; Huddleston & Pullum 2002: 330; cf. Van de Velde 2010). [47]

For example, in a sentence like *The boy cleaned his bike*, the NP *the boy*, is referential and refers to a particular identifiable boy known to the speaker and the hearer (Huddleston & Pullum 2002: 399). Reference here is given to the noun by the addition of the definite article and is heavily context-dependent. Which particular boy one talks about depends on the context (Huddleston & Pullum 2002: 399). Also the pronoun *his* is referential through its anaphoric relation to its antecedent *the boy*. Generally, NPs are referential expressions. Note, however, that the noun by itself is not referential in this case. Rather it denotes a set of entities of a certain kind. In *The boy cleaned his bike*, *bike* by itself is non-referential and denotes a set of entities of a certain kind (two wheeled vehicle). Only with the addition of a determinative (in our case *his*), can the noun start to realize a function in English (Huddleston & Pullum 2002: 55). In other words, very often the determinative added to the noun has the function to add discourse-pragmatic reference to the NP (Huddleston and Pullum 2002: 399ff.).

NPs are generally referential but not every NP is. As a matter of fact, most NPs can be used referentially or non-referentially[48]; compare, for example, *Mary lives next door* vs. *Mary is still a very popular girl name*. In the second sentence we are not talking about a specific Mary in the real world. So called 'bare role NPs' which are restricted to the function of predicative complements (*I was elected president*)[49] and negative NPs (*No car in the race*) are always non-referential. Also certain determinatives mark an NP

[47] See further Quirk et al. (1985: 266) for several ways in which the identity of the referent may also be determined.
[48] See Huddleston and Pullum (2002: 400) on how to test for a referential reading.
[49] Interestingly, the interpretation of bare role NPs is potentially definite. In *Henry became treasurer,* the office of treasurer is definite as it refers to the office in some particular organization. That's why we could replace the sentence by *Henry became the treasurer,* although the NP does not take a determiner here.

as non-referential (*either, each, any*). Generic interpretations of nouns, like in *Lions are dangerous* are considered to be non-referential as well. Still, non-referential NPs are less frequent than referential NPs (Huddleston & Pullum 2002: 402 ff.).[50]

'Generic reference' has to be distinguished from 'specific reference'. There is a difference between a sentence like *The zebra is sleeping in the cage* and *Zebras are funny animals*. In the first sentence the reference is specific; in the second it is generic and refers to the class of 'zebra' without a reference to a specific one.[51] Note that generic reference is a tricky concept. It is commonly assumed that it is a form of reference opposing specific reference. However, many writers have realized that generic reference has a variety of interpretations. Unfortunately, a discussion of those would go far beyond the scope of the discussion here (cf. Chesterman 1993: 14).

In contrast to determinatives, modifiers do not determine reference, but they rather 'restrict' reference in the NP. Modification as a function is mostly optional, mainly performed by the open word class adjective. Quirk et al. state that "[m]odifiers add 'descriptive' information to the head, often restricting the reference of the head" (1985: 65). For example, *an old man* has a more specific meaning than *a man*.[52]

2.1.3 Word class, function & positional slot

Another observation can be made with reference to Table 5. It has been said that determination is a function and that a determinative element fulfills this function as a reference marker. Although in other languages determinating elements can occur in various positions, in English it can be argued that a 'positional syntactic slot' in the prehead is reserved for determinatives. Therefore, in this thesis, I suggest to associate the determination function not only with individual forms but also with a positional fixed slot. Determinatives (slot fillers) have to be inserted there and nowhere else. This

[50] See Huddleston and Pullum (2002: 402ff.) for other special cases of non-referential NPs.
[51] Whereas number distinction is largely irrelevant for generic reference the distinction between singular vs. plural and definite vs. indefinite is important for specific reference (Quirk et al. 1985: 265). "[T]he distinctions of number which apply to this or that member, or group of members, of the class are neutralized, being largely irrelevant to the generic concept" (Quirk et al. 1985: 265; cf. Quirk et al. 1985: 5.52ff).
[52] Note that there is a distinction between restrictive and non-restrictive modification (cf. Quirk et al. 1985: §17.3 ff). Also, ordering principles for pre-head modification exist (cf. Collins & Hollo 2000: 58).

determination slot is situated left of the modification slot. This suggestion will turn out to be essential later on because I will argue that in order for the category article to develop this determination slot had to emerge first.

It is essential to understand that determination is a function which can be fulfilled by lexical items either by virtue of their form and/ or their meaning or by virtue of the position they assume in a structure. Function and form are related indirectly. In other words, a function is different from the lexical morpheme that fulfills it. At the same time, it is also different from the syntactic slot which represents a formal unit, which can also be employed to fulfill the function. On the one hand, there are forms which can fulfill the determination function, e.g. possessives or demonstratives, because they are conventionally associated with meaning that includes or implies determination; e.g. *my* has the semantic meaning [possessed by the speaker] and this automatically implies determination. In this thesis, any lexeme that can express the determination of a referent, no matter where it is to be found in the sentence will be considered a member of the set of determinatives. On the other hand, there is the option that a 'local' slot exists in the syntax, and the way this slot is filled can signal definiteness as well. A slot is nothing but a relative position which can be filled by a formal element. If such a slot exists, filling the slot or leaving it empty can be (or become) meaningful in itself. I will come back to this idea in the following section and again in section 5.2, 5.3, 5.4 & 6.1.

Before a potential determination slot can be looked at in detail, I would like to briefly discuss the notion of 'definiteness'. As this concept has already been mentioned several times, I will briefly discuss it from a theoretical and comparative point of view. Moreover, to complete the picture, I would like to mention some facts about the usage of the definite article in Modern English.

2.2 Definiteness

As has been mentioned above, some determinatives may have additional meanings (e.g. the pronoun *my* expresses possession whereas the demonstrative *those* expresses spatial deixis), but one general function of all determinatives is to specify the definiteness or indefiniteness of an NP's reference.[53] In English the definite article *the*, demonstratives, possessive pronouns and genitive phrases are said to mark the NP's reference as definite. The indefinite article *a/an*, cardinal numbers, and quantifiers mark it as indefinite. *Which, what* etc. are indefinite as interrogatives, definite as relatives. Additionally, some heads determine their own reference type. Within the class of nouns, proper nouns are said to be logically equivalent to definite description and therefore can be analyzed as incorporating their own determiner. Therefore, in English, an NP with a proper noun as the head normally does not contain a separate word with determinative function.[54] For example, personal names, temporal names, some geographical names and other locative names take no article in English (e.g. **The John is a nice guy*). Personal pronouns have long been interpreted as inherently definite and take no determinative.[55]

2.2.1 Typological facts

There is considerable variation in the expression of definiteness across languages. Especially, articles, which only express (in)definiteness or (non)specificity, are not that frequent cross-linguistically (Himmelmann 1997; Lyons 1999; van Gelderen 2007).

[53] Determinatives generally serve to mark the NP as definite or indefinite, but at the same time some also express quantification (existential quantification: *some of it* vs. universal quantification: *all of it*). See Huddleston and Pullum (2002: 358ff) for details.

[54] At least in English, but this does not necessarily have to be the case in all languages. In other languages like Greek, determinatives are found before proper nouns as well. Also in English exceptions exist where a proper noun takes the definite article (e.g. *the Netherlands; the John I know*) (cf. Quirk et al. 1985: 5.70-7.72).

[55] "What distinguishes personal pronouns from full definite (or demonstrative) NPs is their lack of descriptive content (beyond partly descriptive grammatical features like gender in some forms). A pronoun is therefore used, in general where the associated descriptive content can be readily recovered from the discourse or the non-general context" (Lyons 1999: 30). In all those cases I will speak of 'bare definite NPs'.

Thus it is interesting to briefly consider some points related to article usage and grammatical definiteness marking from a typological perspective.

Not all languages mark the semantic concept of definiteness overtly in their morphosyntax. Those that do are a distinct minority. Languages in Western Europe and the countries around the Mediterranean show the greatest concentration of languages marking definiteness in their grammar. Many languages, e.g. Japanese, Finnish and the Slavic languages (except Bulgarian and Macedonian), do not have a definite article. Adding a definite article to the head is not the only way of making definite reference to some entity. Languages may indicate definiteness through position (e.g. in Chinese[56], cf. Diesing 1991), through case (e.g. Finnish and Persian; cf. Buchholz 2004) or, for example, through verbal aspect (e.g. Russian cf. Leiss 1994, 2007; Abraham 1997; Philippi 1997).

Definiteness can be expressed morphologically on prenominal adjectives[57]. For example in Serbo-Croatian, and to a lesser extent in Slovene, the short form of the adjective is interpreted as indefinite (*nov grad* " a new city"), while the long form with the suffix -*i* is definite and/or specific (*novi grad* " the new city", "a certain new city") (Aljovic 2002). In Finnish, word order mostly indicates if an NP is definite or indefinite. Compare *Kadulla on auto*. On the street is a car. Vs. *Auto on kadulla*. The car is on the street (Karlsson1983[95]: 18). It is also common for definiteness to interact with the marking of case in certain syntactic contexts. In many languages direct objects receive distinct marking only if they are definite. For example in Turkish, the direct object in *adamlari gördüm* (meaning "I saw the men") is marked with the affix –*i* (indicating definiteness). The absence of the affix means that the direct object is indefinite (*adamlar gördüm* "I saw men").[58]

One either finds a free lexical item (e.g. *the*) as article or, as like in Turkish, an affixal article of some kind, which is added somewhere in the sentence to mark

[56] Chinese sometimes uses classifiers as definite articles or position to indicate semantic definiteness.
[57] This is also the case in Old English (see further 3.1.4).
[58] "Some languages also have a special article for generics and proper names, or differentiate the definite article with respect to proximity to the discourse participants." (Giusti 1997: 102).

definiteness.[59] Either the article is an invariable word and not inflected (for this reason it is often labeled "particle" in descriptive grammars) or, the article is an inflected form, encoding features such as number, gender and case. This is particularly the case in Indo-European, e.g. Present Day German (Lyons 1999: 67).

Generally, there also exists a typological distinction between preposed and postposed articles following the noun. *The* belongs to the preposed free-form lexical type. The great majority of languages with a lexical article are closely comparable to English in terms of the article's position in the NP. Free lexical determinatives in preposed position tend to occur at the beginning of the NP before the modifier (Lyons 1999: 64) (see section 6.2.1 for why this might be the case).

As has been mentioned before, there are languages which do not employ articles but mark definiteness only through other determinatives. Many languages use demonstratives rather than articles to indicate definiteness.[60] Also in terms of historical development, often a demonstrative (normally the non-proximal demonstrative or equivalent) develops into a definite article (cf. van Gelderen 2007: 275f.).

> It is in fact usually a deictically unmarked demonstrative, or a non-proximal or non-first-person one, which provides the source of a definite article. One consequence of this is that in many languages the definite article is segmentally identical or very similar to one of the demonstratives (though differing in stress). (Lyons 1999: 116)

A second possibility can be observed in the North Germanic dialects, which have developed their article from the third person pronoun postposed, which was originally treated as clitic and afterwards as an ending. (McColl Millar 2000: 305).[61]

Another interesting fact is that article development sometimes seems to be an areal feature resulting from language contact. Here, the Balkan "Sprachbund" (an areal grouping of languages in the Balkan region) provides an interesting example. The languages in that particular region belong to different Indo-European sub-families

[59] E.g. Romanian: *om* (man), *om-ul* (man-ART: the man); *om-ul bun* (man-ART good: the good man). Or in Basque: *emakume* (woman), *emakume-a* (woman-ART: the woman), *emakume ederr-a* (woman beautiful –ART: the beautiful woman).
[60] for forms and info on demonstratives see (Lyons 1999: 113-116)
[61] Often, the articles are then subsequently analyzed as affixes, as for example the Scandinavian definite suffixes (van Gelderen 2007: 275).

(Slavonic, Romance, Hellenic and Albanian). Nevertheless, they share features of syntax and morphology not especially common outside this region. One of those features is that most of the languages have a definite article. Two aspects, in particular, are striking. Bulgarian and Macedonian are almost alone among the Slavonic languages with a definite article (Lyons 1999: 48). Additionally, apart from Greek in the south, all languages involved (Bulgarian, Macedonian, Romanian and Albanian) have a postponed article appearing as a suffix on the head noun or some other word in the NP (Lyons 1999: 48).

The "Sprachbund" example shows that language contact might have an influence on the development of specific morpho-syntactic features, but especially it shows that even a Romance language (Romanian) can follow a different path in its grammatical marking features (suffix instead of lexical elements in the prehead) due to the contact situation. On the other hand, the "Sprachbund" example should not be misleading. Definiteness marking does not only occur as an areal feature. There are many examples of languages or small language groups that differ from their neighbors by having a definite article and where no contact situation has led to its emergence. Erzya-Mordva and Moksha-Mordva, two closely related Uralic languages spoken in the west of the Urals (Kramsky 1972; Comrie 1981b) are a good example. These languages have a definite article in the form of inflectional material on the head noun. The fact that this article is purely a Mordva development which cannot be found in the rest of the Uralic languages shows "that languages can develop a definiteness marker spontaneously" (Lyons 1999: 49). This is relevant for one of the main arguments in this thesis namely that morphosyntactic change can be driven by formal, system internal pressures and not only by external factors like, for example, language contact (see chapter 6). Article development is not very common in the languages of the world, and many languages can perfectly express communicative intentions without it. This seems to indicate that sometimes the article may emerge for reasons other than the 'communicative needs' of the speakers, a point I will come back to in section 3.3.3 and 6.3, where theories on article emergence are being discussed.

At this point the question remains: What exactly is definiteness? Let me point out in advance that this question is very difficult to answer because the whole notion is a compositional concept which includes many characteristic features. For example,

Chesterman points out that "definiteness itself is argued not to be a primary notion at all, but compositional" (Chesterman 1991: 8). Moreover, researchers often do not clearly distinguish between the semantic concept of definiteness and 'grammatical' definiteness, which is in a way derived from semantic definiteness.

2.2.2 Defining definiteness

Definiteness has been investigated extensively by various linguists from several schools.[62] One needs to make a distinction between 'semantic-pragmatic definiteness' and 'grammatical definiteness' (the overt encoding of it). It is essential to realize that the semantic-pragmatic concept occurs in languages even if the corresponding grammatical category is lacking. The grammatical category definiteness must be understood as being similar to other functional categories like Tense, Mood, Number or Gender etc., which also need not be expressed lexically. But, like these, grammatical definiteness is the grammaticalization (i.e. the representation in grammar) of a semantic-pragmatic notion (Lyons 1999: 278) (cf. section 3.2). For example in Hausa, the definite article suffix *-n/-r* is only an optional marker. Thus it is possible that in a sentence a common noun which is semantically definite by having anaphoric reference (because it was mentioned before) still occurs bare (Lyons 1999: 52). This shows that although the NP's reference in the outside world is definite, it is not obligatory to overtly indicate this 'fact' in the grammar of that particular language.

There is still no general agreement among linguists what definiteness is. Generally, it is a functional category pertaining to NPs. It has been stated that "[a] definite NP has a referent which is assumed by the speaker to be unambiguously identifiable by the hearer (in brief, a known or identifiable referent)" (Chesterman 1991: 10). Quirk et al. point out that a definite NP refers "to something which can be identified uniquely in the general knowledge shared by the speaker and hearer" (Quirk et al. 1985: 266). In

[62] cf. Christophersen 1939; Kramsky 1972; Givón 1978; Greenberg 1978; Comrie 1981; Hawkins 1987, 1991, 2004; Lyons 1980, 1995, 1999; Chesterman 1991, 1993; for definiteness and aspectuality cf. Leiss 2000, 2007; Wood 2003, 2007; Osawa 2007; Bauer 2007; for the logical semantic analysis of definite NPs cf. Stalnaker 1974;Grice 1975; Kempson 1975; for the relationship between quantification and definiteness cf. Milsark 1977; Barwise & Cooper 1981; McCawley 1981; Cann 1993; for relevance theory cf. Sperber & Wilson 1987, 1995.

contrast to this, "an indefinite NP has a referent which is assumed by the speaker not to be unambiguously identifiable by the hearer (i.e. a new, or unknown, referent)" (Chesterman 1991: 10).

An essential component of the given definition seems to be the notion of identifiability. Next to identifiability other components of definite meaning have been listed in order to account for the occurrence of definiteness marking. All in all, six major components of definite meaning have been discussed extensively: a) referentiality, b) familiarity, c) identifiability, d) uniqueness, e) inclusiveness and f) specificity. Note that all these components, which I would like to discuss briefly, overlap and are not distinct aspects.

As this thesis is about the development of the English definite article, I will take the Modern English definite article as an example. It is mostly via the definite article that definiteness is realized in English. As Chesterman (1991: 4) points out *the* constitutes "the prototypical core of definiteness expression in English", and Quirk defines the definite article as "referring to something which can be identified uniquely in the general knowledge shared by the speaker and hearer" (Quirk et al. 1985: 266).

Definiteness is definitely linked to referentiality (a). To be precise, it is a property of the referent, not of the NP. Using a definiteness marker often gives the NP reference (however for see generic reference see below). Let us consider the following examples[63]:

(23) I bought the car.

(24) Put the clean towels in the bathroom please.

In such sentences, the article in the NP specifies reference. **I bought car* would be ill formed as the specific reference in the outside world needs overt marking with the singular count nouns in this context. Moreover, the referent in both sentences is marked as known to the hearer and the speaker. This leads to the so called 'familiarity'

[63] Examples (23) – (28) are taken from Lyons (1999: 3-8).

hypothesis (b) first presented by Christophersen (1939) and extensively modified by Hawkins (1978)[64]:

> *The* signals that the entity denoted by the NP is familiar to both speaker and hearer, and *a* is used where the speaker does not want to signal such shared familiarity. (Lyons 1999: 3)

In (23) and (24) speaker and hearer are familiar to the referent. Familiarity enables the speaker and hearer to identify the particular referent. However, in other English sentences such as

(25) The president of Ghana is visiting tomorrow.

(26) They've just got in from New York. The plane was five hours late.

(27) I've just been to a wedding. The bride wore blue.

familiarity is problematic because although the hearer will probably accept that there is a president of Ghana it does not mean that s/he knows this person. It is also unlikely that s/he knows the particular plane which flew in from NY. Still the article is used here. In (27), the hearer knows that weddings involve brides and makes the natural reference to the bride at the particular wedding, but it is not true to say that the hearer really knows the bride. (S/he does not know the bride's name etc). The hearer associates a definite noun phrase (*the bride*) with some entity [bride] which he expects to find in or associates with the situation [wedding] (Lyons 1999: 7).

That is why in the case of English, Huddleston and Pullum are sympathetic to the familiarity thesis, but they prefer to see definiteness as being about 'identifiability' (2002: 365). Identifiability (c) refers to the idea that the use of the definite article "directs the hearer to the referent of the NP by signaling that he is in a position to

[64] Hawkins redefined Christophersen's familiarity in his location theory in terms of speech act theory (1978).

identify it" (Lyons 1999: 6). The notion of identifiability does not replace familiarity, but it can help where familiarity fails as in the cases just mentioned.

Interestingly, there are also cases in English where identifiability does not work. Associative uses of the definite article in general are problematic for identifiability (Lyons 1999: 7). In the sentence (28) the definite article is sanctioned by the relative clause afterwards.

(28) Mary's gone for a spin in the car she just bought.

Here, the hearer finds out that Sally just bought a car but that does not help him/her to identify it. S/he would not know the car if he saw it. To account for article use in those cases, linguists moved on to the notion of 'uniqueness' (d):

> The definite article signals that there is just one entity satisfying the description used. This uniqueness is generally not absolute, but is to be understood relative to a particular context. (Lyons 1999: 8)

Thus in (27) there is just one bride at the wedding; in (28) there is just one particular car. Uniqueness fits well for singular count nouns. However, definite articles sometimes also occur with plural or mass nouns which do not refer to a single, unique referent. This leads to the employment of the last characteristic component. With plural and mass nouns, definiteness involves not so much 'uniqueness' but the notion of 'inclusiveness' (e): "the reference is to the totality of the objects or mass in the context which satisfy the description" (Lyons 1999: 11).

(29) We are looking for the answers.

(30) I can't find the shampoo I put here this morning.

Here, the reference is to all the answers which exist and to the shampoo container left there. Thus, with plural and mass nouns *the* is rather a universal quantifier similar to *all*. Also note that uniqueness is linked to the notion of inclusiveness. Inclusiveness is the same as uniqueness when the NP is singular because the totality of objects which satisfy

the description is only one (Lyons 1999: 12). At the same time, uniqueness often is equated with 'specificity' (f), which can be defined as the "uniqueness of the entity". "Specificity is relevant for whether to refer to *a man* as *him* (for specific) or as *one* (for nonspecific) in English" (Frawley 1991: 70).

To summarize, it can be said that not every possible semantic aspect is included in all cases of article usage. Moreover, in the course of its diachronic development, the English article, in later developmental stages, also gets employed in situations other than marking the referent as definite/indefinite (see 2.2.3 below; cf. van Gelderen 2007: 276). However, marking familiarity, identifiability, and uniqueness is the article's central, prototypical job.

2.2.3 Article usage and its distribution in the noun classes in Modern English

All the semantic components of definiteness which have been discussed above can be found in Hawkins' list of article usage in Modern English (1978). Hawkins argues that in its most prototypical usage the referent of a definite NP is part of a 'shared set'. Physical and mental objects occur in sets of different kinds, and if both speaker and hearer share knowledge that a given referent is located in a given set, this set is a shared set. Examples of such shared sets relate to usage types of *the*. *The* is used when the speaker or hearer knows the entities from previous discourse, the intermediate or larger situation or an association set or general world knowledge (Hawkins 1978: 167). When using the definite article the speaker performs the following act:

> He (a) introduces a referent (or referents) to the hearer; and (b) instructs the hearer to locate the referent in some shared set of objects, […] and he (c) refers to the totality of the objects or mass within this set which satisfy the referring expression. (Hawkins 1978: 167)

Based on this observation, Hawkins (1978: 106-149) and Himmelmann (1997: 36) distinguish the following uses of *the*[65]:

[65] Hawkins himself reflects on the work of Christophersen (1939). Compare Quirk et al. (1985: 5.27-5.35) for their list of definite article usage.

i) *Anaphoric and immediate situation uses*: the intended referent is part of the situation. He can be visible for speaker and hearer, like in *Pass me the bucket, please*! or invisible as in *Beware of the dog*!

ii) *Anaphoric use*: the intended referent was mentioned before, as in *Fred bought me a bucket, but the bucket had a hole in it*.

iii) *Abstract-situative use*: the referent is part of the world knowledge of the speaker, e.g. *the sun*, *the Queen*, *the Prime Minister*, or *the pub* in a sense of "the pub one finds in every local community".

iv) *Associative-anaphoric use*: the textual appeal to general knowledge gives rise to 'associative anaphora'. After mentioning *a house* one can continue with *the roof, the windows, the size.* The first NP is a 'trigger' for the following so-called 'associates'. In *The man drove past our house in a car. The exhaust fumes were terrible.* Here car triggers the exhaust fumes. The essential feature which needs to be fulfilled is a part-of condition.

Hawkins also lists so-called 'unfamiliar uses', where the concept of a shared set does not apply. When using the definite article in those instances, the speaker leaves the notion of semantic definiteness more and more behind:

v) *unfamiliar uses*: complex nominal phrases that cannot be subsumed under the first four points. They are not situational uses of *the*; they are not associates of some trigger in previous discourse, and the speaker and hearer do not share any knowledge of the referent on the basis of previous mention either. Here, 4 subtypes exist:

a) establishing relative clause: *Bill's fed up with the book which I have just given him for his birthday;*

b) NP-complements: *Bill is amazed by the fact that there is so much life on earth;*

c) genitive attributes:, e.g. *the beginning of the war, the weight of the car;* and

d) nominal attributes: *the name Algeron, the color red, the number seven.*[66]

As mentioned before, another possible way of using the article is with generics:

vi) *generic use* (Chesterman 1991:52f)[67]: *The horse is a useful animal*.

Here *the* refers to the species, type or class and not a single referent. In a sentence like *The African Elephant will soon be extinct*, the article denotes the entire class rather than an individual member. Thus those generic NPs which take the definite article have to be interpreted non-referentially. Generally, specific use of the articles is much more frequent than generic use. Also a number of fixed expressions require the article rather arbitrarily, because the expression does not refer to a special entity (*He plays the violin; We dance the rumba*) (Huddleston & Pullum 2002: 407f.) [68]. Here the article functions as a sheer marker of nounhood. I also would like to comment briefly on some of the occurrence restrictions of the article with the various noun classes.

If an NP is definite in Modern English, the definite article is used as the default marker to overtly mark definiteness, if no other determinative already marks it. Overt definiteness marking is obligatory with singular count nouns, plural count nouns and non-count nouns in contexts which make it clear that the NP refers to a unique, identifiable entity known to the speaker and hearer. In contrast to this – if the context is indefinite – the indefinite article *a/an* or no article is used. Generally, the distribution of the definite article/the indefinite article is determined by a combination of three binary oppositions: identifiable referent vs. non-identifiable referent, count vs. non-count and singular vs. plural. For count and non-count nouns the distribution of articles has been listed as the following:

[66] Additionally, Hawkins discusses article usage with superlatives, ordinals, and some adjectives (*same, identical, next, other, only)*, which must also be considered part of unfamiliar uses, but which he himself does not categorize.
[67] Chesterman (1991: 52f) is aware of the fact that "Generics is thus not a clear-cut unitary phenomenon, but rather seems to be more of a cover term for a variety of 'non-particular' kinds of readings."
[68] These fixed expressions denote musical instruments, academic subjects, illnesses, transportation, seasons (cf. Huddleston & Pullum 2002: 408).

	DEFINITE		INDEFINITE	
	Count	Non-count	Count	Non-count
SINGULAR	the tiger	the furniture	a tiger	- furniture
PLURAL	the tigers		- tigers	

Table 6: Use of the definite article (adapted from Quirk et al.1985: 265)

Singular count nouns are not supposed to take no article, still, exceptionally, instances of such a pattern occur. To mark definite contexts is not always the case as there is a group of bare singular count nouns in fixed expressions where we expect a determinative as they denote a real location, like *Ed is in hospital* or *at sea, leave town, start university.* As a reaction, the table above has been severely criticized (Chesterman 1991, 1993).

To defend the proposed distribution, it could be argued that cases like *Ed is in hospital* are given non-referential interpretations. "In these cases the noun acts as an indication of the associated activity, and does not have its standard denotation" (Huddleston & Pullum 2002: 407ff.). The nouns which permit this use are a restricted group: common activities of everyday life, e.g. *Ed is in prison* (= serving time); meals are generally expressed by bare NPs, *We had lunch, We talked about it at dinner*; and bare NPs are used for times of the day following the preposition *at, by, before, until, after* (e.g. *after dawn*) (Huddleston & Pullum 2002: 407ff.).[69] Still such patterns are interesting especially as is other languages some of those phrases take an article: e.g. German *Ich gehe in <u>die Schule</u>.*

Table 6 is also concerend with the question of how many articles exist in English. According to Chesterman (1993: 13), there is disagreement about that question. For him "[n]o unified theory of the English articles in yet available" (Chesterman 1991: 39).

> Some studies assume two articles, *the* and *a*; others include zero; others include unstressed *some*; and still others distinguish between zero and null forms (Chesterman 1991: 40)

[69] Note however, that *morning, daytime, evening* and *dark* take *in+the* instead of *at*. In contrast to this, in a number of expressions involving repetition (e.g. *day by day*, or *arm in arm*) or in certain fixed phrases (e.g. *mother or child)* we find no article.

One can distinguish between so-called 'surface articles', the visible morphemes *the, a/an* and 'invisible' ones as, for example, in *I like coffee* or *hand in hand*. Take the two NPs *I like music* and *I like Peter*. Although superficially the two nouns *music* and *Peter* look alike as they have no article as a dependent, there is a conceptual difference. In the first case we have a common noun which can have so-called 'article contrast', e.g. *music* vs. *the music*, whereas in the second case *Peter* usually does not take an article. Thus Quirk et al. (1985: 246) proposed that *music* has a so-called ZERO article but proper nouns, which generally do not have this kind of article contrast (*Peter* vs. **the Peter*) are considered to have 'no article' at all.

Chesterman criticizes Quirk's article distinction (1993: 13) for various reasons. First of all, it is not true that proper nouns never take an article e.g. *The Peter I know*. Additionally, Chesterman points out that Quirk states that the zero article has an indefinite reading and thus occurs before indefinite mass and plural nouns (*cheese, biscuits*). This, however, forces Quirk to come up with a "strange hybrid" (Chesterman 1993: 13), namely "zero article with definite meaning", to account for the lack of article before singular count nouns in idiomatic expressions like *hand in hand* (cf. Quirk 1985: 274). Alternatively, Chesterman (1993: 13) like many others (e.g. Yotsukura 1970) calls the lack of an article in bare indefinite NPs ZERO and in definite situations NULL.[70] In other words, Chesterman postulates the existence of two invisible articles. In this paper, I will not employ the term ZERO article or NULL article. Either an NP has a visible article as a dependent or it does not. This can either be *the* or *a/an*. If not, the noun will remain 'bare' and the NP has no article.

To conclude this section, it is clear that one should be aware of the difference between semantic definiteness and grammatical definiteness, which is the overt expression/marking of semantic definiteness by grammatical (syntactic) elements. Whereas semantic definiteness is a universal feature, grammatical definiteness marking is encoded differently in various languages. One finds free lexical forms (like determinatives) to mark definiteness but also morphologically bound affixes. Moreover, some languages use different case or word order to mark definite or indefinite referents.

[70] For an extensive discussion of the differences between the two, see Chesterman (1993) and Quirk et al. (1985: 5.39-5.51)

All in all, it seems that it is very difficult to define definiteness in general, and therefore it is also rather difficult to define what is meant by a 'definite NP'. The following working definition of a 'definite noun phrase' will be used for this thesis: a definite noun phrase refers to specific, identifiable entities shared by the hearer and speaker. Although this definition does not include the possibility that the article is used with generics or instances which Hawkins has grouped in his unfamiliar usage category, it still seems reasonable to use it for this analysis. Generic NPs are seen as non-referential and not as definite. So the proposed definition should enable us to differentiate clearly between definite and indefinite and non-referential contexts in this older language stage (see further section 5).

Finally, it has been shown that if a Modern English NP has definite reference, this has to be marked overtly by a determinative with singular count-nouns, plural count nouns and non-count nouns, although exceptions exist. Here, the definite article functions as the default marker but of course other determinatives can also be used to mark definiteness overtly in those cases.

2.3 Prehead dependents (determination vs. modification)

In the previous sections, several elements were subsumed under the cover term determinatives. However, it is not always easy to decide on what grounds an "adnominal dependent in a given language or language stage is in fact a determinative or a modifier that is conveniently ("parasitically") used for expressing definiteness, deixis, etc." (Van de Velde 2010: 266). As a matter of fact, an adequate analysis of the English NP structure is difficult. Denison shows that "not a single one of the 'facts' [related to category membership in the NP] […], is straightforward, even in PDE" (2006: 283) and Ackles makes the following remark:

> Achieving an adequate analysis of the structure of the Modern English NP has proven to be a challenging task. Among the many problems have been the difficulties of analyzing the relationship between the items traditionally labeled demonstratives, definite and indefinite articles, possessive adjectives, possessive pronouns, quantifiers, numerals and simple adjectives. The co-occurrence restrictions and ordering rules of these items are complex and filled with many idiosyncrasies. (Ackles 1997: 46)

A definition of determinatives is hard to find, and even modern grammars disagree about which elements can fulfill the determination function or how the structure of nominal determination should be modeled (Quirk et al 1985: 253ff; Payne & Huddleston 2002; Coene & D'hulst 2003; Denison 2006). There are even linguists who propose that we should "get rid of" this category all together (e.g. Spinillo 2000) because not enough elements would behave in a way that justifies to group them under such a separate category.

Nevertheless, to postulate such a category seems somehow legitimate as formal, semantic and distributional criteria for the identification of the category can be set up (cf. Giusti 1997: 103; Diessel 1999b: 118; Huddleston & Pullum 2002: 354-358, 452, 538; Van de Velde 2010: 268-269). What is debatable, of course, is whether all elements which are listed as determinatives really deserve to be members of that group.

2.3.1 Aristotelian categories – gradience & gradualness

How should one decide when to categorize an element as a determinative or, for example, a modifier? When syntacticians deal with linguistic elements they realize that they often behave similarly (syntactically or semantically) and group them into categories according to certain criteria. For example, elements which behave more like the articles have been grouped under the term 'determinatives', whereas elements which rather behave like adjectives have been grouped under the term 'modifier'. At the same time, the article and the adjective are considered the most prototypical members of the category.

Categories are mostly derived by means of formal/distributional and semantic criteria. Nevertheless, it should not be forgotten that categories are epiphenomenal "notational tools" which are "abstract idealized means of reflecting syntactic and pragmatic differences between seemingly similar constructions" (Keizer 2007: 3). Categories are "systematic and idealized representations of the way we believe grammar to be mentally constituted" (Aarts 2004: 3). Also, as Denison points out, they are a "secondary phenomenon" and do not necessarily have psychological reality:

> What speakers experience is *usage*, from which they no doubt intuit patterns of various kinds. Most linguists attempting to generalize from usage find it a helpful economy to recognize that words generally pattern according to a relatively small number of syntactic categories, but categories are still a secondary phenomenon. (Denison 2006: 282)

Therefore, it is always debatable which categories should be used to model a particular grammar. When categorizing, grammarians mostly insist on "Aristotelian categories with necessary and sufficient conditions for membership and hard-and-fast boundaries" (Denison 2006: 279).

> [M]any schools of modern linguistics generally adopt a rigid approach to categorization by not allowing degrees of form class membership, degrees of resemblance to a prototype or overlaps between categories. This all-or-none conception of categorization (Bolinger 1961) goes back to Aristotle, and has been pervasive and influential, especially in formal linguistics. (Aarts 2004: 1)

Normally, any category is "defined by a basket of properties" with no "intermediate possibility between categories", which leads to "unique constituent analysis of each sentence" (Denison 2006: 282). Often, however, a clear categorization of an element is simply impossible, and therefore Aristotelian categories have been called into question by some linguists (Denison 2006; Croft 2007). One of the reasons why categorizing certain linguistic elements is a fuzzy and vague business is that category membership is historically unstable (see below). Not every member of a category displays every property. As a consequence, some researchers postulate more and more categories or subcategories to account for every occurring linguistic pattern. An example of this strategy would be the postulation of a postdeterminer category as a category in between determiners and modifiers floating between the two categories (Quirk et al. 1985: 253-264 or Davidse 2000). An alternative strategy is to propose 'gradience' in grammars.

The term gradience is used in different ways in linguistic discourse. It is a "grammatical notion which refers to the (perceived) interlacing of the categories in language systems" (Aarts 2004: 5); in other words, it concerns the "nature of boundaries between categories" and the "organization of members within the category" (Traugott & Trousdale 2010: 20). Some members of a category are conceived of as being 'better' than others so it has been suggested that more prototypical/central and less prototypical/ peripheral members of each category exist – allowing for degrees of membership (Quirk et al. 1985: 90; cf. Plank 1992; Denison 2006).[71] Such a suggestion corresponds to 'goodness of exemplar' or to 'degree of membership' in prototype theory (Denison 2001, 2006; Aarts 2004, 2007a,b; Rosenbach 2006, 2007; Croft 2007).

Researchers have long been aware of gradient phenomena when dealing with categorization as a cognitive mechanism in psycholinguistics (see prototype theory). Most of the work on categorization has been done in that domain (Labov 1973; Rosch, Mervis & Catlin 1976; Lakoff 1987a; Taylor 1995). In the domain of syntax, however, less attention has been paid to gradient phenomena. Here the notion is often ignored especially in the generative paradigm.

[71] Another point of view is to see categories as epiphenomenal entities "rooted in discourse and ipso facto subject to variation across and within languages". Elements, can, for example be "grammaticalized to a higher or lesser degree" (Van de Velde 2010: 267; cf. Hopper & Traugott 2003; Bybee 2003).

One scholar who has dealt with syntactic gradience is Aarts (2004, 2007a,b), who understands gradience as "an undeniable property of any categorial system, including grammatical descriptions" (Aarts 2004: 3). In his work, he makes some further distinctions. He distinguishes between 'Subsective Gradience' (SG), which is "intracategorical in nature and allows for members of a class to display the properties of that class to varying degrees" (2004: 1), and 'Intersective Gradience' (IG) which is characterized by "two form classes 'converging' on each other". SG "allows for a particular element x from category α to be closer to the prototype of A than some other element y from the same category, and recognizes a core and periphery within the form classes of the language" (Aarts 2004: 6). IG, on the other hand, "obtains between two categories, such that they gradually converge on one another by virtue of the fact that there exist elements which display properties of both categories" (2004: 6).

Aarts bases his distinction on a morphosyntactic and distributional approach and claims that SG is much more frequent than IG. He subsequently defends a position that allows for gradience but keeps up "sharp boundaries between categories" (Aarts 2004: 1).

> I will argue that grammatical form classes can be strictly kept apart while allowing for them to 'converge' on each other. Convergence occurs when an element α from class A displays morphosyntactic properties of another distinct form class B. Unless the B-like properties of α outweigh the A-like properties, α will be assigned to class A. (Aarts 2004: 3)

By doing so he tries "to find a middle ground between formalists who marginalize gradience to the periphery of grammatical analysis, and functionalists who believe that gradience is central because it is so widespread in grammars" (Traugott & Trousdale 2010: 30f.).

Especially in diachronic syntax, where grammaticalization and gradualness are extensively researched, linguists are becoming increasingly aware that the recent discussion about the synchronic (gradient) architecture of grammars

> intersects with the gradual changes which appear to be characteristic of grammaticalization on the assumption that: "changes are always manifested in synchronic variation" (Andersen 2001: 228) (Traugott & Trousdale 2010: 19).

Haspelmath (2001: 16539) points out that "since grammaticalization is generally regarded as a gradual diachronic process, it is expected that the resulting function words form a gradient from full content words to clear function words". The phenomenon of grammaticalization is the reason why syntactic categories are considered to be gradient (cf. Hopper 1987; DeLancey 1997; Bybee & Hopper 2001). Traugott and Trousdale propose to see "gradualness as in some way a diachronic dimension of gradience" (Traugott & Trousdale 2010: 26) but they also consider it necessary to "restrict 'gradience' to synchronic analysis, and 'gradualness' to diachronic" (Traugott & Trousdale 2010: 5).

Aarts has been criticized for his distinction of IG and SC by several researchers (cf. Traugott & Trousdale 2010:31; Croft 2007). Yet, his general view on the employment of categories as a necessary tool seems more than practical. Although some elements do not fit their categorical profile perfectly, this does not need to be an argument for abandoning categories altogether. How could anyone ever do without categories as a descriptive device in synchronic linguistic description? First of all, there is a psychological reality to categories: human minds categorize all the time. For example, speakers cognitively differentiate between nouns and verbs. Secondly, we should remember that not all elements convert from one category to the next and if they do, they do not all move at the same time. In diachronic processes of category change (often a grammaticalization process where elements are 'recruited' for a new function), elements show differences in progress in this transition. Various researchers (e.g. Hopper (1987) in his Emergent Grammar) and especially grammaticalizationists (e.g. Traugott 2003; Bybee 2007; Traugott & Trousdale 2010) suggest that all syntactic categories are epiphenomenal entities which are rooted in discourse and vary across and within languages (Van de Velde 2010: 267; cf. Bybee 2003a,b; Hopper & Traugott 2003). Moreover, "a gradient of prototypicality within a category is still compatible with an insistence on clear yes-or-no membership of the category" (Denison 2006: 284).

If one wants to keep up the notion of categories, the goal must be to delimit them clearly somehow. It is important to set up clear criteria for one or the other category. Especially those elements that represent the prototype of the category should be demarcated clearly . The set of determinatives is fuzzy and not every element which nowadays is considered to be a member of this set, necessarily used to be a member of

it at earlier linguistic stages. The article however, is considered the prototype of the determinative category; thus in principle in should be possible to set up criteria and check if a certain element deserves to be member of that category.

This also relates to an important point which is often ignored when criteria for word class category membership are listed. When it comes to setting up characteristic criteria for a certain category, one question is "what the relevant properties for category membership are (i.e. what attributes we associate with particular categories)" (Traugott & Trousdale 2010: 29) and second, if the relevant properties are equally important. These questions will have to be discussed in the following sections.

2.3.2 Demarcation criteria for 'articlehood'

So far, diagnostic criteria for 'articlehood' have not been clearly defined by linguists. Thus the goal of this section is to set up and discuss testable criteria for the demarcation of the definite article and the demonstrative. When we observe these two prehead dependents in Modern English, they are highly frequent but behave differently; syntactic and semantic differences can be observed. In the following section, I would like to discuss those observable differences. I will also look at the behaviour of adjectives in comparison because it will be shown that in some ways demonstratives behave more similar to adjectives than to the articles. Seven criteria which will define 'articlehood' will be proposed. Those criteria are mostly based on Van de Velde's criteria for 'determinerhood' (2010: 268f.). Some of these criteria should be regarded as syntactic criteria others as more semantic ones. By 'syntactic' I mean formal and distributional features like e.g. occurrence restrictions or positional independence. By semantic, I mean those which are related to the meaning of the element.

I would like to make clear in advance that all the criteria to follow build up the notion of articlehood 'together'. Each criterion helps to decide on articlehood. The plurality of criteria in itself suggests that being an article is not an either/or question, but a gradual issue. An element can be more of an article or less of an article. The main idea is that if an element does not fulfill any of the criteria it is not an article. If an element meets several of the criteria, this increases the likelihood of being an article. At the same time it will be argued that some criteria are more important (primary) than others

(secondary criteria). Only if the more important ones are fulfilled, it can safely be assumed that an element is an article. (This idea will be discussed at the end of this section).

Note, in addition, that all seven criteria are based on the behavior of the article in Modern English, which means that all the criteria are met in Modern English but that some of them were potentially not met in earlier stages of English. Additionally, some criteria may not fit article usage in other languages. This means that the proposed criteria are not universal. Although it may be a desirable goal to find universal criteria for articlehood this is not the aim of this thesis. Moreover, it seems impossible to find universal criteria as categories and their characteristic features differ from one language to the other. Finally, I would like to point out that the following discussion is non-exhaustive and potentially expandible by other criteria.

2.3.2.1 Criterion: Predication

As a first criterion I would like to discuss predication. One observable difference between the definite article and the demonstrative in Modern English is that whereas *the* cannot act as a predicative complement, the demonstrative and also the adjective can; e.g. **The problem is the* vs. *The problem is this* or *The problem is obvious*.

A predicative complement is an element of the predicate of a sentence which complements the subject or object. It may be nominal or adjectival[72] and is linked to the subject by a copular verb. In the case of English, this copula is *be* but also some other verbs fulfill this function (e.g. *to become, to get, to feel, to seem*; *He became president*). Predicates can either be "identifying (equative, specificational, extensive…)" (e.g. *This is Sarah*) or "characterizing (ascriptive, classificational, intensive…)"(e.g. *He is dead*) (Van de Velde 2010: 294).[73]

[72] If the complement after a copula verb is a noun or a pronoun, it is usually called a predicative nominal, such as *the king of England* in a sentence like *He is the king of England*. If the complement after a copula is an adjective, it is called a predicative adjective, e.g. in *She is beautiful* (Huddleston & Pullum 2002; Collins & Hollo 2000).

[73] Demonstratives cannot function as characterizing complements because they "ascribe a property and are hence incompatible with the functional, rather than lexical semantics of the determinative" (Van de Velde 2010: 294).

Dealing with predication, Van de Velde presents the following criterion to distinguish between determinatives and modifiers: "If an adnominal element can act as a predicate, it is not a determinative" (2010: 268). Van de Velde's criterion has been designed to demarcate all determinatives, which is problematic in the case of the demonstratives, which can be used predicatively in PDE but are traditionally categorized as determinatives. Van de Velde is aware of this fact and points out that the true status of demonstratives as determinatives is debatable.

Even if the criterion turns out to be problemantic for a successful demarcation of all determinatives, I will employ this criterion to define articlehood. Thus the first criterion is **PREDICATION**: **A pre-head dependent which cannot function as a predicative complement is likely to be an article.** Such a definition does not mean that all elements, which may be banned from the predicate position, are always articles (Van de Velde 2010: 268). Some adjectives, for example, do not occur in predicate position either, this however has different reasons (Denison 2006: 283).

2.3.2.2 Criterion: Independence

A second difference between article and demonstrative (which can also be observed when analyzing the predication patterns above) is that the article *the* is dependent on the noun and inseparable from its head (cf. Giusti 1997: 103). In other words, *the* does not occur except before nouns and has no other function independent of the following noun. It cannot head its own NP (e.g.**the is interesting*). In contrast to this, *this/that, these/those* are separable from their heads and can head their own phrases (e.g. as a subject or object complement); compare *this man* with *I like this* or *I do not trust that man* vs. *That is our man in Havana*. Also the adjective is separable from its head (*The day was beautiful*) when used predicatively and can even act as its own head *Let's help the poor*. Based on this observation, the second criterion is **INDEPENDENCE: A pre-head dependent which cannot occur independently of its head is likely to be an article.** Note that this criterion is closely linked to the PREDICATION criterion because demonstratives and adjectives especially stand alone when functioning as predicative complements.

2.3.2.3 Criterion: Co-occurrence

A third factor is co-occurrence restrictions. As prehead elements, adjectives show almost no co-occurrence restrictions. The use of an adjective does not generally preclude the use of another adjective. They occur with determinatives and other adjectives and even itself (*my big beautiful house*; *my big, big wedding*); except for semantic contradictions in some cases (**He was a short tall kid*). Demonstratives and articles, on the other hand, are more limited in their ability to co-occur. Aside from the fact that both can occur with adjectives, their ability to occur with other determinatives is limited. The demonstrative cannot be used with itself and its usage also precludes the use of another demonstrative in Modern English (**this that house*). Admittedly, we find patterns like *this my uncle* but they are highly marked. Still they exist. In the case of the definite article, however, it can be said that it cannot co-occur with itself or other determinatives *(*the the house; *the my house*). Thus, articles are mutually exclusive with each other and with other determinatives. So the article is in "a choice relation" and non-iterative (Quirk et al. 1985: 254).

Some people will argue that the existence of PDE phrases like *both the men* or *all the men* contradict this (Spinillo 2000: 174; Denison 2006: 284). Indeed, such examples show that English has a complex system of co-occurrence restrictions in the prehead and that it is not easy to account for all possibilities and word order patterns by simple rules. In order to deal with such patterns, several models have been proposed. For example, it has been argued that *both* or *all* are not prehead elements but constitute the head of the phrases listed above. It has also been suggested that those words generally do not belong to the class of determinatives. Although it does not make sense to exclude those elements from the determinative class as they obviously determine reference, it seems possible that in the cases above we face some elliptical constructions in the sense of *both of the men* with a different underlying structure and *of the men* indeed being some kind of complement.

As an alternative, Quirk et al. (1985: 253ff.) suggest the following subcategorization of determinatives in a) Predeterminers[74] b) Central determiners[75] and

[74] *all, both, half such, double, what, twice, one-third* etc.

c) Postdeterminers.[76] The idea behind such subcategories is that a rule can be set up that in the three subclasses only the order a) + b) + c) is acceptable and that items from a single subclass can only combine with the other subclasses but they cannot combine with themselves. In other words, central determinatives are mutually exclusive. There cannot be more than one before the head.[77]

Another possibility to deal with the issue is to postulate a gradient scheme with prototypical members and less prototypical members of the class. Whereas those elements which show no co-occurrence with each other are considered prototypical, those which are not, should be positioned on the adjectival side.

No co-occurrence	**>**	**little co-occurrence**	**>**	**co-occurrence**
Article	>	demonstrative	>	adjective

The more selective a word is, the more likely it is to be an article. All other elements (which by some researchers are categorized as pre- and postdeterminatives) show gradience in that respect. This being the case, I propose that an element only deserves to be termed 'article' if it does not co-occur with itself or other determinatives.

Here, 'co-occurrence with itself' is an essential condition. Only if the element does not occur with itself, one can be sure that it is an article. Without this particular constraint, the criterion becomes circular. For example, if a speaker parses the utterance *the big house* and s/he does not know beforehand that *the* is supposed to be the determinative and *big* the adjective, then the observation that *big* and *the* co-occur with each other could lead to the conclusion that both elements are adjectives. In other

[75] Central determiners being articles: *the, a/an;* demonstrative determinatives: *this, these, that, those*; possessive pronouns: *her, our,* etc.; genitive phrases: *the captain's, my family's,* etc.; quantifying determinatives: *some, any, no, either, neither, another, each, enough, much, more, most;* quantifying NPs: *a few, a little;* interrogative/relative determinatives: *which, what.*

[76] cardinal numbers: *five, sixteen,* etc. and quantifiers: *every, little, few, many, several, (a) dozen.*

[77] See Huddleston and Pullum (2002: 356, 352ff) for a different categorization and for number agreement and selection within the NP. Note that this subcategorization is only necessary if one groups *all, both, such,* cardinal numbers (*five,* etc.) and quantifiers (*every*) as determinatives. This decision is highly debated. *All* and *such* have been categorized as determinatives because semantically they are very similar to the article and always precede adjectives. However, some researchers do not include those elements (numerals etc.) in the determinative class. For example, for Szabolcsi *every* cannot be a determinative; at least not in patterns like *John's every word* (Szabolcsi 1987: 170). For Spinillo (2003) *such* is not a determinative.

words, this criterion cannot be applied without first determining whether something is a determinative or not. If one does that, however, the criterion becomes circular. The only way to make it non-circular is to test it on two tokens of the same type. Only then, we do not need any predefinitions. So the only safe criterion to decide whether something is an article and to distinguish between the classes is to basically apply the criterion on the same token of the same type (like *big, big house* vs. * *the, the house*). Thus, the third criterion is **CO-OCCURRENCE**: **a pre-head dependent which cannot co-occur with itself and or determinatives is likely to be an article.** [78]

2.3.2.4 Criterion: Relative Position

Another characteristic feature of the article is that it mostly occupies the position left of the modifier in the NP. In the NP, the article is often the leftmost node (e.g. *The beautiful girl).* The same holds true for the demonstrative. Based on this observation, Van de Velde concludes that

> [i]f an adnominal dependent occurs to the right of an element that is not a determiner, but an adjunct [i.e. modifier], it is not a determiner itself (Van de Velde 2010: 269)[79].

Similarly, in this thesis it will be suggested that for an element to be an article it must be positioned left to any modifier.[80] The fourth demarcation factor shall therefore be **RELATIVE POSITION**: **a pre-head dependent which occurs to the left of any modifier is likely to be an article.** In other words, an element that occurs to the right of any modifier is not an article. Obviously, for this criterion to work we need to define which elements are modifiers. An obvious criterion may be: an adnominal dependent

[78] In contrast to this, the fact that *big* in the case of *big, big house* can co-occur with itself makes it an adjective. Obviously, demonstratives fulfil this criterion, which shows that one cannot clearly demarcate demonstrative from article, if this criterion was the only one applied. That is why more criteria have been set up.

[79] Van de Velde (2010: 269) points out that "the latter criterion is perhaps not entirely watertight: in some cases, a plain adjective indeed precedes the article, as in *so beautiful a daughter* (Quirk et al. 1985: 1323; Payne & Huddleston 2002: 435). However, this construction did not occur until the thirteenth century in English (Fischer 1992: 215), and has a somewhat special status, in that the indefinite article in this construction, like in its Dutch counterpart, is historically presumably a reinterpreted flexional morpheme" (Van der Horst & Van de Velde 2003).

[80] Note that some modifiers can also occur right to their head, e.g. in *the person responsible* or *the president elect* (cf. Huddleston & Pullum: 560). This however, does not influence the presented criterion.

that does not meet at least one of the criteria mentioned here is not a determinative, but a modifier. Note that this criterion does not exclude the possibility that elements which occur left of a modifier are modifiers themselves.

2.3.2.5 Criterion: Obligatoriness

Another noticeable difference between the article on the one hand and the demonstrative and the adjective on the other is that the article is the obligatory default element to mark definite reference with count nouns (Van de Velde 2010: 268). Adjectives, on the other hand, are optional elements which can be disregarded without damaging the grammaticality of the phrase. Compare a sentence like **beautiful girl gave me a smile*, which is ungrammatical without a determinative, and the sentence *The girl gave me a smile*, where no adjectival modifier is added but which still is grammatical.

The demonstrative is not getting employed as an obligatory default marker either. If a demonstrative is used as a prehead dependent in a noun phrase it automatically gives the NP reference and determines it, but this then is a "parasitic" side effect, as the main job of the demonstrative is to indicate spatial deixis (Van de Velde 2010: 266). This means that a speaker's choice to use the demonstrative is first and foremost semantically motivated. Only the article has to be used 'obligatorily' in some cases.[81] The article is the default marker, which is used if no other element functions as a determinative. This leads to the following opposition:

	obligatory	**not obligatory**
Obligatoriness	article	demonstrative/ adjective

So the fifth criterion concerns **OBLIGATORINESS: a pre-head dependent which is an obligatory default marker to indicate referentiality is likely to be an article.**

[81] Usage then could be seen as syntactically motivated rather than semantically.

2.3.2.6 Criterion: Exclusiveness

If we move on to semantics, it can be said that adjectives are semantically "rich"; they encode referential information. The definite article on the other hand, has specialized in exclusively expressing definiteness and does not express other meanings. Unlike other determinatives, it has no other function than contributing definite status to the noun it determines. For example, the article is always neutral with regard to proximal distance (Diessel 1999b: 118). The demonstratives also express definiteness but are semantically richer as they express +/– proximity. So they have a stronger semantic value (Giusti 1997: 111; cf. Sommerstein 1972; Lyons 1977; Diessel 1999 a,b).

> [Demonstratives] are primarily used to focus the hearer's attention on objects or locations in the speech situation (often in combination with a pointing gesture) […] orient[ing] the hearer outside of discourse in the surrounding situation. (Diessel 1999b: 2).

From that perspective the demonstrative must be considered a less prototypical member of the category than the article. The possessive pronoun, which is also a determinative, has even more semantic content and thus is less central than the demonstrative. This relates back to the concept of gradience: in the set of determinatives there are elements which only fulfill the determination function (namely the definite and indefinite article), but there are other elements which express additional meanings (signal other semantic aspects) as well. The fewer additional meanings an element has, the more central/prototypical the element will be in the category. The articles, which are limited to the indication of definite/indefinite reference, are most central. Demonstratives will be less central than articles as they also express deixis, and possessives will be even less central than that because they clearly express possession. From a certain perspective one could argue that the determination function attaches to them parasitically. The sixth criterion I would thus like to list is what has been termed the **EXCLUSIVENESS** criterion (Van de Velde 2010: 268f.): **a pre-head dependent which exclusively expresses (in)definiteness is likely to be an article**.[82]

[82] The exclusiveness criterion has to do with the semantic content of the element; however, it is not easy to employ. If one wants to decide if a certain form in a language functions as an article or as a demonstrative, very often it will be difficult to judge, if a deictic reading in a certain utterance is possible

2.3.2.7 Criterion: Syntactic Motivation Only

Finally, in some cases it can be observed that the article, as a semantically empty satellite of the noun, is simply indicating nounhood. Giusti argues that "contrary to other determiners, articles are not inserted for semantic, but rather for grammatical (morpho-syntactic) reasons" (Giusti 1997: 104).

For example in a number of fixed expressions, the article is required rather arbitrarily, as the expression does not refer to a special unique identifiable entity (*We dance the rumba*) (Huddleston & Pullum 2002: 407f.). Also, as was mentioned before, the article is used with generic reference, e.g. *The African Elephant will soon be extinct*. Here, *the* refers to the species, type or class and not to a single referent. In a sentence like this, the article denotes the entire class rather than an individual member and functions as a sheer marker of nounhood. Thus those generic NPs, which take the definite article, have to be interpreted non-referentially. In none of these examples we find that the article is semantically motivated as it does not indicate a definite referent (i.e. a specific, unique, identifiable elephant) any more. Instead the prototypical elephant is being refered to. Whereas exclusive syntactic motivation is not sufficient for an adjective or a demonstrative, using an article can be exclusively syntactically motivated.

	sufficient	**insufficient**
Syntactic motivation	article	demonstrative/ adjective

Thus, the seventh criterion is **SYNTACTIC MOTIVATION ONLY: a pre-head dependent which is exclusively syntactically motivated is likely to be an article.**

What other differences can be identified? Adjectives are an open word class, whereas the article and the demonstrative belong to a closed word class. On top of that, adjectives are gradable and articles/demonstratives are not. However, I believe that those facts are less reliable to serve as diagnostics for articlehood. The fact that article and demonstrative belong to a closed word class is not a good demarcation criterion

or not. In many cases a non-deictic reading is often as possible as a deictic reading. This problem will be discussed further in section 5.2.6.

because they both are. This only helps to distinguish them from adjectives. The alleged nongradability of both elements was also mentioned. It is definitely the case that morphological grading is rare or nonexistent with the article. Nevertheless scalar focus particles like *almost,* or *quite* which are similar to grading adverbs are sometimes found in front of determinatives, e.g. *quite the man* (cf. Van de Velde 2010: 269). From such a point of view gradability seems to be possible after all.

2.3.2.8 Primary and secondary criteria

In summary, the following seven criteria will be used to determine articlehood. If an element fulfills these criteria, it is an article:

1) PREDICATION: a pre-head dependent which cannot function as a predicative complement is likely to be an article
2) INDEPENDENCE: a pre-head dependent which cannot occur independently of its head is likely to be an article
3) CO-OCCURRENCE: a pre-head dependent which cannot co-occur with itself and other determinatives is likely to be an article
4) RELATIVE POSITION: a pre-head dependent which occurs to the left of any modifier is likely to be an article
5) OBLIGATORINESS: a pre-head dependent which is an obligatory default marker to indicate referentiality is likely to be an article
6) EXCLUSIVENESS: a pre-head dependent which exclusively expresses (in)definiteness is likely to be an article
7) SYNTACTIC MOTIVATION ONLY: a pre-head dependent which is exclusively syntactically motivated is likely to be an article

When we look at Present Day English, it can be observed that whereas the definite article meets all the criteria at this stage, the demonstrative does not meet all of them. The semantic and syntactic behavior of the adjective category - not being a determinative - meets none of the criteria set up for articlehood.

	PREDICATION	INDEPENDENCE	CO-OCCURRENCE	RELATIVE POSITION	OBLIGATORINESS	EXCLUSIVENESS	SYNTACTIC MOTIVATION ONLY
Article	+	+	+	+	+	+	+
Demonstrative	-	-	+	+	-	-	-
Adjective	-	-	-	-	-	-	-

Table 7: Fulfillment of criteria in Present Day English

This leads to another essential point. So far, nothing has been said about the quality of the listed criteria. Only when the criteria are applied on a certain data set in order to decide if certain forms deserve articlehood, will we be able to see if the criteria are really useful for the demarcation of a definite article in Old English or not. The reader will find a detailed discussion of the applicability of the proposed criteria in the second part of this thesis (chapter 5).[83] Moreover, as already indicated, these criteria are based on PDE usage; they are in a way arbitrary and a *post hoc* decision. So although the usefulness of the criteria still has to be tested, and although defining criteria based on a certain linguistic stage as a means to distinguish categories at an earlier stage may be criticized in general (cf. Spinillo 2000), I will take them as the basis for now. Note however, that some of the criteria potentially will have to be dismissed in the course of this analysis.

Finally, also note that the listed criteria do not help to demarcate the whole class of determinatives; a task which is much more difficult. Researchers still argue about the category membership of several determinatives. For example it is a widely discussed issue if demonstratives in general should be subsumed under the category determinatives. Several researchers suggest that demonstratives should constitute their own class or rather be considered as modifiers (cf. Giusti 1997; Diessel 1999a,b). This

[83] For example, as will be shown in 5.2.2, the INDEPENDENCE criterion will be disregarded for various reasons.

thesis, however, is about the definite article, which I consider the prototype member of the category, and the criteria have been set up to exclusively investigate articlehood.

The main argument is that an element needs to behave in a certain way, needs to meet those criteria in a certain way to deserve being called a definite article. Articlehood is an 'umbrella term' for an element which fulfills several different sub-conditions at the same time (i.e. shows a certain semantic and syntactic behavior). One criterion on its own does not constitute articlehood, only when several criteria are met, can we speak of a definite article. This directly leads to the essential question of how many of the criteria have to be met in order for an element to deserve articlehood? This will be an arbitrary decision, made by the researcher. A very restricted (but possible) point of view would be to demand all seven criteria to be met for an element to deserve the title 'article'. Personally, I consider such an approach too strict. How then should we deal with the proposed criteria and their (non)-fulfillment?

One option is to take a gradient perspective. If an element in a certain language stage only fulfills 2 out of 7 criteria it will be questionable to call it an article; if, on the other hand, for example, 5 out of 7 criteria are met, it is reasonable to interpret it as an article. The plurality of criteria seems to suggest that being an article is not an either/or question, but that an element can be more of an article or less of an article. Category membership thus is gradient. The reason for this fact can be understood much better if one takes a diachronic perspective and understands that the behavior of linguistic elements constantly changes in the course of time; it is possible that an element changes category membership because it grammaticalizes. When doing so, the element takes up new characteristic features and loses others and often those features are taken up one after the other. This can lead to the fact that it is possible that an element at a certain point in time does not fulfill all 'necessary' criteria and must be considered as a non-prototypical but valid member of the category, which potentially will meet more and more criteria in due course.

The second option is to ask oneself if some criteria are more important – so to speak better, more-central – than others. Those then would *have to* be met to deserve articlehood. This amounts to weighing the criteria. Such a line of reasoning will be proposed in the following paragraphs.

Some of the listed criteria indeed seem to be more important than others. I will suggest a distinction between PRIMARY and SECONDARY CRITERIA. In our case, I argue that the primary ones are CO-OCCURRENCE, RELATIVE POSITION, OBLIGATORINESS and SYNTACTIC MOTIVATION ONLY. Those four criteria are directly linked to what could be called a 'positional syntactic lexically underspecified slot' in the prehead. The fact that an article does not co-occur with other determinatives, the fact that it occurs left to the modifier and the fact that is has to be used as an obligatory default, even in cases where in the context semantic definiteness plays no role anymore (see generic usage), is not so much a feature of the particular form, but rather the result of the existence of a syntactically underspecified slot, which is functional in itself.

For example, it is not correct to speak of obligatoriness with reference to the form but with reference to the slot. A phrase like **he meets supervisor* is ill formed but you find sentences like *he meets my supervisor* where no article is used here; thus the article is not an obligatory marker. Rather it is the default marker if the slot is not filled by another determinative. It is a default filler of a slot which has to be filled obligatorily. A slot is nothing but a relative position; a structure which can be filled by a formal element. It seems reasonable to assume that the moment a speaker becomes aware of such a slot s/he can assign a function to this slot as well. In other words, if such a slot exists, filling the slot or leaving it empty can be meaningful in itself. The slot itself becomes functional. Certain 'regularities' can be observed in how to fill the slot. For example, it seems to be one characteristic feature of the slot that it can only be filled by one determinative at a time.

As has been mentioned in section 2.2.1, definiteness is marked overtly in various ways in the languages of the world. On the one hand, an element that has some additional semantic load (possessiveness, deixis) can be positioned rather freely in or outside of the NP (position after or before the head) or, on the other hand, a fixed position might be reserved for those elements. Thus one criterion to distinguish a determinative from an adjective in a language might be that a particular syntactic slot for its occurrence can be indentified. Such as the one in the prehead left to the modifier slot in Modern English. If the speakers feel the necessity to fill the slot obligatorily in

certain situations (for reasons which will be discussed in section 6), it is a logical development that one of its potential fillers becomes the 'default'.

What I suggest is that we should not separate the notion of articlehood from the existence of a determination slot. In order to speak of an article, a slot has to emerge first in the cognitive makeup of the speaker. I suggest that the term article should only be introduced in English when we also can identify a fixed positional determination slot. Only after the positional fixation of such a slot does it make sense to call an element an article. In other words: no slot no article.

This also specifies the type of criterion. Not all of the criteria are scalable. With the EXCLUSIVENESS criterion an item can carry more or less semantic content – a gradient scale so to speak, but there are other criteria, where a 'more or less' notion cannot be applied. Either a language has a slot or NOT! Admitteldy, it will be difficult to decide when exactly this slot emerged as it will be difficult to distinguish between a grammar where definiteness is marked often but still optionally (and in different syntactic locations), and a grammar which employs a fixed positional slot which (under certain conditions) needs to be filled. Here, however, the argument should be that as a qualitative criterion in the Hegelian sense at one point a quantitative change amounts to a qualitative change. If we can observe an increase in overt definiteness marking at a specific positional location in the phrehead, this suggest a change in the grammar as well. To conclude, it must be said that all the criteria which have been set up in this chapter will be applied to an older language stage in chapter 5. Then it will be seen if they work to clearly separate the two word classes.

The conditions of the birth and life of a grammatical category are still involved in much obscurity. (Christophersen 1939:18)

3. Established views

One of the main questions of this thesis is WHY a definite article developed in the English language. Before I present my own ideas on potential causal triggers, which may have led to the grammaticalization of the demonstrative (chapter 6), some established proposals on English definite article emergence shall be discussed in the following chapter. After a discussion of some traditional, philological studies, more recent functionalist and formalist views on the subject will be compared. Here, some general, theoretical implications of both linguistic schools will also be presented briefly. Finally, I will argue for a different perspective on the topic, which should complement and add to current alternative views on the subject.

3.1 Traditional philological views on the development of the definite article

3.1.1 German dissertations

Dealing with the history of the English article, one cannot overlook the vast number of 'German dissertations', which dealt with the development of the article in older periods of English and/or in other Germanic languages (cf. Hüllweck 1887; Philipsen 1887; Wülfing 1894; Diehn 1901; Seidler 1901; Lausterer 1914; Reinicke 1915; Steinhoff 1916; Matthiesen 1918; Weinmann 1920;Paschke 1934).[84] These dissertations were of a descriptive nature and primarily described the distribution of the article in a particular text or in a certain period. As has already been mentioned in the introduction, early writers such as Flamme (1885) or Philipsen (1887) believe in the existence of a 'real

[84] see Grimm 1837; Bruggmann 1904; Behagel 1923; Heinrichs 1954; Rennhard 1962; Giusti 1993 for further German and non-German works on the topic.

article' in Old English. Note, however, that the dissertations belong to the earliest works on the article and were written by scholars with a German speaking background. That particular national background may have influenced the categorization of OE *se* as an article because in the Old High German system one can indeed argue that an article was already used (McColl Millar 2000: 306f). Thus the German scholars may have judged the OE system according to their German standards and unjustifiably employed a particular categorization without being aware of categorical differences which might exist in the two languages. The Old English system on nominal determination is different from the German one and the German demonstrative has stalled as a "near article" (McColl Millar 2000: 309) Thus, we have to be careful with their hasty statement and base such a statement on clear criteria and textual evidence within the target language (McColl Millar 2000: 309). After all, the potential existence of the category depends on the defining criteria of the category as well as its interaction with other elements in the particular grammar.

3.1.2 Article as a necessity

One of the most essential works on the English Article system is Christophersen's 1939 monograph: *The articles: a study of their theory and use in English.* Christophersen's study is a reaction to an earlier comment by Gardiner, which he cites (1939: 20):

> It is sometimes said that such relatively insignificant words [i.e. as the articles] are grammatical tools. But the function of tools is to achieve some specific end. That is precisely what, in many cases, the article does not do, or at all events does only in a very slight and uncertain degree. Often it is mere useless ballast, a habit or mannerism accepted by an entire speaking community […] the accumulation of old rubbish is so easy. (Gardiner 1932: 47)

Christophersen, opposing Gardiner, aims to show that the modern article system is necessary to the smooth running of English as a language. McColl Millar (2000: 301) points out that although Christophersen is correct in saying that the article in Modern English is obligatory and needed as an overt marker, he is unaware that Gardner, if one removes the strong language, has a point when saying that there is an arbitrary nature to

the development of the article. After all, as has been shown in the section on the typological distribution of definiteness marking (2.3.2), articles are typologically rare.

Christophersen (1939: 20) suggests that languages develop definite articles because they shift along the typological continuum from synthetic to analytic in a direction from intricate and complex to greater simplicity (cf. Jespersen 1922: 319ff). However, such a suggestion is problematic. Although one sees evidence of such an assumption when having a look at some languages (e.g. all Romance languages have a discrete article of some kind, while Latin still used a demonstrative), we cannot automatically assume the same in the case of English or other languages. Languages like Greek or Scandinavian dialects developed articles before they shifted along the synthetic to analytic continuum. Moreover, as has been said before, there are many languages which have developed no need article, even if they lost case and gender systems (e.g. Farsi; cf. Abraham 2007). Above all other things, I believe that one aspect is highly problematic in Christophersen's reasoning. Saying that X emerged because there is a universal need for it in the language, and proving that by the fact that X is now part of the language is a highly circular argumentation.[85]

3.1.3 Loss of morphology – disappearance of gender and case

As already mentioned in the introduction, several scholars (e.g. Behaghel 1923; Giusti 1993; Holmberg 1993) assume that generally the loss of nominal morphology has lead to the rise of an article system in many languages. According to them, the decay of OE inflections made it necessary to find new means of expressing various relations of the noun. The question however is, whether this general observable breakdown of nominal morphology led to the emergence of the article directly?

It is well known that a massive breakdown of the case and gender system can be observed from Old English to Middle English. Mainly, it was phonological change -

[85] Another article that includes circular reasoning is the work by Purdy (1973); the circularity has also been noticed by McColl Millar (2000: 311-214) and Mitchell (1985: 133). Purdy states that there is no article in Old English yet, but there was a vacuum in its pronominal and determiner systems, a "semantic/grammatical void which was very susceptible to being filled by a definite article" (Purdy 1973: 123). The inevitable filling of the void slot is argumentatively supported by the fact that English developed the overt marker.

main stress became initial - that 'forced' the restructuring of morphology simply by eroding distinctions. Phonological development, in the beginning unrelated to morphology, led to the development of a more analytic language. Old English words of more than one syllable were stressed on their first syllable. The heavy stressing on the first syllable of practically all words had a far-reaching effect on the development of the language. The vowels of the final syllables began to be reduced to a uniform sound as early as the 10th century leading to phonetic ambiguities within the paradigm.[86] Many inflections were falling together so that in most instances morphosyntactic categories such as case and gender were no longer expressed unambiguously.

As has been mentioned in the introduction, Old English inflections indicated number and case. The 4-case system was simpler than that of Latin as there was no ablative, no locative or instrumental case anymore (all of them in time merged with the Dative). Although Old English had a rich case morphology and although the endings of the cases varied with different noun declensions, most of the endings were already multiply ambiguous in Old English so that morphology was relatively inexpressive (Lass 1992: 105). It was rare for a single noun form to be marked for gender, number and case uniquely (not so for determiners and pronouns). Such a situation led to analogical remodeling; Some *u*-stems and *i*-stems took on masculine *a*-stem genitive singular in *–es* etc. Also, the decay of the Old English inflectional system resulted in the collapse of weak vowels into *–ə* (schwa) and the merger of final *m* and *n* in weak syllables.[87]

Also the gender system changed. There has been a historical shift in English from grammatical to natural gender. In the Old English grammatical gender system (similar to that of Modern German and French) every noun belongs to a particular class, which does not necessarily correspond to sexual gender in the real world. "On the grammatical

[86] Fischer (1992) agrees with the idea that initial stress must have played a role, as it contributed to the neutralization of vowel quantities. However, she points out that it cannot have been a decisive factor, when one considers the fact that other Germanic (stress initial) languages did not all lose their inflections.
[87] The disappearance of the final vowels started in the North and was completed by the middle of the 13th century, while in Kent the old inflectional forms were preserved in part as late as the first half of the 14th century.

level gender is simply a classifying device that predicts concord." (Lass 1992: 106).[88] As a result of the vowel leveling in the Old English endings, grammatical gender ceases to exist in the course of late Old English and early Middle English.[89]

The reasons for the breakdown of the inflectional system are diverse and will not be dealt here in detail. According to Hogg these shifts were not caused by the Norman conquest, but he understands them as the product of a long term trend in the history of language (Hogg 1992: 10). Fischer suggests that the Viking settlements in the Danelaw influenced the language due to a process of pidginization with "a concomitant loss of morphological structure and the development of a more analytic language (see O'Donnell & Todd 1980: 47-8; Poussa 1982)" (Fischer 1992: 208).[90] The process is definite multi-causal and affected the complete language system in a space of three to five generations (Ackles 1997: 32).

The question, however, is whether this observable breakdown of nominal morphology led to the emergence of the article directly? Typologically, Holmberg (1993) observes a complementary distribution between case morphology and articles in European languages. On the one hand, according to the author, languages without articles (most Slavic, and Finno-Ugric languages, Latin and the Old Germanic dialects) have a rich system of case morphology. On the other hand, languages that have a rather poor system of case morphology (the Celtic, most of the Romance and modern Germanic dialects) have lexical determiners. Also Giusti (1993) observes that all languages with articles only develop them when they are losing or weakening case

[88] "In many cases there is nothing in the form of the noun itself to indicate gender. Gender may be a covert noun category; overtly realized only in concord and anaphora, i.e. the main signal of gender in Old English texts is the concordial relation between a noun and its modifiers and anaphors" (Lass 1992: 106)

[89] The process again began in the North. In some Northumbrian texts it is noticeable in the second half of the 10th century. In the South, excluding Kent, grammatical gender disappears in the course of the late 11th, 12th and 13th centuries. By around 1200 the old system is in considerable disrepair in most dialects, and except in Kent the shift to natural gender was pretty well complete by the end of the century. The changeover does, however, show a certain disorderliness; as late as the thirteenth century, the west midland dialect preserves some traces of the old genders in non-sex items where the marked determiners were still distinctive: e.g. 'assailede …*þen* toun and wonne *him*'.

[90] Mustanoja elaborates: [T]here are scholars who believe that the leveling of the case-endings is due to, or at least promoted by, the increasing fixity of word-order in OE and the appearance of new periphrastic forms of expression, but the opposite view, that the periphrases and word-order gained significance only after the decay of the case-endings had created a need for new means of linguistic expression. [...] [W]hat ever the causes and mechanism of the decay of the OE inflectional endings may have been, this development brought about a striking change in the structure of the English language. The functions of the old case endings were largely taken over by prepositions and word-order. (Mustanoja 1960: 67f)

morphology. It is therefore possible that, from Old English to Middle English, the article somehow 'had to' develop to identify the case information which was no longer visible on the noun (Philippi 1997: 63).

Admittedly, in cases like German, case is realized on the article. However, there are several counterarguments to the hypotheses just mentioned: First of all, typologically it is not necessarily the case that the article is superfluous in a language that has case morphology. For example, one finds definite articles as well as rich case morphology in Ancient Greek. As McColl Millar (2000b: 285) points out, in some languages, e.g. the North Germanic ones, a fully developed article system existed – "albeit from a different source – at a time when they also had a relatively complex synthetic morphology" and he concludes that

> [t]here cannot be the one-to-one correspondence […] between grammatical 'simplification' and the growth of an article, even if we have the suspicion that just such 'simplification' does encourage the development of an article system in a wide range of languages (Christophersen 1939: 20) (McColl Millar 2000b: 285).

Second, it is not correct that languages without case morphology necessarily have articles. Chinese is a good counterexample. Thirdly, the loss of case morphology can be compensated in different ways without using an article. It is well known that in languages like Dutch or English prepositions have taken over functions of case markers (Philippi 1997: 63). As a conclusion, the proposed hypothesis must be criticized, mostly due to the fact that it is not very detailed and stays on the surface. Moreover, as pointed out, many counterexamples can be found typologically.

3.1.4 The weak and strong adjective declensions

Another hypothesis, which specifies the earlier 'decay of inflections' proposal and which has often been submitted by present-day grammarians, links the rise of the definite article to the weak form of the adjective (Mustanoja 1960: 232; cf. Brunner 1962; Fischer 2000). It can be observed that in demonstrative + adjective + noun combinations, *se* is almost always used in connection with the weak adjective (cf.

Flamme 1885; Hüllweck 1887; Philipsen 1887; Wülfing 1894; Funke 1949;). Lass (1992: 114) points out that

> [t]he definite article and demonstrative are intimately connected, historically with the adjective, since one of the main controls on adjective inflection in Old English was the definiteness of an NP.

In Old English, adjectives belonged to two declensions: the 'weak' and the 'strong' declension. "Which declension an adjective followed in a given context was syntactically determined" (Hogg 1992: 128). Broadly speaking, if the adjective was in a definite NP then the weak declension was used, elsewhere the strong was used.[91]

	Declension of strong			Declension of weak adjectives		
	masc	neut	fem	masc	neut	fem
nom.sg	-	-	-/-u	-a	-e	-e
acc.sg	-ne	-	-e	-an-	-e	-an
gen.sg	-es	-es	-re	-an	-an	-an
dat.sg	-um	-um	-re	-an	-an	-an
nom.pl	-e	-/-u	-a/-e	-an	-an	-an
acc.pl	-e	-/-u	-a/-e	-an	-an	-an
gen.pl	-ra	-ra	-ra	-ra/-ena	-ra/-ena	-ra/-ena
dat.pl	-um	-um	-um	-um	-um	-um

Table 8: Strong and weak adjectives in Old English (Fischer 2000: 159)[92]

Mitchell elaborates on the observable general tendency:

> [T]he attributive adjective before a noun is declined weak if it is preceded by a demonstrative (*se*, *þes*) or by a possessive (e.g. *min*, *his*), but strong without one of these elements. (Mitchell 1985: 51)

[91] Grammarians use the term 'weak' for the first type and strong for the second because adjectives in a definite NP were formed according to the *n*- or weak declension wheras in the indefinite NP they were formed according to the vocalic or strong declension. Note that the adjective was not strong because the noun was strong or weak. The assignment was syntactically determined. In this respect the adjective did not agree with the noun. (Hogg 1992: 128)

[92] The strong adjective is more highly marked than the weak one.

Mitchell also discusses some exceptions to this rule. Although the demonstrative is commonly associated with the weak adjective, the weak adjective does not always take a demonstrative (Mitchell 1985:§ 114-115). Most of these examples, however, seem to be instances of *–um/-an* dative confusion in the plural and singular and are explained away by Mitchell (1985: § 114-116).

How did this regularity come about and why should it be responsible for article emergence? In Proto-Germanic the weak adjectival declension alone, without demonstrative or possessive, could signal definiteness (Heinrichs 1954), but according to Philippi (1997: 63) this changed in the course of time:

> Weak adjectives were formed by adding a demonstrative suffix *en/on* to mark definiteness and substantiation. In the course of time, however, the demonstrative force of the suffix eroded and was no longer sufficient to indicate the demonstrative character of the adjective. Therefore the need for a new reference marker arose. The East and West Gmc languages used the demonstrative pronoun *sa/thata/so* which was realized in pre-adjectival position.

In other words, in earlier stages the weak adjectives were supposed to have some "deictic *Kraft*, whilst the strong adjectives were originally lacking such force" (McColl Millar 2000b: 278). Later on, in Old English, the demonstrative needs to be present to "support the teetering weak adjective as determiner system […] in order to make certain that there was deixis in the expression" (McColl Millar 2000b: 278). The strong form of the adjective seems to have been neutral to definite vs. indefinite in Pre Old English. Later on, contrasting the weak form, the strong form came to be associated with the indefinite. As, for example in *blind man* (a) 'blind man' vs. *Se blinda man* 'the/ that blind man' , where *blind* carries the masculine nominative singular *–a* ending of the weak declension (McColl Millar 2000b: 278).

One argument against the proposal is that the loss of the weak strong adjective distinction did not prompt the emergence of an article in other languages, for instance in Russian (Leiss 1989, 1994; Abraham 1997; Philippi 1997). Additionally, the hypothesis is only a valid one if the pattern 'Dem + weak adjective + noun' in definite cases and 'strong adjective + noun' in indefinite cases is applied consistently. Is it really the case that definite contexts are always indicated overtly by the use of *se*? Is it really the case

that then always the weak adjective ending is used? Is it really the case that the strong adjective declension is always used in indefinite contexts? Mitchell notes that some examples of weak adjective + noun cannot be explained by dative confusion in the plural and singular and have to be taken seriously (Mitchell 1985: § 116-117). He also lists some examples where a demonstrative is used with strongly inflected adjectives. He points out, however, that the real existence of the pattern is doubtful because all the found examples involve the possibility of an *–um/-an* confusion in the dative singular masculine or neuter (Mitchell 1985: § 119). In any case, it will be necessary to check the frequency of any 'exceptions' in prose and analyze if those cases can safely be dismissed as archaisms, scribal error or analogical confusion, as is suggested in the literature. All those questions will be investigated in section 5.1.1.2. Thirdly, the arguments given above rely on an assumption that I consider to be seriously flawed. It has been claimed that from Pre Old English to Old English the demonstrative suddenly had to be used together with the weak adjective because the deictic *kraft* of the weak adjective suffix eroded. This is given as the explanation why the use of the demonstrative became obligatory together with the weak adjective.

As my data will show (5.1.1.2), however, I was always able to successfully distinguish between the strong and the weak endings in my texts (following the declension in Table 8). Why then, if one can still distinguish between weak and strong, and if we assume that strong indicates indefiniteness, should we assume that suddenly at that early stage, the weak adjective ending lost its definite marking capacity. For what reason should we assume that the deictic *kraft* of the weak adjective suffix suddenly eroded, if it is still identifiable and distinguishable from the strong one. To claim that this simply happened is an easy way out. Why should one ending have lost the indication of definiteness and the other not? Obviously the argument would be valid later on, when we have a complete breakdown of declensions and cannot distinguish between weak and strong any longer. But the strict rule of 'Dem + weak adjective' can already be observed at a stage where we still can distinguish. This rather implies double marking but not a shift in definiteness marking from one element to the other. This objection is also supported by McColl Millar, who refers to the work of Samuels:

> Samuels has shown that the London English of Chaucer's time had retained – for at least some, more conservative speakers – some remnants of the old distinction between strong and weak adjectives (Samuels 1989a; see also Elliott 1974: 55). Yet the tripartite system of *the, that* and *this* was in full use in just these dialects in a manner very close- if not entirely identical – to that found in English today (McColl Millar 2000b: 284)

In other words, the breakdown of the weak/strong adjective declension took place too late in order to justify the proposed hypothesis.

Rather, I agree with linguists such as Barbara Strang (1970: 301), who argues that due to the syncretism of several endings in the weak paradigm, case and gender could no longer be distinguished sufficiently, so the demonstrative was first needed to disambiguate case and gender. As the demonstrative paradigm was still more prominent and also automatically marks a noun phrase as definite, definiteness marking finally shifted from the weak adjective paradigm to the demonstrative (after a potential phase of double marking). For Strang this distinction serves a function as it exercises a "principle of economy". The strong adjective ending is still useful when there is no other defining element because it is still distinctive of case and gender. In the weak adjective declension, endings are not that distinctive any longer so that case and gender need to be indicated by the preceding demonstrative. It is claimed that this functional interdependence of the demonstrative and the adjective ending explains the rise of the article and the decline of the weak/strong distinction: The increasing presence of the one (the article) obviates the need for the other (Fischer 2000: 160).

Still, another factor must be mentioned. Frequency may play a crucial role here. Obviously, Dem + weak adjective + N combinations exist but are presumably rarer than for example Poss + N, Dem + N or even Zero + N (see chapter 5). Even if a speaker becomes aware of the strong link between demonstrative and the weak adjective, s/he does not necessarily need to apply this to all other instances where the NP occurs without such an adjective. Especially when we find many NPs with surface structures which lack adjectives.

3.1.5 An alternative scenario

Also Spamer (1979) links the article's development to the breakdown of inflections but points out that the observable process has little to do with definiteness marking or the weak/strong distinction but with the internal syntax within the NP.

Spamer assumes that the distinction between "strong" and "weak adjectives is a misconception in the first place (Spamer 1979: 246; cf. McColl Millar 2000b: 282). He proposes that the traditional "weak" adjective is not a real adjective but belongs to another word class – being an adjunct. According to Spamer, there were only two classes of words in Old English which could precede a head noun in an NP: modifiers (strong adjectives), and adjuncts (as part of a compound with the head noun, e.g. *brick wall*). The important point for Spamer is that a) the adjective occurs before the adjunct in Old English and b) that, in contrast to Modern English, only the adjunct category is a recursive category.[93] In other words, there are not two inflectional systems for adjectives. There is simply the adjectival declension, the traditional "strong" one, and there is the adjunct declension, the "weak" one. Thus if several elements precede the head noun they are not all adjectives; rather the inherent phrasal structure of Old English NPs (even if not realized) is [modifier] + [adjunct] + [head noun]. Also the strong adjectives and the demonstrative pronoun are very similar if not identical in function, which leads Spamer to the following hypothesis: the demonstrative pronoun is an adjective in morphological and functional terms and both modifiers are non recursive (Spamer 1979: 247).

> The modifier was declined with "strong" endings, and the adjunct (or adjuncts) followed the "weak" declension. The adjectival declension in Germanic […] was a modification of the declensional system of demonstrative pronouns (see Meillet 1970: 96 and Prokosch 1939: 275-276 for details). Thus the adjective and the demonstrative se/seo/þaet share many formal markings. But there is more: when an Old English noun phrase begins with the demonstrative, any "adjectives" which follow take "weak" endings. The initial demonstrative pronoun and the adjective (by which I now mean a modifier marked by "strong" endings) are therefore mutually exclusive. The demonstrative and the adjective function in the same way in

[93] Compare Modern English where both categories are considered being recursive. With this argument Spamer contradicts traditional grammars (see Spamer 1979: 244).

> the noun phrase: they take essentially the same endings (in contrast to the adjuncts), they occupy the same initial position, and the use of one precludes the use of the other. They both belong to the same form class which I have here called "modifiers". Another way of making the same claim is simply to say that the demonstrative, when it occurs at the beginning of a noun phrase is actually an adjective. (Spamer 1979: 247)

This would explain why a demonstrative never occurs with a strong adjective. In Middle English, however, the inflectional endings of both adjectives and adjuncts were lost, and the adjective and adjunct declension indistinguishably fell together. As a result adjectives also became recursive. Only afterwards the demonstrative which is perceived always to occur before the merged adjunct/adjective class is assigned to a new category – namely the article category (Spamer 1979: 248).

Interesting at first, Spamer's reasoning is problematic. If the demonstrative is nothing but a specialized adjective and the adjective becomes recursive in time, then nothing would block the surface order **old the man* (Spamer 1979: 248) which usually does not occur. Spamer explains this by the fact that

> Middle English speakers […] would have realized that *the* had to occur initially and could not be repeated in the same noun phrase, they would have naturally concluded that *the* belonged to a form class different from that which included adjectives. In a word, they would have concluded that *the* was an article. (Spamer 1979: 248)

It seems reasonable to assume that Middle English speakers would have judged **old the man* as ungrammatical simply because in their input *the* always occurs before. This word order pattern could be caused for discourse-pragmatic reasons (as, for example, is the case with fixed PDE adjective ordering). However, "it is difficult to see why the process that he [Spamer] is discussing should have brought this about" (McColl Millar 2000b: 284). Additionally, Spamer fails to discuss OE examples of his adjunct group and does not elaborate why such adjuncts are recursive (cf. Fischer 2000: 164ff.). Finally, Spamer's adjunct/adjective distinction does not directly motivate the proposed reinterpretation of the former adjectival demonstrative into the new word category article.

> The *is, in other words, an historical accident. (McColl Millar 2000b: 275)*

3.2 A language contact scenario

Another hypothesis is that the article developed due to language contact. McColl Millar (2000a,b) closely links the development of the definite article to the language contact with Old Norse. The grammatical system was not so much altered by the semantic drift of *se* but by the development of the distal demonstrative *þæt*, which was encouraged by contact with the Scandinavian system (2000a: 331). Based on a detailed analysis of all demonstrative forms in 11 selected texts from what Miller calls 'the transition' period, he tries to show that "the intense Scandinavian influence over the dialects of the North of England in the Anglo Saxon period […] was responsible for the direct transfer of semantic and formal structures for the description of definition and deixis from Norse to English" (2000a: 11).

English developed into a tripartite system, similar to all other modern West Germanic dialects (except German[94]) with a discrete article, a simple demonstrative (with distal meaning), and a compound demonstrative (with proximal meaning). When this development took place in the late Old English period, some languages already had a separate system of distal demonstrative pronouns and articles. This was the case with the Celtic languages, French and the Scandinavian dialects (Calder 1923 [1990]: § 117; Wessen 1958: § 128; Iversen 1973: § 148-149). While, for McColl Millar the Celtic languages[95] and French[96] do not qualify to have brought about the change (McColl Millar 2000b: 302f), the contact with Norse does. Next to the simple demonstrative

[94] Which employs a simple demonstrative *der/die/das* with near-article meaning and a compound *dies-* (cf. McColl Millar 2000a: 306ff.)

[95] It is a disputed question how much influence the Celtic language had on English (for the Celtic Hypothesis see Filpulla, Klemola & Pitkänen 2002 and Filpulla, Kemula & Paulasto 2008) but for McColl Millar the contact with the Celtic language did not influence the shift towards the article system.

[96] Although the French influence appears to be more promising – it has a preposed definite article – , it it unlikely to have had an influence either, as English had no substantial contact with French before 1066, and the development was well underway before this date.

	singular			plural		
	masc.	fem.	neuter.	masc.	fem.	neuter.
N	*sa*	*su*	*þat*	*þeir*	*þær*	*þau*
A	*þann*	*þa*	*þat*	*þa*	*þær*	*þau*
G	*þess*	*þeir(r)ar*	*þess*	*þeir(r)a*	*þeir(r)a*	*þeir(r)a*
D	*þeim*	*þei(r)i*	*þ(v)i*	*þeim*	*þeim*	*þeim*

Table 9: Declension of simple demonstrative in Old Norse (Gordon 1957: § 109,111 in McColl Millar 2000: 22f.)

Old Norse had the following compound demonstrative paradigm:

	singular			plural		
	masc.	fem.	neuter.	masc.	fem.	neuter.
N	*sja,þessi*	*sja, þessi*	*þetta*	*þessir*	*þessar*	*þessi*
A	*þenna*	*tessa*	*þetta*	*þessa*	*þessar*	*þessi*
G	*þessa*	*þessar*	*þessa*	*þessa*	*þessa*	*þessa*
D	*þessum*	*þessi*	*þessu*	*þessum*	*þessum*	*þessum*

Table 10: Declension of compound demonstrative in Old Norse (Gordon 1957:§ 111 in McColl Millar 2000a: 23)

Additionally to that it had an article-like element[97], which could occur independently as a premodifier, but an enclitic usage was more common.

	singular			plural		
	masc.	fem.	neuter.	masc.	fem.	neuter.
N	*inn*	*in*	*it*	*inir*	*inar*	*in*
A	*inn*	*ina*	*it*	*ina*	*inar*	*in*
G	*ins*	*innar*	*ins*	*inna*	*inna*	*inna*
D	*inum*	*inni*	*in*	*inum*	*inum*	*inum*

Table 11: Declension of determiner in Old Norse (Gordon 1957: § 112 in McColl Millar 2000a: 24)

This threefold situation influenced the Old English demonstrative paradigm. Thus the development of English should be analyzed as a mediated form of *koinëisation*

[97] "[T]he Scandinavian languages show a split between a definer apparently originally derived from the personal pronoun and the simple and compound demonstrative paradigms, largely held in common with the West Germanic dialects". (McColl Millar 2000a: 22).

following the contact between Norse and English. The initial friction between Old English and Old Norse gave rise to a *koinë*[98], and the process of its dissemination (and tempering) was a series of koineoids (2000a: 60). *Koine* is "a language or dialect where a harmonization (or leveling) of grammar and phonology for the sake of mutual comprehension has taken place between speakers of different varieties of essentially the same dialect continuum" (Siegel 1985).

There was a peaceful co-existing in the North between the speakers of Norse and English and there was some understanding among speakers (McColl 2000a: 57). In order to make communication smoother, grammatical simplification would be involved. Living with both languages

> a doubtless unconscious decision was made about what was central, what peripheral to the system, what features were necessary, what not, to the good running of a language (Dones et al 1966). As can be seen in later varieties, these decisions gradually set adrift certain features of the ancestral language, such as grammatical gender and case, while concentrating (and often simplifying) other features, such as word order. […] The problem is that once one feature (say, case-distinctive morphology) becomes peripheralised, and is eventually jettisoned as unwieldy or ambiguous, other originally central features which relied upon this now peripheralised set (such as grammatical gender) are inclined to follow them to the periphery (Vachek 1980: 373). This process is continued, as we will see, until a new status quo of a largely coherent system is achieved. (McColl Millar 2000a: 58)

It seems possible that the Scandinavian speakers felt the need to "carry over linguistic material" from their language. Although they could have carried over their own native mode of defining (postponed clitic), they went for another option, namely to "use the building blocks of the new language to create essentially the same semantic distinction without using the same morphological materials" (McColl Millar 2000b: 303). The phonologically distinct element *se* was reinterpreted. The gradual simplification of the demonstrative's morphological form supported this fact. Since, due to loss of inflectional endings, *þæt* was the only element that remained phonologically distinct and could be stressed more easily, it is not surprising that it became associated with

[98] The term is also used by Trudgill (1983: 105). Note that McColl Millar distinguishes *koine* from the concept of *creole* or *pidgin* (cf. 2000: 44ff.).

pure distal meaning (2000a: 337). Finally, the *koine* which had developed in the North was imported to the Midland dialects because certain koine features helped to dissolve several linguistic ambiguities. In the end, these dialects would transfer material to the South.

According to McColl Millar, the development of the article was not an unlikely event; nevertheless it was by no means inevitable. English could have followed the same path as High German and might have ended up with a simple demonstrative pronoun with near-article uses. That this was not the case has to do with the development of *that* as a pure demonstrative with only distal meaning. Due to the specialization of *that* a gap "opened in the semantic fabric of the language" that was filled by *the* (McColl Millar 200b: 275).

How sound is McColl Millar's argumentation? It is true that contact between two languages can influence one or both contact languages. Research has shown that not only lexical entries are taken over but even morpho-syntactic features (cf. Thomason 2001; Heine 2005).[99] It is well known that the English language has borrowed from Norse not only vocabulary but also function words.[100] Moreover, the proposal that a (tripartite) system emerged as a consequence of the prior existence of a tripartite model in the other language, is a very attractive one. It employs the idea that what speakers do, largely relies on the overall systemic nature of their language. Most of the time a system is open to change because of internal ambiguities, and change in one area might have consequences for another part of the system. A speaker might parse a certain structure, take it as a model and reinterpret another ambiguous structure according to that model or, as here in the given substratum situation, use his native (Scandinavian) construction and fill it with L2 (English) lexical forms.

What is especially interesting about McColl Millar's hypothesis is that he draws attention to the fact that a change in a language cannot only occur because there is an overwhelming need for them but because of other factors, in his opinion external ones, which push the change into a certain direction. Indeed, linguistic change does not always happen for the sake of clarity on the listener's side or to improve

[99] Of course, it depends on the type and length of contact.
[100] Most famous is the case of the pronoun *they* but also *shall* can be mentioned here (Kirch 1959: 508; cf. Samuels 1969, 1989b; McIntosh 1969).

communication. It is necessary to look for additional cognitive factors which might influence a change (e.g. to make the grammatical system more regular). Those changes can be based on available patterns elsewhere in the grammar, which suddenly get employed analogously. This thought will also be taken up in the next section where functional explanations for article development will be discussed.

However, McColl Millar's hypothesis has to be treated with caution. Firstly, several researchers believe that the Viking demographic presence neither was that enduring nor were the Northern dialects spoken long enough for such heavy influence (Thomason & Kaufman 1988: § 9.8.6.3). Secondly, it has been suggested that the tripartite split (and particular the enclitic defining particle) was only developing later in Scandinavia in the Viking period – too late to influence the Old English development (Skautrup 1944: §22)[101].Secondly, McColl Millar's work displays some methodological weaknesses. Although he manages to demonstrate the breakdown of the inherited case- and gender-based paradigms (2000a: 11), which may have created a system open to change and open to the employment of external linguistic structures in order to fight ambiguity, he has a hard time presenting convincing textual evidence for his proposed spread of article features from the North (where the Scandinavian dialects were present) down to the South. Here he relies on the work of others to argue for the plausibility of such an influence (cf. Ekwall 1963: 54-67; Samuels 1989b). As many other before, he manages to demonstrate that Southern texts are more conservative than Northern ones and that inflected forms linger on in the South, but he is not able to trace the trickling effect from the North to the South, which admittedly is largely impossible due to the shortage of the Old English materials. Migration patterns have been discussed (cf. Poussa 1982; Samuels 1969 in Lass 1969) but the debate remains undecided if, why and how a relatively low status northern dialect affects the (potentially) prestigious dialect in the South in its determination system? To conclude, I believe that a language contact scenario is not unlikely, and as language change is always multi-causal it might have influenced the process to a certain extent but, as always, further conclusive research is definitely needed to support or falsify the *koine* scenario.

[101] Admittedly, later work (e.g. Hadley & Richards 2000) argues for a longer period of influence (against Thomason & Kaufman 1988)).

3.3 Down the cline – article development as a grammaticalization phenomenon

Next to McColl Millar's language contact scenario, the emergence of the article has also been interpreted as a grammaticalization phenomenon *par excellence* (cf. Lehmann 1982[95]; Traugott 1982, 2003; Hopper 1987; Himmelmann 1997; Heine 2003). Himmelmann (1997), based on Greenberg (1978) and Lehmann (1982[95]), postulates the following grammaticalization path for the definite articles:

> Deictic Particle + Categorial Noun > Demonstrative Pronoun > Demonstrative Determiner > Weakly Demonstrative Definite Determiner > Definite Article > Affixal Article > Noun Marker. (Himmelmann 1997: 23)

Essentially, such a path suggests that articles develop as "part of a greater process of redesignation of purpose of morphological components within a system" (McColl Millar 2000b: 277). In the case of English, the former demonstrative grammaticalized and stalled as a definite article. In the following section, some conceptual tenets of grammaticalization theory will be discussed briefly (3.3.1). Afterwards, some specific proposals on the grammaticalization of the definite article will be presented (3.3.2) and evaluated (3.3.3).

3.3.1 Grammaticalization

3.3.1.1 Definition & parameters

The term "grammaticalization" was introduced[102] by Meillet (1912: 131) as "le passage d'un mot autonome au rôle d'élément grammatical" – the change of an independent entity into the status of a grammatical element. Words with full lexical content turn into form words, which fulfill various grammatical functions. Not only lexical elements can undergo grammaticalization but grammatical elements too can become even more

[102] Although several grammarians dealt with grammaticalization before him (e.g. Bopp 1816, 1833). However, the phenomenon was then discussed under different names (e.g. "Agglutinationstheorie") (cf. Lehmann 1995).

grammatical. Such changes are accompanied by the reduction of phonetic form, the bleaching of semantics[103] and other tendencies (see Lehmann's parameters below).

Since Meillet's definition, research on grammaticalization has evolved and today we find rather narrow as well as very loose definitions of grammaticalization. Whereas Brinton & Traugott (2005: 99) define grammaticalization as

> the change whereby in certain linguistic contexts speakers use parts of a construction with a grammatical function. Over time the resulting grammatical item may become more grammatical by acquiring more grammatical functions and expanding its host-class.

Lehmann and others define the grammaticalization of a linguistic sign in a very broad sense – namely as "a process in which it loses autonomy by becoming more subject to constraints of the linguistic system" (Lehmann 2004: 155). Croft even offers an extremely loose definition and understands grammaticalization as "the process by which grammar is created" (Croft 2006: 366).

In 1985, Lehmann tried to measure the degree of grammaticalization and postulated six parameters based on three major aspects, which are relevant for the measuring of the dependency of a linguistic form: weight, cohesion and variability of the sign. From that perspective, the degree of grammaticalization depends on how autonomous the sign still is. The lexical form is more independent and more complex than the shorter, simpler and bounded grammatical form (Lehmann 1985: 306).

As can be seen in Table 12, some processes affect the semantic properties of a linguistic element, others its morpho-syntactic ones. In the semantic realm, lexical-referential meaning develops into systematic-grammatical meaning. The process of attrition leads to fewer semantic features of an item (cf. Sapir 1921; Talmy 1988). The weight or substance of a lexical item is reduced through phonetic and semantic erosion.

Formally, the element loses its syntactic independence and its morphological distinctiveness. The more grammaticalized a linguistic element is, the more its bondedness increases (e.g. it may fuse with other elements; agglutination, cliticization and fusion are developmental steps here). Also, syntagmatic and paradigmatic

[103] The concept of 'semantic bleaching' has been severely criticized as many linguists rather observe 'pragmatic enrichment', in which an element might loose some of its meanings but gains new semantic meaning at the same time (Sweetser 1988, 1990; Hopper & Traugott 2003: 20).

variability is lost (i.e. the grammaticalizing element becomes fixed in position and is the only one left in its paradigm). Moreover, the element becomes increasingly obligatory (Fischer 2007: 118; cf. Heine & Reh 1984; Lehmann 1985; Bussmann, Kazzazi & Trauth 1996: 196). Usually, the degree of grammaticalization is measured with these parameters.[104]

Parameter	Weak grammaticalization	Process	Strong grammaticalization
Integrity	Bundle of semantic features; possibly polysyllabic	Attrition	Few semantic features; oligo- or monosegmental
Paradigmaticity	Item participates loosely in semantic field	Paradigmatization	Small, tightly integrated paradigm
Paradigmatic variability	Free choice of items according to communicate intentions	Obligatorification	Choice systematically constrained use largely obligatory
Structural scope	Items relates to constituent arbitrary complexity	Condensation	Item modifies word or stem
Bondedness	Item is independently juxtaposed	Coalescence	Item is affix or even phonological feature of carrier
Syntagmatic variability	Item can be shifted around freely	Fixation	Item occupies fixed slot

Table 12: Correlation of grammaticalization parameters after Lehmann (1995: 164).

Note that several important aspects of grammaticalization are not subsumed under Lehmann's parameters. The first is the notion of 'synchronic layering' which reflects "the fact that various stages of the process (i.e. the still lexical and the already grammaticalized forms) occur side by side" (Fischer 2007: 119). The second is 'divergence', the process when grammaticalized and non-grammaticalized forms of the same origin go their own separate ways and do not influence each other anymore. Thirdly, 'persistence' points to the fact that "traces of the original lexical meaning of the linguistic elements that are grammaticalized adhere to these elements" (Fischer 2007: 119). Finally, there is a performance and processing aspect to grammaticalization. The

[104] There has been severe criticism of the parameters (cf. Jeffers and Zwicky 1980; Joseph & Janda 1988; Herring 1991; Ramat 1992; Janda 2001). For other ways of measuring strong or weak grammaticalization see further Lehmann (1982[95] ch IV, 1985: 30ff); Heine & Reh (1984 ch 1.1); Bybee & Dahl (1989: 59ff); Croft (1990 ch 8.5.1) and Hopper (1991: 22ff).

grammaticalized elements appear to be more productive in the grammars containing them than their lexical donors, with the result that the grammaticalized forms are more frequent. High frequency is a result of the higher number of constructions and contexts in which a "gram" can be used in (Hawkins 2004: 80).

3.3.1.2 Phenomenon vs. theoretical framework

Grammaticalization has often been interpreted very differently in the literature. On the one hand, the term is used for a single, observable diachronic phenomenon in a particular language. A particular entity undergoes a gradual, formal as well as semantic change. In doing so it is said to follow a 'unidirectional' development along certain "paths" (Bybee 2003b), which have also been termed "clines" (Halliday 1961; Andersen 2001), "channels" (Lehmann 1995) or "chains" (Heine, Claudi, & Hünneneyer 1991). Evidence for various developmental paths has been accumulated (cf. Heine & Kuteva 2002). Campbell (1998: 239f.) lists about 30 as instances of grammaticalization some of which are listed below:

a) Demonstrative pronoun > Definite article

b) noun > Grammatical gender ('man, male, boy' > masculine; or 'woman, female, girl' > feminine). [105]

c) Numeral 'one' > Indefinite article

d) Noun > Indefinite pronoun ('person, man, body, thing' > 'one')

Comparable to those paths, Givón (1979: 33) postulated a reductionist cyclic process of language: "DISCOURSE > SYNTAX > MORPHOLOGY > MORPHOPHONEMICS > ZERO" and verbalized that cycle in sentences like: "Today's morphology is yesterday's syntax". However, the movement of the linguistic element may complete Givón's cycle but can also only be partial.

[105] According to Hawkins (2004: 80) the precise relationship between the 'donor' property and the grammaticalized property can vary, but there is always some natural and plausible link between them, as for example in b) where the semantic concept of masculinity expressed in *man* or *boy* end up in the grammatical masculine gender.

On the other hand, grammaticalization is also used to refer to grammaticalization theory, a fully-fledged framework, which aims to 'explain' language change and the development of grammar. Especially among functionalists, it has become a widely-used framework within the last twenty years. Most functionalists interpret grammaticalization as an explanatory mechanism, which independently causes language change – comparable to reduction, drift or ease of effort.

Functionalist approaches to linguistic change concentrate on the way language is used in communication and how this leads to a change in its learners' grammar (the bottom-up approach). Functionalism advocates to study grammaticalization from "the performance angle because here variation and fuzziness is to be found which forms the beginning of change" (Fischer 2007: 66). From such a perspective syntax arises "out of discourse-pragmatic phenomena, and […] the language system [consists] of fluid patterns rather than clearly outlined terms and principles" (Fischer 2007: 61). "Structural changes are aligned with patterns of use, and usage shapes grammatical representation" (Traugott & Trousdale 2010: 21, cf. Croft 2000; Bybee 2006).

Also formalists have tried to explain grammaticalization phenomena. The formalist approach[106], which "claims that language universals can be explained by an innate (and therefore universally shared) language faculty in humans" (Kirby 1999: v), generally takes a rather restricted perspective on language change.[107] Change in the language output is the result of changes in the individuals' 'biological grammar'. This change is caused by change in the innate (formal) parameter system (the top-down approach). The setting and resetting of the parameters forms the basic mechanism for major linguistic

[106] Regarding formalism it is important to point out that this approach goes under a number of different names – Chomskyan, generative, innatist or nativist. All of these are Chomskyan in the sense that they directly expand on the basic suggestions of Chomsky's work, but there is a great deal of diversity.

[107] Functionalism and formalism differ from each other on various points, most of which cannot be discussed here (cf. Givón 1995; Newmeyer 1998; Pinker 2002; Fischer 2007). For the formalists, the proper object of study is *langue (*'competence', 'I-language'); for the functionalists it is *parole* ('performance';'E-language'). Opinions also differ on what a "grammar" is. On the one hand, grammar has been equated with the syntactic component only (formalist perspective); on the other hand, it is synonymous with all language output, characterizing a corpus of utterances, including the lexicon or phonological rules. Finally, opinions differ on how the grammatical system gets into the brain of a child (ontogeny) and how performance influences and changes this underlying grammar (phylogeny) (Fischer 2007: 56ff). One question of debate is whether linguistic change is gradual or abrupt. This, however, depends on the perspective one takes. If we focus on textual output, change is definitely gradual and piecemeal because diachronic texts show evidence of small gradual changes. If we focus on individual grammars, change is sudden and catastrophic (at least according to formalist reasoning) (Lightfoot 1999: 18) (see chapter 3.4.3).

changes (Fischer 2007: 3; cf. e.g. Lightfoot 1999; Chomsky 1981: 1-16). Note that in formalist models, grammaticalization is not entitled to theory-relevant autonomy, and cases of grammaticalization are considered regular cases of reanalysis (cf. Newmeyer 1998; Campbell 2001a; Campbell & Janda 2001; Roberts & Roussou 2003). (This point will again be discussed in section 3.4).

As can be seen, grammaticalization has been approached by different schools in different ways, which sometimes may confuse the newcomer to the field. Still, it must be concluded that grammaticalization has become very popular[108], and there seem to be several reasons for its popularity: a) The term grammaticalization labels almost any development by which a form or structure becomes more grammatical than it formerly was and b) grammaticalization can be found on all linguistic levels. In a fascinating way it clearly shows how strongly connected morphosyntax, semantics and phonology are and how much all of them seem to be subject to general principles and tendencies.

> Typically, semantic/pragmatic, morphosyntactic, and morphophonological changes [all] may affect an item that is grammaticalizing. Bybee, Perkins and Pagliuca (1994: 20) refer to this phenomenon as "the dynamic coevolution of form and meaning". (Traugott & Trousdale 2010: 27)

In other words, grammaticalization has become the perfect example for the interdependency of the linguistic system as "the cross-componential change par excellence" (McMahon 1994: 161).

Grammaticalization theory also became the temporal remedy against the linguistic disillusionment that linguistic change might be unpredictable and could only be explained in retrospective.[109] For example, Heine announces that grammaticalization, which is believed to follow 'unidirectional' paths,

> not only allows for historical reconstructions but also makes it possible within limits to predict what is going to happen in the future, or else what is likely to exist in some unknown language (Heine 1995) (Heine 2003: 598).

[108] Grammaticalization theory has been employed to a) offer new ways of reconstructing semantic change (e.g. Traugott 1980); b) describe and explain the structure of grammatical categories across languages (Bybee 1985; Bybee et al. 1991, 1994); c) understand grammaticalization as being synonymous, or nearly synonymous, with grammar; d) interpret grammar as the result of an interplay between conceptualization and communication (Heine 2003: 577).

[109] Such negative feelings are often expressed in phrases like "every word has its own history".

As will be pointed out in section 3.3.3, it is a matter of a more recent debate if this is really the case, but let us turn to the grammaticalization path for definite articles now.

3.3.2 Article development

Typologically, it is mostly a demonstrative morpheme with deictic meaning which grammaticalizes into the definite article (Lyons 1999: 331).[110] Next to the development of spatial deictics into the definite article, at least four other sources for articles have been attested: personal pronouns, relative pronouns, conjunctions and copulas (Himmelmann 1997: 30; Diessel 1999a,b).[111] Several researchers have especially dealt with the grammaticalization of the demonstrative in English. For example, Lehmann (1995) and Hawkins (2004) discuss article development from a typological perspective (3.3.2.1), whereas Traugott (1982, 1991, 2003) identifies the semantic-pragmatic shifts that are involved in article development (3.3.2.2).

3.3.2.1 Typological perspective

According to Lehmann, the free demonstrative pronoun, which is often the ancestor of the article, in its full form generally contains two semantic and one syntactic component. On the one hand, the pronoun has a "demonstrative element in the narrow sense which embodies definiteness and a pointing gesture" (Lehmann 1995: 37). On the other hand, the pronoun contains a deictic element which directs "the attention to something located in regard to the speech situation (speaker vs. hearer, visible vs. invisible, etc.)" (Lehmann 1995: 37). Additionally, there is a formal categorical component, which makes the pronoun either syntactically autonomous (functioning as a head) or dependent. So the demonstrative can either head its own NP or it can be attached to a noun attributively (Lehmann 1995: 37) (also see demarcation criteria in 2.3.2).

[110] Which often develops into a demonstrative determinative (Diessel 1999a,b).
[111] Until today there has been no convincing evidence for the lexical source of decitic elements. It has been assumed that so-called "attention-getters" might have been the source (Traugott 1982: 269; cf. Brugmann 1904; Anderson and Keenan 1985).

For Lehmann, the weakening of the deictic component is the first step of grammaticalization. As an example he lists the extreme reduction of Vulgar Latin **ecce hoc illac* 'look this over there'> French *cela* 'that'> *ca* 'it' (Lehmann 1995: 38). As a next step, the semantically bleached demonstrative pronoun then might develop along two principal grammaticalization clines, corresponding to whether the categorical component is a dependent or the head: either it develops into a "definite determiner" (when adnominal) or into a personal pronoun (as head). Lehmann defines a definite determiner as

> an adnominal demonstrative pronoun which is deictically neutral and therefore mainly used for anaphoric purposes. Examples beside Late Latin *ille*, are Gothic s*a, so, þata*, OE *se, seo, þæt* and Homeric *ho, he, to* all deriving from PIE **so, sa, tod.* Persian *an* and Japanese *sono* appear to be well on their way towards this stage. (1995: 38)

Finally, this definite determiner reduces to mere definiteness and will result in a definite article. One gets French *le, la*, OHG *ther, thiu, thaz*, Engl. *the* and Attic *ho, he, to*. (Lehmann 1995: 38; cf. Greenberg 1978, Givón 1978). Afterwards the article may get agglutinated (affixed) to the noun. A phenomenon which occurs in Romanian, Swedish, Danish, Basque, Ijo (Kwa), Koyo (Kru) and several Yuman languages. Finally, further semantic weakening may even reduce definiteness to marking nominalization. The element then is a nominalizer which simply signals that the words it gets attached to are nouns (e.g. in the Abkhaz or Dagbani language) (Lehmann 1995: 38f.).

Additionally, the use of the article involves a gradual expansion "in the set of NPs that are compatible with the erstwhile demonstrative marking" (Hawkins 2004: 83). One can attach the article to more NPs than is possible with a demonstrative pronoun, since the definite article has pragmatic and syntactic properties (e.g. anaphoric reference marker) that permit such a high frequent use, which the demonstrative has not (cf. Hawkins 2004: 81ff).

Note that no shift is obligatory in the cline (Hopper & Traugott 1993: 39). For Himmelmann (1997: 4) this also explains why languages differ in their article usage. Phonetic erosion and contextual spread develop with a different pace in various languages:

> Die erwähnten Unterschiede der Gebrauchsbedingungen für Definitartikel in westeuropäischen Sprachen sind also, sehr vereinfacht gesagt, darin begründet, dass Definitartikel ein (instabiles) Stadium in der Grammatikalisierung von Demonstrativa aufweisen. (Himmelmann 1997: 4)

If we combine Lehmann's and Hawkins' ideas and relate them to the criteria for articlehood set up in section 2.3.2, it can be stated that the demonstrative, which embodies definiteness and a deictic element loses the deictic feature through a process of 'semantic bleaching/attrition'. Thus it fulfills the EXCLUSIVENESS criterion. The article can also be used as a sheer noun marker; this relates to the SYNTACTIC MOTIVATION ONLY criterion. Also, the definite article involves less formal marking compared to the demonstrative. This is not necessarily the case (cf. Dutch, French, Italian where there is still gender and case marking on the article) but English *the* has fewer and more reduced segments that the original demonstrative (generally a schwa vowel and reduced stress). This fulfils Lehmann's criterion of 'Phonological attrition'. Moreover, the former free choice item becomes more and more obligatory ('Obligatorification') and starts to occupy a fixed slot ('Fixation'). This relates to the criteria POSITION and OBLIGATION. The fact that the former independent demonstrative cannot occur without a head noun anymore, relates to the INDEPENDENCE criterion.

3.3.2.2 Subjectification

Another researcher who has particularly dealt with the emergence of the definite article in English is Traugott. Generally, she attempts to establish characteristics for grammaticalization different from those of Lehmann (cf. Traugott 1982, 1991, 1995, 2003). Her main goal is to identify the semantic-pragmatic shifts that precede grammaticalization processes. In her earlier research (1982), Traugott assumes that shifts in the semantic realm, which are motivated through pragmatics, trigger the grammaticalization process.[112]

[112] Thus, one has to deal with "meaning-shift", where an element might lose part of its meaning but, on the other hand, gains pragmatic functions (Hopper & Traugott 2003: 20). In contrast to the traditional semantic bleaching model, Traugott postulates a "loss-and-gain-model".

Traugott assumes three functional-semantic components in language. First of all, there are so-called 'propositional' elements which a language uses to express truth-conditional relations. The propositional component involves the resources of the language which make it possible to talk about something. Next, as a second component, there are 'textual' markers which keep discourse coherent (e.g. connectives, anaphoric and cataphoric pronouns, complementizers,…). Finally, there are subjective, 'expressive' elements in language which are used to express personal attitudes to the topic itself and to other participants in the speech situation (e.g. honorifics or turn taking markers) (Traugott 1982: 248).

Traugott then formulates hypotheses based on the shifts between these components. The first hypothesis (A) suggests that if a shift in meaning takes place in the grammaticalization process, this shift will take place to reach a more 'personal' level in communication.

> Hypothesis A. If a meaning-shift in the process of grammaticalization occurs within a component, it is more likely to involve "less personal to more personal" than the reverse. (Traugott 1982: 253)

For example, the Old English *butan* „on the outside" does not reflect the opinion of the speaker but expresses mere location, whereas the use of the textual connective *but*, which *butan* developed into, indicates the speaker's attitude.

The second Hypothesis (B) postulates unidirectionality:

> Hypothesis B. If there occurs a meaning-shift which, in the process of grammaticalization, entails shifts from one functional-semantic component to another, then such a shift is more likely to be from propositional through contextual to expressive than in the reverse direction. (Traugott 1982: 256)

While the old English numeral *an* 'one' designates a distinction in number (singular vs. plural), the modern indefinite article *a(n)* is already more personal as it "introduces fresh material to the hearer's consciousness" (Traugott 1982: 250, cf. McMahon1994: 168).

Later on, Traugott reformulates her shift from propositional to textual to expressive meaning. She postulates a tendency towards "subjectification" and

"intersubjectification". Subjectification is "the development of a grammatical identifiable expression of speaker belief or speaker attitude to what is said" (Traugott 1995: 32) and "arise[s] out of the cognitive and communicative pragmatics of speaker-hearer interactions and discourse practices (see Langacker 1977, DuBois 1985, Hagege 1993, among others)" (Traugott 2003: 634). Thus her new shift looks as follows: 'non-subjective > subjective > intersubjective' (cf. Traugott 1989; 1995).

Traugott also identifies this shift in article development and distinguishes between the demonstrative and the article:

> The function of demonstratives is primarily to identify or index things in the world and relate them to the speaker's point of view; the function of *the* is to signal that whatever is being talked about has already been referred to, or to treat it as if it were already salient in the hearer's consciousness. It can also have an expressive meaning when associated with contrastive stress as in 'the man around town'. (Traugott 1982: 250)

The development of the definite article represents the evolution of a grammatical marker with a textual function (anaphora and cataphora). This function was carried by *se, seo, þæt* in Old English. As *the* developed, the demonstrative was partially relieved of this function and continued primarily to function as a marker which either establishes the speaker's physical distance from objects in the situation outside the text (at the propositional level), or the speaker's evaluative distance (at the expressive level) (Traugott 1982: 252). One witnesses a specialization of functions.

The article also shows the shift from propositional through textual to the expressive component. The demonstrative and the article both have the textual function of anaphora. *That man* and *the man* can both refer back to some entity previously mentioned; but *the* has also acquired an expressive participant-oriented meaning, so that in a sentence like *The woman was walking down the street* at the beginning of a novel, where no situational context has been set up, the readers are invited to react as if the situation were in their consciousness. "In this sense [the] acquired an expressive function in addition to its cohesive one" (Traugott 1982: 252).

3.3.3 Reconsidering functionalism

When we compare the Old English deictic demonstrative *se* and its elaborate declension with the Modern English, the article *the* as a monosyllabic marker, it is definitely true that most of Lehmann‘s grammaticalization parameters (phonological reduction, semantic bleaching, obligatorification, fixation) can be applied to the observable diachronic development. However, such parameters – in my opinion – cannot be considered causal mechanisms of change. Rather these developments are the epiphenomenal result of ‘something else’ (Van de Velde 2010: 291; cf. Ackles 1997; Campbell 2001b; Joseph & Janda 2003). There must be some initial trigger in the language system for a lexical element to grammaticalize. One aim of this thesis is to discuss such potential triggers for the grammaticalization of the demonstrative. Postulating the sheer existence of the grammaticalization cline ‘demonstrative > article’ is simply not satisfying enough.

Several researchers have repeatedly attacked the idea that grammaticalization has explanatory power and should be used as a theory of language change. First of all, it is a question of debate if grammaticalization really is a so-called ‘unidirectional’ phenomenon.[113] Various examples have been found which demonstrate some kind of ‘degrammaticalization’ (cf. Newmeyer 1998: 260ff.; Norde 2001, 2009; Joseph & Janda 2003, Joseph 2001a).

Another point of critic is that often researchers do not discuss how exactly Lehmann’s parameters are affected. Are they all affected at the same time or one after the other? Which parameter will be affected first, which one later? Grammaticalization processes need a trigger. Is one of the parameters such a trigger (e.g. attrition) or is it a sheer consequence of some other causal mechanism? If a certain element has a certain property is it then likely to take up another one later on? Certain properties and

[113] Nevertheless, most researchers consider cases in the opposite direction rare compared to those examples that support the hypothesis. Most counterexamples are said to be “idyosynchratic” (Heine 2003: 582) and seen as exception to the rule. Next to others Lehmann rejects the existence of degrammaticalization and refers to the importance of a unidirectional heading: “We must therefore conclude this discussion with the observation that no cogent examples of degrammaticalization have been found […] if grammaticalization is a unidirectional process, one must ask why this should be so”. (Lehmann 1991: 19)

linguistic behaviors may feed each other; one increasing the likelihood of the other. For example, a rise in the frequency of an element often leads to its automatisation and attrition. Another question which is especially interesting for this thesis is how Lehmann's parameters obligatorification and fixation interact and influence each other. May fixation lead to the obligatorification of an element or vice versa?

Researchers also often neglect the impact of the overall synchronic linguistic system on the direction of linguistic changes. Mithun has repeatedly referred to this shortcoming and mentions "the shape of the current grammar" as an important factor that might constrain the path which a grammaticalizing element takes. She also stresses that "[t]he formation of new grammatical categories is motivated or hindered by the contours of the existing grammatical system" (1991: 160). In this thesis, I will argue that lexically specific instances of grammaticalization are mostly caused by changes which affect the setup of the entire grammatical system and which can affect more than one linguistic item at the same time (cf. Van de Velde 2010: 291).

This relates to the fact that grammaticalization often puts too much emphasis on individual, isolated lexemes. The grammaticalization of element X and its development into element Y has usually been looked at from the point of view of individual lexemes. For example, a shift from one to another category is often seen as an isolated instance of grammaticalization. However, it has to be pointed out that individual lexemes do not grammaticalize in isolation and without reason. Often a closer look will reveal that not an individual form grammaticalizes but the larger syntactic construction which the form is embedded into.

Another problematic point is that often in grammaticalization studies semantic change is said to precede structural change. Functionalists working on grammaticalization have

> a strong inclination to see changes as taking place gradually by imperceptible shifts, and being steered on by semantic/pragmatic forces. Any concomitant morphosyntactic (and phonetic) changes are seen as a (mere) *result* of this earlier 'conceptual manipulation'(Fischer 2007: 82).

However, we might find so called form-first phenomena in language change, where the motivation for change is neither always semantic nor pragmatic. The essential question

is how much the semantic/pragmatic and phonetic/phonological levels (and developments in those realms, e.g. frequency effects; semantic bleaching; phonological erosion; communicative creativity etc.) interact with and trigger change on the morphological and syntactic level. Also syntactic position, formal similarity or the adjacency of signs can be important driving forces in linguistic change.

> [T]here are also changes that proceed formally […] changes where new forms arise (or disappear) because a learner sees a relation between two structures on the formal level. (Fischer 2007: 123)

"By neglecting form, the formal similarity of patterns and the adjacency (contiguity) of signs are neglected as an important formal force in grammaticalization" (Fischer 2007: 122). This thesis argues for the possibility that a change can occur for syntactic, system-internal reasons (Haiman 1998: 161; Fischer 2007: 66). Article development is interpreted as a form-driven change (see section 6.1.1).

Last but not least, some grammaticalization studies can be criticized for the fact that they often completely avoid to answer the WHY question. Authors rather concentrate on 'proving' the existence of a particular cline with empirical diachronic data. Still, one of the most important questions when dealing with grammaticalization is how similar processes in all the languages of the world are motivated. Why does a certain element follow a certain cline in one language but not in another language? This implies two questions at the same time: one asking for the starting point of grammaticalization, the other asking for its course.

Admittedly, several researchers have taken the WHY question seriously. Already in 1912, Meillet aimed to answer the WHY and HOW of the process and notes:

> Thus languages follow a sort of spiral development: they add extra words to intensify expression; these words weaken, decay and fall to the level of simple grammatical tools; one adds new or different words on account of expressiveness; the weakening begins again, and so on endlessly. (Meillet 1912: 140)

Meillet believes that grammaticalization takes place because the speaker has the wish to express himself more clearly. Words which are used often lose their expressivity through steady repetition, therefore they would need reinforcement. Although this idea

was taken up by many (cf. Lehmann 1985), Meillet's answer (change being driven by "communicative creativity"), from my point of view, is definitely too fuzzy.[114] I will argue that communicative efficiency cannot always be seen as the driving force of linguistic change or grammaticalization in particular.

In general, many advocates of grammaticalization assume that languages are as they are in order to solve problems for their users and owners. If one wants to understand languages one needs to ask what speakers demand of them. For many linguists, the speakers' creative use of language is considered to be the playground that nurtures and determines the direction of change in the first place. If, however, grammaticalization (as language change in general) is primarily determined by the interaction of hearer and speaker and communicative strategies to support the ease of communication for both, this implies that change is goal-oriented. Especially in North-American linguistics such an idea is mostly rejected because there is no means of empirical checking. The idea that the speaker intentionally aims to improve his communicative efficiency and therefore (subconsciously) changes his languages to fulfill certain needs is problematic. Ultimately, this should make language more and more efficient over time. However, this does not seem to be the case.

Languages need to fulfill a number of potentially conflicting functions at once: for example, they need not only be speaker friendly and efficient, but also listener friendly and effective. They serve not only communicative transaction, but also help to express and to establish the identities of groups and individuals. Although I do not want to deny the fact that language use shapes and changes any language system, it should be pointed out that suggested pragmatic-discourse based factors may not always be responsible.

This relates back to Traugott's proposal (notion of subjectivity), which was taken up by many researchers (Krug 2000; Verhagen 2005) but which has also been criticized (Abraham 1991; Bybee et al. 1994). Traugott's theory implies that in stages like Old English the personal opinion of the speaker could not be expressed sufficiently. This assumption cannot be supported by facts. It has to be assumed that the Old English speaker, perhaps with the use of different constructions, was definitely able to express

[114] Meillet and Lehmann's early (and necessary) focus on the description of the process scheme has somehow distracted from the important question, HOW and WHY the process is initiated in the first place.

personal attitudes. This then questions Traugott's assumption on the pragmatic necessity of such a development. Moreover, it has been observed that pragmatic force increases in time, but that such an increase can often not be observed at the beginning of the grammaticalization process and thus cannot be understood as a trigger device (Sweetser 1988; Bybee 1994).

Several researchers approach the WHY question differently by suggesting that the triggers for grammaticalization are metaphorical transfer/metonymy (semantic change), frequency effects or other psychological factors. For example, cognitive-semantic approaches to grammaticalization have been put forward which focus on the cognitive make-up of the speaker. Cognitive reasons, not mainly pragmatic ones, lead to grammaticalization.

> Rather than subscribe to the idea that grammatical evolution is driven by communicative necessity, we suggest that human languages have a natural propensity for making metaphorical extensions that lead to the increased use of certain items. (Bybee & Pagliuca 1985: 75)

These factors have to be taken seriously as studies have repeatedly shown that they influence linguistic change. From such a perspective, grammaticalization depends on general cognitive processes (e.g. metaphorical transfer; ritualization) in the brain (Heine 1991, 2003) which, among other things, can influence the semantic development of an expression. In other words, paths reflect metaphorical processes that are based on human cognitive make-up, and they reflect the inferences that humans commonly make when they communicate (Heine, Claudi & Hünnemeyer 1991: 39; Bybee 1994: 302; cf. Bybee 2003a,b). These models try to focus on explanations which can be linked to general cognitive development and which try to bridge the gap between system internal effects and speaker oriented issues. They seem to be able to deal with semantics, use and formalism at the same time and therefore will be discussed in more detail at a later stage.

All points of critic are especially relevant for the development of the article. Although grammaticalization theory definitely provides a process scheme that fits the phenomenon descriptively, it does not deal with the causes of either the actuation of the change or its apparently irreversible spread within the population. Although

explanations are put forward (e.g. Traugott's subjectification hypothesis) some of them are questionable. That is why this thesis tries to offer an alternative explanation for article development, which discusses how 'formal' factors (e.g. position, formal similarity, frequency) play an important role in the development.

3.4 Categorical reanalysis - formalist views on article development

The emergence of the definite article in the English language marks a change in the overall structure of the English NP. Therefore, one aim of this thesis is to model such a change precisely. How does a grammar which requires an obligatory definiteness marker differ from one that does not require it? While some researchers have neglected the attempt to formally describe such a change, various generativists have tackled the problem. Within formalist modeling, the change from demonstrative into article is understood as an abrupt, semantic-syntactic reinterpretation of the grammatical system where new functional material is created by categorical reanalysis due to textual ambiguity and for the sake of structural simplification (cf. e.g. Ackles 1997; Roberts & Roussou 2003; van Gelderen 2004, 2007). Before I discuss some generative proposals on article emergence (3.4.2 & 3.4.3), some basic tenets of formalism will be presented (3.4.1).

3.4.1 Representational innateness and abrupt change

Formalist views on language change which follow the work of Chomsky are based on the assumption of representational innateness (i.e. a Universal Grammar (henceforth UG)), parameter change (3.4.1.1) and the mechanism of reanalysis (3.4.1.2). Additionally, most formalists model syntax using an X-bar structure which they assume to be universal (3.4.1.3).

Generally, the grammar of an individual is supposed to consist of a set of fixed and invariant 'principles' valid for all languages and a set of 'parameters' (not fully fixed) which define the range of possible cross-linguistic variation (Haegemann 1997: 4). The task of the language learner is to fill in the values for parametric options which are allowed by UG constrained by the evidence in the learner's language environment. In other words, children are endowed with innate knowledge about permissible classes of structures or grammatical operations on those structures, and exposure is only a

triggering device to start off the acquisition process.[115] Obviously then, UG must be rich enough to account for the acquisition of all possible languages (cf. Chomsky 1965, 1981, 1986b, 1996; Hyams 1986; Manzini & Wexler 1988; Lightfoot 1991; Fukui 1993; Baltin & Collins 2000; Fodor 2001).

3.4.1.1 Change through parameter resetting

Regarding language change, the notion of parameter setting and resetting has played a considerable part in formalist models. Especially Lightfoot (1979, 1991), van Kemenade (1987), Kroch (1989a,b), van Gelderen (2004) and Roberts and Roussou (2003) pioneered the application of generative grammar to diachronic data (cf. Haegeman 1997: 15).

In most formalist frameworks, linguistic change is seen as instantaneous. Especially from the point of view of language acquisition (which is also a model for change).

[115] The position that our linguistic abilities do not derive from environmental input alone and that linguistic constructs are innate has been put forward by Chomsky (1965). Chomsky's framework postulates that humans are genetically equipped with universal principles which enable them to learn the syntax of a language. Categories and rules of a language are thus genetic predispositions, i.e. parts of a Universal Grammar (UG). The child is also equipped with a Language Acquisition Device (LAD), which refers to the child's ability to construct or to 'invent' a grammar based on primary linguistic data (PLD), using those innate predispositions as a starting point (Jackendoff 2002: 70). The existence of UG is supposed to follow from logical and biological considerations – one of them being the 'poverty-of-the-stimulus argument': the environmental linguistic input a child receives is insufficient for the construction of a grammar, i.e. if something develops in the child's brain that did not go in, it can only come from the structure of the mind itself (cf. Chomsky 1965, 1986b; Lightfoot 1989; Radford 1990; Chomsky & Lasnik 1993; Fodor 2001; Kirby 1999). This argument is essential because any innate component to our knowledge of language is therefore logically more or less shared by every other member of our species. In other words, if grammar is innate, we have a "ready-made explanation" for universal properties of language (Kirby 1999: 14; cf. Pinker 1994; Fischer 2007). Research and experiments have been conducted in favor of domain-specific innate representations for language which oppose the idea that language can be acquired only through imitation, reinforcement and analogy. Throughout the years, different lines of evidence have been offered in favor of genetic control over linguistic knowledge. Next to the poverty of stimulus, these arguments include: Species specificity, genetically based language disorders, studies of lesioned brains, activation studies of grammar in the normal brain, structural eccentricity of language, linguistic universals, modularity of processing, dissociations and critical periods of language learning.

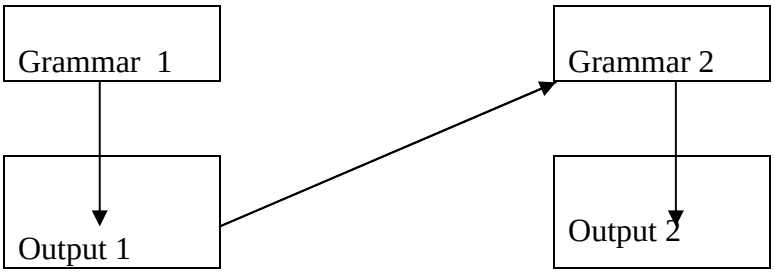

Figure 2: Formalist model of language transmission (based on Andersen (1973) in Fischer 2007: 76)

The speaker of the next generation (Grammar 2) constructs his grammar on the basis of the first generation output (supported by his UG). As a consequence there is no direct link between Grammar 1 and 2 (Fischer 2007: 76). In this so-called 'structuralist approach' (Lightfoot 1991) change "is initiated when (a population of) learners converge on a grammatical system which differs in at least one parameter value from the system internalized by the speakers whose linguistic behaviour provides the input to the learners" (Roberts and Roussou 2003: 11). The change occurs when the trigger experience for a parameter setting has become obscure or ambiguous, due to language or dialect contact or phonological/morphological erosion (Roberts and Roussou 2003: 12).

The change then moves through a community because individuals one after the other acquires the new parameter setting (Ackles 1997: 15) and "while historically it may appear that the language gradually changes, there is no gradual change within the grammar of the individual" (Ackles 1997: 15). According to this point of view "the spread of a new parameter setting through a speech community is typically manifested by categorically different usage on the part of different authors rather than by variation within the usage of individuals" (Lightfoot 1991: 162).[116] In other words, formalism "privileges abruptness, understood as saltation" (Traugott & Trousdale 2010: 24f.).

[116] Linguistic variation within the language use of one speaker is a highly discussed point among formalists as empirical evidence shows that sometimes one speaker produces utterances which can only be accounted for if we assume that he uses the 'old' and the 'new' parameter setting at the same time – so the question is if (s)he simultaneously has two grammars? As a reaction to this question, those linguists who follow the structuralist approach to change, often postulate adaptive rules to account for variation in the output of individuals: "When speakers finish the period of rules testing, they still produce output which they later recognize as defective in some way. They then apply Adaptive rules to mask such output, making it acceptable according to local norms" (Disterheft 1993:95). In contrast to this, those linguists

It is not surprising that change is abrupt for generativists, as they focus on the endpoint of a change, when the parameter gets reset. Then, variation has already shifted to zero in the grammar of a next generation of speakers. All the smaller changes ('shifts') which cannot be linked to any principle of grammar directly are classified as 'triggers' which only lead up to 'real' catastrophic or radical grammar change. The fact that an individual's speech varies, does not mean that his grammar changes (Ligthfoot 1999: 80).[117]

This leads to the important distinction between 'trigger' and 'change' in formalist frameworks. Lightfoot differentiates between three types of 'change': 1) triggers, 2) small scale grammar changes and 3) large scale changes.

Type of change	1 Triggers (on the PLD level)	2 Minor grammar changes	3 Major grammar changes
Characteristics	Involves variables (small changes) on the output level	Involves changes in the grammar	Involves changes in the grammar
	Progresses gradually until threshold is reached	Change is piece-meal, may diffuse lexically	Change is abrupt
	Is haphazard, but may lead to change in the grammar	Involves recategorization (morphological and categorial)	Involves parameter shifts, and clusters of simultaneous changes

Table 13: Types of change according to Lightfoot (in Fischer 2007: 108)

The trigger experience of a child "varies from person to person and consists of an unorganized, fairly haphazard set of utterances" (Lightfoot 1999: 66). As minor shifts on the output level, they only have an effect on the emerging grammar when they cross a particular threshold which forces the system to shift and results in a new grammatical

who are working within the so called 'variationist approach' (e.g. Kroch 1989a) support a double-base hypothesis. Although the powerful mechanism of reanalysis is not rejected, it is being argued that rather than having "categorically different usage, individual speakers are able to acquire two grammars and that these two grammars may remain in competition over time" (Ackles 1997: 16).

[117] This is different from the functionalist model, where those small shifts are recognized as changes within the grammar. For many functionalists "there is no build-up towards a radical grammar change" and change is thus conceptualized as something gradual (Fischer 2007: 106).

property (Lightfoot 1999: 91). Whereas triggers should not be considered as changes, the second and third type should. Also note that not every change is abrupt or includes a real parameter shift; only major, large scale changes (Type 3) are and do.

In contrast, small scale changes (local micro-changes) do not include parameter shifts. Here lexical items (only) become categorized differently. This kind of reorganization takes place in a piecemeal fashion as organization may affect some words sooner than others. So a Type 2 change which involves recategorization may diffuse lexically and does not include a parameter shift but rather some kind of reorganization of existing surface patterns. The development of the demonstrative into an article is conceptualized as a Type 2 change (Roberts and Roussou 2003).

The important and powerful underlying mechanism responsible for syntactic change of Type 2 and 3 is reanalysis (cf. Lightfoot 1979, 1991, 1999; Roberts 1993b; van Gelderen 1993; van Kemenade & Vincent 1997; Pintzuk et al. 2000; Fischer et al. 2000a; Roberts & Roussou 2003). Generally, reanalysis is a problematic term because it has been used in various ways by different scholars and schools.

3.4.1.2 Reanalysis

In general, reanalysis is the diachronic process by which a form comes to be assigned a different syntactic function from the one it originally had. However, no change in the surface form is observable. Researchers from different theoretical schools have tried to define reanalysis. For Langacker (1977: 58), giving a rather functionalist definition, reanalysis is a "change in the structure of an expression or class of expressions that does not involve any immediate or intrinsic modification of its surface manifestation". Under such a broad definition of reanalysis (as a structural change), it includes semantics and phonology. At the same time, reanalysis is involved in grammaticalization because grammaticalization involves structural change (Traugott & Trousdale 2010: 33).[118]

In formalist frameworks reanalysis is conceptualized in a narrower sense, as a "mechanism which changes the underlying structure of a syntactic pattern which does not involve any modification of its surface manifestation [e.g. morphological marking,

[118] Recently, Lehmann has defined "reanalysis of a construction" even more generally as "the assignment of a different structure to it" (Lehmann 2004: 162).

and word-order]" (Harris & Campbell 1995: 50). For them 'underlying structure' includes change in constituency, hierarchical structure, category labels and grammatical relations.

> Reanalysis takes place on the syntagmatic level of language, causing a single surface sequence of linguistic element to receive a new syntactic and semantic interpretation. This happens as an alternative analysis is assigned to an existing surface sequence in ambiguous environments. The immediate result is a split between an old representation and a new one for the same surface sequence; later the newly established representation may manifest itself in new surface sequences irreconcilable with the old analysis (De Smet 2009: 1728f.)

Recently, in the Minimalist programme, where the attention has shifted from

> macro-parameters as exemplified in e.g. Baker (2001) to micro-parameters as exemplified by the 'cartographic' work on micro-parameters (e.g. Chincque and Kayne 2005), reanalysis has been redefined in the generative literature as small abrupt steps. (Traugott & Trousdale 2010: X)

Reanalysis is conceptualized as small abrupt steps. The important axiom of reanalysis is that it depends on the possibility of more than one analysis of a given construction due to surface ambiguity. This allows some kind of reinterpretation of the pattern (cf. Trask 2000: 274; Harris & Campbell 1995: 51). One should be aware that reanalysis is not parameter change *per se*. Roberts (1993a: 311) makes a clear distinction. Parametric change affects the whole grammar as there we have a major resetting of a grammatical option (Type 3), whereas reanalysis is a 'hidden' change in the sense that it only constitutes a grammatical reorganization of existing surface patterns (Type 2).

As was mentioned in the previous section, the grammaticalization of the English demonstrative is seen as a case of reanalysis. For most formalists, grammaticalization cannot be separated from the concept of reanalysis and is not entitled to theory-relevant autonomy (Hopper & Traugott 2003: 50-69; cf. Newmeyer 1998; Campbell 2001a; Campbell & Janda 2001; Norde 2001). Although grammaticalization is accepted as a descriptive term, it is rather seen as a case of internal reinterpretation (reanalysis) of the principles and parameter system (van Kemenade 1987, 1997; Lightfoot 1991; van Gelderen 1993, 2004; Roberts & Roussou 2003). Grammaticalization is said to be

located in the shifts of functional properties like case, agreement, tense, etc. "hence in the relationships within and between functional projections and the lexical projections for which they are relevant" (van Kemenade & Vincent 1997: 7). Grammaticalization is the creation of new functional material and thereby involves categorical reanalysis of sometimes lexical or already functional material (Robert & Roussou 2003: 2). In other words, it is a change in category membership. What changes is the way functional heads are realized. "Assuming a universal hierarchy of functional heads […] the change involves the overt realization of these heads." (Roberts and Roussou 2003:35). Grammaticalization involves historical upward movement of forms which were base generated to a higher position in the functional hierarchy, turning into abstract heads (see 3.4.1.3 below). Cases of grammaticalization, such as the development of the definite article in English, are thus considered regular cases of reanalysis. From that perspective, grammaticalization always involves reanalysis but reanalysis does not necessarily involve grammaticalization.

3.4.1.3 X-bar structure and functional categories

One of the suggested principles which is assumed to be universal is that of X-bar structure (Stowell 1981; Chomsky 1970; Jackendoff 1977; Kayne 1994).[119] According to the standard views of X-bar structure, each morphological category that is syntactically relevant heads its own phrasal projection, conforming to the general phrase structure rules.

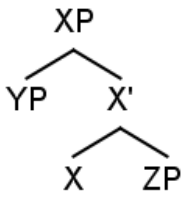

Figure 3: XP-structure

Phrases may be headed by either lexical elements or functional elements. Different from "lexical" categories like N(oun), V(erb), A(djective), P(reposition)[120], functional categories are grammatical categories which may or may not put inflectional morphology in the syntax, e.g. Tense (T). In other words, grammatical features can also function as heads which project a phrasal category containing a specifier and a complement.

[119] A phrasal category, an XP (or X''), is projected from a head X. Between these two is an intermediate level X'. XP immediately dominates, besides X', the specifier position (SpecXP) which is thus sister to X': Also, depending on its lexical properties, the head may take one or more complements as sister. Essentially the complement is optional. The specifier and complement positions are occupied by phrasal categories. In addition it is possible for phrasal categories to be adjoined to some or all of the projections of X (X itself, X' and XP) (Ackles 1997: 5; Lyons 1999: 41). The places where the line braches are called nodes, so the node joining X and ZP is the X' node. X is also said to project X', and both X' and X'' are projections of X. There is a debate over how many projections and how much iteration is possible within a phrase. Generally, it is assumed that X' nodes can iterate (indefinitely) and that X'' is the highest possible projection of X, closing off the projection. A Head is labeled X^{O} and X'' is labeled X^{max} or maximal projection (Ackles 1997: 6).

[120] Which denote real-world entities, states, activities, properties, relations etc.

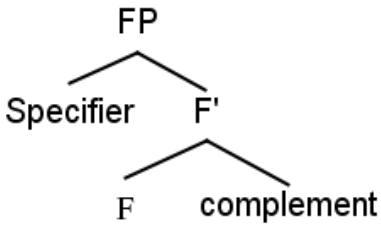

Figure 4: FP-structure[121]

Functional categories contain "closed-class grammatical morphemes, purely morphological material (bound morphemes or morphophonological features) or perhaps no overtly realized material at all, depending on the language" (Roberts & Roussou 2003: 45). Each functional category has a full phrase-structural status (Roberts &Roussou 2003: 45) and can act as a trigger for 'Movement' (Robert and Roussou 2003: 6).

In the most recent 'generative' model, Minimalism, Movement is an important mechanism. Grammatical structures are generated with the help of three mechanisms: Merge, Move, and Attract/Agree (Ackles 1997: 9; Roberts and Roussou 2003: 18; cf. Chomsky 1995, 2000). The syntactic component is expanded with information from the lexicon. Merge, as a binary operation, connects two lexical items into one more complex item, thus building phrase structure. "Agree is the operation that manipulates combinations, by establishing a relation between lexical items within a syntactic space" (Roberts and Roussou 2003: 18). Move takes such a merged unit and connects it with the larger unit:

> Underspecified lexical elements (e.g. when inflectional morphology is absent) will move since their function can only be fully specified by their functional head (Fischer 2007: 114).[122]

[121] F represents any functional feature here.

3.4.2 DP-Analysis as a model for nominal determination

After this general introduction the question remains how formalists model the change from demonstrative to article. To understand the line of argumentation better, it seems necessary to first have a look on how nominal determination is modeled in general.[123] In earlier formalist models, scholars assumed that the NP is a maximal projection of the Noun. Moreover, determinatives were understood to be in specifier position and adjectival expressions adjoin mainly to N'. Complements are typically expressed by prepositional phrases (Lyons 1999: 42; cf. Radford 1988).

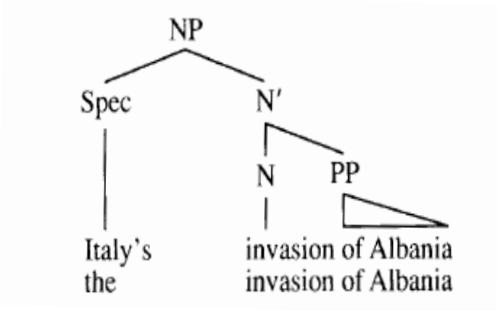

Figure 5: Traditional NP-structure (Haegeman 1997: 21)

Such a model is very similar to the traditional conceptualization of the NP (see Huddleston & Pullum 2002) and has also frequently been employed by non-generativist research. However, this model has been criticized[124] and since Abney (1987) a different approach has become popular in which the NP is complement of the determiner (Det or D). Here, the functional category D is the head of the phrase, rather than the Noun. Thus the phrase is called DP not NP. The category NP still exists but only within the DP as a complement of the head D corresponding to what used to be N'.[125]

[122] Grammatical features such as case or agreement are being checked through out the derivation. If the features are interpretable they are erased, if not, the derivation 'crashes' and is ill formed (cf. Fischer 2007: xiv).
[123] A rich and inspiring formalist literature on nominal determination exists. The work of Greenberg (1978), Seiler (1978), Rijkhoff (2002) Coene & D'hulst (2003a,b) offers interesting insights into the diachronic, synchronic and typological structure of nouns and nominals (cf. Longobardi 1994, 1996, 2005 Chierchia 1998; Zamparelli 2000). The evolution of determiner systems in various single language families has been discussed by many linguists (cf. for Romance languages: Selig 1992; Vincent 1997; Stark 2005; for Germanic languages: Abraham 1997; Leiss 2000; Bauer 2007; for English: Philippi 1997; Osawa 2007; Wood 2007).
[124] cf. Haegeman 1997: 21
[125] for DP-hypothesis also see Szabolcsi 1987; Haider 1988; Ritter 1988; Longobardi 1994, 2005.

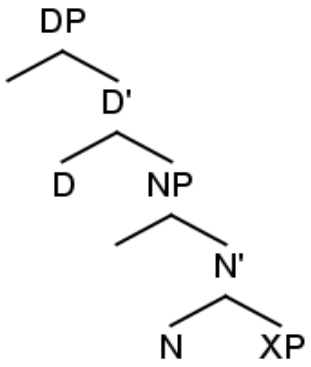

Figure 6: DP- analysis

DP thus is a projection of the functional category of D(eterminer). Abraham (2007: 5) elaborates on the difference between NPs and DPs:

> According to Longobardi (1994: 624; 2005:24, 27), the difference between NP and DP is that NPs –determinerless, bare nominals – are inherently predicative and thus cannot occur in referential argument position. […] Only DP can occur in argument positions, which need to refer to theta characteristics which in turn are contingent upon the semantics of the predicating verb. The role of picking out a particular referent is taken care of by a functional D. The role of functional D is to change predicative nominals, bare NPs, into arguments, DPs, by identifying the referentiality of a nominal. This selection operation is best explained by the theory of theta-binding proposed by Higginbotham (1985).

In other words, the determiner forms a functional shell around the NP and can express various functions, like definiteness specificity, deixis, number, gender and so on (Bernstein 2001).[126] So the task of a functional D is to change predicative nominals into arguments by identifying the referentiality of a nominal.

An extensive discussion is still going on about the number and nature of possible other functional heads in the English DP. Other functional heads, which are presumed to be involved in nominal structure, are, for example, Num(ber) and K(ase) (Lyons 1999:

[126] Comparable to the IP and CP shells around the VP.

44). Models also differ in respect to the question whether all NPs are DPs. Some claim that all NPs are contained in a DP (e.g. Abney 1987; Ritter 1991), but others argue that some NPs are not (e.g. Lobeck 1995). For example, it isn't clear if [-definite] NPs are headed by a D. Additionally, researchers within the framework do not agree how many and what kind of projections are necessary to model full nominal structure in other languages (Ackles 1997: 48ff; Haegeman 1997: 25; cf. Ritter 1991; Lobeck 1995; Giusti 1997; Abraham 2007).

This relates to the question whether D(P)- structure exists across all languages and language stages even when no D-word shows up overtly? Generally it has been agreed that parametric differences between languages are restricted to the properties of that part of the sentence where morphological information such as tense, agreement, main /subordinate are expressed (van Kemenade & Vincent 1997: 3). The claim is that parametric differences in different languages and historical stages of one language are differences in functional properties only. Several formalist syntacticians side with the view that functional architecture is universal for all languages (which implies a great number of innate functional heads in UG) but that it depends on each particular language, whether the functional category is expressed overtly or not (then being a 'silent' function) (e.g. Roberts and Roussou 2003). For example, "[l]anguages can differ in that in one language a given functional head F has an overt exponent, while in the next language F has no exponent" (Roberts and Roussou 2003: 6). In other words, the category exists but may remain empty as a "silent" category. Thus, for one group of formalist syntacticians the idea is that even if determinatives are absent, nominal reference or other properties of argument NPs can only be accounted for if one assumes a D projection, which might be left 'empty'.

For a second group of researchers, an overtly marked functional category D is not universal. Categories can be emergent and do not have to be operative from the beginning. In languages without overt determiners no functional D-projection exists in order to derive the referential status of nominals. In these languages the referential or definite value of the nouns is checked against other existing functional projections. Thus, functional categories do not have to be operative from the beginning in all languages but can emerge over time bringing about certain syntactic phenomena. This approach insists on evidence in the surface structure for the postulation of a category.

(Abraham 2007: 2; cf. Gil 1987; Vincent 1997; Chierchia 1998; Progovac 1998; Vincent 1997; Boucher 2005).

Arguments for an emerging DP come from first language acquisition where determiners emerge rather late. Osawa sees some parallels between phylogeny and ontogeny, where a DP-structure does not exist in the prefunctional stage before 24 months. "In both domains, functional D emerges later and the emergence of a D-system brings about the change from NP to DP" (Osawa 2007: 334). Additionally, one can find extensive typological evidence of languages without determiners (Abraham 2007: 10; Osawa 2003).[127]

As could be seen, many researchers are in favor of universal DP modeling but some do not agree – with arguments on both sides (Huddleston & Pullum 2000: 357f.; cf. Spinillo 2000; Denison 2006). As was shown in Figure 1 and Figure 2, the position of the definite article is either specifier of NP or head of DP depending on the framework one has chosen.

In this thesis, I will assume a rather traditional NP analysis with the Noun being the head of the NP and the determinative as a dependent in the prehead. One of the reasons not to work with a DP structure is that it is the noun which defines the selectional properties of the noun phrase. Moreover, the range of NPs which do not contain a determinative (*money is great, love is mystery,…)* is much larger than the small group of NPs which do not have a noun as ultimate head (*both; the largest*). Finally, the determination function does not need to be fulfilled by a determinative but can also have the form of an embedded NP (e.g. Genitive Phrase) (Huddleston and Pullum 2002: 357f.). Still, it was necessary to present the DP model, because the following line of

[127] Finally, it seems implausible to postulate the existence of a non-active, empty, covert functional category which has no visible counter part. Any model should insist on evidence in the surface structure for the postulation of a category (Fukui & Sakai 2003: 327). Fukui and Sakasi (2003: 329) argue that "if functional categories are present in a language, but they are not active, what does their existence mean exactly?" and propose "The Visible Guideline for Functional Categories": "A functional category has to be visible (i.e. detectable) in the primary linguistic data. One only should assume those categories that one has evidence for. Robert and Roussou refer to this approach as "What you see is what you get" (2003: 24). If functional heads were always there in principle (with some of them never to surface) then this leads to a long list of universal functional categories for all languages (as proposed by Roberts and Roussou 2003) and requires an explanation, why their lexical appearance is blocked in one or the other language (Fischer 2007: 115).

argumentation can be followed more easily if one knows about the model and its different interpretations.

3.4.3 Article development – from Spec to Head

Depending on the assumption of a universal DP, two hypotheses for the development of the article have been be postulated: a "Covert–to overt–D Hypothesis" vs. an "Out of nothing–to–D Hypothesis" (Abraham 2007: 3). In the first

> a silent DP might be invoked for a language introducing lexical determiners in D after changing the triggering grammatical and semantic features and thus satisfying singular reference and anaphoric, transclausal binding in due course. Hitherto undetected patterns of definiteness marking (covert DPs either in the linguistic sense or in the metalinguistic sense) are being replaced by an article system where D is overt or less covert. (Abraham 2007: 3)

In other words, DP structure is universal with DP being a projection of the functional category determiner. In Old English, however, a silent, covert DP is replaced by overt marking (cf. Wood 2007; Abraham 1997; Leiss 2007). In the second hypothesis, no DP existed in Old English yet. Old English had an NP structure without a D-projection where one finds demonstratives or other elements only specifying the nominal (Yamamoto 1989; Osawa 2003, 2007).

Those in favor of the first hypothesis argue that identifying the reference of a nominal is not always taken care of by an overt D (Abraham 1997, 2007; Leiss 2000, 2007). Sometimes, morphological case on the head nouns can determine the referentiality of a nominal indirectly. For Abraham "[m]orphological case alternates contingent upon the choice of aspect determined definiteness versus indefiniteness" (2007: 5) and while there was no overt D-category present in language states as Old English, Old High German, Gothic, or Latin "referentiality was ascertained through the interaction of means other than direct lexical D-fillers"(Abraham 2007: 5). In other words, an empty D-slot filler is assumed for Old English.

Evidence for an empty but existing D-category comes from word order in Old English nominals. When possessives or demonstratives occur with adjectives they often

occur before the adjective. Woods (2003) argues that demonstratives, possessives and adjectives are strictly ordered in Old English and then there must be some functional layer above NP.

What arguments get listed for the second hypothesis? Functional elements are generally defined as phonologically and morphologically dependent and are usually inseparable from their heads. They mostly lack descriptive content or the semantic contribution is second-order (Osawa 2007: 317). While the modern PDE article has these features, the demonstrative *se* in Old English syntax does not have these features. In Old English – as was shown in the introduction to this thesis – the demonstratives could co-occur with possessive pronouns in the same phrase. Also, word order was much freer than in Modern English. Demonstratives and possessives could appear to the right of the adjective and after as well as before the noun. Finally, NPs remained unmarked (bare) in contexts where one would expect an obligatory article in PDE to indicate definite reference.

This has led the supporters of the second hypothesis to three conclusions: Firstly, it has been concluded that word order patterns were less strict in Old English and the patterns one finds might simply be discourse-pragmatic restrictions on the mutual ordering in special cases without an underlying categorical distinction.

Secondly, it has been suggested that demonstratives and possessive pronouns should not be treated as determinatives but rather as modifying elements in Old English, thus occupying the modifier slot (Spec) in the syntactic tree. The demonstrative carries more information e.g. definiteness, deixis, spatial proximity (Ackles 1997: 105) and thus, formally, does not qualify as a functional head and cannot be a determiner (1997: 107). Demonstratives are "generated in a Specifier position, similar to an adjective, which is lower than the article."(Giusti 1997: 111).[128] In other words, the demonstrative is in a lower Spec position (together with the adjectives), because only the article heads

[128] The demonstrative checks its referential features in SpecDP. If an element in Spec makes the revelant features (morphologically) 'visible', the corresponding head in agreement with it will be empty.

the phrase as a true determiner (Szabolcsi 1994; Giusti 1997).[129] Only articles are defined by the fact that they are functional heads.

The article is a minimal marker of definiteness. Ackles remarks:

> [The definite article's] syntactic function is analogous to that of the indefinite in that it is the minimal marker of the presence of a functional node when that node is the leftmost node of a NP. The definite article is the minimal marker of a Determiner Phrase, and the rise of the definite article is a surface manifestation of an underlying change in the structure of the NP (Ackles 1997: 3)

Thirdly, and this being the overall conclusion, it has been argued that no DP existed in Old English. In other words one could also say that Old English had a flatter structure than Modern English (Yamamoto 1989; Osawa 2003, 2007; Miyamae 2005).

> [A]n OE nominal structure is expected to have a structure paralleling an OE flat clause structure against the analysis than an OE NP contains DP layer (cf. Wood 2003, Alexiadou 2004). I propose that OE NP has a partially flat structure. (Osawa 2007: 313)

For Osawa, the presence of a few pronominal elements before the head nominal and the word order does not give crucial evidence for a DP layer or the presence of a D-head (Osawa 2007: 322). In time, however, the loss of case morphology triggered the emergence of DP "assuming that a Referential role of nominals must be bound by either a functional D or morphological case (Osawa 2007: 313).

Thus, if one opts for the non-universal existence of the D, then the emergence of definite articles in languages represents the appearance of the grammatical functional category D[130] triggered through the interaction of reanalysis and semantic weakening. On a syntactic level the structure of the phrase is changed through a reanalysis towards a D projection (Lyons 1999: 323; cf. Osawa 2007). The earlier D-less NPs change into DPs via the emergence of a D-paradigm for nominals (Lightfoot 1991; van Gelderen 1993, 2004; van Kemenade 1997; Roberts & Roussou 2003). The determiner slot

[129] Giusti leaves open the question what kind of category they are. Demonstratives might be a new category (indexical), or we can analyse them as Adjectives, since they are modifiers of the noun. In any case, demonstratives are not in D^0, in contrast to articles.
[130] The semantic function of determination is no doubt universal.

emerges as an innovation in Old English and as a consequence the modifying demonstrative acquires its new status as determiner/article. In subsequent periods the determiner function consolidates its position and more and more elements are recruited as fillers of this new function (Van de Velde 2010: 293). What makes such a process possible is the broad functional overlap between demonstrative and definite article which can be seen as a deictically unmarked demonstrative. Thus the change is understood as an internal semantic-syntactic reinterpretation of the grammatical parameter system where new functional material is created by categorical reanalysis of lexical or already functional material (Lyons 1999: 323; cf. Roberts & Roussou 2003; van Gelderen 2003; Osawa 2007; Van de Velde 2010).

Especially Philippi (1997) has tried to account for the article's development. She relates the rise of the article to the loss of the verbally governed partitive genitive and object case. She argues that in the Germanic languages (without overt D), morphological case performed the task of definiteness marking. Lexical definiteness markers already existed in the Old Germanic languages but they where rather demonstrative pronouns. Demonstratives optionally occupy Spec, FP as F^{o} is already occupied by case (cf. Uriagereka 1992 a). Therefore the demonstrative in Spec, FP may only act as a redundant reference marker which is only allowed in emphatic contexts. In other words, as a reference marker, the demonstrative pronoun is redundant. In time, however, due to the gradual erosion of inflectional morphology, genitive is lost as an object case and collapses with other cases. It is no longer possible to mark definiteness of the NP morphologically. Simultaneously, lexical definiteness markers become obligatory in indirectly anaphoric contexts in the Middle English period. The emphatic demonstrative is reanalyzed as the functional head of DP. Also the restrictions on the use of definite determiners are gradually lost. In this position the determiner takes over the function of specifying the referential interpretation of the NP (Philippi 1997: 90ff).

> In the course of history case morphology is weakened such that it can no longer function as a syntactic head of FP, the emphatic determiner is reanalysed as the functional head of the NP (Philippi 1997: 91)

Also Van Gelderen, who reports on *the Definiteness Cycle in Germanic* suggests that "the change from demonstrative to article is determined by (a) the shift from specifier to

head" and she explains that "demonstratives might originate as adjectives", but in an intermediate stage "[are] analyzed by a subsequent language learner as situated in the Specifier of the DP" (2007: 279) and finally become head of the phrase, which is when they turn into articles in accordance with certain economy principles.

It can be concluded that in formalist modeling there are two options for the article's development: Either D already exists (because it is universal) and the demonstrative pronoun, through reanalysis, gets raised in time into D position, which is the point when it turns into an article, or D has to emerge yet with the demonstrative moving into D which results in the creation of the new category.

3.4.4 Reconsidering Formalism

As was shown in the previous sections, formalist researchers account for the difference between demonstrative and article usage by having the demonstrative in Spec position and the article in D position. This, of course, is a model-internal difference. Still, the model clearly distinguishes between the two elements. However, the question remains why categorical reanalysis should bring about a change from Spec to Head in particular?

Most formalists argue that Spec to Head movement is a consequence of certain economic principles, which motivate change and help the child to acquire its grammar (cf. e.g. van Gelderen 2004, 2007). Here, one general principle is the "Head preference Principle (HPP)" which states that whenever possible a word is rather interpreted as a Head than as a phrase (van Gelderen 2007: 284). Van Gelderen claims that the HPP is relevant to a number of historical changes and must be seen as a cognitively innate principle which leads to syntactic change. If the linguistic input is ambiguous, the speaker will apply the HPP and preferably interpret elements as heads. For van Gelderen, one example of the HPP is the development of full pronouns into demonstrative pronouns and finally into articles (van Gelderen 2007: 284). Another universal principle is that of Late Merge (Chomsky 1995: 316, 378) which states that is it more economical to merge late. The 'Late Merge' principle accounts "for the change from lexical head to functional head or from functional to higher functional head" (van Gelderen 2007: 284).

Van Gelderen reformulates the two principles into one: namely the 'Principle of Feature Economy': "minimize the semantic/interpretable features in the derivation". When phrases "are reanalyzed as heads and higher heads, they lose semantic force and formal features" (2007: 286). She also relates this to Greenberg's Definiteness Cycle (1978) and translates the descriptive Greenbergian cycle of a) into b) within a DP structure:

a) demonstrative > def. article > case/non-generic > class marker
b) specifier > head > affix > zero

Van Gelderen finally concludes that grammaticalization is

> the result of 'internal pressure' in children's acquisition of language, especially Economy Principles and Feature Reanalysis. Economy principles account for changes from "phrase to head and from lower head to higher head. (van Gelderen 2010: 130)

In other words, she is talking about structural simplification here. Robert & Roussou (2003) also mention structural simplification as a natural mechanism of linguistic change:

> Structural simplification is a natural mechanism of change, and therefore the fact that grammaticalization is a widespread and natural kind of change. Our general characterization of grammaticalization then, is that it is categorical reanalysis which creates new functional material, and that this reanalysis always involves structural simplification (Robert & Roussou 2003: 3).

To conclude, languages have a tendency to simplify as a principle of economy and structural simplification is a formal principle of UG.[131]

Note that the proposed structural simplification, conceptually, is not influenced by semantic reduction or communicative simplification. The question then is why the structural simplification did not take place earlier? The answer for that can only lie in

[131] The reason why languages do not get simpler and simpler to a point of 'structural perfection' is that "the simplification effected by changes is always local, and many increase complexity elsewhere in the system."(Roberts and Roussou 2003: 17).

factors which are considered as external triggers by most formalists. Why then should we understand those factors, e.g. frequency, pragmatics etc. as external in the first place and not term observable shifts in the phonological/lexical domain as 'real change' as well? To exclude semantic and pragmatic forces as causal mechanisms is one of the main weaknesses of the formalist framework. This however, is not the only reason why the generativist endeavor has generally turned out to be problematic over the years.

First of all, the general assumption of an innate Universal Grammar has strongly been rejected by many researchers (Chafe 1967: 89; Derwing 1977: 79-80; Itkonen and Haukioja 1997: 166; cf. Lamb 1966; Bowerman 1988; Hawkins 1988; Elman et al. 1996; Deacon 1997; MacWhinney 1999). According to De Smet, Universal Grammar is

> typologically difficult to operationalize (Croft, 2001; Newmeyer, 2004), implausible from an evolutionary perspective (Christiansen and Chater 2008) and unnecessary from an acquisitional perspective (Slobin, 2001; Tomasello, 2006)." (De Smet 2009: 1730).

Innateness claims are not arguments based on evidence for such a genetic basis but mostly derive from the poverty of the stimulus argument. For many years, however, functionalist research and the social/cognitive position have presented various studies rejecting the poverty of stimulus-argument and supporting the adequacy of a strong (general but not language specific) learning mechanism within the child (cf. e.g. Newport, Gleitman & Gleitman 1977; Arbib & Hill 1988; Hawkins 1988; Gopnik, Choi & Baumberger 1996; Aslin, Saffran & Newport 1999; Chouinard & Clark 2003).[132] These findings underline how much language acquisition is influenced through the environment and that syntax might be learnable after all. If we, as a consequence, do not

[132] The assertion that cognitive mechanisms are inadequate has been countered with proposals of how general mechanisms could achieve aspects of grammatical knowledge and evidence has been brought forward that general cognition does contribute to grammatical development. The speech that children hear is not as impoverished as Chomsky has supposed. The claim that language experience simply does not provide sufficient feedback has been rejected. Research to find evidence in favor of a non-genetic explanation for language acquisition has focused on the following aspects: I) the power of statistical learning mechanisms and pattern abstracting abilities (Saffran, Aslin & Newport 1996; Aslin, Saffran & Newport 1999; Marcus et al. 1999), II) the connection between general, non-linguistic development and linguistic development (Shore, O'Connell & Bates 1984; Gopnik, Choi & Baumberger 1996; Perez-Leroux 2001), III) the quality of 'motherese' (Newport, Gleitman, & Gleitman 1977; Nelson et al. 1984; Hoff-Ginsberg, 1985, 1986; Morgan & Demuth 1996; Hoff-Ginsberg 1998), IV) the role of feedback (Chouinard & Clark 2003)

accept the notion of a universal grammar established by formalism, an explanation based on UG should not be favored even if it might be internally coherent.

Moreover, it has been criticized that formalism construes languages as 'idealized' formal systems. Chomsky chooses to work on an "ideal speaker-listener, in a completely homogenous speech community" (Fischer 2007: 57). However, the decision to concentrate mainly on competence and the core language, not taking into consideration performance, is problematic when it comes to answering language change. First, a completely homogenous speech community cannot contain innovative individuals, a point that even generative historical linguists are aware of:

> A central idea behind the minimalist programme is the idea that language is in some sense a perfect system (the strong minimalist thesis: see Chomsky (1995: 1-10), (2000: 96f.), (2001: 1-2). Now, perfect systems do not vary over time, so the very existence of synchronic variation among grammatical systems also poses an apparent problem for the strong minimalist thesis. (Roberts and Roussou 2003: 1)

Second, the decision to concentrate on the competence of an 'ideal' speaker has lead to a situation which ignores variation, but it is mostly variation which provides the play-ground for change. If one ignores variation, one often ignores the possible trigger/initial stages of certain changes. Some changes can only be explained by the influence of semantics. For Lightfoot, the situational context, pragmatics and communicative needs (e.g. the need to be polite or expressible) are all external factors, not relevant to grammar change. But we have seen that external societal contact factors can play a role (as suggested by McColl Millar). In this case an alternative model which includes those factors may be more interesting.

Admittedly, Lightfoot does not completely deny that those factors play a role as triggers. A change on the level of the PLD may lead to a real grammar change. Still it seems difficult to me to distinguish between PLD triggers and real changes (cf. Croft 2000: 49-50; Fischer 2007: 102). Such differentiation only makes sense if we assume an independent, innate, syntactic module in the first place which I simply do not.

It has also been stated that for formalists the key mechanism is reanalysis. Generally, I agree that change first and foremost occurs within the individual and accumulates as it spreads through a population of speakers. However, I would like to

point out that the term *re*-analysis seems to be ill-formed especially from the perspective of the child in the language acquisition process. It is a misconception to say that a speaker, when s/he encounters ambiguous input in his or her language acquisition process,[133] *re*-analyses this input. If anything at all the child *analyzes* and *categorizes* the linguistic data in a certain way, but how should the learner *re*-analyze a system that he/she acquires for the first time.

> [O]ne can only 're-analyze' something that pre-exists, so if a child learns a language and parses a particular string with a new analysis, no ' re-analysis' has occurred from the point of view of the learner.[…] the term 'reanalysis' is therefore not accurate in a composition semantic sense, except in the case of language users who reanalyze their own structures. (Traugott & Trousdale 2010: 35)

In other words "reanalysis does not occur in the physical sense of the word" (Fischer 2007: 145).

From an outside perspective, on a metalevel so to speak, it is a valid observation to state that linguistic surface forms *get re*-analyzed (*re-organized*), but on the individual speaker's level a different process takes place. Here, I suggest that rather than *reanalyzing* anything, the speaker *recognizes* patterns, draws analogies, and finally *categorizes* them in a certain way. This idea will be discussed further in chapter 6.

[133] This is where, according to formalism, language change really occurs.

> *Why is it that grammaticalization clines are set in motion in some languages but not in others, or set in motion at some stage of language and not at another?[…] The intuition is that there is some structural pressure or need for the relevant grammatical category (F2: P2) and that this motivates its expansion out of an earlier F1: P1. (Hawkins 2004:82)*

3.5 In search for synthesis – summary and outlook

After presenting and discussing various proposals on the article's development, I would like to point out that I do not want to dismiss every hypothesis that has been presented in the past but add to current views on the subject. Change is often multi-causal, which means that all the explanations proposed in the last sections do not necessarily exclude one another. Still – as Hawkins makes perfectly clear in the quotation above – the essential question is why grammaticalization clines are set in motion in some languages at a particular time but not in other languages.

Various explanations on article emergence have been discussed in this chapter. In (3.1) traditional views on the development of the definite article have been presented. The German scholars at the turn of the last century came to the conclusion that a) the definite article already existed in Old English and that b) it developed as a necessary linguistic tool due to the decline of the inflectional system and the shift from a synthetic to an analytic language.

Again, I would like to point out that the existence of the article in Old English still has to be confirmed empirically and remind the reader that the loss of inflections has not lead to article development in many languages. Moreover, articles exist in several languages which have rich case morphology (as typological data shows). I have also discussed the hypothesis that article emergence is linked to changes in the adjective paradigm (weak-strong distinction), and I have tried to show why this proposal does not seem to qualify as an explanation either. Additionally, an alternative scenario by Spamer (1979) was presented. Here, especially one argument shall be kept in mind,

namely Spamer's idea that the demonstrative has a modifying status in Old English; an idea which is also supported in many formalist models.

I have also illustrateed that from early research onwards, authors have been aware of the fact that there is an arbitrary nature to the development of the article (Gardiner 1932: 47; McColl Millar 2000: 309) and that the birth of a grammatical category often takes place under obscure conditions (Christophersen 1939: 18). For example, McColl Millar calls English article development an "historical accident" (2000b: 275) and motivates the process through language contact. For him an external cause (Scandinavian influence from the North) is responsible for the observable demonstrative split in the nominal system.

McColl Millar also draws attention to the fact that some linguistic developments do not only occur because there is a communicative need for them but for other reasons (in his point of view external ones). This point is especially noteworthy because in this thesis it will be argued that the article does not primarily develop for the sake of communicative efficiency but that its development is triggered by multi-level frequency and analogy effects (e.g. analogical pattern recognition and transfer). This point will especially be elaborated on in chapter 6.

This relates to the functionalist explanations for article development. The grammaticalization of the article is said to be caused by semantic or discourse pragmatic developments (e.g. Traugott's subjectification). Semantic change in this case conceptually precedes structural change. However, it is questionable if pragmatic pressures are really the main trigger for the observable category change. Traugott's argument for the pragmatic necessity of the development comes across very hasty and is only applicable for article development at a later developmental stage.

Grammaticalization theory often neglects the synchronic system and the shape of the current grammar (internal structure) as a potential cause for or constraint on change. It might be possible that sometimes structural change precedes semantic change or at least occurs at the same time. In the next chapters, I will argue for the fact that the grammaticalization of the demonstrative is formally driven. I will also imply that grammaticalization is rather a descriptive label for a certain type of change, which should and can be explained as the outcome of more fundamental mechanisms.

Finally, formalist models have been discussed. In most of them the demonstrative formally (i.e. theory-internal) does not have the same status as the article. Only the article heads the phrase and is to be found in D. This formal distinction underlines the syntactic and semantic differences of demonstrative and article; differences which are often being ignored in the functionalist literature. In the course of my analysis, I do not want to argue that the demonstrative is a type of adjective; rather I will suggest that the difference between the demonstrative and the article is that the article is bound to the existence of a determination slot.

Generally, formalists interpret article development as categorical reanalysis. Changes in grammar are caused by reanalysis. This, however, does not explain why reanalysis takes place when it does. I have also emphasized that reanalysis seems to be a problematic term. In the chapters to come, it will be argued that reanalysis is based on analogical reasoning and could be termed analogy as well.

Finally, the formalist DP model with its universal functional categories has been criticized because it does not seem the best model in the first place. First of all, it invokes 'silent' categories, which we have no evidence for and secondly, it is based on the notion of Universal Grammar, which is questionable all together.

Generally, it seems to me that the two major approaches of functionalism and formalism have to be unified, if there is to be sufficient explanatory adequacy. "[T]oo strict an adherence to one or the other theory often leads to a neglect of the philological details" (Fischer 2007: 2). In this respect, both external and internal structures have to be taken into consideration when looking at language acquisition or change and article emergence in particular.

> What we need is a description of morphosyntactic change that does full justice to form as well as meaning, and takes all of the change into consideration. What we need therefore is a theory that looks at performance facts, takes account of variation, and gives equal weight to form and function. (Fischer 2007: 82).

After some theoretical considerations have been presented in this and the previous chapter, the 2nd part of this thesis constitutes the empirical investigation. The overall goal of the following chapters is to trace the development of *se* diachronically from early to late Old English, to discuss the status of the form and to suggest when the

category potentially emerged (chapter 5). Afterwards, a potential explanation for the emergence of the definite article will be presented (chapter 6).

In the literature, it has been claimed that the frequency of *se* increases steadily from Old English to Middle English, and that this increase is a direct result of and evidence for the emergence of the form's article function. One aim of the following chapters will be to find empirical evidence for this increase. Another major question is if it is safe to assume that *se* already had article status in Old English or if it took on that role earlier or later (Middle English). This question will be tackled by employing the criteria for articlehood, which have been set up in section 2.3.2. It will be seen if and how those are met by the form *se* in various earlier and later Old English texts. Moreover, the quantitative and qualitative analysis of a larger data set should shed light on the plausibility of the theories on article emergence which have been presented in chapter 3.

PART II

A theory is the more impressive the greater is the simplicity of its premises, the more different are the kinds of things it relates and the more extended the range of its applicability. (Albert Einstein)

Every theory presented as a scientific concept is just that; it's a theory that tries to explain more about the world than previous theories have done. It is open to being challenged and to being proven incorrect.(Marvin Harris)

4. Textual Evidence

Before any empirical studies are presented, I would like to provide some information on the investigated manuscripts. As was already mentioned in the introduction, the following Old English prose texts have been chosen for analysis:

Manuscripts	period	word count	Latin Translation	manuscript in YCOE
Peterborough Chronicle	o.3/4	40,641w	no	cochronE.o34
Ælfric's Catholic Homilies	o.3	106,173w	no	cocathom1.o3
Ælfric's Life of Saints	o.3	100,193w	no	coalelive.o3
Bede's History of the English Church	o.2	80,767 w	yes	cobede.o2
King Alfred's Boethius	o.2	48,443 w	yes	coboeth.o2
King Alfred's Pastoral Care	o.2	68, 556w	yes	cocura.o2
Orosius	o.2	51,020w	yes	coorosiu.o2
Parker Chronicle	o.2/3	14,583w	no	cochronA.o23
Laws of Alfred	o.2	3314w	no	colawaf.o2
Laws of Alfred Introduction	o.2	1,966w	no	colawafint.o2
Laws of Ine	o.2	2,755w	no	colawine.ox2

Table 14: Investigated early Old English Manuscripts (o.2 and o.3 period)

Among them are the A and E manuscript of the *Anglo-Saxon Chronicle*.

4.1 The Anglo-Saxon Chronicles

The *Anglo-Saxon Chronicle* is a collection of annals in Old English telling the history of the Anglo-Saxon tribes. It is likely that the Chronicle had its origins towards the end of the ninth century during the reign of King Alfred the Great (871-899), who is characteristically associated with prose writing at that time and is said to have compiled the chronicle (Hunter Blair 1966: 12). The chronicle is of enormous importance as it is one of the earliest fundamental cultural documents compiled in English. It is the first continuous national history of any western people in their own language and it seems that "at this time no other European nation apparently felt confident enough in its own language to record its own history" (Swanton 1996: xx). In other words, the Chronicle is the single most important source for the historical period between the departure of the Romans and the Norman Conquest (Hunter Blair 1966: 11). It does not consist of one

text, but of a number of individual texts with a similar core but considerable local variation, each having its own history.

Nine manuscripts, of which none is the original version, survived in whole or in part. The oldest surviving manuscript was probably begun at the end of Alfred's reign, whereas the most recent one was written at Peterborough Abbey. The original chronicle might have been compiled in the early 890s by a scribe in Wessex but was lost (Abels 2005: 15). Seven of the nine manuscripts today can be found in the *British Library*. The other two are to be found in the *Bodleian Library,* Oxford and the *Library of Corpus Christi College,* Cambridge.

Essentially, the chronicle grew out of so called Easter Tables. With the use of list-like *Easter Tables* consisting of separate lines for astronomical data and very short notes the clergy determined religious feasts in future years. The chronicle is a composite document using several sources for information. Records of world history from the beginning of the Christian area to the year 110 probably came from one of the small encyclopedic volumes similar to the Roman "cosmography". Other annals were transferred from Bede's chronological appendix in the *Ecclesiastical History*. We also find continental sources and even oral transitions are incorporated. Apart from a few exceptions the annalists are anonymous and usually impersonal (Swanton 1996: xx). The chronicle entries are very short at the beginning and it is debatable if they should be considered 'Literature' at all. However, through the course of time – from the 9th to the 12th century –, one can witness the emergence of a distinct prose genre, evolving from brief announcements to lively sketches of dramatic events. From 890s onwards, entries become fuller, more complex and more coherent in terms of content. Moreover, the style becomes increasingly personal and colloquial with annalists even taking sides (Swanton 1996: xvii).

4.1.1 The *Parker manuscript*

For this thesis two of the nine manuscripts were chosen for analysis. The first is the *Parker Chronicle,* also called the Winchester Manuscript, which once belonged to Matthew Parker, archbishop of Canterbury 1559-75. Today it is held in the library of Corpus Christi College, MS 173, ff.I-32 and is the oldest surviving manuscript of the

Chronicle. The *Parker Chronicle* mirrors the oldest linguistic stage available to researchers of Old English, because it "was not brought into conformity with the late West Saxon literary standard" (Swanton 1996: xxi; cf. Bately 1986: lxxii).[134] The text also includes certain sections which are not included in any other version. The Parker Manuscript was begun at Old Minster, Winchester, when a scribe wrote out the genealogy of King Alfred and then began copying out a version of the Chronicle (Swanton 1996: xxi). The first chronicle entry is for the year 60 BC and the scribe stopped with the year 891. After that several other scribes continued through the tenth century (Bately 1986: xxi). The manuscript tells about the Danish invasion during the reigns of Alfred and his son Edward until 924. The *Parker Chronicle* also includes a copy of the *Laws of Alfred* and the *Laws of Ine* which were originally bound in after the entry for 924. Moreover, it includes four poems in traditional alliterative verse (Swanton 1996: xxi). The manuscript becomes independent of the other recessions after the entry for 975 and the last vernacular entry is for 1070, describing the institution of Lanfranc as archbishop of Canterbury. "With the exception of a relatively long entry for 1001 (describing Danish raids in Hampshire and Devon), the later entries are typically scant, single-line, single-event, formulaic entries, but valuable because independent of other recensions" (Swanton 1996: xxii).[135]

4.1.2 The Peterborough manuscript

The other manuscript which will be studied in this thesis is the *Peterborough Chronicle,* which was once owned by William Laud, Chancellor of Oxford University and archbishop of Canterbury 1633-1654. Therefore it is also known as the Laud Manuscript. The Chronicle is currently held at the Bodleian Library, MS Laud 636.[136] Generally, the *Peterborough Chronicle* was maintained longest, its earliest entries refer to 60BC down to 1154 (Middle English times) (Irvine 2004: xiii).

Down to the close of 892, the *Peterborough Chronicle* embodies the contents of the *Parker Chronicle* or, to be precise, the 'common stock' of the chronicle, known as

[134] Here it makes sense to speak of a kind of *Schriftsprache* rather than a standard.
[135] For further details on different scribes and passages in the *Parker Chronicle* see Earle (1865); Plummer (1952) and Bately (1986).
[136] http://www.bodley.ox.ac.uk/dept/scwmss/wmss/medieval/mss/misc/12th.htm

"the first chronicle", which is not only incorporated in the *Parker* (A) but also in manuscripts (B) and (C). An exception is the Peterborough's Preface where it follows the Worchester manuscript (D).[137] Additionally, various charters and local details about the Peterborough Abbey were included that are not to be found in other versions.[138] Especially after 1023, *the Peterborough Chronicle* becomes more original and fewer northern events are described (Swanton 1996: xxvi; Irvine 2004: xxxvi; cf. Plummer 1952).[139]

Generally, the manuscript can be split up into three main parts: a) the entries up to 1121, and the so-called 'two continuations'; b) 1121-1131 and c) 1131-1154. The entries up to 1121 are all "in a homogeneous hand and ink" (Clark 1958: xi) and thus are considered to be written by one scribe continuously.

At first glance, it may seem confusing that authorship in the *Peterborough Chronicle* has been ascribed to one hand down to the entry for 1121 (Earle 1865: xliii). This relates to the fact that there was a fire in 1116 at the Peterborough monastery and the original manuscript supposedly was destroyed. However, shortly after the fire an unknown manuscript was borrowed, possibly from a Kentish library, and was copied up to date, so that one finds a new chronicle with the year 1121.

> The E-text, all the evidence would suggest, is a copy of the Anglo-Saxon Chronicle made at Peterborough in about 1121, perhaps as part of an effort to replenish library stocks after the disastrous fire of 1116, and continued thereafter up to 1154. (Irvine 2004: xiii)

In other words, one scribe worked on the manuscript more or less continuously; first he brought the manuscript up to date and then he continued over the following ten years to add new material (Irving 2004: xix; cf. Clark 1958: xi).

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[137] Although the manuscript has some elements in common with the northern version of the Worchester manuscript it makes no use of the Mercian Register and omits the Brunanburh panegyric.

[138] Also the Chronicle contains thirty-eight Latin entries, which occur sporadically in E through the manuscript up to 1062. Those entries mostly deal with universal and English ecclesiastical history and are very uniform in style (cf. Irvine 2004: lxxxviii).

[139] Historically, the Chronicle is one of the few first-hand accounts from the period 1070 to 1154 in England (Irvine 2004) and "it gives 75 years' history beyond any of the others" (Earle 1865: xliii). After 1122 the Chronicle becomes unique. Clark (1958) also elaborates on the importance of the later part of the chronicle (from 1070 onwards).

Whereas the so called first continuation[140] is still written in late Old English, the second continuation[141] shows mixed forms, leaves the conservative archival language behind and switches to an early form of Middle English. For this thesis, however, only the part of the chronicle down to 1121 will be analyzed, as the continuations are not available in the YCOE corpus but the PPCME2, which is tagged slightly differently (especially when it comes to nominal determination) and thus output structures often cannot be compared.

The two texts have been chosen as examples of Old English prose because they are secular prose, no translations and are available in a tagged format. On top of that, another idea was relevant. The idea was to split up the texts into diachronic periods in order to investigate the emergence of the article as a diachronic process throughout the centuries. Being annuals written by various scribes throughout the years, they may enable the researcher to gain insight into different linguistic stages.

With respect to this idea, one objection comes to mind immediately. The *Peterborough Chronicle* was rewritten in 1121 by one scribe and as a consequence it might have been the case that this one particular scribe changed 'older' grammatical structures to conform to the linguistic norms of 1121 while copying. Therefore one could argue that if the *Peterborough Chronicle* mirrors some language stage it is the one of 1121 and no other. The essential question is if this text, then, can be split up into meaningful diachronic subperiods at all? This only seems reasonable if we assume that the scribe was faithful to the original and did not hypercorrect. To answer this question is difficult. The text shows some peculiarities of the scribe and sometimes slightly differs from that of other manuscripts (cf. Irvine 2004: cviii-clxv). Still it is difficult to distinguish reliably those differences that have arisen as a result of "variations in the

[140] The so called first continuation (1122-1131) is lively and detailed and has unique records of events in the area as well as insights into the life of ordinary people. It records the Conquest as well as ecclesiastical scandals. After 1131 the manuscript was laid aside. The second continuation (1132-1154), was written as a composite account about 25 years later by a second scribe in a completely different hand who brought things up to date at around 1155. All in all, the two continuations stand on their own in terms of information, style and language (Clark 1958: xii, cf. Ker 1957 and Irvine 2004).

[141] Next to several other developments towards Middle English, Allen (1995: 170-176), shows that the early material, the first continuation and the second continuation differ in their case-marking systems, and show a progressive deterioration from the West-Saxon standard. Also, Earl (1865: xliii) points out that "the variety of styles renders it one of the chief luminaries of the English language before the Conquest".

exemplars in the course of historical transmission" from those which "may have been introduced by the scribe" (Irvine 2004: clxff.).

Several researchers attest a faithful copying process. For example, Irvine does not identify any peculiarities for the demonstratives and points out that the scribe "seems to have copied fairly faithfully the morphology of the exemplar or exemplars used […] since morphological practices vary according to the different sections" (Irvine 2004: cxxxix; cf. Allen 1995: 170). Clark also remarks on the "general conservatism" of the "inscrutably conventional copied annals" (Clark 1958: xl) and states that

> this part [up to 1121] of the text represents the immediate original fairly faithfully; for the regular differences, affecting all aspects of language, which are maintained between the copied text and the Peterborough Interpolations in the same hand imply that this scribe was a faithful copyist (Clark 1958: xxxv).

Trusting such statements, I believe that to split up the text is feasible.

As mentioned in Clark's statement above, The *Peterborough Chronicle* also incorporates about 20 interpolations. Those interpolations, which vary considerably in length, were apparently incorporated by the first scribe when copying the annals up to 1121. These passages show very late characteristics of their language (Irving 2004: xc) so that it has been suggested to exclude the interpolations from the text when analyzing it, because the later passages show different language use and might level the output.

Why I decided not to exclude the interpolations when analyzing the manuscript will be explained in section 5.1.3. It will also be interesting to check if findings in the *Parker Chronicle* are supported by findings in the *Peterborough Chronicle* or if observed tendencies must be regarded as textual artifacts.

4.2 Early Old English Prose

Next to the *Anglo-Saxon Chronicles* other Old English manuscripts were investigated. To extend the database more prose texts[142] were studied, especially those which are available from the earliest period (o.2). The manuscripts (listed in Table 14) were

[142] See Appendix 1 for a detail list on the chosen manuscripts.

particularly chosen because most of them – except the law texts – have a high word count (> 40.000w. – ~100.000w.) and thus provide large samples. Moreover, the idea was to study texts from various genres. In terms of their genre, the chosen manuscripts are historical annals, law texts, religious homilies and philosophical texts and thus vary in their prose styles (Bately 1991: 81). This is one of the reasons why these texts should not be treated as one corpus sample, but should rather be interpreted as separate texts being investigated next to each other.[143]

Also note that some of the texts are Latin translations, which are very different from original and for an investigation like this the latter should be preferred. Unfortunately, most of the manuscripts which have survived from the earliest stage (o.2) are translations from a Latin source text (except the Laws). Nevertheless, as will be shown, some translations are more literal than others. Very often the term 'translation' does not seem to fit the final product, as often passages are changed to such an extent, that they do not really deserve the term anymore, and "[e]ven translations which closely follow their Latin originals often combine fidelity to their source with a sensitivity to the idioms of Old English" (Bately 1991: 82).

Additionally, most of the o.2 texts are texts which were translated by King Alfred, king of Wessex (877-899), to revive education in England. Although we cannot be sure that Alfred translated all of them himself, a certain Alfredian style can be identified.[144] This style is very different from the elaborate style of later writers like e.g. Ælfric, a scholar with classical education, fluent in Latin and English (Wardale 1935: 266). This means that the results in the individual texts do not tell us much about the Old English which was spoken on the streets, but about a very specific register used by one person (or a team of translators).

[143] Additionally, their regional and dialectal differences should prevent us from interpreting the texts as one sample.

[144] Wardale points out that for Alfred, a statesman who was only self educated to some extent, reading Latin must have been difficult. That's why Alfred himself in the preface to *Pastoral Care* points out that he "translated the books as he understood them and could most intelligibly render them, which seems to suggest a certain amount of difficulty with the meaning of the Latin and in finding fitting English in which to convey it" (Wardale 1939: 238).

4.2.1 Alfred's rendering of Boethius's *De consolatione Philosophiae*

It would go far beyond the scope of this thesis to present as much information on every individual text as was presented on the Chronicles. Therefore, only the most important background information about the texts shall be provided.

One of the texts chosen is King Alfred's translation of Boethius's *De consolatione Philosophiae* ('On the consolation of Philosophy'), which was one of the most widely read and influential books of the Middle Ages. Boethius was a patrician Roman consul and Christian philosopher (although his philosophy is essentially pagan), who wrote the *consolatione* in prison.[145] It purports a dialogue between himself and a figure named Philosophia ('Lady Philosophy') who visits him in his cell. They discuss injustices of fortune and the divine influence on existence. The work tries to preserve classical philosophical knowledge. Originally written in Latin, the work was translated many times including translations by Chaucer and Queen Elisabeth (Wardale 1935: 252). Also Alfred had this text translated into West Saxon, and he demanded some severe changes, eliminating autobiographical references to Boethius and presenting the dialogue as one between the inquirer's mind and a male personification of Wisdom, rather than Philosophia. He also added an introduction to the translation accounting for the historical background of Boethius's fate. Generally he gave it a stronger Christian character (Marsden 2004: 37). Wardale states that "[t]his well-known work Alfred has treated with remarkable independence, even for those days" (Wardale 1935: 252), and Bately mentions that

> [a]t some times it seems as though he is using his Latin texts as no more than a spring-board for his own considered responses to their contents and his personal interests (Bately 1991: 77).

The Old English *Boethius* has been preserved in three MSS. The most complete is kept in the *Bodleian Library*, Oxford (Mitchell & Robinson 2001: 226; cf. Sedgefield 1899; Whitlock 1966).

[145] Boethius was imprisoned and executed by Theoderic the Great, who suspected him of conspiring with the Byzantine Empire (Mitchell & Robinson 2001: 226).

4.2.2 Alfred's translation of Gregory's *Cura pastoralis*

King Alfred also distributed a translation of pope Gregory the Great's *Cura pastoralis*, a handbook for priests, to churches throughout his kingdom. The English version of the handbook is commonly known as *Pastoral Care* and deals with the responsibilities of the clergy. In the case of *Pastoral Care*, relatively minor changes within the paragraph and on the syntactic level were made (Bately 1991: 75). Alfred's translation is also kept at the *Bodleian Library* and is the oldest known book written in English. With it Alfred started his series of translations (Wardale 1935: 242f.; Marsden 2004: 30; cf. Sweet 1871; Ker 1957).

4.2.3 Bede's *Historia ecclesiastia gentis Anglorum*

Bede's *Historia ecclesiastia gentis Anglorum* ('The ecclesiastical history of the English people') is a record of the ecclesiastical and political history of the nation of 'the English', which is firmly set in the context of Christian history. Bede, also referred to as the Venerable Bede, was a monk at the Northumbrian monastery of Saint Peter. Bede's writing was immense; the *Historia ecclesiastica gentis Anglorum* is said to be his greatest achievement and gained him the title "The Father of English History". In five books it tells the story of the isles from Julius Caesar's invasion in 60 BC to the year in which Bede finished the document: 731 (Colgrave & Mynors 1969; Ray 2001). The main focus of the text is on the conflict between Roman and Celtic Christianity. Bede also wrote a preface for the work and dedicates it to Ceolwulf, king of Mercia.

The first twenty-one chapters, which cover the period before the mission of St. Augustine, are compiled from earlier writers such as Orosius and Gildas. As many other texts from that period, the text is less objective than modern historical writings, being a mixture of fact, legend and literature (Marsden 2004: 43). It is very likely that King Alfred commissioned the translation from Latin,[146] which again supported the increasing importance of the vernacular. For the first time people could read about the history of Britain in their own language (Marsden 2004: 43; cf. Wardale 1935: 239). Also the *Anglo-Saxon Chronicle*, which was composed at that time, draws heavily on

[146] Alfred's direct involvement in the translation has not been proved (Marsden 2004: 69).

the *Historia* (cf. Higham 2006). The translation (showing West-Saxon and Anglian features) tends to stick closely to the original; a fact which sometimes leads to awkward results. Alfred had some passages which suited him politically translated very closely, but he cut down and summarized others only briefly (Wardale 1935: 248). The Old English translation is preserved in four main manuscripts and some fragments (Marsden 2004: 70). The most authoritative manuscript (version 0; Hatton 43 (4106)) is considered to be the earliest and is again to be found in the *Bodeleian Library*, Oxford (cf. Colgrave & Mynors 1969; Harrison 1976; Hunter Blair 1990; Ward 1990; Higham 2006; Wright 2008).

4.2.4 Orosius's *Historiae adversum paganos*

Orosius, a Spanish priest, was an early 5th century Christian historian and is best known for his *Historiae adversum paganos,* where it is suggested that the world has improved since the introduction of Christianity. He wrote the text as a response to the belief that the Roman Empire declined after the sack of Rome by Alaric the Goth in 410 as a result of its adoption of Christianity. "Orosius made his book a survey of the earlier history of the world with its sufferings from war, earthquakes, pestilences and fire, but especially from war" (Wardale 1935: 244). The text covers the period from the fall down to about 417. The text was translated very freely and abbreviated into West Saxon to have a clear message for a "ninth-century Christian England troubled by the attacks of pagan Vikings" (Bately 1991: 77). For example, some parts on geography were added. Again, the translation was potentially commissioned by Alfred (Wardale 1935: 244ff.; cf. Sweet 1883; Bately 1980 Wardale 1935).

4.2.5 Laws

Legal documents such as wills and laws were the first documents to be written in the English vernacular. Thus the following texts have also been chosen for investigation: the *Laws of Alfred*, *Alfred's Introduction to the Laws* and the *Laws of Ine*. It appears that "law-making had […] become a public display of royal power and prerogative, and it was an opportunity to set out ideological aspirations" (Marsden 2004: 45). The law-

makers' priority lay in integrating the needs of the new church within the established legal system. Additionally, another object of the Anglo-Saxon law was to "formulize and contain the more destructive aspect of the Germanic feud system, whose structure of reciprocal loyalties demanded the exacting of revenge for wrongs done to kin or to associates" (Marsden 2004: 45; cf. Liberman 1960; Hough 2001).

In terms of language, the laws are of a very elementary character because they generally were the first texts where prose began to take the place of verse (Wardale 1935: 238): "The prose used in the lawcodes, especially the earlier ones, is concise and unadorned and reflects their oral and formulaic origins in Germanic law-making" (Marsden 2004: 46).

4.2.6 *Ælfric's Life of Saints* and *Catholic Homilies*

Next to the *Peterborough Chronicle* and *Parker Chronicle,* which have been tagged as texts from middle Old English, I also added the first part of *Ælfric's Catholic Homilies* and his *Life of Saints* to extend the sample of o.3 texts. Ælfric was an English abbot and a prolific writer. He gained reputation as a scholar at Winchester and novice master at the abbey of Cerne, Doresetshire, where he wrote his two famous sets of his English homilies, which were dedicated to Sigeric, Archbishop of Canterbury. The first series of forty homilies is devoted to a plain description of the major events of the Christian year (cf. Bately 1991: 79).[147] As a third major work, he wrote the *Lives of Saints*. Interestingly, some passages in the *Lives of Saints* are written in a kind of rhythmical, alliterative prose (cf. Skeat 1966; Hurt 1972; Magennis & Swan 2009).

I did not add other texts from the o.3 period because the main period of interest turned out to be the earliest available writings of vernacular prose, and those are tagged as o.2.

[147] The second series deals with church doctrine and history.

It is not until the second half of the ninth century that we have a clear and unambiguous evidence of the use of English on any large scale for the writing of prose. (Bately 1991: 71)

5. Nominal determination in Old English prose

This chapter constitutes the empirical analysis of this thesis. In it several studies will shed new light on nominal determination and definite NP patterns in Old English. The role of the demonstrative *se* will be analyzed on a quantitative but also qualitative basis. The main aim of this chapter is to answer the question when *se* took up article status in Old English by analyzing various Old English prose texts. In order to answer this question, I will start with a thorough analysis of the *Peterborough Chronicle* and then extend my analysis to various other Old English texts. Especially the criteria for articlehood, which have been set up in section 2.3.2, will be tested. It remains to be seen if it is possible at all to pin down the exact moment when the article emerged, or if article development is rather a gradual process, in which the form *se*, when taking up its new function as the definite article, slowly but steadily changes its semantic and syntactic behavior. My main conclusion will be that a determination slot already existed in the early Old English period (o.2) which paved the way for the grammaticalization of the demonstrative.

As already mentioned, especially regarding the use of the demonstrative, Old English NP structures are formally different from the structures one finds today. It is worthwhile to investigate those different structures and their frequencies by looking at a large set of corpus data. To the best of my knowledge, not many existing studies on the Old English NP test their assumptions against a large text sample using a computer accessible corpus. Therefore, this quantitative analysis should help our understanding of Old English NP structure.

In general, the researcher should never take handbook statements for granted. Very often, reported instances of certain patterns allow for an alternative interpretation or a different kind of translation than the one that is sometimes given in the handbooks. In addition, the listed examples are often presented out of context, so we cannot analyze

their contextual embedding or their discourse-pragmatic function on the basis of these studies. Another important factor, which is often missing in the handbooks, is a discussion of frequency. Valid claims on how Old English grammar should be modeled need to be established on the basis of the frequency of certain patterns. The existence of a small number of interesting 'exceptional' patterns does not necessarily indicate that they are representative of the grammatical system in use. Those instances might be typos, frozen expressions, highly marked stylistic (poetic) devices or simply archaic forms which represent an older language stage. This relates to the crucial question in quantitative analysis of how many instances of a certain pattern a linguist needs to find in order to legitimately assign productive status to such a pattern.

As a first attempt to analyze the usage of the demonstrative *se* and to trace the birth and development of the definite article, the *Peterborough Chronicle* and the *Parker Chronicle* were investigated. Several search queries were run to determine the frequency of some determination patterns (position, occurrence and non-occurrence of determinatives in the prehead). In section 5.1, those patterns will be discussed (5.1.1). Additionally, in section 5.1, I investigate whether within a single text (*Peterborough Chronicle*), a change in demonstrative usage can be observed diachronically. This was done by splitting up the text into subperiods (5.1.2).

In section 5.2, I will continue to discuss the status of the form *se* and establish if and to what extent the criteria for articlehood, which have been set up in section 2.3.2, are met by *se*. After this individual case study on the *Peterborough Chronicle*, some of the searches will be extended to other Old English prose texts for reasons which will be discussed later (section 5.3). Information on the annotation of the YCOE corpus, the various features of the CorpusSearch program and the detailed structure of the query files can be found in Appendix I and II. All searches run can be found on the CD-Rom which accompanies this thesis.

5.1 Nominal determination in the *Anglo-Saxon Chronicles*

As the demonstrative *se* is part of the prehead, I mainly analyzed the OE prehead. The elements which are mostly used to mark definite reference in Old English are demonstratives, possessives but also genitive constructions. When they function as determinatives all those elements combine with common [CN] and proper nouns [PN]. Thus, in the course of my research, common and proper nouns and how they combine with the above mentioned determinatives were examined. In the following section, however, mostly the results for the common noun combinations will be presented, since the story of the definite article appears to be, above all other things, a story about its relationship with the common noun.

Table 15 lists some of the definite NP patterns[148] which were investigated in the *Peterborough* and *Parker Chronicle*. The middle column lists the patterns searched for and gives the assigned search query number (e.g. S56) for easier reference in the Appendix; next, the number of hits[149] in the two documents is shown. Note that for all of the searches below the query files were written in such a way that the particular structure searched for can sometimes be preceded by several further elements or followed by other elements within the NP. The focus always lies on the noun and the simple question is how many times certain elements hold the position immediately preceding it.

Additionally, the numbers in table 15 include forms of *se* (simple demonstrative) and *þes* (proximal compound demonstrative) in all case combinations. Both forms are represented here because at this stage of our investigation the number of all demonstratives (the complete set) will be compared to the number of the other determinatives (i.e. possessive pronouns and genitive phrases). Note that later on forms of *þes* will be excluded from the calculations when necessary. This is essential as it is unlikely that the definite article derived from the compound demonstrative *þes*. As will

[148] Several other searches were conducted as well but will only be discussed later on.
[149] As the YCOE corpus is not tagged for number (no singular vs. plural distinction), the hits always include singular as well as plural nouns.

be shown, forms of *þes* are much rarer than forms of *se.* Nevertheless, the development of the compound demonstrative will be investigated in a separate section, because any potential increase in the usage of *þes* may be used as indirect evidence for article emergence. This will be elaborated on in section 5.1.2.2 (cf. Mustanoja 1960: 173; Mitchell 1985: 136; Lass 1992: 114).

			PB	**PA**
	Pattern	**Search query**	**Hits**	**Hits**
a)	NPs total (incl.Pro,PN;CN)	S56	15972	6208
b)	NPs with CN	S56a	6043	2140
c)	NPs with PN	S56b	2865	1756
d)	Dem + CN	S11	2026	562
e)	Poss + CN	S15	531	135
f)	Genitive Phrase + CN	S53	534	262
g)	Dem + Adjective + CN	S12	262	119
h)	Dem + PN	S10	79	40
i)	CN + Adjective (postpos.)	S52	8	2
j)	Dem + Poss + Adj + CN	S45	1	0
k)	Poss + Dem + Adj + CN	S46	2	0
l)	Poss + Dem + CN	S38	0	0
m)	Dem + Poss + CN	S32	0	0
n)	Adj + Dem + CN	S43	1	1

Table 15: Definite NP patterns in the *Peterborough* and *Parker Chronicle*

At first, I searched for definite NP patterns which are still well established in Modern English (d-g). Note that these basic patterns are all rather frequent in Old English as well. However, from h) onwards, I was searching for unusual patterns which show that in Old English the system of nominal determination differs from the modern one. Some of these patterns would be considered ungrammatical in Present Day English.

5.1.1 Basic determination patterns

Generally, the Old English part of the *Peterborough Chronicle* consists of 40,641 words. The text includes 15972 noun phrases of which 6043 consists of a Common

Noun compared to 2865 which consist of a Proper Noun. The *Parker Chronicle* (14.583 words) includes 6208 noun phrases with 2140 including a common noun.

In the *Peterborough Chronicle* (henceforth also PB) the combinatorial pattern 'Demonstrative + Common Noun' (Dem+CN) occurs 2026 times. This means that 33,5% of all NPs including a CN have this structure:

(31) þa noldon hi faron ofer **þone ford**.
then *would not* *they* *cross* *over **the/that ford**.*
(cochronE,ChronE_[Plummer]:0.30.27) S11

This pattern is much more frequent than 'Demonstrative + Proper Noun' (Dem+CN) with only 79 hits (ex.32); this comprises only 2,7% of all NPs which include PNs. Still, the construction is a productive pattern in Old English. The *Parker Chronicle* (henceforth also PA) shows very similar results with 40 Dem+PN hits (2,2% of 1756 NP including a PN).

(32) **se Cynewulf** rixade xxxi wintra.
The/that Cynewulf *ruled* *thirty-one winters.*
(cochronE,ChronE_[Plummer]:755.39.775) S10

To use a demonstrative with a proper noun is extremely rare in ModE – at least in the singular. As this pattern sheds additional light on the semantics of *se* and its functional role, it will be discussed in more detail in section 5.1.2.7.

5.1.1.1 *se* as the most frequent determinative

Also, the frequency of Dem+CN was compared to the frequency Poss+CN or GenP+CN. Generally, structures in which a demonstrative immediately precedes a common noun are about four times higher than for example Poss+CN (531 hits, ex.33) or GenP+CN (ex. 534 hits, ex. 34).

(33) heom to þæs cynges hearme & swicdome **heora castelas** ageafon.
to them *to the/that king's harm and betrayal* ***their castles*** *[they] gave up*
(cochronE,ChronE_[Plummer]:1118.6.3594) S15

(34) heom to **þæs cynges hearme & swicdome** heora castelas ageafon.
*to them to **the/that king's harm and betrayal** their castles [they] gave up*
(cochronE,ChronE_[Plummer]:1118.6.3594) S53

Poss+CN combinations and GenP+CN each add up to about 8,8 % of all noun phrases including a common noun in contrast to 33,5% Dem+CN.

The situation is very similar in the *Parker Chronicle*, where Dem+CN occurs 562 times, which amounts to 26,2 % of all NPs including a common noun (2140 hits). Poss+CN (135 hits) adds up to 6,3 % and GenP+CN (262 hits) adds up to 12,2 %. This shows that the demonstrative *se* is the most frequently used determinative to mark definite reference overtly. In other words, the concept of possession is less often expressed than the concept of deixis (e.g. *my house* vs. *this/that house*) in the prehead. Of course, we do not know if deixis is still expressed in all those cases or if the semantic notion has bleached and the demonstrative is exclusively used as a marker of definite reference. Still, the fact that Dem+CN is already a highly frequent pattern in the grammar will be essential for the line of reasoning to be outlined in chapter 6.

5.1.1.2 *se* + adjectival modification

Another pattern which was analyzed is how *se* combines with modifying adjectives. This combination is also extensively discussed in the literature. The breakdown of the weak/strong distinction in the adjective paradigm has frequently been made responsible for article emergence (section 3.1.4). In the prehead[150], the adjective is said to be "declined weak if it is preceded by a demonstrative (*se, þes*) or by a possessive (e.g. *min, his*) but strong without one of these elements" (Campbell 1959: 261; Mitchell 1985: 51, §102). In other words, 'Demonstrative + Weak Adjective + Common Noun'

[150] With adjectives, the handbooks also differentiate between prehead and posthead modification. Old English adjectives could either occur prenominally or postnominally (Quirk and Wrenn 1958:88-89; Lightfoot 1979: 168ff; Mitchell 1985: §132; §159-17461ff.). Regarding postposition, we find 8 valid examples where the adjective is postponed to the head noun in the PB and 2 in the PA. In the PB, in 7 out of 8 cases the slot before the head noun is filled with another element. E.g. on *þe ea hi tugon up heora scipa oð ðone weald iiii mila fram **þam muþan utanweardum** (They pulled their ships up to the forest 4 miles from **the external mouth**)* (cochronE,ChronE_[Plummer]:892.8.1324) S52, or *Ða genamon þa Walas. & adrifon sumre ea ford ealne mid **scearpum pilum greatum** innan þam wetere.* (*Then the Britons went and staked all the ford of a certain river with **great sharp stakes** in the water)* (cochronE,ChronE_[Plummer]:0.28.25) S52.

is supposed to mark definite NPs, 'Strong Adjective + Common Noun' indefinite NPs.[151]

Mitchell, for example, doubts the existence of the alternative 'Demonstrative + Strong Adjective + Noun' in Old English prose (Mitchell §118; 1985: 58). Still, some exceptions exist. For example, the Old English adjective *oðer* is always declined strong even after demonstratives (Campbell 1959: 261). The comparative and the superlative in *–ma* are only declined weak. Also weak forms of *eall, monig, genog* etc. are very rare. *Fela, gewunga, bewunga* are indeclineable. Additionally, one exception is the vocative, where the adjective is declined weak in both prose and poetry when used without a demonstrative or possessive (Mitchell 1985: 115-117).

In this section I would like to have a closer look at this claimed regularity in the *Peterborough Chronicle* and check how the demonstrative combines with the adjective. Is it really the case that the weak adjective is always used with the demonstrative and the strong one without it? If not, any explanation which links article emergence to this regularity must be dismissed. Also, the frequency of potential adjectival combinations should be checked because, as I argued in section 3, only a high frequency of '*se* + Weak Adjective + Noun' would make it a salient pattern which is strong enough to influence the system of nominal determination effectively. After all, the obligatory use of *se* in combination with weak adjectives has to extend to all those definite NPs where no adjective is used.

In the *Peterborough Chronicle* 262 hits for Dem+Adj+CN (ex.35 & 36), and 20 hits for Dem+Adj+PN (ex.37) can be found.

(35) Her **se eadiga apostol** (NOM-SG-masc.) Petrus
Here [at this date] ***the/this blessed apostle*** *Peter*

geset biscopsetl on Antiochia ceastre.
occupied [the] bishop's seat *in Antioch city.*
(cochronE,ChronE_[Plummer]:35.1.46) S12

(36) furðon on **þa wildan fennas** (ACC-PL-masc.) hi ferdon.
even *into* ***the/those wild marshes*** *they travelled*
(cochronE,ChronE_[Plummer]:1010.11.1779) S12

[151] "When a genitive of a noun or a genitive group precedes the combination, adjective + noun' it too is followed by the weak form of the adjective" (Mitchell 1985: §113).

(37) & **se ylca Raulf** (NOM-SG-masc.) wæs Bryttisc on his moderhealfe.
*& **the/this same Ralph*** *was British on his mother's side.*
(cochronE,ChronE_[Plummer]:1075.1.2693) S13

In ex.35, 36 and 37 it is indeed the case that in those definite noun phrases the masculine sg. nominative *–a* ending and the masculine pl. accusative *–an* ending belong to the weak adjective paradigm. Compare the following table:

	Declension of strong a.			Declension of weak adjectives		
	masc	neut	fem	masc	neut	fem
nom.sg	-	-	-/-u	-a	-e	-e
acc.sg	-ne	-	-e	-an-	-e	-an
gen.sg	-es	-es	-re	-an	-an	-an
dat.sg	-um	-um	-re	-an	-an	-an
nom.pl	-e	-/-u	-a/-e	-an	-an	-an
acc.pl	-e	-/-u	-a/-e	-an	-an	-an
gen.pl	-ra	-ra	-ra	-ra/-ena	-ra/-ena	-ra/-ena
dat.pl	-um	-um	-um	-um	-um	-um

Table 16: Strong and weak adjectives in Old English (Fischer 2000: 159)

Out of 262 instances (excluding special adjectives like *oðer*, etc.), only 13 examples can be listed where we unexpectedly find a strong adjective ending in the combination. This amounts to 5% of all cases. Some of these are listed here:

(38) on oðrum wes Basecg & Halfdene
In another [one] *were* *Bagsecg and Halfdan,*

ða hæðene ciningas (NOM-PL-masc.).
the/those heathen kings.
(cochronE,ChronE_[Plummer]:871.11.1134) S12

(39) þa amansumede he ealle þa men þa **þæt yfel dæde** (ACC-SG-fem.)
then excommunicated *he* *all the men* *who **the/that evil deed***

hæfden don.
had done. (cochronE,ChronE_[Plummer]:1070.61.2631) S12

(40) oð þæt **þa gode mæn** (NOM-PL-masc.) þe þis land bewiston
until ***the/those good men*** *who looked after this land*

him fyrde ongean sændon. & hine gecyrdon.
sent an army against him *and turned him back.*
(cochronE,ChronE_[Plummer]:1091.25.3090) S12

(41) & þa ofer **þone midne sumor** (ACC-SG-masc.) com
And then *after* ***the/this mid(dle) summer****,* *came*

þa se Denisca flota to Sandwic.
then the Danish fleet *to Sandwich.*
(cochronE,ChronE_[Plummer]:1006.5.1678) S12

(42) Fand þa hidde in **þa ealde wealle** (ACC-PL-masc.) writes
found then *hidden* *in* ***the/these old walls*** *writings*

þet Headda abbot heafde ær gewriton,
that Abbot Headda *had earlier written*
(cochronE-INTERPOLATION,ChronE_[Plummer]:963.21.1408) S12

(43) & forbearnde þa burh Maðante & ealle **þa halige mynstres** (ACC-PL-neut.)
And burned down *the city Mante* *and all* ***the holy ministers***

þe wæron innon þære burh.
which were *inside this town.*
(cochronE,ChronE_[Plummer]:1086.41.2869) S12

It can be argued, however, that one has to dismiss at least some of those cases as positive evidence. Most of the strong adjective endings in combination with the demonstrative should be regarded as scribal error, or phonetic or analogical confusion, because for many of the examples (e.g. ex.38 & 40), a parallel alternative with a weak adjectival ending can be found in the same manuscript (ex. 44 & 45):

(44) Eac wearð on Ispanie þæt **þa hæðenan men** (NOM-PL-masc.)
It happened in Spain *that* ***the/these heathen men***

foran & hergodan uppon þam Cristenan mannan…
went and raided *against the Christian men.…*
(cochronE,ChronE_[Plummer]:1086.149.2952) S12

(45) ðas þing we habbað be him gewritene. ægðer ge gode ge yfele.
these things we have about him written, both the good and the evil,

þæt **þa godan men** (NOM-PL-masc.) niman æfter þeora godnesse.
*that **the/these good men*** *perform after the goodness*

& forleon mid ealle yfelnesse.
and let go all the evil (cochronE,ChronE_[Plummer]:1086.139.2946) S12

Also, in *þa ealde wealle* (ex.42), it was probably the case that the scribe used an *–e* ending to agree with the noun declension *–e*. Moreover, it can be observed that many examples come from later entries when case forms were already declining. If we dismiss all the late examples (i.e. those after the entry for the year 1000), only 2 examples remain. If we do not dismiss any of the 13 examples, it still can be confirmed that the majority of the 262 cases follows the 'rule' of 'Demonstrative + Weak Adjective +Common Noun'.

In a second step, I examined the pattern 'Weak Adjective + Common Noun'. Mitchell claims that although the pattern 'Weak Adjective + Common Noun' occurs more often in Old English prose, most of the cases must be considered exceptional as well. He states that with most of the cases in the dative, it again seems reasonable to assume a potential *-um/-an* confusion. In many cases in which we have *-an* instead of *-um* in the dative singular (masculine or neuter) or in the dative plural, it is likely that the speaker simply substituted the *-um* with *-an* due to analogical leveling (Mitchell 1985: 115-117).

To investigate the 'Weak Adjective + Common Noun' pattern, I searched for the combination Adj+CN in two-word NPs. Here, the NP is supposed to be indefinite and thus remains without a determinative (e.g. ex. 46). Out of 146 cases, one can find a strong adjective ending in 123 cases (e.g. ex. 46), but 23 hits show a weak ending as in ex. 47. This amounts to about 16%:

(46) Hy arerdon **unrihte tollas** (ACC-PL-masc.).
*They levied **unjust tolls**.*
(cochronE,ChronE_[Plummer]:1086.30.2861) S100

(47) & heo siððan wunodon on **rihtan gelefan** (DAT-SG-fem.)
*and they afterwards remained in **[the] true faith***

oððe Dioclitianus rice.
until Diocletian's rule.

(cochronE,ChronE_[Plummer]:167.2.78) S100

However, it can be observed that almost all of the 23 examples are dative cases where it seems likely that the *–um* was indeed substituted by *-an*. Additionally, many examples are expressions of time (ex. 49, 50 & 51), which often behave as frozen idiomatic expressions and may have preserved the old function of the weak adjective as a definite marker. Finally, example 53 is a vocative construction, which according to Mitchell often takes both forms.

(48) ðises geares sende se cyng toforan længtene his dohter
This year, sent the king before spring, his daugther

mid **mænigfealdan madman** (DAT-PL-masc.) ofer sæ.
*with **manifold treasures** overseas*

(cochronE,ChronE_[Plummer]:1110.5.3482) S100

(49) & to Pentecosten **forman siþe** (DAT-SG-masc.) his hired
*And at Pentecost for **[the] first time** his court*

on þam niwan Windlesoran heold.
in that new Windsor (he) held.

(cochronE,ChronE_[Plummer]:1110.1.3481) S100

(50) Her hine bestæl se here on midne winter
Here stole away the raiding army in mid winter

ofer **twelftan niht** (ACC-SG-fem.) to Cippanhamme.
*after **[the] Twelfth Night** to Chippenham.*

(cochronE,ChronE_[Plummer]:878.1.1206) S100

(51) & þy ilcan geare ær **middan wintra** (DAT-SG- masc.)
*And in the same year **before midwinter***

forðferde Carl Francna cyng.
passed away Carl, [the] Francs' king.

(cochronE,ChronE_[Plummer]:885.12.1275) S100

(52) & he is bebyrged on **ealdan mynstre** (DAT-SG-neut.) on Winceastre
*& he is buried In **[the] old monastry** in Winchester*

mid Cnute cynge his fæder.
with king Cnut, his father.

(cochronE,ChronE_[Plummer]:1041.1.2126) S100

(53) oc ic wile ðe gebidden **la leoue freond (**NOM-VOC-SG-masc.)
*but I wish to ask you, **Oh dear friend**,*

þæt hii wirce æuostlice on þere werce.
that they should work hastily on the work.

(cochronE-INTERPOLATION,ChronE_[Plummer]:656.14.400) S100

Interestingly, in almost all of the examples the context is a definite one (e.g. ex. 47, 49, 50, 52). What Mitchell often interprets as a simple dative confusion might sometimes occur for another reason. The weak adjective ending might have been used because the context of the NP was definite and not indefinite. This means that in those examples the weak adjective ending alone, without demonstrative or possessive, successfully indicates definiteness. So rather than the adjective being in the 'wrong' declension, one could argue that a form of *se* is missing here. This would then mirror the archaic use of the weak adjective, which in Proto-Germanic could signal definite reference on its own without the additional use of a demonstrative (cf. Heinrichs 1954). This lack of an overt determinative in noun phrases with definite reference is something that will be investigated in detail in section 5.1.2.5. The main point for now is that those adjective examples cannot be seen as clear counterexamples to the 'rule': 'strong ending in indefinite context'.

How is this result relevant to the research questions asked in this thesis? First of all, when analyzing the *Peterborough Chronicle*, Mitchell's statement can be confirmed that apart from some exceptions and potential dative confusion "the weak-strong distinction in the declension of adjectives is consistently observed in the prose" (Mitchell 1985: 141, 67). Second, the investigated examples help us to comment on the hypothesis about article emergence presented in section 3.1.4. There it was argued that the weak adjectival ending still had some definite marking capacity, but the additional determinative was necessary to disambiguate case and gender (see Strang's argument, p.

96). Disambiguating case and gender is seen as the reason why the demonstrative spread as an obligatory definiteness marker and thereby developed into the definite article.

I wonder, however, how sound this argument is, in a time when the whole inflectional system was collapsing. Admittedly, putting the demonstrative in use in a construction as a means to disambiguate could be interpreted as a counter-act to the inflectional breakdown. Such repair-mechanisms have been observed in other languages. In the case of Old English, however, where half of the system is full of case syncretism already, it is not likely that this was the only reason why the demonstrative became an obligatory default marker in all definite contexts. For example, the explanation does not help in all those cases where there is no adjective.

This relates to the question of the pattern's frequency. If one takes into consideration that the 'Demonstrative + Weak Adjective + Common Noun' pattern only occurs 262 times, the question is why this pattern combination – which occurs more rarely than many other structures in the prehead – should have such a strong influence on the general economy of the NP? Even if a speaker links weak adjective usage to the obligatory use of the demonstrative in definite contexts, s/he does not necessarily need to apply this 'rule' to all other instances where the NP occurs without such an adjective.

It may therefore be confirmed that the demonstrative is used obligatorily with weak adjectives to refer to a definite referent, but it is less clear if such a regularity has the power to exert that much influence on the system of nominal determination leading to obligatory definiteness marking in general.

So far, four basic determination patterns have been discussed: Dem+CN, Poss+CN, GenP+CN and, in the last subsection, Dem+Adj+CN. It was shown that Dem+CN is more frequent than the other patterns. All these results do not tell us anything about the historical development of *se* so far. However, one major goal of this thesis is to trace the development of *se* from a diachronic perspective. In order to do so, I decided to split up the Chronicles into subperiods and look at them individually to see if any changes in the demonstrative's usage can be detected. Splitting up the Chronicles into periods, after all, seems to be possible because the annals were written by various scribes and copied more or less faithfully throughout the years, which should make it possible to observe linguistic changes.

5.1.2 Diachronic development of *se*

To investigate the emergence of the article, the *Parker Chronicle* and the *Peterborough Chronicle* were split up into the following periods: 3 for the Parker text (AI, AII, AIII), which ends in 1070 and 4 for the Peterborough one (PIa-PIIb), because it extends over a longer period. [152]

source file	***Peterborough Chronicle* (*cochronE.o34.psd*)**			
subperiods	PIa.psd	PIb.psd	PIIa.psd	PIIb.psd
coverage	< 731	733-991	992-1070	1071-1121
NPs total	3035	3293	4532	5112
remarks	incl. interpolation 654,656, 675, 686	incl. interpolation 777, 851, 852, 870	new scribe; incl. interpolation 963, 1013,1041, 1052, 1066, 1069, 1070	1070 the Parker manuscript ends Incl. interpolation 1102, 1103, 1107, 1114, 1115, 1116
source file	***Parker Chronicle* (*cochronA.o23.psd*)**			
subperiod	AI.psd	AII.psd	AIII.psd	
coverage	< 731	733-891	892-1070	
NPs total	1866	2084	2258	
remarks	Mostly translations AI.psd can be compared with PIa.psd in terms of temporal coverage		new scribe	

Table 17: Diachronic subperiods of the *Peterborough* and the *Parker Chronicle*

When splitting up the text into the given periods, the basic idea was to provide a more or less balanced amount of NPs in each period.[153] Additionally, factors relating to the manuscript's composition played a role. In the *Parker Chronicle* only three periods were created because the amount of NPs is lower, so that three periods seemed more appropriate than four. Secondly, the manuscript ends with 1070 and this falls together with the end of the PIIa section in the *Peterborough Chronicle*. The Old English part of the *Peterborough Chronicle* ends with 1121 marking a natural boundary. Note that PIa.psd ends at the same entry as AI.psd. To use the entry for 733 to begin a new

[152] If searches were conducted on the various subperiods, the output was normalized accordingly.
[153] Dates represent the entries for the particular year.

section was inspired by Earle, who points out that in the Parker manuscript the entries down to 731 must be assigned to Alfred's reign and often are mere translations from Bede and others. He considers the section to be "a work of collection, translation and bookmaking" (Earle 1865: viii). AIII starts with the year 892 where we have a change in scribe (Bately 1986: xxi-xliii). Additionally, the entry for the year 991/992 (beginning of PIIa.psd) can also be interpreted as a textual boundary because at this point, according to Earle, who suspects a new scribe, "begins a series of comparatively unbroken continuity […] [that shows] traces of a literary motive which has not appeared in the earlier Chronicles" (1865: xlv).

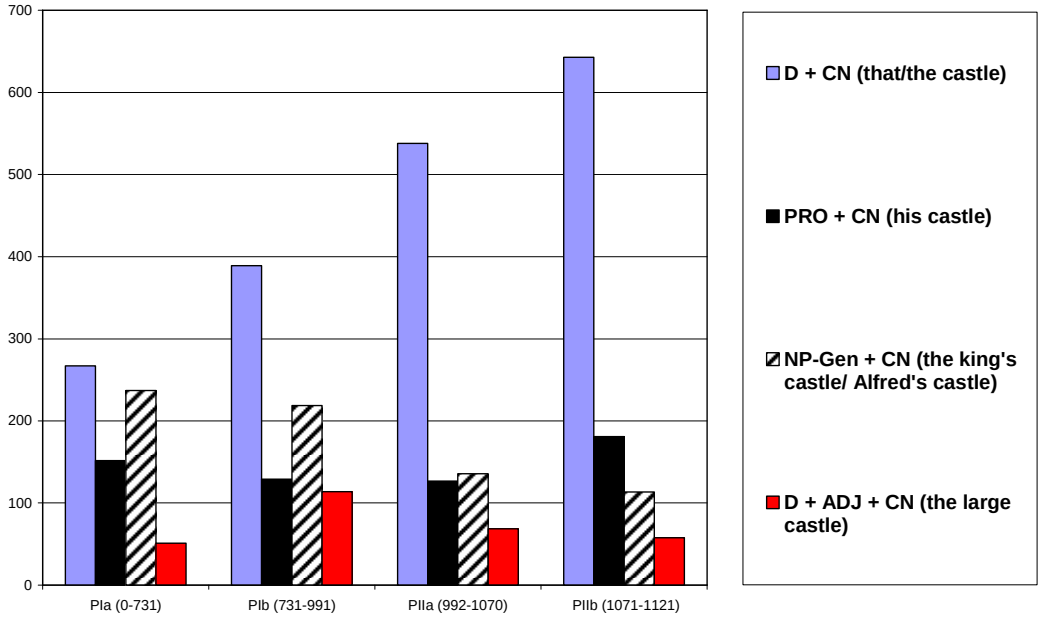
The *Peterborough Chronicle* also includes about 20 interpolations. It has been argued that they should be excluded because they might 'level' the output negatively. As keeping them does not alter the overall outcome of the study[154], they were not excluded.

5.1.2.1 Evidence for article emergence - the rise of the demonstrative

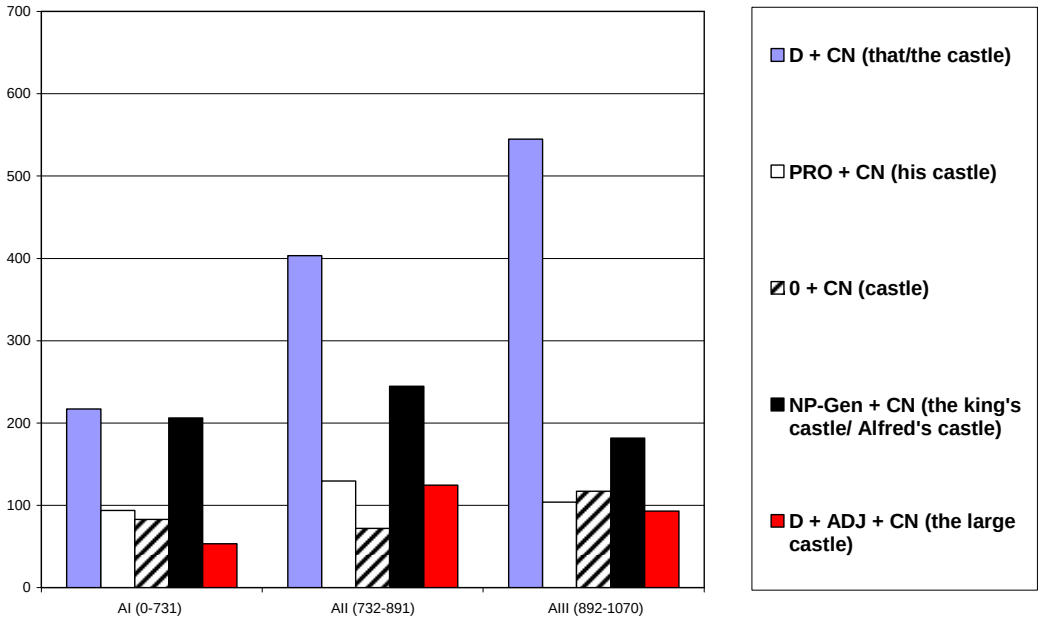
Graph 1a and 1b show the results of 4 searches that were run on the subperiods of the *Parker* and the *Peterborough Chronicle*. All of them show the diachronic development in the frequency of some definite NP patterns. All searches were for NPs with a common noun preceded by a certain determinative construction. Note that the output for the searches including demonstratives this time excludes all forms of the compound demonstrative *þes.* However, the development of the compound demonstrative will be discussed separately in this section.[155]

[154] Compare Graph 1a and 1b; here it can be seen that the number of demonstratives increases drastically although the interpolations have been included and potentially level the output. This means that if we exclude the interpolations, it is likely that the increase of demonstrative would even be higher. In other words, we can assume that if the interpolations had been left out, the diachronic development of certain patterns would be even more radical.

[155] Also, in all four searches all the cases were excluded in which the common noun appeared in the genitive. Genitive constructions often do not function as the head of a phrase but as a determinative themselves. The intention was to focus on those cases (NOM, DAT, ACC) which can function as the subject and object of a clause. (e.g. S49)



Graph 1a: Determination in CN-NPs in the *Peterborough Chronicle* (norm. in 5000 NPs)



Graph 1b: Determination in CN-NPs in the *Parker Chronicle* (norm. in 5000 NPs)

The first bar represents constructions with a demonstrative immediately preceding a common noun, e.g. ModE *that castle* (S49). The black bar represents the 'Pronoun + Common Noun' combination, e.g. *our castle* (S50). The hatched bar gives the hits for a possessive construction before the head noun, patterns like *king's castle*, *the king's*

castle, or *Alfred's castle* (S53). The last bar represents Dem+Adj+CN combinations like *the large castle (*S12). Note that other NP patterns exist, which could be subsumed under another bar (named 'rest') but this bar is not given.

The graphs show that the frequency of *se* before common nouns increases drastically, reaching a peak in late Old English. The graphs also show that Poss+CN as well as the combination with adjectives (Dem+Adj+CN) remain stable in frequency, whereas prehead genitive constructions even decrease in frequency (at least in the PB).

The findings in the *Parker* and *Peterborough Chronicle* support the claim that the demonstrative becomes more and more frequent from early Old English to early Middle English. This is often interpreted as direct evidence for the fact that the form *se* took up its new article function. As an article the semantically bleached anaphoric reference marker would be used much more often than as a deictic marker. The question is if this assumption is warranted without further analysis of individual examples and without testing clear criteria for articlehood. For example, it could be the case that the increased frequency of the Dem+CN construction results from the fact that the number of common nouns is generally higher in the later sections. Thus, the results presented so far are only a first step to fulfill our agenda. The following table should help to shed further light on the increase of Dem+CN:

	search	PIa.psd	norm.	PIb.psd	norm.	PIIa.psd	norm.	PIIb.psd	norm.
a	NPs total (S56)	3035	**5000**	3293	**5000**	4532	**5000**	5112	**5000**
b	NPs incl. CN (S56a)	982	**1618**	1251	**1899**	1783	**1967**	2077	**2031**
c	Dem + CN (S49) (token) incl. *þes*	199	**328**	269	**408**	557	**614**	763	**746**
d	Percentage of Dem+CN (S49) (token incl. *þes)* within NPs incl. CN		~20%		~21,5%		~31%		~36,5%
e	Dem+CN (S49)(token) excl. *þes*	162	**267**	256	**389**	488	**538**	657	**643**
f	occurrence of compound demonstrative *þes*	37	**61**	13	**19**	69	**76**	106	**104**
g	Dem + CN (type) incl. *þes*	92	**151**	92	**140**	141	**155**	167	**163**
	search	**AI.psd**	**norm.**	**AII.psd**	**norm.**	**AIII.psd**	**norm.**		
a	NPs total(S56)	1866	**5000**	2084	**5000**	2258	**5000**		
b	NPs incl. CN (S56a)	478	**1281**	788	**1891**	874	**1935**		
c	Dem + CN (S49) (token) incl. *þes*	82	**220**	170	**409**	260	**576**		
d	Percentage of Dem+CN occurrence (incl. *þes)* within NPs incl. CN		~17%		~21,5%		~30%		
e	Dem+CN (S49)(token) excl. *þes*	80	**212**	166	**398**	240	**531**		
f	occurrence of compound demonstrative *þes*	2	**5**	4	**10**	20	**44**		
g	Dem + CN (type) incl. *þes*	40	**107**	55	**132**	96	**216**		

Table 18: Diachronic analysis of demonstrative usage in the PB and PA (type vs. token frequency)

In Table 18, row a) lists the number of NPs in all subperiods; row b) lists the number of NPs which include a common noun.[156] Note that in the second column of each period the numbers have been normalized in 5000NPs. Row c) and e) show the increase of Dem+CN including and excluding all forms of the compound demonstrative *þes*. In both cases, the usage of the demonstrative steadily increases: from the first period, where the demonstrative occurs 328/267 times in 5000NPs to the last period with 746/643 times. As can be seen, the situation is very similar for the *Parker Chronicle* where we can also observe an increase of the demonstrative.

Also, it can be seen that the rise of frequency of the Dem+CN construction has nothing to do with the fact that the number of common nouns is generally higher in the later sections. When we consider the general occurrence of common nouns in the

[156] This means that here, pronoun NPs, NPs with proper nouns and all other NPs where no common noun functions as the head are excluded.

sections of the PA and the PB (row b) it can be stated that while the number of common nouns only increases slightly by a factor of >1,25,[157] the amount of the Dem+CN pattern more than doubles (from 328 to 746) (row c). This increase is also indicated by the percentages in row d). The percentage of Dem+CN occurrence within NPs including a common noun increases from 20% to 36,5%.

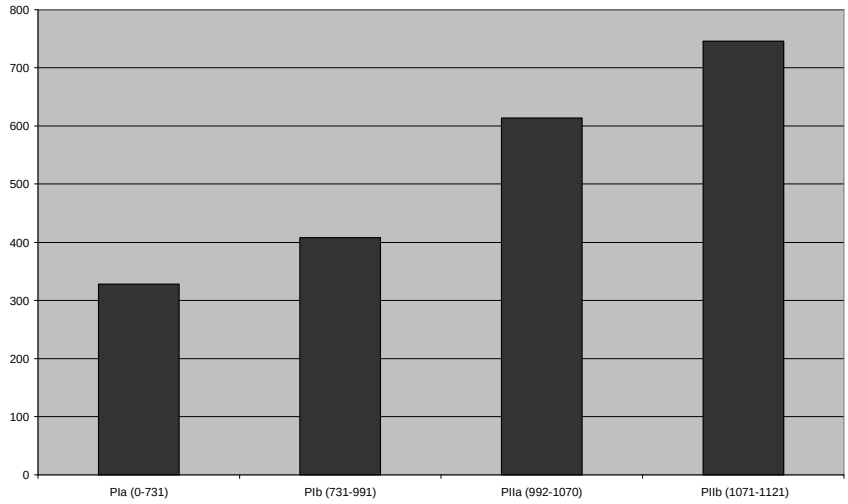
The results support the idea that the increased frequency mirrors a change in the syntactic structure, with *se* adopting an article function. On the other hand, the increase in *se* forms is still not as conclusive as it first seems. It could be based on the fact that simply the number of definite NPs (with definite reference) may be higher in the later parts of the text. There a narrative structure develops, the annual entries get longer and more paragraphs are used to report on and refer to a particular referent. This increases the anaphoric usage of the demonstrative. Thus, an analysis of tokens alone is insufficient.

5.1.2.1.1 Direct evidence – Token frequency vs. type frequency

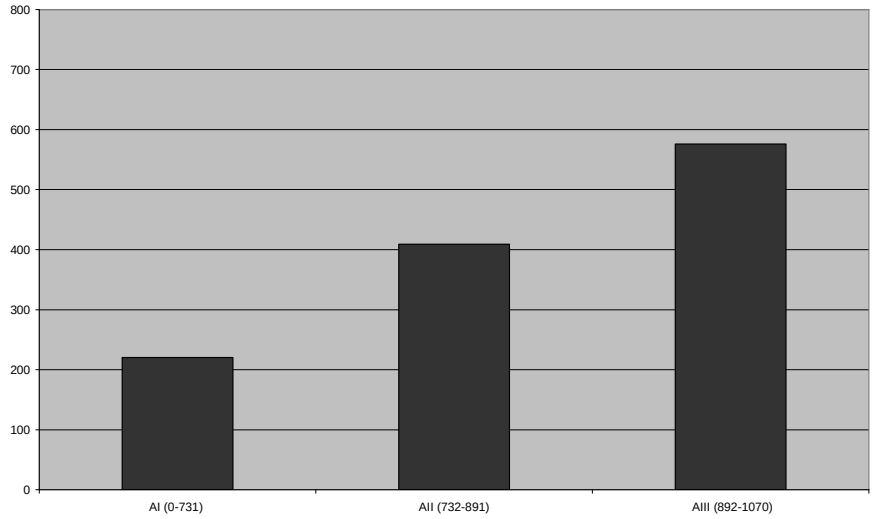
In order to answer the question if the usage of *se* really increases in an absolute sense in time, also 'type' frequencies were analyzed and compared to 'token' frequencies. By token frequency I mean the number of all Dem+CN combinations. By type frequency, I mean the number of cases where the demonstrative occurs with different common nouns. It might be the case that a combination like *the king* occurs a hundred times in the text. As a 'type' this will be counted only once. The idea was to investigate with how many 'different' CNs *se* occurs in the individual periods.

Graph 2a and 2b visualize row c) from Table 18 and show again (as was shown in Graph 1a and b already) that forms of the demonstrative steadily increase in connection with common nouns. This is the case in both texts. This, however, regards token frequency.

[157] from 1618 to 2031 (see line b).



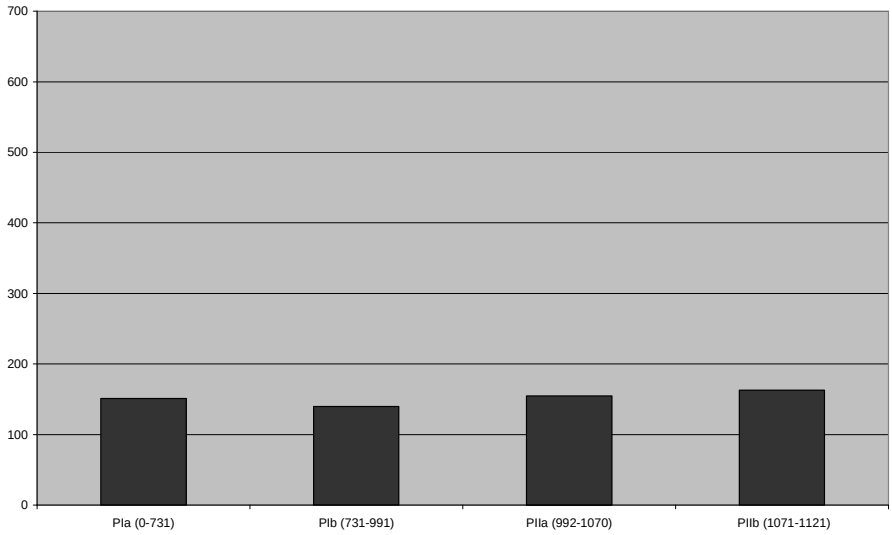
Graph 2a: Token increase of Dem+CN (including *þes*) in the PB (norm. in 5000NPs)



Graph 2b: Token increase of Dem+CN (including *þes*) in the PA (norm. in 5000 NPs)

However, when we investigate the increase with different types of nouns, it can be observed that type frequency does not increase and remains more or less constant. Table 3a and 3b, visualize row g) from Table 18. Dem+CN (type) does not increase and stays

around 150 types[158]. This means that in the *Peterborough Chronicle*, *se* constantly occurs with around 150 different common nouns in each diachronic section.

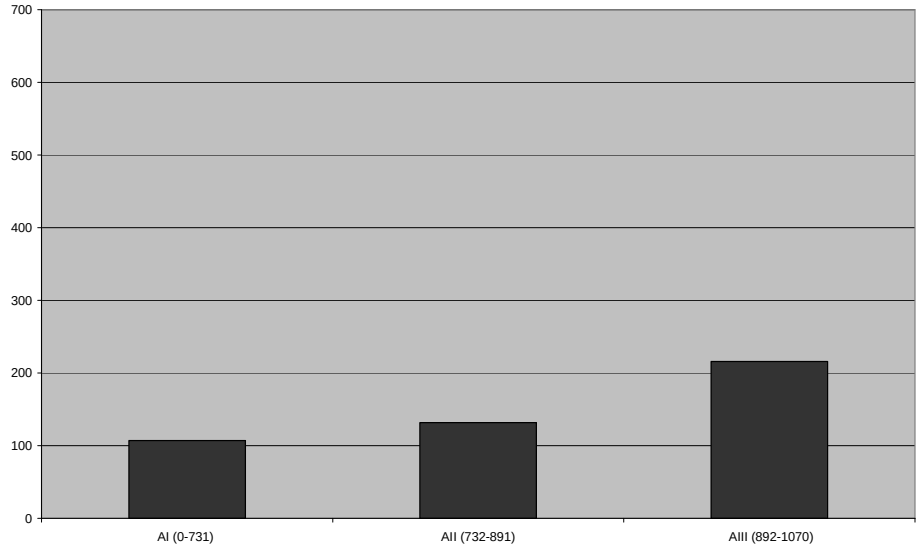


Graph 3a: Type increase of Dem+CN (including *þes*) in the PB (norm. in 5000NPs)

Why is it important to make a distinction between type and token increase? As a matter of fact, the result in 3a) implies that it is likely that the token increase of the demonstrative in the later periods is not so much based on the fact that the demonstrative grammaticalizes and thus extends its usage to new syntactic environments but that it is rather based on the fact that the individual entries tend to become longer and that therefore a particular referent is referred to repeatedly. This is different from an alternative scenario, namely one where not only token but also type frequency increases. Only an increase in both domains would clearly attest that the form *se* extends its usage and is used more frequently in different syntactic contexts.

Interestingly, this is the case in the *Parker Chronicle*, where also type frequency increases and doubles from 107 to 216.

[158] The number of types was calculated with the help of the CorpusSearch lexicon function (ml_make lexicon) (see Appendix II.i.iii).



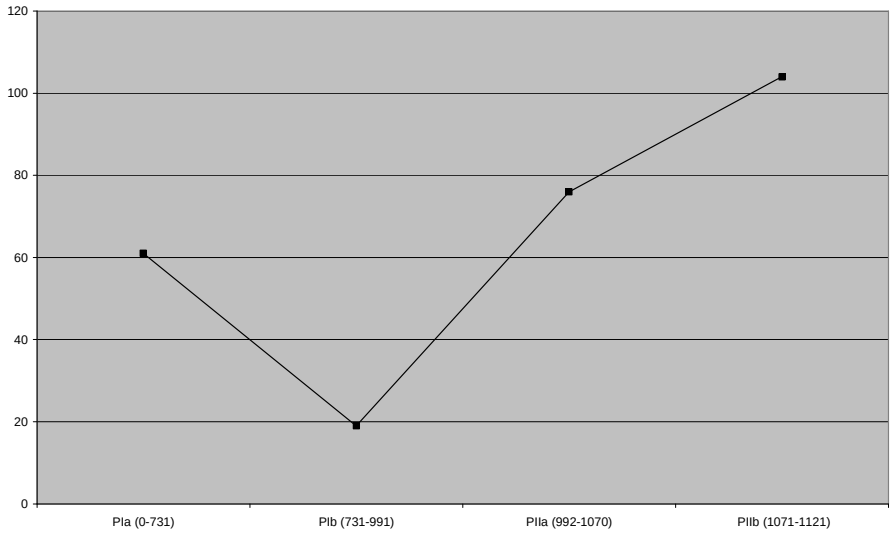
Graph 3b: Type increase of Dem+CN (including *þes*) in the PA (norm. in 5000 NPs)

In the PA the form *se* is used more and more often in time and its usage extends to different CNs. It remains unclear why the result in the PB is different. It is not clear whether we face a textual artifact here, or if demonstrative usage increases due to the changing categorial status from demonstrative to article.[159]

5.1.2.1.2 Indirect evidence – increase of the compound demonstrative þes

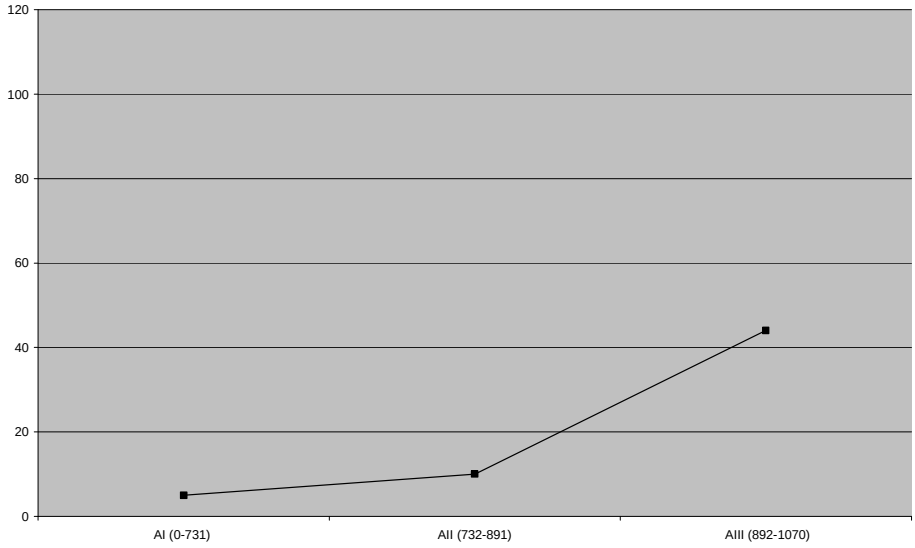
The compound demonstrative *þes* was also studied because I believe that its development can be an indication of the potential emergence of the article. As can be seen in row f) in table 18, the number of *þes*+CN increases from 61 instances to 104 in the last period[160]. Admittedly, we cannot speak of a steady rise in the *Peterborough Chronicle*, because in the second period a sharp decline of *þes* occurrence can be observed (see Graph 4a).

[159] It may be possible that the interpolations in the PB are responsible for the different result.
[160] This was again calculated with the help of CorpusSearch lexicon function (ml_make lexicon) .



Graph 4a: Occurrence of compound demonstrative *þes* in the PB (norm. in 5000 NPs)

It remains unclear why this is the case. In the *Parker Chronicle*, however, the number of *þes*+CN patterns increases sharply from 5 to 44 cases:



Graph 4b: Occurrence of compound demonstrative *þes* in the PA (norm. in 5000 NPs)

First, the increase is only slight, but from AII to AIII we can observe a sharp increase. It seems reasonable to argue that when the form *se* takes up article function and its deictic

force diminishes (so that proximity or distance is no longer expressed by it), another element will be employed to fill this semantic gap. Indeed this gap was filled by the compound demonstrative *þes* and by a new use of the neuter *þæt* in Middle English. As Mustanoja mentions the Modern English "demonstrative pronoun *this* goes back to OE *þes*" (160: 173). Already in Old English the sense of *þes* included a stronger deictic notion, contrasting with *se*'s developing anaphoric function. Nevertheless, they often were still interchangeable; *se* may be translated as *this* and *þes* as *the/that* (see introduction). According to the literature, the distal/proximal opposition between *this/that, these/those* only emerges after the 12th century (cf. Mustanoja 1960: 173; Mitchell 1985: 136; Lass 1992: 114).[161] Still it could be argued that an increase of *þes* is indirect evidence for the split between *se* with its new role as a definite article and *þes* as the remaining demonstrative with the special function of expressing proximity or emphasis.

As can be seen, the idea to create subperiods of the *Anglo-Saxon Chronicles* to find conclusive evidence for the increase of *se* did not yield results as compelling as hoped for. It was shown that although the token frequency of *se* increases dramatically, type frequency only does in the *Parker Chronicle*. It could also be seen that although the frequency of the compound demonstrative *þes* increases in both Chronicles, this increase is not constant in the *Peterborough Chronicle*. Therefore, the question remains how much those results are textual artifacts. Still, the results in the *Parker Chronicle* demonstrate a constant increase on all levels. Thus, it seems safe to postulate that in general, a diachronic increase of the form *se* can be observed. Again note that the rise of frequency of the Dem+CN construction has nothing to do with the fact that the number of common nouns is generally higher in the later sections.

Based on these results, I would like to return to the searches conducted in Table 15 on page 162 and discuss the patterns j) – n) because they can also help us to understand the status of the form *se* better. These patterns related back to the criteria for articlehood which have been set up in 2.3.2 and which shall be tested now. In the following section only the *Peterborough Chronicle* will be analyzed.

[161] Only then does the old neuter nominative/accusative singular *þaet* begin to emerge with a clear distal sense (opposed to *þis*). Also the new plural type *þes-e* emerges only after the 13th century (Mustanoja 1960: 168ff; Lass 1992: 114).

5.2 Demarcating a category - demonstrative or article?

After this mere quantitative analysis of definite NP patterns in the *Peterborough* and *Parker Chronicle*, I would now like to proceed to the more qualitative analysis of the semantic and syntactic behavior of the form *se*. As has become apparent in the first part of this thesis, the existence of a category 'article' in Old English is an extensively discussed issue. One option is to assume that the article 'exists' as soon as a few semantically bleached cases can be identified where *se* expresses definite contexts without indicating spatial deixis. If semantic bleaching of the deictic force is regarded as the only evidence for the demonstrative's development into the article, the 'birth' of the new category can be postulated quite early, namely when we find the first cases where a semantically bleached demonstrative is used. If, on the other hand, we only accept the existence of the new category when *se* meets the criteria set up in section 2.3.2, then the article's 'moment of birth' will depend on the fulfillment of those criteria and potentially take place later. To go for the second option means that we have to investigate textual output of the time systematically and observe how often and in what ways *se* was really used.

In 2.3.2, I have tried to establish objective criteria that shall enable the researcher to distinguish the article from other elements in the Old English NP prehead. The aim of the following sections is to employ those criteria. Note that the existence of the definite article has been linked to the existence of a determination slot (see 2.3.2.8). To begin with, I checked the criteria in only one manuscript, namely the *Peterborough Chronicle*. Obviously, this does not tell us anything about the general state of Old English, as more texts from different genres and regions will have to be analyzed for that. For now, however, the application of the criteria on only one text aims to show if it is possible to positively demarcate the category article at all.

5.2.1 Criterion: Predication

The first criterion which was established is PREDICATION: a pre-head dependent which cannot function as a predicative complement is likely to be an article. Searching for predication patterns[162], however, did not turn out to be conclusive in the *Peterborough Chronicle*.

Although the manuscript is full of predicative adjectives and common and proper noun constructions which are used predicatively (as, for example, in ex. 54 - 58), no example could be found where the demonstrative is used predicatively.

(54) Alswa ic beode þe Saxulf biscop þæt swa swa þu hit georne**st**.
Likewise I command you, Bishop Seaxwulf, that just as you desired it

þæt seo mynstre beo **freo**.
*that the minister should be **free**.*
(cochronE-INTERPOLATION,ChronE_[Plummer]:675.40.545)

(55) & wæs þær mid him oð ðone byre þe Swegen **dead** wearð.
*And was there with him until the time that Swegen was **dead**.*
(cochronE,ChronE_[Plummer]:1013.38.1877)

(56) & he wæs **se eahtoða cining** se þe Brytenwealda wæs.
*and he was **the eighth king** who the wielder of Britian was.*
(cochronE,ChronE_[Plummer]:827.3.980)

(57) & Godwine eorl wæs **heora healdest mann**.
*and earl Godwin was **their most loyal man.***
(cochronE,ChronE_[Plummer]:1036.10.2102)

(58) & Godrum se norðerne cyning forðferde.
and Guthrum, the northern king, passed away.

þæs fulluhtnama wæs **Æðelstan**,
*whose baptismal name was **Athelstan**,*
(cochronE,ChronE_[Plummer]:890.2.1309)

[162] like *X + is/ was/ became + this/that*

Of course, the lack of such a structure must be considered as negative evidence and is never as reliable as positive evidence. It can easily be the case that such a predication pattern exists in other Old English texts. Still, in the case of the *Peterborough Chronicle*, the result suggests that the criterion PREDICATION is met because *se* is never used predicatively. This then seems compatible with the assumption that *se* already functioned as the definite article but does not actively support it. However, I would like to point out that the criterion does not seem to be the most well reasoned criterion in the first place. Why I question the quality of the criterion will be discussed in the next section, together with the INDEPENDENCE criterion.

5.2.2 Criterion: Independence

Next, it was decided that a pre-head dependent which cannot occur independently of its head is likely to be an article. As was already mentioned in the introduction, it is often the case in Old English that the demonstrative stands alone: *se* is used independently as a demonstrative pronoun (comparable to ModE *this/that;these/those*) but also as a relative pronoun (translatable as today's *who*/*which*) (ex. 59-61).

(59) þer gegadorode six hund scipa, mid **þam** he gewat eft in to Brytene.
*there gathered sixhundred ships; with **those/which** he went back to Britian.*
cochronE,ChronE_[Plummer]:0.24.23_ID

(60) & þa hi ærost togedore geræsdon, þa man ofsloh ðes Caseres gerefan,
And when they first joined battle, the men killed the emperor's tribune,

se wes Labienus gehaten.
***who** was called Labenius*
cochronE,ChronE_[Plummer]:0.26.24_ID

(61) þær man sloh eac cc preosta **þa** comon ðider
*there they also slew 200 priests **who** had come there*

þæt heo scoldan gebiddan for Walana here.
that they should pray for the Welsh army.
cochronE,ChronE_[Plummer]:605.5.257_ID

In examples 62 & 63, we can see that *þæt* is also often used in fixed phrases like *after that, beyond that*. It is also often used in fixed phrases like *that is…, that was…,* (ex.64)

(62) Siððan ofer **þæt** ne rixodan leng Romana cinigas on Brytene.
*Afterwards, beyond **that**, no longer ruled the Roman kings in Britain.*
cochronE,ChronE_[Plummer]:409.2.104_ID

(63) & æfter **þonn** feng to rice Hengest, & æsc his sunu.
*And after **that**, succeded to the kingdom Hengest and Aesc his son.*
cochronE,ChronE_[Plummer]:455.1.141_ID

(64) & **þæt is** wið Æðelinga ige.
*& **that is** near Athelney.*
(cochronE,ChronE_[Plummer]:878.21.1226)

Also *se* is used independently in object position:

(65) & he hafde **þa** oð he ofslohðone ealdorman þe him lengst wunode.
*and he had **that** until he killed (the) ealdorman who stayed with him longest.*
cochronE,ChronE_[Plummer]:755.1.739_ID

(66) þa **þæt** onfundon ða Romani, þa noldon hi faron ofer þone ford.
*When the Romans dicovered **that,** they would not cross over that ford.*
cochronE,ChronE_[Plummer]:0.30.27_ID

(67) & þa ongeat se cyning **þæt**.
*and then perceived the king **that.***
cochronE,ChronE_[Plummer]:755.12.749_ID

(68) And bed him **þæt** he scolde **þæt** geten mid his writ
*and asked him **that** he should **that** confirm with his charter*

and mid his bletsunge.
and his blessing.
cochronE-INTERPOLATION,ChronE_[Plummer]:675.4.533_ID

(69) ðas sindon þa witnes þe þær wæron, & þa **þæt** gewriten
*These are the witnesses who were there and who wrote **that/it***

mid here fingre on Cristesmele
with their finger on Christ's mark
cochronE-INTERPOLATION,ChronE_[Plummer]:656.88.455_ID

In all those cases, the form occurs independently of a head. Thus it can safely be concluded that the criterion INDEPENDENCE is not met. A fact that, in contrast to the PREDICATION criterion, seems to confirm the non-existence of the article.

However, I suggest that the criterion must be disregarded for the following reasons: The fact that the form *se* fulfills other functions next to being a determinative (i.e. it is used as a relative pronoun as well) should not influence the decision whether it deserves to be treated as an article in some cases. The form occurs independently, but this happens only in those cases where it fulfills the function of a relative or demonstrative pronoun. The real question, however, is if – in its role as a determinative (i.e. a dependent prehead element) – it behaves in a way that justifies articlehood instead of demonstrativehood.

In almost every language it often is the case that one form is employed to express various functions. For example, in Modern English the form *have* functions as a full lexical verb in sentences like *I have a car* but also as an auxiliary, which is part of a construction as, for example, in *I have seen his car*. Of course, the auxiliary usage historically developed out of the lexical verb. To claim that *have* is not an auxiliary because it is still used as a lexical verb somewhere else is seriously flawed. Similarly, it seems too restrictive to decide that a form only deserves the term 'article', if it exclusively exists as a dependent of a head and has no other functions. This may be the case for Present Day English with the form *the*, but does not necessarily have to be the case at the beginning of category emergence, when a new category often develops out of an existing category which fulfills certain other functions. Of course, it is reasonable to suggest that a prehead marker which only fulfills one function and which is bound to its head is likely to be an article; but that does not imply that a linguistic form which has a second function cannot function as an article as well.

For the same reason, also the PREDICATION criterion turns out to be problematic. Even if several cases could be found, where *se* was used predicatively this would only

tell us something about the fact that *se* in its function as a demonstrative pronoun can be used predicatively, in the sense of *The problem is <u>this</u>*. To find an element in such an independent position again does not tell us anything about the role which the form *se* may have taken up as a prehead dependent. From that point of view, the criterion is only helpful for Modern English where we have two separate forms – *this* and *the.* In Modern English it is possible to clearly distinguish between the demonstrative *this* and the definite article *the.* It can be checked easily if *the* is used predicatively – which it is not. In Old English, however, it is impossible to eliminate the possibility that *se*, when used in predicative (i.e. independent) position, is used as the demonstrative pronoun, which has nothing to do with its role as a prehead determinative. Thus, the two criteria shall not be investigated further and will not be applied to other Old English prose texts (see 5.3 for clarification).

5.2.3 Criterion: Co-occurrence

The next criterion is CO-OCCURRENCE. It has been decided that the article is a non-iterative category in Modern English. It cannot occur with itself or other determinatives. So an element which can co-occur with itself and other determinatives should not be termed an article.

In the *Peterborough Chronicle* no example can be found where a form of *se* occurs with itself in one NP. Patterns with Dem+Dem+CN (S45a) and Dem+Dem+Adj+CN (S38a) do not exist. As a matter of fact, however, *se* and a possessive can both precede the noun in the same NP in Old English. Examples 70 & 71, show that patterns like Dem+Poss+Adj+CN (1 hit) as well as the variant Poss+Dem+Adj+CN (1hit) can be found in the *Peterborough Chronicle*.

(70) ac he teah forð **þa his ealdan wrenceas**.
but he brought out ***these his old tricks.***
(cochronE,ChronE_[Plummer]:1003.6.1640)S45

(71) þet he mid þam dynte nieðer sah…
that he with the/that blow sank down

and **his þa haligan sawle** to Godes rice asende.
and ***his the/that holy soul*** *to God's kingdom rose.*
(cochronE,ChronE_[Plummer]:1012.12.1834)S46

This pattern is claimed to be relatively common (Kytö & Rissanen 1993: 254).[163] Allen (2006: 155) states that the Poss+Dem construction "was genuine OE usage […] found in all sorts of writing". According to Traugott, 'Poss+Dem+Adj+N' is as possible as 'Dem+Poss+Adj+N when an adjective is present, but the first is more frequent. When no adjective is present 'Dem+Poss+N' is preferred (Traugott 1992: 173; cf. Mitchell 1985: 104-12; Heltveit 1977; Allen 2006, 2008; Wood 2007).

The existence of such structures has repeatedly been used to argue against the existence of a determination slot, which can only be filled by one element at a time and hence against the article category in Old English (cf. Osawa 2000; Denison 2006; Van de Velde 2010). Some researchers, however, argue that the co-occurrence of Poss+Dem (or Dem+Poss) has to be treated with caution for various reasons.

First of all, "it has […] been widely observed that not all OE examples need to be analyzed with Dem and Poss as part of the same nominal" (Wood 2007: 350). In example (70), *þa* (translatable as *then*) might be an adverb, which is not part of the NP altogether. An alternative reading for Dem+Poss is also possible in which the demonstrative is used in a topicalized, appositive structure: [demonstrative] + [poss+ noun] (*these, his old tricks*). Such a structure is also used in Present Day English, e.g. in

(72) Dada was coming out of **this, his** special lavatory, as Nicandra, on her return from the dining room, arrived.
(BNC H7H W_fict_prose).

In Present Day English, however, we "usually use a comma in writing to indicate such apposition, however OE scribes didn't use punctuation like that" (Wood 2007: 351). From that point of view, it is hard to decide if such a pattern should be analyzed either as an appositional construction or Dem+Poss in the same NP.

[163] Kytö & Rissanen provide a corpus based study investigating Dem+Poss combinations in Old English, Middle English and Early Modern English (1993: 255). Also see Allen (2006) for a potential prehistory of Poss+Dem and its occurrence in various Old English manuscripts.

Moreover, it may as well be the case that we find a hidden genitive in the construction in ex. 71. Due to the free word order, it could be argued that the possessive pronoun is part of a genitive construction; e.g. *that holy soul of his*. If we take that into consideration, we cannot be sure if the two examples in the *Peterborough Chronicle* count as positive evidence for the existence of the Poss+Dem/Dem+Poss construction. Also note that no examples for Dem+Poss+CN or Poss+Dem+CN without the adjective were found in the *Peterborough Chronicle*.[164]

Secondly, it has been claimed that the Poss+Dem/Dem+Poss construction

> is especially common in texts for which a Latin source is either known or probable. This is suggestive of Latin influence, and indeed in texts which are close translations from Latin, we usually find that Det Poss translates a combination of possessive and a demonstrative in the original (Wood 2007: 152)

This is why it could be argued that the pattern should be dismissed from evidence as a Latin *calque* and that the existing co-occurrence patterns are exceptional and should not be interpreted as evidence against the existence of a determination slot.

For example, Allen (2004: 16) has found a correlation between the presence of Dem+Poss in a manuscript and the existence of a Latin source, although the constructions are used in places that do not necessarily have corresponding Latin constructions. Allen suggests

> the Det Poss construction was not simply a *calque*, but part of a particular register in OE. That is, it was similar to a Latin construction, and so it was seen as appropriate for the translation of Latin or for a high style (Allen 2006: 152f.).

Thus, from her point of view, the pattern is not a Latin *calque* "but nevertheless particularly likely to be found in texts influenced by Latin" (Wood 2007: 350). This

[164] See Allen (2006: 156f.) who suggests possible reasons for this lack in the *Anglo-Saxon Chronicles*. In one of her studies, Allen investigates if Dem+Poss and Poss+Dem are really in free variation or if they are completely different constructions. Beside other things, she argues that Poss+Dem is only used in combination with adjectives. She argues that "the Det Poss and Poss Det constructions are not simply variants of each other, to be accounted for by the genereal freedom of word order in OE. There are two major differences between the two: (1) the Det Poss construction may use either *se* or *þes*, but the Poss Det construction is limited to *se* and (2) the Poss Det construction is only used with a following adjective" (Allen 2006: 164). According to Allen the demonstrative forms a unit with the adjective and the noun.

makes it a marked construction favored by only some speakers, for example translators who use a Latinate register (Allen 2004: 16).

Kytö & Rissanen (1993: 258) also show that the construction is favored in certain genres and was probably supported by Latin models. However, Kytö & Rissanen also observe that "few of the extant Old English [Poss+Dem] examples are literal translations from Latin" (1993: 256). They list various examples, in which the construction is used in the Old English text, where no similar pattern can be found in the Latin source. Often the word order in the Old English text is completely independent of the order found in Latin. I generally support the view that the patterns Dem+Poss/Poss+Dem should not simply be dismissed as exceptional *calques* but have to be analyzed in detail. Poss+Dem/Dem+Poss examples from native poetry or secular writing must be seen as counter-examples to the suggestion that the pattern is always influenced by its Latin source. The fact that the pattern occurs in the *Peterborough Chronicle*, which is a secular text and no Latin translation, is such a counter-example. Unfortunately, we only find 2 instances of the construction in the *Peterborough Chronicle.* As different syntactic structures can also be assigned to the examples, I decided to disregard both. On top of that, neither a pattern like Dem+Poss+CN (S32) nor Poss+Dem+CN (S38) can be found in the manuscript. Something we would expect if the pattern was truly productive. Thus, I conclude that in the case of the *Peterborough Chronicle*, the criterion CO-OCCURRENCE is met. This suggests that a determination slot which can only be filled by one element at a time already existed.

However, more examples are needed and this criterion will have to be checked in a larger sample to get more conclusive results; especially in order to see a) if clear, non-ambiguous examples can be found, b) how frequent those are, c) if the pattern Dem+Poss/Poss+Dem without adjectival modification is productive as well and d) if a Latin source always exists. Only then can we confirm the productivity of the pattern. If we find that Poss+Dem/Dem+Poss are free and frequent variants of each other, then it can be argued that a particular determination slot has not yet developed because Poss+Dem and Dem+Poss occur in the same noun phrase. If, on the other hand, we only find a few ambiguous examples, then it can be assumed that a determination slot has already emerged and can only be filled by one determinative at a time.

5.2.4 Criterion: Relative position

The next criterion is RELATIVE POSITION: a pre-head dependent which occurs to the left of any modifier is likely to be an article. An element which occurs to the right of any modifier may be something else. In the literature, Old English examples have been listed where the demonstrative pronoun occurs right to the adjective. For example,

(73)[165] On **wlancan þæm wicge.**
On proud that horse.

(Battle of Maldon 240)

This kind of word order variation and *se's* ability to 'still float around freely' in the NP would also corroborate the statement that no determination slot has emerged yet and that thus *se* has not taken up article function yet. If the speaker had already analyzed the grammatical input in such a way that a determination slot left to the modification slot was assumed, then the speaker would feel the obligation to position the determinative in this fixed location. However, the example in 73 is ambiguous. *wlancan* may be used as a substantive adjective, i.e. *on the horse, the proud (one),* and thus the sentence could be given a different reading.

In the *Peterborough Chronicle*, only one example can be found in which the adjective preceeds the determinative.

(74) & þa biscopas Eadnoð & Ælfhun. & seo burhwaru
and the bishops Eadnoth and Ælfhun *and the townpeople*

underfengon **haligan þone lichaman**.
took up ***holy the body.***

(cochronE,ChronE_[Plummer]:1012.15.1835)S43

Here too, it can be argued that *haligan* is a substantive adjective in the genitive to be translated as *the body of the holy (one)*. Once again, the example is ambiguous and therefore I conclude that the criterion RELATIVE POSITION is met. Obviously, patterns where a free floating demonstrative occurs to the right of the adjective are not productive. Nevertheless, it will be necessary to extend the search to a larger sample.

[165] Example (73) taken from Mitchell (1985: 70).

5.2.5 Criterion: Obligatoriness

The fifth criterion which shall now be applied to determine *se*'s role in Old English is OBLIGATORINESS. As already mentioned, one of the most interesting characteristics of *se* in Old English is its paradigmatic variability. As argued in section 2, an element only functions as an article when it is the default filler of a determination slot which has to be filled obligatorily to indicate definiteness (if definiteness is not already indicated otherwise by another element in the NP like a possessive pronoun). This condition is met in Modern English: singular and plural common nouns generally do not occur bare when they are used in a context where the speaker or hearer knows the entities from previous discourse (75a), in the intermediate or larger situation (75b) or from general world knowledge (75c); in other words, in contexts that make it clear that the noun refers to a unique, identifiable entity. In those cases the overt marking of definite reference is obligatory, and this is accomplished by using the definite article as a default.[166]

(75) a) She gave me a plant as a present.
*Now I have to water plant every day.
Now I have to water <u>the plant</u> every day.

b) *The father kissed bride.
The father kissed <u>the bride</u>.

c) *Sun goes down in the east
<u>The sun</u> goes down in the east.

[166] Note that the article is not always obligatory in Modern English; several exceptions can be listed. Some fixed phrases without an article exist although the noun seems to denote a specific entity or identifiable location, like *Ed is in prison, Ed is at sea, He leaves town, He starts university.* However, it has been argued that is such cases the bare nouns can be given non-referential interpretation in the sense of, for instance, *Ed is serving time*. The nouns which permit this use are a very restricted group. Also in sentences with a predicative complement, e.g. *He became president*, the phrase can be given a role interpretation. Nevertheless, it is possible here to use the article, e.g. *He became the president.*

In Old English, however, it has been observed that the use of a determinative in those cases does not seem to be obligatory (see also the 1.1.2). The following examples illustrate this:

(76)[167] on sumre stowe hine man mihte mid **heafde** geræcan
*in certain place it one (SUBJ) could with **[the/his] head** touch*
(*Ælfric Homilies* I, 34, 508.18)

(77) [168] Gecyste þa **cyning** æþelum god, **þeoden Scyldinga**, ðegn betstan
*kissed then **[the] king** prince good, **[the] Lord of Scyldings**, warrior best,*

ond be **healse** genam
*and by **[the] neck** took*
(*Beowulf* 1870)

Traugott states that in Old English prose, as shown in (76) & (77), the "absence of *se* is common in possessive constructions involving body parts of a possessor that is subject of the clause" (Traugott 1992: 172), and Ackles remarks that

> [n]ouns in Old English very often appear with a determiner-like or article-like element of one form or another, but can, and very frequently do, appear "bare" in places where Middle or Modern English would require a determiner or the indefinite article. (Ackles 1997: 30)

The non-occurrence of the demonstrative has also been noted with cases where the noun is unique, e.g. *earth, hell, devil, world, heaven, etc.*... In addition, the demonstrative is said to rarely occur before the ordinal directions (*North, South,*...), feasts, divisions of time, and usage is especially variable before *God* (Flamme 1885: 5-27; Wülfing 1894: 278-85; Mitchell 1985: 134).[169] These special cases, but especially the fact that definite NPs often occur 'bare' (see the examples in *Aelfric's colloquy* in 1.2.1), are two of the

[167] Example (76) is taken from Traugott (2002: 172).
[168] Example (77) is taken from Philippi (1997: 85).
[169] Especially in poetry the noun is commonly used 'bare' in definite contexts without any overt indication. The literature even speaks of free variation in some cases. However, when it comes to poetry, this 'increased bareness' of nouns in definite contexts may also be due to metrical factors or archaizing tendencies (Christophersen 1939: 86f.; Mitchell 1985: 135).

main arguments for the non-existence of the article in Old English. The criterion of OBLIGATORINESS does not seem to be met.

Again, it is necessary to investigate how frequent the cases of those bare nouns in definite contexts really are. The hypothesis is that a high number of bare noun cases is an indication that no determination slot (which has to be filled obligatorily) has emerged yet. In such a scenario, the form *se* has not taken up article function yet. On the other hand, it can be assumed that the fewer the unmarked cases get in time, the more likely it is that the system is heading towards some consistent obligatory marking of definiteness. Again, I propose that this consistent marking is a result of the prior emergence of a determination slot. If a determination slot is conceptualized by the speakers and thus implemented in their grammatical system, then one feature of this slot may be that it needs to be filled by an overt element if reference is definite.

5.2.5.1 Bare common nouns in the *Peterborough Chronicle*

To investigate this line of reasoning, bare common noun patterns were analyzed in the two manuscripts quantitatively and qualitatively. I decided to search for all one-word NPs including a common noun (S23). In other words, I have collected NPs where the CN stands completely alone (unmarked) and is not modified by any additional word. Such a query produces 717 hits. [170]

As the corpus is not marked for definite NPs – because this is obviously a matter of context – I had to sift through every example individually and decide if the reference was definite or indefinite based on the context. As pointed out before, a noun phrase was counted as having definite reference when the referent referred to was a specific, identifiable entity (that was mentioned in the previous discourse or that was clearly inferable from the larger context/world knowledge). I also distinguished between

[170] I have not investigated NPs with adjectival modification or post-head modification, e.g. *They met wise men who lived in this land*. Obviously, it may be the case that also complex NPs exist where definite reference is not marked by a determinative. For example in section 5.1.1.2, adjectival patterns were discussed. There, it was shown that in some cases, (e.g. he is bebyrged on **ealdan mynstre (**DAT-SG-neut.) on Winceastre*; he is buried in* ***(the) old monastry*** *in Winchester* (cochronE,ChronE_[Plummer]:1041.1.2126) S100) a determinative is 'missing' although the referent (*mynstre*) obviously is definite. Thus, to investigate this criterion in more detail, further research will be necessary in the future. Still, one-word NPs seem to be a legitimate start to test obligatoriness.

referential and non-referential NPs. Table 19 shows the distribution of indefinite definite and non-referential bare one-word NPs.

As I wanted to analyze only those NPs where the context is clearly definite, the first task was to exclude all the indefinite and non-referential cases. 305 bare cases of singular, plural or non-count common nouns in an indefinite context were identified (I, a,b,c). In a second step, 175 NPs which were clearly non-referential were excluded (II; d,e,f,g,h). For example, predicative complements or phrases like *in prison* or *to court*[171] were excluded from further analysis because a non-referential NP obviously does not require a definiteness marker.

As a third group (III), I also excluded ambiguous cases, which may either get a definite reading or a non-referential one. For example, we find several idiomatic, fixed phrases which repeatedly occur without a determinative. Although in i) *to scipon* may get a definite reading (*returned to the ships*), this phrase can easily be interpreted non-referentially in the sense of *on board.* Other idiomatic phrases, too, repeatedly occur unmarked. Here, I argue that they constitute complex predicates, fixed combinations which must be considered inseparable units, in which the noun can also be interpreted as non-referntial. For example, the noun is never modified by an additional element (see j, k, l). Finally, we find time expressions (e.g. *in winter, in spring*) where the noun stays unmarked, although a definite reading *in this winter* is also possible. Again, I argue that with those time expressions overt definiteness marking is not necessary. Whereas the full prepositional phrase *in winter* is referential and refers to a particular moment in time, the noun within the prepositional phrase is non-referential.

Note that it is obviously very difficult to decide if an NP is clearly non-referential or if a referential reading is also possible. For example, in example h) it could be argued that the NP is compatible with a definite reading, in the sense of *he brought X under <u>his</u> control*. In any case, it was necessary to exclude all ambiguous cases and only focus on those cases where the the context is clearly definite.

[171] In most of them we do not find article usage in Present Day English either.

bare CN NPs	**717**	**Old English examples (S23)**
excluded	49	(wrong tagging, i.e. proper nouns,…)
I) indefinite	**305**	a) & him **aðas** sworon. *and swore him **oaths**.* (cochronE,ChronE_[Plummer]:1086.160.2964)S23 b) & he getimbrade Bebban burh. sy wæs ærost **mid hegge** betined. & þær æfter **mid wealle** *and he built Bamburgh. This was enclosed with **[a] stockade** and after that with **[a] wall**.* (cochronE,ChronE_[Plummer]:547.1.189)S23 c) & þa gewrohte he weall **mid turfum** *and then he constructed a wall* **with turf.** (cochronE,ChronE_[Plummer]:189.1.82)S23
II) non-referential (clear cases) e.g. predicative complements	**175**	d) Her Eadbald Cantwara cining forðferde se **wæs cining** xxiiii wintra. *…he **was king** for 24 years.* (cochronE,ChronE_[Plummer]:639.3.340)S23 e) & se eorl Rodbeard of Norðhymbran nolde **to hirede** cuman. *and the earl Robert of of N. would not come **to court*** (cochronE,ChronE_[Plummer]:1095.9.3203)S23 f) & hine he sætte **on cweartern**. *and he put him **in prison**.* (cochronE,ChronE_[Plummer]:1086.94.2913)S23 g) & genam **frið** við Cantwarum. *and made **peace** with Kent.* (cochronE,ChronE_[Plummer]:865.1.1074)S23 h) & he sona gerad eall Norðhymbraland him **to gewealde**. *and he soon arranged all the land of Northumbria **under control**.* (cochronE,ChronE_[Plummer]:948.1.1364)S23
III) non-referential/ definite (ambiguous cases) e.g. idiomatic expressions e.g. 16x *her on lande* 24x *hider to lande (ashore)* 15x *to scipon* (on board) e.g. time expressions	**118**	i) Se here gewende þa **to scipon** mid þam þingum þe hi gefangen hæfdon. *The army went back **to [the] ships** [on board] with the things they had seized* (cochronE,ChronE_[Plummer]:1016.94.2028)S23 j) Her on þisum geare com æðeling Eadmundes sunu cynges **hider to lande.** *Here in this year came the noblemen Eadward the king's son here **to [the] land**.* (cochronE,ChronE_[Plummer]:1057.1.2416)S23 k) Her Eleutherius on Rome **onfeng biscopdom**. *Here Eleutherius in Rome **succeeded to [the] bishopric*** (cochronE,ChronE_[Plummer]:167.1.73)S23 l) Her se eadiga apostol Petrus **geset biscopsetl** on Antiochia ceastre. *Here the blessed apostle Peter **occupied [the] bishop's seat** in the city of Antioch.* (cochronE,ChronE_[Plummer]:35.1.46)S23 m) And on þes ylcan geares **æfter midewintre** se cyng let… *And in the same year **after midwinter** the king had…* (cochronE,ChronE_[Plummer]:1083.32.2793)S23 n) ac him com to **on niht** se apostol Petrus. *came to him **at night** the apostle Petrus* (cochronE,ChronE_[Plummer]:616.4.267)S23
IV) definite	**70**	

Table 19: Relation between non-referential, definite and indefinite context with bare NPs in the *PB*

By excluding all non-referential and indefinite cases, 70 bare instances of singular count, plural count and non-count nouns in a definite context remain. Yet, on a closer look, this number includes various special patterns listed in Table 20.

Definite reference	**70**	bare common noun examples (excluding indefinite contexts)
i) genitive noun-noun	**9**	And ic Æðelred þes kyningas broðer þet ilce tyde **mid Cristesmel**. *And I, Æðelred, the king's brother, grant the same with **Christ's mark.*** (cochronE-INTERPOLATION,ChronE_[Plummer]:656.98.460)S23
ii) appositions	**10**	Eanbalde arcebiscop. & fram ***Æ*Eðelberhte biscope**. *…by **bishop Æthelberth.*** (cochronE,ChronE_[Plummer]:791.1.882)S23
iii) syntax	**18**	on þa ilcan tima þa common hi to Medeshamstede. Beorndon and bræcon. slogon **abbot & munecas**. & eall þæt hi þær fundon. *at that time they then came to Peterborough, burned and demolished, killed **[the] abbot and [the] monks** and all that they found there* (cochronE-INTERPOLATION,ChronE_[Plummer]:870.5.1117)S23 þa gyrnde he griðes & gisla. þet he moste unswican **into gemote cuman. & ut of gemote**. *then he asked for safe-conduct and hostages, that he might come **into [the] meeting and out of [the] meeting** safely.* (cochronE,ChronE_[Plummer]:1048.68.2297)S23
iv) bare cases	**32**	**þ**a þe nolden ær to his libbendum lichaman onbugan, þa nu eadmodlice **on cneowum** abugað to his dædum banum. *Those who would earlier not bow to his living body, those now humbly bow on **[the] knees** to his dead bones.* (cochronE,ChronE_[Plummer]:979.19.1488)S23 Her sunne aðeostrode on xii kalendæ Iulii. *Here **[the] sun** grew dark on [20 June].* (cochronE,ChronE_[Plummer]:540.1.183)S23

Table 20: Bare definite common noun phrases in the *PB*

In several instances, the head noun can be analyzed as a complex construction with a genitive noun that functions as determinative (i). In various appositive constructions (ii), it can be argued that no determinative is necessary either, because the common noun is combined with a proper name which already gives the construction definite reference.[172]

Finally, as shown in iii), it can be observed that in some of the cases the noun is part of a special syntactic construction, in which several referents are combined by coordinative '&'; e.g. *slogon **abbot & munecas**. & eall þæt hi þær fundon.* In many of

[172] However, note the different Old English word order.

those listings, reference is clearly definite (e.g. the particular abbot of the Peterborough monastery) but remains unmarked. Whenever such enumerations occur, it is frequently the case that no determinatives are used. Thus, I argue that this pattern is a special stylistic device used in Old English. Also in Modern English, such a phrase could be translated as *killed abbot and monks and all that they found there.*

If we again exclude all those cases, only 32 instances can be identified where one can argue that a determiner is really "missing". Generally, such a result immediately raises various questions. Are 32 cases a sufficient number to support the "free variation"- argument? I doubt it. After all, one has to compare this number to the thousands of instances in the manuscript where we find a determinative before the common noun to indicate definite reference. In the *Peterborough Chronicle*, a CN is introduced by a demonstrative 2026 times. In 531 cases a possessive pronoun preceeds the CN, and in 534 cases a genitive construction (see section 5.1.1). This means that in 3073 cases, a determinative overtly marks definiteness. Thus, the 32 examples do not at all suggest that definiteness marking was still optional.

Before jumping to conclusions, the 32 instances need to be analyzed:

9 > *land*/ land, nation, country
4 > *fyrd*/ army
4 > *sunne*/ sun
2 > *cneow*/ knees
2 > *cyning*/ king
1 > *scip*/ ship
1 > *burgh*/ town
1 > *tune*/ town
1 > *earde*/ earth
1 > *heofen*/ heaven
1 > *þeodland*/ nation
1 > *middangeard*/ earth
1 >*gemote*/ meeting
1 > *mode*/ mind
1 > *wæge*/ way
1 > *hærfest*/ harvest

With the noun *fyrd* (ex. 78), a determinative is indeed missing because 'the [Saxon] army' was introduced in previous discourse (already overtly marked by *se* several

times),[173] so that in the passage a particular army is being talked about; still the noun remains bare:

(78) þa wæs þær **fyrd** gesomnod æt Cynetan.
*Then was there **[the] army** assembled at Kennet.*
(cochronE,ChronE_[Plummer]:1006.25.1698)S23

Nevertheless, it could be argued that a spelling mistake may have occurred here with the *r* in *þær* being a *t* . This then would mean that a demonstrative was used.

With the words *earde* (ex. 79) and *þeodland* (ex. 80), *cyning*, *lond*, *scip* and *burgh*, a determinative is also missing:

(79) & se cyng hine ða geutode **of earde.**
*And the king them banished **from [the] land**.*
(cochronE,ChronE_[Plummer]:1002.7.1630) S23

(80) He wearð wide **geond þeodland,** swiðe geweorðad,
*he became wide **beyond [the] land**, greatly honoured*

forþam þe he weorðode Godes naman georne,
for that he worshipped God's name eagerly,
(cochronE,ChronE_[Plummer]:959.16.1385)S23

Once again, it has to be pointed out that the relevance of those examples has to be questioned because we find hundreds of examples in the PB where *cyning, lond, earde, fyrd, scip* and *burgh* are used with a determinative.[174] Thus it may be the case that the examples listed here are simply scribal errors, where the scribe left out the determinative unintentionally. Similarly, the example with *tune* is not a clear-cut case either (ex. 81). Although the town referred to in the given context is the particular town of *Sherborne*,[175] the phrase could also be analyzed as an idiomatic, non-referential NP, *in town*.

[173] ða hit winter leohte þa ferde **se fyrd** ham & se here com þa ofer Martinus messan to his fryðstole to Wihtlande (cochronE,ChronE_[Plummer]:1006.15.1688_ID).
[174] For example, *cyning* occurs 581 times with a determinative.
[175] Again *tune* is regularly used with the demonstrative or other determinatives in other parts of the *Peterborough Chronicle*.

(81) & he hæfde þæt biscoprice æt Scireburnan L winter
And he had the bishopric at Sherborne 50 years

& his lic lið þær **on tune**.
*& his body lies there **in [the] town.***
(cochronE,ChronE_[Plummer]:867.11.1096)S23

If we exclude all those cases for the reasons mentioned, the number of 32 is reduced even further. If we look at the rest of the list, we find the examples *sun*, *heaven* or *middangeard*. Those cases are especially interesting, as they can be interpreted as inherently definite, similar to proper nouns. They denote entities which in the world knowledge of the speakers are unique and which can thus easily be identified.

(82) **Her sunne** aðeostrode on xii kl. Iulii.
Here [the] sun *grew dark on [20 June]*.
(cochronE,ChronE_[Plummer]:540.1.183)S23

(83) & men gesegon read Cristes mel **on heofenum**
*and men saw a red sign of Christ **in [the] sky/in heaven***

æfter **sunnan** setlan gange.
*after **[the] sun** went down.*
(cochronE,ChronE_[Plummer]:774.3.815)S23

(84) On þam tidum aras Pelaies gedwild geond **middangeard**.
*In those times arose Pelagius' heresy throughout **[the] world.***
(cochronE,ChronE_[Plummer]:380.5.101)S23

Also Traugott's statement that especially body parts do not take determinatives can be confirmed as we find two instances where *knee/s* are used bare.

(85) þa þe nolden ær to his libbendum lichaman onbugan,
those who would not earlier to his living body bow

þa nu eadmodlice **on cneowum** abugað to his dædum banum.
*those now humbly **on [their]knees** bow to his dead bones*
(cochronE,ChronE_[Plummer]:979.19.1488)S23

Uniqueness seems to play a role here as well: there is no need to overtly mark a person's knees as the speaker conceptualizes his own knees as something unique and thus inherently definite (ex. 85). Thus, it seems that this special category of unique entities resists determinative usage more often than others. Other words which conceptually could be seen as members of such a group are *moon, hell, head* or *flod.*

5.2.5.2 Unique common nouns

It seems worthwhile to investigate this potential group in more detail in order to find out if these nouns never take a determinative or if usage varies. Additionally, an interesting question is if a determinative is used more consistently with these special nouns in the later periods of the PB. In other words, the hypothesis is that if those cases are the last ones to resist consistent, overt definiteness marking, they should remain bare more often in the earlier periods and only take up article usage later, when article usage generally spreads to instances of marking nounhood rather than definiteness. I therefore analyzed the following words and their occurrence in the PB-periods.

	sun *sunna* (m.)		moon *mona (m.)*		heaven *heofen (m.)*		hell *hell (m.)*		knee *cneow (n.)*		head *heafod (n.)*		(middle)-earth *middan-geard* (m.)		flood/ tide *flod*	
used with d	**+**	**-**	**+**	**-**	**+**	**-**	**+**	**-**	**+**	**-**	**+**	**-**	**+**	**-**	**+**	**-**
PIa	-	2	-	-	-	-	-	1	-	-	-	-	-	1	-	-
PIb	2	1	6	-	1	-	-	-	-	1	1	-	-	-	-	-
PIIa	-	-	-	-	-	-	-	-	-	-	5	-	-	-	1	-
PIIb	-	-	4	-	4	1	-	-	-	1	2	1	-	-	1	-
Total	**2**	**3**	**10**	**-**	**4**	**1**	**-**	**1**	**-**	**2**	**8**	**1**	**-**	**1**	**2**	**0**

Table 21: Distribution of determinatives with unique common nouns in the PB

As can be seen, obligatory marking in the *Peterborough Chronicle* is not consistent. Whereas *moon* and *flood* are always marked overtly, only *knee, hell* and *middlearth* are

always used without a determinative. *Head*, *heaven* and *sun* exhibit inconsitent behavior.[176] As the number of hits is very low in the *Peterborough Chronicle* the conclusions which can be drawn from this can only remain tentative. On the basis of this small sample it is simply impossible to make any claims about a potential diachronic development. What can be shown, however, is that the 'group' shows no consistent use of determinatives. Some unique nouns take a determinative, other do not. It remains to be seen if similar tendencies can be identified when investigating a larger text sample.

So far we can only conclude that definiteness marking is already quite consistent in the *Peterborough Chronicle* because the cases that still resist marking can to a large extent be explained. In other words, evidence suggests that the OBLIGATORINESS criterion is met in the *Peterborough Chronicle*. Does that mean that the criterion is also met in Old English prose in general? As a matter of fact, the *Peterborough Chronicle* is a rather late document. It has been tagged o.3/o.4 in the *Helsinki Corpus* and the process of obligatorification might be well on its way. I therefore conducted the same search in the *Parker Chronicle*, which is the oldest surviving Anglo-Saxon Chronicle tagged as o2/o.3. Again, the results are similar:

bare CN NPs	**PA**
TOTAL	251
excluded	16
indefinite	121
non-referential/clear	98
definite	**(16)/8**

Table 22: Relation between non-referential, definite and indefinite contexts with bare NPs in the PA

After all the indefinite and non-referential contexts are subtracted (Table 22) and after all exceptional patterns[177] are excluded as well, only 8 cases remain, where one could argue for the determinative to be indeed missing. These are

[176] To investigate the behaviour of these unique nouns the Antcon concordance programme was used.
[177] 2 cases had an appositional structure and 6 cases are a complex noun construction.

3x *sun*; sun
1x *mona*/moon
1x *eðele*/gentry, nobility;
1x *hefon*/heaven
1x *flod*/tide
1x *middangeard*/middleearth

Again, this suggests that indicating definiteness overtly has become obligatory and *se* is already used more or less as the default marker to do so. Admittedly, it could also be the case that we face a textual artefact here as both Chronicles belong to the same genre. As the situation may be different in other genres, it will again be necessary to have a look at other manuscripts.

5.2.6 Criterion: Exclusiveness

The next criterion is EXCLUSIVENESS: a pre-head dependent which exclusively expresses (in)definiteness is likely to be an article. Generally, as was shown in section 2.2.2, the concept of 'definiteness' is quite fuzzy. It incorporates several semantic notions, e.g. specificity, uniqueness, etc. and often not every feature can be assigned in every case where an article is used in Present Day English. In other words, it is very difficult to decide which utterance should be given a 'definite reading'. Moreover, it is also very difficult to decide if a noun phrase is incompatible with a deictic reading. A potential deictic interpretation of *the* is sometimes even possible in Modern English; although the article category is well established at that linguistic stage. For example, imagine a woman shopping, who tells the shop assistant *I take the blouse* holding a blouse in her hands. Here, the context suggests that we could read some spatial deixis into *the.*

In Old English, it is often possible to translate *se* either as *this/that* giving it a deictic reading or as *the*, exclusively indicating identifiability or specificity. The compatibility of definiteness with spatial deixis is obviously the reason why articles tend to develop out of demonstratives in the first place. Most of the demonstratives can thus be interpreted in two ways. When we consider an example taken from the *Parker Chronicle* we can see that the determinative can either receive a deictic or an identifying reading:

(86) þy ilcan geare drehton þa hergas on East Englum & on Norðhymbrum
The same year harassed the raiding armies in East Anglia and N.

West Seaxna londs wiðe be þæm suðstæðe mid stælhergum,
Wessex widely along the south coast with predatory bands

ealra swiþust mid **ðæm æscum** þe hie fela geara ær timbredon.
*most of all with **the/those ships** which they had built many years earlier*

þa het ælfred cyng timbran lang scipu ongen **ða æscas**;
*then king Alfred had built long ships against **those/the ships**,…*

(cochronA-2b,ChronA_[Plummer]:897.17.1125)S49

While, for example, Ropers (1918: 35-6) and Conradi (1886: 54-5) analyze *ðæm* in example (86) as a 'stressed' deictic demonstrative "…*with those ships which*…" it can also be analyzed as the unstressed variant "…*with the ships which*…" (Christophersen 1939: 92).

The same problem exists in the *Peterborough Chronicle*. For example, in the following passage, there are several cases where a double reading is possible (see line 2, 5, 6, 12 & 18)

(87)[178]

1	Her com Swegen mid his flotan to Norðwic. &	*Here Swein came with his fleet to Norwich, and*
2	**þa burh** ealle gehergade. & forbærndon.	*completely raided and burned down **that/the town**.*
3	þa gerædde Ulfkytel wið **þa witan** on East	*Then Ulfcytel decided with **the councillors** in east*
4	Englum. þæt him bætere weron þæt man wið	*Anglia that it would be better that they [one] made*
5	**þone here** friðes ceapode. ær hi to mycelne	*peace with **that/the army**, before they did too much*
6	hearm on **þam earde** gedydon. forþam þe hi	*harm in **that/the country**, because they came*
7	unwares comon. and he fyrst næfde þæt he his	*unexpectedly and he had no time in which to gather*
8	fyrde gegadrian mihte. ða under **þam griðe** þe	*his army. Then under the cover which should have*
9	heom be tweonan beon sceolde. þa besteal **se**	*been between them, the army stole up from the ships*
10	**here** up fram scipon. and wendan heora fore	*and turned their force to Thetford.*
11	to þeodforda. ða Ulfcytel þæt undergeat. þa	*Then when Ulfcytel realized that, he sent that they*
12	seonde he þæt man sceolde **þa scipu** to	*[one] should chop up **those the ships.** But those, who*
13	heawan. ac hi abruðon þa ðe he to þohte. and	*he thought of failed and then he secretly gathered his*
14	he þa gegaderode his fyrde diglice swa he	*army as fast as he could.*
15	swyðost muhte. **se here** com þa to þeodforda	*And **the army** then came to Thetford, within three*
16	binnon iii wuca þæs þe hi ær gehergodon	*weeks that they had earlier raided Norwich. And*
17	Norðwic.and þær binnon ane niht wæron. and	*were there one night, and raided and burned down*
18	**þa burh** hergodon & forbærndon.	***that/the town**.*

cochronE,ChronE_[Plummer]:1004.14.1665_ID

[178] The Modern English translation is taken from Swanton (1996: 135).

A factor that could help to distinguish articlehood is stress. As early as Wülfing (1894: 277-287) some philologists tried to only count those instances of *se* which do not carry stress as 'definite articles'. But working on Old English data, stress is what turns out to be one the main problems. There may have been a difference in the pronunciation of *se* as demonstrative and as article, and at some point in time the latter must have become unstressed (i.e. using a schwa *ə)*. This, of course, is not marked in writing (Christophersen 1939: 96), and thus we cannot distinguish when *se* clearly carries emphasis (Mitchell 1985: 128).

In the passage above, we find one case (line 15) where a non-deictic reading makes far more sense because the determinative is used as an anaphoric reference marker (the referent *the army* has been introduced earlier in line 5). Of course, one could argue that as soon as such an example can be found in a text, we have to speak of article usage. The question, however, is how many of these semantically bleached cases have to occur to safely argue for the existence of an article. As a diachronic phenomenon, one will expect that those cases increase in time, but again it is not really possible to employ the criterion objectively. As the contradicting interpretation of the two researchers has shown, the final choice is highly subjective. Therefore, this criterion is unfortunately not applicable and will not be investigated any further.

5.2.7 Criterion: Syntactic Motivation Only

Closely related to the EXCLUSIVENESS criterion is the last criterion SYNTACTIC MOTIVATION ONLY, which also turns out to be difficult to interpret. It has been decided that a pre-head dependent which can exclusively be syntactically motivated is likely to be an article. As was discussed in section 2.2.2 and 3.3.2.1, 'definite' articles often reach a developmental stadium in the grammaticalization process, in which semantic content has bleached so much that they – at least in some languages – function as nominalization-markers only (cf. Lehmann 1995: 38f.). An example for such usage in English is the article's usage together with generic reference, e.g. *The lion is a dangerous animal*. Here, *the* refers to the species, type or class and not to a 'definite' referent.

As has been pointed out, using an article in such cases does not reflect an early stage in the grammaticalization process (cf. Lyons 1999: 340). It seems unlikely that in Old English, where the article only is about to develop, one will find such examples. Interestingly, Traugott (1992: 176) claims that "[g]eneric NPs introduced by the incipient definite article clearly exist in OE". She lists the following example:

(88) **Se lareow** sceal bion on his weorcum healic, ðæt he on his life
The/A *teacher* *must be* *in his works excellent,* *that he in his life*

gecyðe lifes weg his hiermonnum
may teach *life's way* *to his followers*

(CP 14.81. 2(=ID cocura,CP:14.81.1.525))S49

Here, however, the NP may not be generic after all. The passage, taken from the *Cura Pastoralis*, reports on the 'ideal' teacher[179], so that it could be argued that the author speaks about a specific type of teacher (in the set of all possible teachers), which would explain definiteness marking.

Generally, it again seems necessary to confirm this particular usage by finding examples in the texts investigated in this study. In the *Peterborough Chronicle* the combinatorial pattern 'Demonstrative + Common Noun' occurs 2026 times. In order to investigate the possibility that *se* is used with generic reference, these examples had to be analyzed. To reduce the amount of 2026 examples, I decided to only analyze instances where the head noun takes a nominative case and thus can be presumed to function as a Subject (S11a). Admittedly, this decision was mostly made to reduce the number of NPs which had to be analyzed. On top of this, however, this procedure seems reasonable because Subject-NPs (which are assumed to occur in the nominative in Old English) are likely to have generic reference (e.g *The Lion is a dangerous animal).*

755 examples exist where the head noun has a nominative case and all of them were analyzed in their context one by one. I was trying to detect instances where *se* is used to refer to a type or class (in a more or less non-referential way) and not to a specific, identifiable referent, which has been introduced in the text or can be inferred from world knowledge. As a matter of fact, in none of the 755 examples *se* is used with

[179] In several chapters, the behaviour of the ideal priest, the ideal teacher and the ideal ruler, etc. are discussed (cf. Sweet 1958: 74-172)

generic reference. This then does not seem to be compatible with the assumption that *se* already functioned as an article. The non-existence of the pattern implies that the Criterion SYNTACTIC MOTIVATION ONLY is not met in the *Peterborough Chronicle*.

Note however, that the lack of this structure is inconclusive. First of all, it might be the case that we find such a pattern in the 1271 examples which were not investigated[180] or in other Old English texts. However, based on the evidence in the PB, I do not assume to find many examples which clearly prove the existence of the pattern. Secondly, the criterion is problematic for another reason. Even if it can be confirmed that *se* is not used with generic reference, this does not prove that the form is not an article. *Se* could be used as an obligatory default marker to indicate definite reference in a fixed syntactic position – something that we have decided to be a strong indication for articlehood – but at the same time it may not be used with generic reference, at least not yet. It may take up that function only later in time, e.g. in the late Old English period or the Middle English period. Thus, the SYNTACTIC MOTIVATION ONLY criterion will not be investigated any further.

5.2.8 *se* with proper nouns

One aspect which may shed additional light on the role of the form *se* is that it is used in combination with singular proper nouns in Old English. The pattern Dem+PN occurs in 79 instances in the PB. Those include plural cases with peoples as

(89) Đa ferdon **þa Pihtas.**
Then went ***the Picts***

(cochronE, ChronE_[Plummer]:0.13.12)S10

Such a construction still exists today. If one excludes these e.g. *the Scots*, *the French*, names of places, etc., 28 instances show a combination with a singular personal name.

[180] Again, it might be possible that we face a textual artifact. No examples may be found because a) the *Peterborough Chronicle* is simply to small in sample size or b) because – in terms of its genre – the Chronicle mostly refers to concrete, unique events where specific people and specific events are being listed.

(90) & **seo *Æ*glbriht** onfeng Persa biscopdomes
and ***that Agilbert*** *received* *the bishopric of Paris*

on Galwalum be Sigene.
in Gaul *on the Seine.*

(cochronE,ChronE_[Plummer]:660.1.493)S10

The infrequency of this combination shows that such a pattern is already rare in Old English, which might be due to the fact that a name is inherently definite on its own and does not need overt definiteness marking. This however, is the crucial point: as proper nouns are considered to be inherently definite the 'additional' use of *se* can only mean that the speaker, when using such a construction, wants to add some deictic meaning. A metaphorical pointing gesture, so to speak. It can thus be assumed that when the form *se* takes up article function and looses it deictic content, then the number of cases where it can be found together with proper names will decrease.

Interestingly, when we investigate the cases with proper names from a diachronic point of view, looking at the distribution of the pattern in the four diachronic subperiods of the *Peterborough Chronicle*, the hypothesis can be verified. The number of cases decreases from 16 in the first periods down to 0 in the last period (for a detailed analysis see Table 24 in the next section).

5.3 Summarizing the results for the *Peterborough Chronicle*

Let us summarize the most important findings presented so far. In the last subsections, I have presented my results on the diachronic development of the form *se*. First of all, it has been shown that generally the demonstrative is the most frequently used determinative element to mark definiteness in the PB. Moreover, it could be confirmed that the demonstrative is used more or less consistently in combination with weak adjectives.

I have also tried to trace the development of *se* diachronically and discussed to what extent the criteria for articlehood are met by the form in the *Peterborough Chronicle*. Table 23 summarizes some of the findings:

		PIa (< 731)		**PIb (733-991)**		**PIIa (992-1070)**		**PIIb (1071-1121)**	
	NPs	*3035*	***5000***	*3293*	***5000***	*4532*	***5000***	*5112*	***5000***
a)	Dem+ CN with *þes* (token frequency)	199	**328**	269	**408**	557	**614**	763	**746**
b)	Dem+CN without *þes* (token frequency)	162	**267**	256	**389**	488	**538**	657	**643**
c)	Dem + CN incl. *þes* (typ frequency)	92	**151**	92	**140**	141	**155**	167	**163**
d)	occurrence of compound demonstrative *þes*	37	**61**	13	**19**	69	**76**	106	**104**
e)	Dem+ sg. proper names	10	**16**	11	**17**	7	**8**	0	**0**
f)	bare common nouns	6	**10**	8	**12**	8	**9**	12	**12**
g)	predication	-	**-**	-	**-**	-	**-**	-	**-**
h)	relative position	-	**-**	-	**-**	1	**1**	-	**-**
i)	co-occurrence	-	**-**	-	**-**	1	**1**	1	**1**

Table 23: Diachronic development of nominal determination patterns with *se* in the PB

Generally, it can be said that the token frequency of *se*+CN increases in the *Peterborough Chronicle* (row a and b). The usage of *se* constantly increases in time and has almost tripled by the end of the manuscript. Also the occurrence of the compound demonstrative *þes* almost doubles from the first period to the last period (d). This can be interpreted as direct as well as indirect evidence for the fact that a determination slot – and as a consequence the article – developed from early Old English to late Old English. Moreover, the usage of *se* with proper nouns decreases in time (e). This fact also supports the view that the form *se* took up article function – thereby becoming less eligible for the earlier demonstrative function.

However, the picture is not as conclusive as it seems at first because it can be observed that type frequency does not increase in the *Peterborough* (row c) but only in the *Parker Chronicle* (see Graph 4b). On top of that, some of the tested criteria have not lead to conclusive results. Either it has been impossible to apply them, or the results turned out to be inconclusive. If we summarize the findings for the tested criteria, it

must be concluded that by looking exclusively at the *Peterborough Chronicle*, articlehood cannot be attested free of doubt.

CRITERION	criterion could be applied	criterion met	conclusive/ inconclusive	suggests det. slot and article function
PREDICATION: a pre-head dependent which cannot function as a predicative complement is likely to be an article	yes	yes	inconclusive	
INDEPENDENCE: a pre-head dependent which cannot occur independently of its head is likely to be an article	yes	no	inconclusive	
CO-OCCURRENCE: a pre-head dependent which cannot co-occur with itself and other determinatives is likely to be an article	yes	yes	conclusive	yes
RELATIVE POSITION: a pre-head dependent which occurs to the left of any modifier is likely to be an article	yes	yes	conclusive	yes
OBLIGATORINESS: a pre-head dependent which is an obligatory default marker to indicate referentiality is likely to be an article	yes	yes	conclusive	yes
EXCLUSIVENESS: a pre-head dependent which exclusively expresses (in)definiteness is likely to be an article	no			
SYNTACTIC MOTIVATION ONLY: a pre-head dependent which can exclusively be syntactically motivated is likely to be an article	yes	no	inconclusive	

Table 24: Criteria for articlehood in the *Peterborough Chronicle*

As can be seen in Table 24, the EXCLUSIVENESS criterion could not be applied successfully at all. The criteria PREDICATION and INDEPENDENCE could be applied, but the results are irrelevant for the status of *se* as a determinative. *Se* is only used independently in its role as the independent demonstrative pronoun which has nothing to do with its role as a determinative. Similarly, the fact that *se* is not used as a predicative complement is not conclusive either, because investigating predication again means to analyze *se* as a demonstrative pronoun. With regard to SYNTACTIC

MOTIVATION ONLY it has turned out that finding evidence for the usage of *se* with generic reference does not enable us to demarcate the article either.

Only the three criteria CO-OCCURRENCE, RELATIVE POSITION and OBLIGATORINESS have turned out to be 'useful' criteria. All of them could successfully be applied and the results suggest that the *Peterborough Chronicle* mirrors a grammar in which a determination slot (that has to be filled obligatorily in definite contexts) was conceptualized by the speakers.

Admittedly, the results are not very compelling as often, due to the size of the text sample, only a handful of examples could be found. Most examples were ambiguous and had to be dismissed as evidence. The low frequency of the remaining examples (e.g. in the case of bare noun NPs) makes it hard to interpret their relevance. For example, with the OBLIGATORINESS criterion it had to decided if the 32 cases of bare noun NPs in definite contexts constitute enough evidence to argue against the existence of an 'obligatory marking rule'. I have argued that 32 cases do not seem to be enough evidence for a system that allows definiteness marking to be optional.

Also note that the *Peterborough Chronicle* is a rather late Old English text; it has been given o.3/o.4 status in the YCOE corpus. It might be the case that a determination slot was already established at this point in time. Also the *Parker Chronicle*, which in some respects differs from the *Peterborough Chronicle*, is tagged as an o.23 document. Moreover, both texts belong to the same genre. This means that all the findings in the two manuscripts (5.1 & 5.2) tell us nothing about the situation of nominal determination in other genres.

I have therefore decided to continue the investigation by analyzing more texts, in particular some of the earliest texts available; those which have been marked o.2 in the YCOE. This increases the scope of the investigation (larger sample) and enables us to test the following hypothesis: If a determination slot seems to be established in the *Peterborough Chronicle*, it is likely that the emergence of the assumed slot took place earlier, namely in early Old English period (o.2) or even before that. Thus, if it can be shown that the syntactic and semantic behavior of the form *se* in early Old English strongly differs from its later behavior (represented by o.3/o.4 texts), this potentially suggests that a determination slot was only about to emerge in early Old English. To

claim the existence of a definite article before the slot's emergence would be unwarranted.

If, on the other hand, it can be shown that the demonstrative is already used obligatorily in a certain position and does not co-occur with other determinatives in early Old English, then it must be concluded that the speakers already use a grammatical system in which a determination slot has been implemented and in which the 'rule' is to mark definiteness obligatory and by filling this positional slot. Only a grammar which employs such a determination slot, needs to employ a default filler for definiteness marking, which is the reason and trigger for the grammaticalization of the demonstrative. Only then does it makes sense to assume that the demonstrative takes up its new article function.

5.4 Nominal determination in early Old English Prose texts

Some of the nominal determination patterns, which were searched for in the *Anglo-Saxon Chronicles* (see 5.1.1. Table 15), were investigated in several earlier Old English texts as well. Next to the *Peterborough* and the *Parker Chronicle*, the following texts were analyzed:

Manuscripts	**period**	**word count**	**Latin Translation**	**manuscript in YCOE**
Ælfric's Catholic Homilies	o.3	106,173w	no	cocathom1.o3
Ælfric's Life of Saints	o.3	100,193w	no	coalelive.o3
Bede's History of the English Church	o.2	80,767 w	yes	cobede.o2
Boethius	o.2	48,443 w.	yes	coboeth.o2
Cura pastoralis / The Pastoral Care	o.2	68, 556w	yes	cocura.o2
Orosius	o.2	51,020w.	yes	coorosiu.o2
Laws of Alfred	o.2	3314w	no	colawaf.o2
Laws of Alfred Introduction	o.2	1,966w	no	colawafint.o2
Laws of Ine	o.2	2,755w	no	colawine.ox2

Table 25: Early Old English manuscripts (o.2 and o.3 period)

The results have been listed in Tables 26 and 27.. Table 26 gives the raw numbers; percentages were added in Table 27.

	Peterborough Chronicle, no trans. (40.641w. cochornE.o34)	*Ælfric's Life of Saints, no. trans (100,193w. coalelive.o3)*	*Ælfric's Catholic Homilies, no trans. (106,173w. cocathom1.o3)*	*Parker Chronicle, no trans. (14,583w. cochronA.o23)*	*Bede's History of the English Church, yes trans. (80,767 w. cobede.o2)*	*Boethius, yes trans. (48,443 w. coboeth.o2)*	*Cura pastoralis , yes trans. (68, 556w. cocura.o2)*	*Orosius, yes trans.(51,020w. coorosiu.o2)*	*Laws of Alfred, no trans. (3314w. colawaf.o2)*	*Laws of Alfred Introduction (1,966w. colawafint.o2)*	*Laws of Ine, no trans. (2,755w. colawine.ox2)*
NPs total(incl. Pro, PN; CN)	**15972**	**36606**	**40120**	**6208**	**31412**	**17042**	**25151**	**20245**	**1572**	**848**	**1261**
NPs incl. PN	2865	3770	3529	1756	3005	357	801	3034	15	39	13
Dem + PN	79	112	77	40	109	28	39	103	0	0	0
NPs incl. CN	6043	14715	17150	2140	12577	5960	8568	6709	637	256	526
Dem + CN	2026	3951	4207	562	3246	1801	3119	2208	135	51	110
Poss + CN	531	1984	2290	135	1359	644	1184	765	52	39	68
Genitive Phrase + CN	534	1034	1556	262	1483	288	554	659	51	16	32
Dem + Adjective + CN	262	1617	1691	119	1353	595	788	346	11	6	10
Dem + Poss + Adj + CN	1	0	0	0	**2**	**1**	0	0	0	0	0
Poss + Dem + Adj + CN	**1**	**2**	**4**	0	**26**	**2**	**2**	**11**	0	0	0
Poss + Dem + CN	0	0	0	0	**3**	**1**	0	0	0	**2**	0
Dem + Poss + CN	0	**2**	0	0	**13**	**16**	**5**	**1**	0	0	**2**
Adj + Dem + CN	1	0	0	**1**	**8**	**2**	**4**	**2**	0	0	0

Table 26: Determination patterns in early Old English manuscripts

	Peterborough Chronicle, no trans.(40.641w. cochornE.o34)	Ælfric's Life of Saints, no. Trans (100,193w. coalelive.o3)	Ælfric's Catholic Homilies, no trans. (106,173 w. cocathom1.o3)	Parker Chronicle, no trans.(14,583 w. cochronA.o23)	Bede's History of the English Church, yes trans. (80,767 w. cobede.o2)	Boethius, yes trans. (48,443 w. coboeth.o2)	Cura pastoralis , yes trans. (68, 556 w. cocura.o2)	Orosius, yes trans. (51,020 w. coorosiu.o2)	Laws of Alfred, no trans. (3314 w. colawaf.o2)	Laws of Alfred Introduction (1,966 w. colawafint.o2)	Laws of Ine, no trans. (2,755 w. colawine.ox2)
NP Pattern	PB.o34	LOS. o3	CH. o3	PA.o2	BED. o2	BOS.o2	CUR.o2	OSI.o2	LAW.o2	LAWI.o2	INE.o2
NPs incl. PN	2865	3770	3529	1756	3005	357	801	3034	15	39	13
Dem + PN	79	112	77	40	109	28	39	103	0	0	0
(percentage in NP incl. PN) %	***2,7***	***3***	***2,2***	***2,2***	***3,6***	***7,8***	***4,9***	***3,4***	***0,0***	***0,0***	***0,0***
NPs incl. CN	6043	14715	17150	2140	12577	5960	8568	6709	637	256	526
Dem + CN	2026	3951	4207	562	3246	1801	3119	2208	135	51	110
(percentage in NP incl. CN) %	***33,5***	***26,9***	***24,5***	***26,3***	***25,8***	***30,2***	***36,4***	***33***	***21,2***	***19,9***	***20,9***
Poss + CN	531	1984	2290	135	1359	644	1184	765	52	39	68
(percentage in NP incl. CN) %	***8,8***	***13,5***	***13,4***	***6,3***	***10,8***	***10,8***	***13,8***	***11,4***	***8,2***	***15,2***	***12,9***
Genitive Phrase + CN	534	1034	1556	262	1483	288	554	659	51	16	32
(percentage in NP incl. CN) %	***8,8***	***7,0***	***9,1***	***12,2***	***11,8***	***4,8***	***6,5***	***9,8***	***8,0***	***6,3***	***6,1***
Dem + Adjective + CN	262	1617	1691	119	1353	595	788	346	11	6	10
(percentage in NP incl. CN) %	***4,3***	***11***	***9,9***	***5,6***	***10,8***	***10,0***	***9,1***	***5,2***	***1,7***	***2,3***	***1,9***
Dem + Poss + Adj + CN	1	0	0	0	2	1	0	0	0	0	0
(percentage in NP incl. CN) %	***0,02***	***0***	***0***	***0***	***0,02***	***0,02***	***0***	***0***	***0***	***0***	***0***
Poss + Dem + Adj + CN	1	2	4	0	26	2	2	11	0	0	0
(percentage in NP incl. CN) %	***0,02***	***0,01***	***0,02***	***0***	***0,21***	***0,03***	***0,02***	***0,16***	***0***	***0***	***0***
Poss + Dem + CN	0	0	0	0	3	1	0	0	0	2	0
(percentage in NP incl. CN) %	***0***	***0***	***0***	***0***	***0,02***	***0,02***	***0***	***0***	***0***	***0,78***	***0***
Dem + Poss + CN	0	2	0	0	13	16	5	1	0	0	2
(percentage in NP incl. CN) %	***0***	***0,01***	***0***	***0***	***0,10***	***0,27***	***0,06***	***0,01***	***0***	***0***	***0,38***
Adj + Dem + CN	1	0	0	1	8	2	4	2	0	0	0
(percentage in NP incl. CN) %	***0,02***	***0***	***0***	***0,05***	***0,06***	***0,03***	***0,05***	***0,03***	***0***	***0***	***0***

Table 27: Determination patterns in early Old English manuscripts (%)

Generally, it can be observed that nominal determination patterns are distributed similarly in the manuscripts. In all texts the pattern Dem+CN makes up between 25% and 30% of all NPs which include a common noun. Only in the three law texts the percentage is lower (around 20%) but this is probably a genre issue. It seems reasonable to assume that in a law text, fewer examples of NPs with definite reference can be identified because such a text makes very general statements about human interaction in general, e.g. *if a farmer kills an ox of some neighbor*, etc. Not many cases of unique, specific referents can be expected here. Additionally, in law texts individual legal cases are listed one after the other and no narrative structure (with the use of anaphoric reference markers) emerges.

The other basic determination pattern Poss+CN adds up to 6-15% in the texts. The GenP+CN pattern occurs in a range between 5 and 12% in all manuscripts. Therefore, it can again be generalized that Dem+CN is the most frequent pattern to mark definite reference in Old English.

The pattern Dem+PN is used as rarely as in the *Chronicles* – around 3% – with *Boethius* being the exception with a higher percentage (7,8%). Interestingly, the usage of Dem+Adj+CN differs slightly in the manuscripts. Whereas it is only used in about 2% of all the cases in the law texts, it is used much more in the homilies or the philosophical and religious texts (around 10%). This of course may again be a matter of genre. Descriptive narratives are stylistically more complex, and it is to be expected that adjectival modification of some concepts is more likely in a philosophical or religious manuscript than in a law text or a chronicle.

Additionally, I would like to draw the reader's attention to the bottom right of Table 28. It can be observed that in the o.2 period more instances of unusual (word order) patterns can be found. The demonstrative occurs in a different position in the pre-head and co-occurs with other elements. The number of these examples is still extremely low (< 1% of all NPs including a CN), but one can definitely find more hits than in the later o.3 period (compare the number of hits in the o.3 texts (bottom left) with the o.2 texts).

In the following sections, those unusual determination patterns shall be studied in more detail. In other words, I will try once again to apply the criteria for articlehood. I decided to concentrate on the three criteria which have turned out to be the only

conclusive criteria. Interestingly, those were the ones which have been termed PRIMARY CRITERIA in 2.3.2 and which have strongly been linked to the existence of a determination slot: CO-OCCURRENCE, OBLIGATORINESS and RELATIVE POSITION.

5.4.1 Criterion: Co-occurrence

First, the CO-OCCURRENCE criterion was tested. As was shown in the last section, co-occurrence of Poss+Dem/Dem+Poss does not exist in the *Parker Chronicle* and is very rare in the *Peterborough Chronicle*. Interestingly, no instances of Poss+Dem/Dem+Poss without adjectival modification could be found in the *Peterborough Chronicle*. This is the reason why it is necessary to investigate this pattern in other manuscripts. If more examples of co-occurrence can be found in the earlier o.2 texts than in the later manuscripts, we can assume that some change in the grammar has taken place which is responsible for the disappearance of the pattern.

Indeed slightly more examples of co-occurrence can be found in the earlier o.2 texts. Although the *Parker Chronicle* and the *Laws* show almost no co-occurrence patterns, the demonstrative collocates with the possessive in the other four investigated o.2 manuscripts. There, also instances for Dem+Poss+CN without adjectival modification can be found.

Table 27 shows that the search query produces hits for all the four types of co-occurrence patterns in *Bede* and *Boethius*.[181] The first type, Dem+Poss+Adj+CN, we only find in *Bede* and *Boethius* (3 examples all together; e.g. ex.91).

(91) þa sumu we nu gemdon geþeodan
(of) which some *we now* *have taken care to insert*

in **þis user ciriclice stær**.
*in **this/the our ecclesiastical history***.

(cobede,Bede_4:8.282.20.2857)S45

Again, it is debatable if we should analyze the NP with Dem+Poss as elements of the same NP, or if we give the demonstrative appositional status. In 91, it is possible to

[181] Compare Allen's study (2006: 157) on the co-occurrence patterns in OE texts.

interpet *this* as an independent appositional phrase in the sense of *this, our ecclesiastical history.* To argue for an appositional structure also seems reasonable because *þis* here is the compound demonstrative with a stronger deictic force. As was pointed out earlier, the article did not derive from the compound demonstrative.

More examples for the word order variation Poss+Dem+Adj+CN are listed; 11 in *Orosius* (e.g. ex.92), 26 in *Bede* (e.g. ex.93). The pattern is also attested twice in *Boethius* (e.g. ex.94) and twice in *Cura Pastoralis*.

(92) þa sendon hie Filonem **hiora þone gelæredestan mon**
*Then sent they Filone **their that/the most learned man***

to þon þæt he him sceolde Gaiuses mildse geærendian.
to the one so that he should carry him (news of) Gaius' mercy
(coorosiu,Or_6:3.135.25.2855)S46

(93) & **his þæm godan willan** wel gefultmode Felix se biscop,
*and **his that/the good will** was well seconded by bishop Felix*

se cwom of Burgundena rices dælum, þær he wæs acenned & gehalgod.
who came from the district of Burgundy, where he was born and consecrated.
(cobede,Bede_2:12.142.18.1372)S46

(94) Swaþeah is an ælmihtig God on **his þære hean ceastre**;
*nevertheless (there) is an almighty God in **his that/the high castle***
(coboeth,Bo:40.141.6.2813)S46

Also the simple Poss+Dem+CN pattern without an adjective occurs. The pattern is not very frequent with 3 examples in *Bede* (e.g. ex.95), 1 in *Boethius* (ex.96) and 2 in the *Introduction to Alfred's Laws* (ex.97).

(95) Forðon he wiste & gemunde: se þe cwæð, lufa ðu þinne Dryhten God,
For he knew and remembered: he who said: love you your Lord God,

se ilca cwæð, lufa ðu **þinne ðone nehstan**.
*He also said: love you **your that/the neighbor**.*
(cobede,Bede_4:29.370.6.3698)S38

(96) gegaderode þa saula & þone lichoman mid **his þam anwealde**,
*gathered the souls and the body with **his that/the power***
(coboeth,Bo:30.69.22.1291)S38

(97) Gif hwa slea **his ðone nehstan** mid stane oððe mid fyste,
If anyone beats ***his that/the neighbor*** *with a stone or with (the) fist*
(colawafint,LawAfEl:16.41)S38

The word order variation Dem+Poss+CN occurs more often. 13 times in *Bede* (e.g. ex.98), 16 times in *Boethius* (e.g. ex.99), 5 times in the *Pastoral Care* (e.g. ex.100) and once in *Orosius* (e.g. ex.101) and twice in the *Laws of Ine* (e.g.ex.102).

(98) & þa gemette **þone his geþoftan** slæpende.
And found ***this/the his comrades*** *sleeping.*
(cobede,Bede_3:19.244.1.2492)S32

(99) **ða mine þeowas** sindon wisdomas & cræftas & soðe welan;
These/The my customs *are wisdom and virtues and true wealth*
(coboeth,Bo:7.18.5.287)S32

(100) Swa eac **ða his folgeras**, swa hie unwiðerweardran & gemodran beoð,
So also ***these/the his followers****, so friendly and unanimous they are,*

swa hie swiður hlecað tosomne,
so close they unite together,
(cocura,CP:47.361.19.2448)S32

(101) **Se heora cyning** ongan ða singan & giddian,
This/The their king *began to sing and recite*
(coorosiu,Or_1:14.35.14.683)S32

(102) Gif ceorl ceap forstilð & bireð into his ærne,
If [a] husband steals cattle and brings it to his house

& befehð þærinne mon, þonne bið **se his dæl**
and one finds it there then [he] for ***this his part***

synnig butan þam wife anum,
is alone guilty without the wife
(colawine,LawIne:57.153)S32

Again we may subtract several ambiguous cases. For example, ex. 98 seems to be an appositional construction (*þone* is singular whereas *his geþoftan* is plural, which suggests a construction like *and found this, my comrades)*. In ex. 99 & 100 *ða* could

also be the adverb *then.* Still, it cannot be denied that the results confirm that the co-occurrence of Poss+Dem/Dem+Poss in one NP existed in Old English.

Note that the manuscripts chosen are mostly translations from a Latin source. The question then is if the high amount of co-occurrence might be due to Latin influence and should be disregarded as evidence (see section 5.2.3). In the previous section, I already argued that those patterns should not be dismissed as Latin *calques*. Even if some of the examples might be direct translations from the original Latin source, many of them are not. This shall be exemplified by a small study investigating the *Orosius* examples.

5.4.1.1 The influence of Latin on the co-occurrence of determinatives in *Orosius*

Below the 11 examples of Poss+Dem+Adj+CN and the 1 example of Dem+Poss+CN in *Orosius* are listed with their Latin counterparts.[182] Nowhere we find a direct translation of the Poss+Dem combination. In terms of content, we do find corresponding Latin NPs in examples 103 – 109, but those have different NP structures.

(103) ne dorste Cassander self on ðæm færelte cuman,
not might Cassander himself on this way come

for **his ðæm nihstan feondum** þe him ymb wæron.
*because of **his those/the nearest enemies*** *that him around were*
(coorosiu,Or_3:11.81.16.1619)S46

Cassander **finitimorum (*of the near ones*)** *bellis implicitus*, Lysimachum *cum ingenti* manu *pro se* sociis in auxilium misit. Seleucus quoque *novus Antigono hostis accessit*. Hic siquidem Seleucus plurima per orientem *bella gessit*.

(104) & **hiora þæt þridde gefeoht** wæs on Lucaniam,
*and **their that/the third fight** was in Lucania,*

on Arosinis þære dune;
on the field/hill Arosinis
(coorosiu,Or_4:1.85.29.1727)S46

[182] The Latin passages are taken from Sweet (1883).

Interea reversum ex Sicilia Pyrrhum Curius consul excepit; **tertium id bellum (*3rd the battle*)** *contra Epirotas* apud Lucaniam in Arusinis campis *gestum est.*

(105) a sendon hie þider Amilchor, **heora þone gleawestan mon**,
*then sent they Amilchor thither, **their that/the most skillful man**,*

þæt he Alexandres wisan besceawade,
that he Alexander's manner (may) watch
(coorosiu,Or_4:5.90.20.1828)S46

Amilcarem *quemdam*, **virum solertia praecipuum**, **(*a man distinguished by skill*)** ad perscrutandos Alexandri actus *direxerunt*: qui omni civibus suis per tabellas scriptas et post cera superlitas, enunciabat

(106) On **hiora þæm forman gefeohte** wæs Romana III M ofslagen,
*in **their that/the first fight*** *was Romana III M slain*
(coorosiu,Or_4:7.97.5.1989)S46

Nam **in primo conflictu (*in the first fight*)** tria millia quingenti cecidere Romani

(107) Æt þæm feorðan cirre hie sendon Hannan **heora þone unweorðestan þegn**
*At the fourth occasion they sent Hanna **their that/the unworthiest thane***
(coorosiu,Or_4:7.97.19.2000)S46

et *cum* bis missis legatis nihil *profecissent*, *post* etiam decem principibus *supplicantibus*, nec impetrarent, ***novissime*** **Annonis, minimi *hominis* inter legatos**, **(*lowest of man, among the legators*)** oratione meruerunt.

(108) þa sendon hie Filonem **hiora þone gelæredestan mon**
*Then sent they Filone **their that/the most learned man***

to þon þæt he him sceolde Gaiuses mildse geærendian.
to the one that he should carry him (news of) Gaius' mercy
(coorosiu,Or_6:3.135.25.2855)S46

apud Alexandriam *profligate caede*, atque urbe propulsi, *expromendarum querelarum* causa Philonem, **virum *sane* in primis eruditum**, **(a *man indeed exceedingly educated*)** legatum ad *Caesarem* miserunt.

(109) & Mammea **his sio gode modor** sende æfter Origenise
*and Mammea, **his that/the good mother*** *sent* *after Origenise,*

þæm gelæredestan mæssepreoste,
the most learned mass-priest

(coorosiu,Or_6:18.143.3.2999)S46

cujus mater Mammaea, *Christiana*, Origenem Presbyterum *audire curavit*.

In the following examples, 110 – 112, the corresponding Latin passage does not even include a Latin NP which corresponds to the Old English 'translation'.

(110) On **hiora ðæm ærestan gewinne** Amilcor, Cartaina cynig,
*On **their that/the first battle/war*** *Amilcor, king of Carthage*

þa he	to Romanum	mid firde	faran wolde,
when he	*against the Romans*	*with an army*	*wanted to go (to war),*

þa wearð he	from Spenum	beþridad & ofslagen.
then was he	*by the Spanish*	*overcome and killed.*

(coorosiu,Or_4:7.98.3.2012)S46

Anno ab urbe conditia DXVII, Amilcar, dux Carthaginiensium, ab Hispanis *in bello*, cum *bellum adversus Romanos pararet*, occisus est.
(no Latin counterpart)

(111) **Hiora ðæt æfterre gefeoht** wæs æt Trefia ðære ie,
their that/the second fight *was at Trefia the river*

(coorosiu,Or_4:8.100.3.2061)S46

Pugnatumdeinde ad flumen Trebiam, iterumque Romani *pari* clade suerati sunt. (**no Latin counterpart**)

(112) & begeat Siracuses, **heora þa welegestan burg**, þeh he hie
and obtained Syracuse, ***their that/the wealthiest town*** *(the one that he)*

æt þæm ærran færelte begietan ne mehte,
at the preceding expedition could not obtain,
(coorosiu,Or_4:10.103.8.2133)S46

secunda oppugnatione vix cepit, quam, cum jam pridem obsedisset,
Archimedis Syracusani civis, *admirabili* ingenio *praediti*,
(**no Latin counterpart)**

Finally, example (113), and (114) show that sometimes it is even the case that no related Latin passage can be found in the Latin original. The following examples were added to the Old English version as new text.

(113) **Se heora cyning** ongang þa singan & giddian
That/the their king *began then to sing and to recite*
(coorosiu,Or_1:14.35.14.683)S32

(114) Eala, Romane, hwa mæg eow nu truwian
Alas, Romans, how may you now trust

þa ge swylc lean dydon **eowrum þam getrywestan witan**?
that you such reward gave (to) ***your those/the most loyal councilors***?
(coorosiu,Or_5:4.119.3.2492)S46

This shows us that in the particular case of *Orosius*, very often the existing Poss+Dem/Dem+Poss construction must not be interpreted as a direct translation. Rather, the creativity of the scribe suggests that the pattern was indeed part of an Old English register. Still, one aspect has not been discussed yet. Even if we accept that co-occurrence was part of an Old English register, the pattern is extremely infrequent. Even if we do not exclude any of the potential ambiguous examples, 44 cases in *Bede*, 20 in *Boethius*, 7 in the *Pastoral Care*, 12 in *Orosius* and 2 in the laws texts do not seem a sufficient number to argue against the existence of a determination slot which we assume can only be filled by one determinative at a time. They constitue less than 1% of all CN NPs. Poss+Dem/Dem+Poss is not productive pattern at all. Thus, it must be concluded that the CO-OCCURRENCE criterion is met in early Old English.

5.4.2 Criterion: Relative position

The next criterion is RELATIVE POSITION. In the *Peterborough Chronic*le we could only find one instance where an adjective precedes the demonstrative but it was possible to interpret the adjective as the head of a separate NP with a genitive construction following.

In the *Parker Chronicle* we also find only one example:

(115) & þreo stodon æt **ufeweardum þæm muðan** on drygum,
*and three stood at **upward the (river-)mouth** on dry land*
(cochronA-2b,ChronA_[Plummer]:897.30.1136)S43

In *Bede*, 8 instances of the pattern Adj+Dem+CN can be found, but interestingly all cases include adjectives which mean *middle* (eg. ex. 116-118). This then leads to the question if the pattern is really productive or if it is only applied in the special cases of *middle* and *-weardum*.

(116) Wæs micel fyr onæled on **middum þam huse**.
*A large fire had been kindled in **middle that/the house**.*
(cobede,Bede_3:8.180.26.1799)S43

(117) we ða wæron on **midre ðære sæ**,
*we then were **in middle the sea**,*
(cobede,Bede_5:1.384.18.3832)S43

(118) & he mec forlet in **middum þæm þeostrum** ond ðære ongrislican gesihðe.
*and he me left **in middle the darkness** and that fearful vision.*
(cobede,Bede_5:13.426.16.4287)S43

Also the two cases 2 in *Boethius* include *middle* (e.g. ex.119):

(119) Hu meahtes þu bion on **midre þisse hwearfunga**
*How might thou be in **middle this change/instability**,*

þæt ðu eac mid ne hwearfode?
that you did not also change with?
(coboeth,Bo:7.18.26.299)S43

In *Pastoral Care* we find 4 hits all of which include *middle* or *from behind* (e.g. ex. 120, 121 & 122):

(120) he bið on **middum ðæm ofne** gecirred to are.
he is *in **middle the oven**,* *turned into bronze*
(cocura,CP:37.267.24.1747)S43

(121) Forðæm æfner, ða ða he ongean ðone cirde ðe hine draf,
Therefore *when he turned against* *the one that drove him,*

ne ofstong he hiene no mid ðy speres orde,
he did not stab him *not with the spear's point*

ac mid **hindewerdum ðam sceafte**.
*but with **hind part of the shaft**.*
(cocura,CP:40.297.9.1957)S43

(122) & gað from geate to geate ðurh **midde ða ceastre**,
and go *from gate to gate* *through **middle the castle***
(cocura,CP:49.383.1.2586)S43

In Orosius we find two examples, again both of them used in special constructions with *-weardum*.

(122) þonne is an port on **suðeweardum þæm lande**,
there is a port *on **southwards the land***

þone man hæ Sciringesheal.
that one calls *Sciringesheal.*
(coorosiu,Or_1:1.16.2.281)S43

(123) Swa egefull wæs Alexander þa þa he wæs on Indeum,
So terrible *was* *Alexander* *when he was in India,*

on **easteweardum þissum middangearde**, þætte þa from him ondredan
*on **eastwards this middleearth,*** *that then from him were afraid*

þe wæron on westeweardum.
those that were westwards
(coorosiu,Or_3:9.74.2.1454)S43

As all of the 16 examples where an adjective precedes the demonstrative are very special, they do not indicate that the demonstrative is still floating around freely in the prehead of Old English. The pattern Adj + Dem is by no means a productive pattern of Old English. In other words, I suggest that already in early Old English the demonstrative *se* (and presumably all other determinatives) mostly occur in a rather fixed position in front of the adjective. This suggests that the RELATIVE POSITION criterion is met in Old English and that a determination slot to the left of the modificational elements may have already been conceptualized by the speakers.

5.4.3 Criterion: Obligatoriness

In order to investigate the OBLIGATORINESS criterion on a larger scale, I decided to analyze four of the selected texts in more detail: *Bede* (80,767w.), *Boethius* (48,443w.), *Pastoral Care* (68, 556 w.) and *Orosius (*51,020w.). The texts were chosen because they have a high word count and thus represent the larger text samples among the manuscripts. Note that in the handbooks on Old English literature all of them are treated as translations from Latin, but as has been pointed out in previous chapters, for some texts the term 'translation' does not seem to fit because the Old English version strongly deviates from its Latin counterpart (especially *Orosius* and *Boethius*). Therefore, I argue that those texts are representative of Old English prose and can be used for analysis without having to take into consideration the possibility of transfer phenomena from Latin. The Law texts were only excluded from analysis because it would go beyond the scope of this paper to analyze all manuscripts. Note, however, that I am well aware that the OBLIGATORINESS criterion should also be investigated in this particular genre. Such an analysis will have to be one of many future projects.

5.4.3.1 Bare common nouns

To answer the question how obligatory the overt marking of definiteness was in early Old English, the same procedure was used as in the *Peterborough* and *Parker Chronicle*. All one-word NPs including a common noun (S23) were searched for. This produced 1325 hits for *Bede*, 601 hits for *Boethius*, 744 hits for *Pastoral Care* and 839

hits for *Orosius* (see table 28). Again note that a search query for one-word NPs does not produce an output which includes all the potential cases where overt definiteness marking may be missing. [183]

Again, every example was analyzed individually, and based on the context it was decided if the NP was definite, indefinite or non-referential. In order to reduce the number of 3509 examples, and in order to make results comparable to the *Parker Chronicle*, where 251 NPs were analyzed, I decided to have a closer look at the first 250 examples listed in each output file. In other words, for each text, I analyzed the first 250 examples of NPs with a bare common noun.

Following the procedure that was set up for the *Peterborough* and the *Parker Chronicle*, all indefinite and non-referential NPs (e.g. 124 – 129) were excluded:

(124) He cuæð: ða ic hæfde ðone weall ðurhðyrelod, ða geseah ic **duru**.
He said: *when I had the weall pierced* *I saw **[a] door***
(cocura,CP:21.155.3.1053)S23

(125) ðætte ða sacerdas ne scoldon no hiera heafdu scieran
that the priests *should not their heads* *shave*

mid **scierseaxum**, ne eft hi ne scoldon hira loccas lætan weaxan,
*with **razors**,* *nor should they let* *their locks grow*

ac hie scoldon hie efsigean mid **scearum**.
but they should *clip them* *with **scissors***
(cocura,CP:18.139.11.945)S23

(126) Gif ge nu gesawan hwelce mus þæt **wære hlaford** ofer oðre mys,
If you now saw *some mouse* *that **was lord*** *over other mice,*

& sette him domas, & nedde hie æfter gafole,
and set them judegments *and subject them* *to tribute*

hu wunderlic wolde eow ðæt þincan.
how wonderful *would you think it*
(coboeth,Bo:16.35.30.648)S23

[183] The output of the query only lists one-word NPs where the noun stands completely alone (unmarked) and does not get modified by any additional word (e.g. an adjective) or phrase (e.g. a relative clause).

(127) & hu he Darius þone cyning oferwon;
and how he king Darius overcame

& hu he self wearð **mid atre** acweald.
and how he was ***with poison*** *killed*
(coorosiu,OrHead:3.9.32)S23

(128) þæt he wære on Truso on syfan dagum & nihtum,
that he was in Truso in seven days and nights,

þæt þæt scip wæs ealne weg yrnende **under segle**.
that the ship was all [the] way ***under sail***.
(coorosiu,Or_1:1.16.21.296)S23

(129) **on sumera** hit bið wearm, & **on wintra** ceald.
i*n summer* *it was warm and* ***in winter*** *cold*
(coboeth,Bo:21.49.19.894)S23

After doing so, I ended up with the following number of definite NPs in which the noun referred to a specific, identifiable entity: 40 examples in *Bede*, 18 in *Boethius*, 19 in the *Pastoral Care* and 26 in *Orosius*.

250 bareNPs	*Bede*	*Boethius*	*Pastoral C.*	*Orosius*
exclude	7	12	7	8
indefinite	138	169	186	139
non-referential	65	51	38	78
definite	40	18	19	25

Table 28: Relation between non-referential, indefinite and definite contexts with bare NPs in o.2 texts

As a next step, which was also taken in the Chronicles, special syntactic constructions were excluded. After doing so, in all four texts, again only a few cases remained where no determinative is used although reference is made to a specific, identifiable entity (see Table 29).[184] If we now calculate how many bare noun cases in definite context we find

[184] These numbers include singular count, plural count and non-count nouns (compare Table 19).

in the whole sample of one-word CN NPs (not ony in the first 250 NPs), we end up with 165 examples in *Bede*, 26 in *Boethius*, 36 in the *Pastoral Care* and 57 in *Orosius*.[185]

Manuscripts	**definite contexts in the first 250 examples**	**special constr.**	**bare CNs in 250**	**bare CNs in complete sample**
Bede'	40	9	31/250	(165/1325)
Boethius	18	7	11/250	(26/601)
Pastoral C.	19	7	12/250	(36/744)
Orosius	25	8	17/250	(57/839)

Table 29: Bare definite common noun phrases in early Old English prose

These are the the 'famous' cases of bare definite nouns which are always discussed in the handbooks and which are considered to be important evidence for the non-obligatoriness of definiteness marking in Old English. Once again it has to be pointed out that the number of examples is extremely low.

For example, in the case of Bede, 3246 cases were found where the demonstrative preceeds the CN, 1359 cases where a possessive pronoun marks the NP overtly and 1483 cases where a genitive constructions functions as a determinative. This means that in 6088 cases definiteness is overtly marked by a determinative in *Bede*. Now, it simply cannot be argued that 165 instances (where an overt determinative is missing) corroborate the assumption that Old English was a linguistic stage where definiteness marking is optional. Given the fact that only in an extremely small percentage of definite NPs the noun remains bare, it can only be concluded that definiteness marking is already quite consistent in early Old English and that the OBLIGATORINESS criterion is met.

If we analyze the examples in detail, it can again be seen that the nouns which are reluctant to overt marking are again special ones. The instances below show that again the majority of examples which are found without a determinative contains body parts and unique words like *the devil*, *heaven* or *the sea* (e.g. 130 – 135).

[185] In the *Peterborough Chronicle*, in 32 cases a determinative was missing. In the *Parker Chronicle*, 8 examples out of 251 lack a determinative.

(130) He is swiðe biter **on muðe**,
*He is very bitter **in [the] mouth***
(coboeth,Bo:22.51.2.927)S23

(131) þæt he wearp þæt sweord onweg þæt he **on handa** hæfde,
*so that he threw the sword away that he **in [his] hand** had*

& him **to fotum** feoll.
*and him **to [the] feet** fell*
(cobede,Bede_1:7.38.18.318)S23

(132) To hire gerestscipe þonne hire wer ne sceal gongan,
To her bed then her husband shall not go,

ær þon þæt acennde bearn **from meolcum** awened sy.
*before the new born is weaned **off [the] breasts***
(cobede,Bede_1:16.76.27.711)S23

(133) Gif hine þonne yfel mon hæfð, þonne bið he yfel þurh þæs monnes yfel
If then an evil man has it, it is evil through the man's evil,

þe him yfel mid deð, & **þurh dioful**.
*who does evil with it and **through [the] devil**.*
(coboeth,Bo:16.38.26.702)S23

(134) On ðære wæron ða stænenan bredu ðe sio æ wæs on awriten
In it were kept the stone tablets on which the law was written

mid tien bebodum,[…], & eac se sweta mete
in ten commandments […] and also the sweet food

ðe hie heton monna, se him cuom **of hefonum**.
they call manna which came to them ***from [the] heaven***.
(cocura,CP:17.125.17.847)S23

(135) & þone mæstan dæl his hæfð **sæ** oferseten.
and *the greatest part of it has **[the] sea** covered*
(coboeth,Bo:18.41.28.758)S23

5.4.3.2 Unique common nouns

If we again examine the group of 'unique' nouns (e.g. *heaven, sun,* etc…), it can be confirmed that those words do not consistently resist definiteness marking. Most of these words repeatedly occur in combination with a determinative in the texts.
Table 31 shows how often some unique nouns occur with or without a determinative in the selected old English texts.

	sun		**moon**		**heaven**		**hell**		**knee**		**head**		**(middle) earth**		**flood/ tide**	
+d/ -d	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
PA	2	4	1	1	-	-	-	-	-	-	1	-	-	1	1	1
Bede	2	1	1	-	-	4	-	1	3	-	14	1	4	22	1	-
Boethius	35	1	10	-	8	-	1	1	-	-	-	-	9	2	-	-
Cura P.	4	-	1	-	-	-	-	7	-	-	10	-	9	-	-	1
Orosius	6	-	2	-	2	-	-	2	3	-	7	1	8	8	3	1
Laws A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LawsAI	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
LawI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O2	**49**	**5**	**15**	**1**	**10**	**4**	**1**	**11**	**6**	**0**	**32**	**2**	**30**	**35**	**5**	**3**
ACH1	18	-	13	-	4	5	-	9	1	1	27	1	23	53	1	1
ACH2	19	5	-	-	2	-	1	10	8	-	24	-	18	21	1	1
ALoS	20	-	-	-	1	-	1	15	5	3	29	1	18	60	2	1
PB	2	3	10	-	5	1	-	1	-	2	8	1	-	1	2	-
03	**59**	**8**	**23**	**0**	**12**	**6**	**2**	**35**	**14**	**6**	**88**	**3**	**59**	**135**	**6**	**3**

Table 30: Distribution of *se* with unique common nouns in Old English texts

The nouns *sun, moon, heaven, knee, head* and *flod* are marked by a determinative more often than they occur bare. Only *hell* and *middleearth* mostly occur bare. Also, it can be seen that the situation is similar in the later manuscripts. There the use of *se* with unique nouns does not become more consistent.

Admittedly, it is true that the handbooks are correct when they claim that if a noun occurs bare in a definite context, this is mostly the case with unique nouns, (body parts, directions, *devil, middleearth, …)* which could be interpreted as inherently definite

(similar to proper nouns), but as these words are often used with determinatives as well, the lack of a determinative in a few cases does not suggest a linguistic state where marking of definiteness is entirely optional. We can thus conclude that the cases of bare nouns seem to be special cases being the last ones to sporadically resist the marking process.

5.5 Preliminary conclusions: category and slot emergence at o.2

In this chapter I have analyzed a large amount of data in order to find out about the status of the Old English demonstrative *se*. I have investigated several definite NP patterns in various Old English prose texts. Several search queries have been run to determine the frequency of some determination patterns (position, occurrence and non-occurrence of determinatives in the prehead). As the demonstrative *se* is part of the prehead, mainly the OE prehead has been analyzed. Common and proper nouns and how they combine with demonstratives, possessives and genitive constructions have been examined. Also the criteria for articlehood, which were set up in section 2.3.2, have been tested. First, the *Peterborough* and the *Parker Chronicle* have been investigated; next the investigation has been extended to other early Old English prose texts. This has been necessary because it has turned out that by exclusively looking at the *Peterborough* and the *Parker Chronicle*, the existence of a determination slot and a definite article in Old English could not be attested free of doubt.

On the one hand, evidence exists which seems to suggest that the form *se* took up article function. When investigating the development of *se* diachronically by splitting up the texts into periods it could be observed that

a) the token frequency of *se* + CN drastically increases in both Chronicles;
b) the use of the compound demonstrative *þes* increases;
c) using *se* with singular proper names decreases.

This has been interpreted as strong evidence for the fact that the form *se* loses it deictic force and takes up article function whereas the compound demonstrative gets employed

more often to express proximity or emphasis, thereby filling a semantic gap that was opened by the grammaticalization of *se*.

On the other hand, the picture is not as conclusive as it seems. For example, it has been observed that type frequency only increases in the *Parker* but not in the *Peterborough Chronicle*. Additionally, the diachronic development of the compound demonstrative *þes* shows some unexplainable fluctuation in the *Peterborough Chronicle*. Thus it has to be concluded that the diachronic investigation of the *Peterborough Chronicle* yielded inconclusive results.

Moreover, some of the tested criteria have not lead to conclusive results either because some patterns only occurred once or twice in the *Peterborough Chronicle.* In addition, the application of some criteria has turned out to be problematic. For example, the EXCLUSIVENESS criterion could not be applied successfully at all. The criteria PREDICATION, INDEPENDENCE and SYNTACTIC MOTIVATION ONLY could be applied but the results do not really tell us much about *se* in its function as a prehead determinative. Thus, only three criteria have turned out to be helpful for investigating the role of *se* in the Old English prehead. Those have been RELATIVE POSITION, CO-OCCURRENCE and OBLIGATORINESS. All of them suggest that the grammar used in the *Peterborough Chronicle* employs a functional determination slot.

Finally, the results in the *Peterborough Chronicle* and the *Parker Chronicle* tell us little about the situation of nominal determination in other genres. The two manuscripts are tagged as rather late (o.3/o.4) texts. For this and other reasons (mentioned in the subsections), I have also investigated other Old English texts. On the basis of these, the following results have been obtained:

Generally, it can be observed that nominal determination patterns are distributed similarly in the manuscripts. It can be generalized that Dem+CN is the most frequent pattern to mark definite reference in Old English. In all texts the pattern Dem+CN makes up between 25% and 30% of all NPs which include a common noun. Only in the law texts is the percentage lower (around 20%), but this is probably a genre issue. The other basic determination pattern Poss+CN adds up to 6-15% in the texts. The GenP+CN pattern occurs in a range between 5 and 12% in all manuscripts. In other words, the concept of possession is less often expressed than the concept of deixis (e.g.

my house vs. *this/that house*) in the prehead. This fact will be highly relevant for the argumentation to come in chapter 6.

The pattern Dem+PN is as rare as in the *Chronicles*, (around 3%) with *Boethius* being the exception with a higher percentage of 7,8%. Interestingly, the usage of Dem+Adj+CN differs slightly in the manuscripts. Whereas it is only used in about 2% of all the cases in the law texts, it is used much more in the homilies and the philosophical and religious texts (around 10%). This of course may again be a matter of genre. Some genres are stylistically more complex than others, and it is to be expected that adjectival modification of some concepts is more likely in a philosophical or religious manuscript than in a law text or a chronicle.

Regarding the criteria for articlehood, the following criteria have been tested on the early Old English prose texts: RELATIVE POSITION, CO-OCCURRENCE and OBLIGATORINESS. Note that this thesis is based on the idea that the existence of the definite article is linked to the existence of a positional, lexically underspecified determination slot. It has been argued that we should not separate the notion of articlehood from the existence of a determination slot. In order to speak of an article, a slot has to emerge first in the cognitive makeup of the speaker. The term article should only be introduced in English when we also can identify a fixed positional determination slot. This slot becomes functional and certain rules on how it has to be treated are attached to it. Only after the positional fixation of such a slot, is it likely that an element is employed as its default filler. The three tested criteria are strongly related to such a functional slot.

Regarding the RELATIVE POSITION criterion, it has been concluded that the examples where an adjective precedes the demonstrative are not very convincing ones. The pattern Adj + Dem is by no means a productive pattern of Old English. In other words, the demonstrative *se* mostly occurs in a rather fixed position in front of the adjective in Old English. This suggests that the RELATIVE POSITION criterion is met in early Old English and that a determination slot to the left of modificational elements has already been conceptualized by the speakers.

Regarding the OBLIGATORINESS criterion, only a handful of cases exist where the determinative seems to be missing although reference is made to a specific identifiable entity. Only these few represent the ‘famous’ cases of bare definite nouns,

which are always discussed in the handbooks and which are considered as important evidence for the non-obligatoriness of definiteness marking in Old English. In has been shown that most of the cases are special unique nouns. They seem to be special cases being the last ones to sporadically resist the marking process. Note that for each of those cases counterexamples can be found where the same noun is marked by *se* or another determinative. Based on these results, we have to conclude that definiteness marking is already quite consistent in early Old English. Hence, it can only be concluded that the OBLIGATORINESS criterion is met.

Regarding CO-OCCURRENCE, it could be shown that that the Poss+Dem/Dem+Poss construction is part of an Old English register. The question, however, is if the pattern is frequent enough to to argue against the existence of a determination slot, which can only be filled by one determinative at a time? As Denison (2006: 290f.) points out, a pattern might be infrequent for other reasons than marginal grammaticality, including full grammaticality but restricted pragmatic usefulness. Therefore, in a strict sense, the CO-OCCURRENCE criterion is not met.

Still, it must be made clear that even if we take the existence of such co-occurrence patterns seriously, they constitute less than 1% of all CN NPs. Poss+Dem/Dem+Poss is not productive pattern at all. As a consequence, I suggest that the speakers of early Old English already use a grammatical system in which a determination slot has been implemented. Based on the results for the other two criteria, I argue that in early Old English it has already become the 'rule' to mark definiteness obligatorily by filling this positional slot. The fact that Poss+Dem still exists shows us that the emergence of such a determination slot is a gradual process. Obviously, it will take some time until the system reaches a point where definiteness marking becomes completely regular and gets extended to all the cases that we know of today.

I have to admit that the idea to set up criteria for articlehood based on Modern English and to apply them on an older language stage has failed. Out of 7 criteria, only 3 turned out to be useful. And out of those 3, only 2 clearly speak for the existence of a determination slot. This, however, again underlines what scholars have said about the fuzziness of categories and the inability to capture linguistic relativity by Aristotelian categorization. Language is constantly changing, and linguistic behavior at one stage

may not be analyzable with tools that have been set up for anaylzing linguistic behavior at a later stage (see my final conclusion (chapter 7) for further thoughts on this issue).

> *Every utterance, including every historical innovation, is sanctioned both by the regularities that constitute grammar and by more general functional, cognitive and pragmatic factors and constraints. (De Smet 2008: 86)*
>
> *Analogy making lies at the heart of intelligence. (Hofstadter 1995: 63)*

6. Causal mechanisms of category emergence

The second major aim of this thesis is to examine the reasons for a particular change in grammar – from a grammar that has no definite article to a grammar that employs this category. As has already been argued in chapter 2 and 5, the change in grammar which is seen as the prerequisite for article development in English is the emergence of a positional, syntactic, lexically underspecified determination slot, which becomes functional itself. In the last section I suggested that this slot already existed in the early o.2 period. Why and how the emergence of such a determination slot was likely in the history of English and what factors may have led to the emergence of the article category will be discussed in the following sections.

Generally, the development of the definite article has been interpreted as a phenomenon caused by grammaticalization or reanalysis, with a heated debate about those two notions being either epiphenomenal descriptive terms or 'real' causal mechanisms and thus driving forces of linguistic evolution. Although linguistic change tends to be multi-causal and although I will not argue against the general possibility to describe and name the inferable reinterpretation of the linguistic system as a case of reanalysis or grammaticalization, I agree with Fischer (2007) and De Smet (2008, 2009) that often the process of reanalysis can and should be broken down "into more fundamental mechanisms of language change, including (among others) analogy" (De Smet 2009: 1730). It will be suggested that not only semantic–pragmatic but also formal

'system-internal' factors[186] are responsible for the grammaticalization of the demonstrative. All of these factors push the demonstrative down its grammaticalization path. When it comes to the development of the definite article, a usage-based, analogical model of morphosyntactic change – especially taking into account the frequency of linguistic surface forms (i.e. concrete tokens) and cognitive on-line processing – seems to be the most fertile one (Fischer 2007: 4; cf. Hawkins 2004). From such a point of view learning a language is schema-based rather than rule based, and structural similarities (i.e. position & overt shape of forms) can be a cause or stimulus of change (Fischer 2007: 326).

6.1 Slot emergence and grammaticalization of a schematic construction

So far one could conclude that it is quite obvious why the demonstrative should have developed into the definite article. What makes such a process likely is the broad functional overlap between the demonstrative and the definite article, which can be seen as a deictically unmarked demonstrative. The demonstrative was already very close to the definite article in terms of semantic content, so that all it had to lose was its deictic force. Moreover, the demonstrative – like the article – is attached to the head in the left periphery so that formally the syntactic position of the two elements is similar. Thus, one could interpret the rise of the article as a simple grammaticalization effect driven by the semantic and positional relatedness of demonstrative and article. What I hope to show, however, is that although those factors definitely played a role in the process, it would oversimplify the picture tremendously if one stopped here. As has been argued in previous chapters already, the development of the definite article does not only involve the processes of attrition (semantic bleaching, phonological reduction), fixation and obligatorification of a particular overt element (*se* > *the*), but it also seems to be linked to the cognitive conceptualization of a lexically underspecified determination slot. In the section on nominal determination, where the criteria for articlehood were set up, it

[186] By 'system internal' factors I mean the impact of the shape of the grammatical system. For example, the notion of 'system internal' forces includes, among other things, the idea that speakers strive for structural simplification as a principle of formal and functional economy.

was argued that one should not speak of the existence of a definite article in English unless such a slot has developed (see section 1.3; 2.3.2). The essential question then of course is why the speaker's mind constructs such a slot and why certain functions are attached to it.

Based on the results discussed in chapter 5, a simple but crucial observation can be made in Old English: it is hard to find noun phrases with a common noun as a head in a semantically definite context which are not marked by an element in the prehead that overtly marks them as being definite. Already at the earliest attested stage of Old English, a demonstrative or a possessive or a genitive construction almost always occurs somewhere in the prehead and marks the head as definite.

So if there is a common noun which is heading a definite NP in early Old English;

$$[\mathrm{CN}]_{\mathrm{NP\{def\}}}$$

and if the prehead can be filled by various elements;

$$[\ \_ + \_ + \_ + \mathrm{CN}]_{\mathrm{NP\{def\}}}$$

then it is very often the case that somewhere in the prehead at least one element X (by definition being a member of the class of determinatives) marks the NP as definite. Speakers simply often feel the need to express semantic notions like [possession] or [deixis]. Let us call this STAGE 1 at t_1[187] and assign the following NP-schema to it:

$$[\mathrm{X}_{\mathrm{determinative}} + \mathrm{Z}_{\mathrm{cn}}]_{\mathrm{NP\{def\}}}$$[188]

[187] STAGE1 at t_1 is represented by the linguistic evidence found in all the investigated manuscripts tagged as o.2 (see results in section 5).

[188] Note that the given annotation of the NP-schema does not follow any current formalization conventions used in a generative or a functional framework. In this notation, X, Y and Z represent concrete tokens or words with their word class attached as a subscript in lower case. The […] brackets represent a presumed syntactic construction whereas curly brackets { } are reserved for indicating the type of referentiality. Also note that in order to keep the formalization short, any kind of potential NP posthead will not be included in the annotation.

This rather simple NP-schema is very frequent.[189] Of course the NP can potentially be extended by adjectival modifiers[190], numerals etc., represented as $Y_{modifier}$:

$$[X_{determinative} + Y_{modifier} + \ldots + Z_{cn}]_{NP\{def\}}$$

At STAGE 1 the speaker faces input in which s/he recognizes various other NP types as well.[191] For example, as was shown in section 5.4.1, NPs with two determinatives in one NP occur:

$$[X_{determinative} + X_{determinative} + \ldots + Z_{cn}]_{NP\{def\}}$$

For example, ***his þa haligan sawle*** *to Godes rice asende*.[192] On top of that, the determinative is sometimes preceded to its left by another prehead element:

$$[Y_{modifier} + X_{determinative} + \ldots + Z_{cn}]_{NP\{def\}}$$

An example of this less prototypical word order pattern is *seo burhwaru underfengon* ***haligan þone lichaman***.[193] However, as was shown in section 5.2.4, such patterns are very rare, which leaves $[X_{determinative} + Z_{cn}]_{NP\{def\}}$ and $[X_{determinative} + Y_{modifier} + Z_{cn}]_{NP\{def\}}$ as the prototypical NP-schemata for NPs with definite reference. Thus, for STAGE 1, one thing which can safely be generalized is that whenever demonstratives or possessive or genitive constructions are being used, those elements are mostly positioned left of the head noun.

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[189] e.g. *þa noldon hi faron ofer* ***þone ford.*** *They would not cross over* ***the/that ford*** (cochronE,ChronE_[Plummer]:0.30.27)
or *Þænne* ***se yrthlingc*** *unscenþ* ***þa oxan****, ic læde hie to læse. When* ***the farmer*** *has unyoked* ***the oxen*** *I lead them to the pasture* (Garmonsway 1938: 19ff.)

[190] *Her* ***se eadiga apostol*** *Petrus geset biscopsetl on Antiochia ceastre. Here [in this year]* ***the blessed apostle*** *Peter occupied [the] bishop's seat in Antioch city* (cochronE,ChronE_[Plummer]:35.1.46).

[191] Obviously the same holds true for the later stages of English. A speaker encounters and uses many different types of NPs in his/her in- and output.

[192] ***His the/that holy soul*** *to God's kingdom sent* (cochronE,ChronE_[Plummer]:1012.12.1834).

[193] *the townpeople took up* ***holy the body*** (cochronE,ChronE_[Plummer]:1012.15.1835).

What is essential for the following argumentation is that putting determinatives left of the head at this stage does not necessarily imply the existence of a fixed positional slot in the prehead, where determinatives have to be inserted.[194] The speaker simply faithfully copies the linguistic constructions s/he encounters in order to follow the linguistic majority patterns in his/her speech community. English being a left-branching language, modifying and determinating elements simply cluster left to the head. Thus, the speaker, who follows a natural tendency to imitate, in his own linguistic production puts those elements there as well. The word order within the prehead at this stage still shows more variation and is less rigid.

At the same time, one can also argue that the function of defining the referent is 'parasitic' on the formal element. The definiteness function only attaches to the determinative 'parasitically'. Using for example, a demonstrative, automatically gives the NP definite reference. Still, the demonstrative's primary function is to express a spatial relation. Thus, the second essential point is that at such a linguistic stage, the overt marking of definite reference does not necessarily have to be obligatory yet. What comes to mind are languages where common nouns generally stay unmarked in definite contexts but where demonstratives exist as prehead dependents but can be used more freely (e.g. Finnish see section 2.2.1). Also in Old English, we still find the cases of bare NPs with common noun heads when referring to a definite referent.[195] At this stage marking definite reference is still optional.

Nevertheless, it might be possible that some speakers (i.e. a younger generation of learners) interpret the linguistic input of Stage 1 differently and develop an understanding of a regularity, where marking definite reference in a certain fixed position in the NP is obligatorily (> STAGE 2 at t_2). What causes this new interpretation of the linguistic system?

It is assumed that the learner's mind is sensitive to statistical information. How often a pattern occurs in the input will be influential because the learner is likely to be affected by the relatively high frequency of certain patterns. When analyzing the

[194] This can also be compared to the situation of adverbs in Old English, which seem to float around rather freely in the clause and still can occur in several positions (even between auxiliary and main verb), not being limited to occur at the margins of the clause (like in PDE).
[195] Although they seem to be rarer than suggested in the handbooks (see chapter 5).

linguistic STAGE 1 input, the learner's mind computes the following pattern preferences: First of all, the cases where no element is found that overtly marks the NP as definite are rare. As shown in chapter 5.2.5 and 5.4.3.1, if one excludes non-referential readings or special stylistic constructions, bare definite NPs with common noun heads are rather infrequent. Or to put it more simply, when the NP is definite, the common noun that functions as the head is almost always preceded by at least one determinative. Secondly, if more elements are to be found in the prehead the one determining reference will most of the time be found to the left of the elements which modify reference (e.g. attributive adjectives). Thirdly, the demonstrative is used four times more often as a prehead element than the Possessive or a Genitive Construction (see 5.1.1.1).

What 'conclusions' might the learner draw on the basis of this input? Conclusions which presumably make him/her dissect the linguistic input in a particular way and which – from a diachronic 'meta' perspective – lead to a change in the overall linguistic system (linguistic output of STAGE 2 at t_2). Firstly, the learner potentially concludes that most of the time semantic definiteness is marked overtly by some material element and may feel the need and obligation to always use an element to mark semantic definiteness overtly in order to produce a pattern which is observed to be frequent in the first place. In other words, overt marking is interpreted as the default option if the referent of the NP is definite.

$$[X_{\text{determinative}} + Z_{\text{cn}}]_{\text{NP\{def\}}}$$

The learner abstracts this pattern and also applies it to the rare NP cases where common nouns occurred bare so far; in other words, it is assumed that the learner overgeneralizes this pattern and extends the schema to non-prototypical instances.

Secondly, I would like to suggest that the learner conceptualizes a positional determination slot (before the adjective/ adjunct position), which is reserved for determinatives:

$$[\ [\_\_]_{\text{DETERMINATION}} + [\_\_]_{\text{MODIFICATION}} + [Z_{cn}]_{\text{HEAD}}]_{\text{NP\{def\}}}$$ [196]

When the learner dissects the input, s/he will find determinatives in this particular position (left of modifiers) most of the time. This will support the learner's awareness that certain elements cluster in that location. At this stage, the speaker starts to put determinatives only in this slot in order to stick to the observed preference of the speech community.

$$[\ [X_{\text{determinative}}]_{\text{DETERMINATION}} + [\_\_]_{\text{MODIFICATION}} + [Z_{cn}]_{\text{HEAD}}]_{\text{NP\{def\}}}$$

For the generation of learners, at some point, the slot becomes functional itself,[197] meaning that 'rules' are attached to the slot how it has to be treated. For example, one rule is that filling the slot is obligatory if the NP is definite. Another rule which was also mentioned earlier is that the slot can only be filled by one element at the time. This explains why co-occurrence of Poss+Dem in one NP, which still exists in Old English (see 5.2.3 & 5.4.1), hardly occurs in later stages of English. I do not intend to discuss the question if the conceptualization of a determination slot automatically implies the conceptualization of a modification slot as well, although it seems likely.

The third conclusion that the speaker draws is that s/he needs a default slot filler. If s/he concludes that definiteness marking is obligatory, s/he will choose an element to fulfill this role by default whenever the position is not already filled by another element which parasitically marks definiteness. The speaker will choose one of the linguistic forms that are available. As the demonstrative is already quite frequent as a determinative, its high frequency makes it a prominent candidate for 'the job' of a default filler. Not only is it close in terms of semantic content but also its high frequency plays a role. So in a way we encounter a frequency effect here, where an

[196] Subscript in capital letters represents the syntactic function of an element.

[197] As far as the language is concerned the point of slot emergence will differ per speaker and thus the process from a meta perspective will be gradual. From an outside perspective – when we observe all the Old English speakers and what they do – , the process of slot emergence is a gradual one. It will not be the case that a whole speaker community, from one day to another, uses the slot. From the learner's inner perspective, however, it is assumed that the categorization of a determination slot is a rather sudden development in his/her learning process. Either a speaker has conceptualized a slot or not.

element which was already used quite frequently (thus salient) became even more frequent: a process which develops a self-perpetuating dynamic (see 6.1.2 for a detailed discussion of frequency).

Before a learner can extend a schema to new instances s/he has to become aware of the 'schema' in the first place. The speaker compares the NPs in his input to each other, draws analogies and abstracts a common underlying pattern. In more theoretical terms, we can say that the learner observes "discrete clusters of usage, which then license the extraction of [a] more abstract schema[…]" (Israel 1996: 223). In our case this schema could be formalized as the

$$[[X_{determinative}]_{DETERMINATION} + [Z_{cn}]_{HEAD}]_{NP\{def\}} - \text{construction}^{198}$$

As many linguistic patterns are already compatible with this abstract schema in early Old English, the high type and token frequency of such NPs will lead to a high productivity for the schema (De Smet 2008: 91). Thus the creation of the slot is licensed by the existence of many NP patterns which already fit the construction. That the slot emerges at a certain point is therefore strongly influenced by frequency. The number of $[X_{determinative} + Y_{modifier} + Z_{cn}]_{NP\{def\}}$ – patterns and $[X_{determinative} + Z_{cn}]_{NP\{def\}}$ patterns has to be high enough, before the speaker becomes aware of an abstract schema. Before we discuss the role of analogy and frequency in the process in more detail, I would like to make some further remarks on what has just been said.

Let us summarize what has been stated so far: The new generation of speakers – in contrast to the 'parent' generation – seems to apply three new 'rules' to form its linguistic output. In very simple terms the three rules could be: a) always mark definite reference overtly b) mark definite reference in a certain slot and c) to do so use *se* as the default slot filler. So, whereas for the first generation of speakers (STAGE 1) marking of definite reference is only a 'variable rule'[199], this seems to be different for the second generation (which in return is responsible for the linguistic output of STAGE 2). The parent generation does not have a locally fixed prehead slot reserved and they do not fill

[198] Again note that this formalization does not follow the annotation of a specific Construction Grammar framework.
[199] using determinatives more freely and only in certain semantically motivated situations.

this slot obligatorily to indicate definite reference. Nevertheless, the next generation receives input where such a position is filled most of the time. This might lead the younger generation to draw different conclusions from the parent generation. [200]

Of course, this directly leads to the question why the learner deviates from the parents' practice for whom definiteness marking is only optional. Why is it the case that a child which receives input where definiteness is only marked 'sometimes', opts for obligatory definiteness marking 'all of the time'? The following scenario seems likely: Although the parent generation does not mark definiteness obligatorily, because it still follows a variable rule, it is likely that the child nevertheless receives input where the demonstrative is marked most of the time.

As was already mentioned, not marking definiteness overtly is already rare. We also know that the child develops its hypothesis about the grammatical system early in the period of language acquisition on the basis of the caregivers' child-directed speech. Extensive studies have shown that this kind of 'motherese' tends to be more listener friendly and more explicit than adult-adult language (see Clark 2003: 38ff and Hoff 2001: 119 for references). Based on those studies, I argue that if definiteness marking is already very frequent in Old English, it is likely that it is even more frequent in Old English motherese[201]. When talking to the child, the caregiver has two options: either s/he relies on the fact that the child infers definite reference from the context, which is difficult for the child, or s/he marks definiteness explicitly, which is much more listener friendly. With an adult, one can be less explicit knowing that the adult will be capable of identifying definite reference from the context. However, the caregiver will not demand such discourse-pragmatic skills from the child. It is likely that s/he will try to be more explicit and thus mark definiteness more often than when talking to an adult. That means that the caregiver will exploit the variable rule in such a way that marking definiteness occurs more often than not marking it. At the same time, the child receives

[200] Although it is possible that also an adult speaker of the parent generation changes his grammatical system by conceptualizing such a positional determination slot, I think this is rather unlikely. The language learners of the next generation will be the ones to conceptualize the slot during their language acquisition process. For the parents, marking definiteness will still be a question of variation. Changes in the grammatical system of adults which are mirrored by consistent changes in their linguistic output tend to be rather superficial ones.

[201] This idea is obviously based on the assumption that parents at that time addressed their children in a similar manner like today.

input where overt definiteness marking may be significantly higher than in adult-adult conversation. Analyzing that input, the child may hypothesize that definiteness marking is obligatory.

Moreover, it is more difficult for a speaker to establish a detailed hypothesis when to mark or not mark definiteness overtly, than to go for a simpler rule, namely marking definiteness all of the time. From that point of view, the obligatorification process it a matter of systemic simplification. Generally, a variable (conditioned) rule is more complex than an unconditioned rule which says: "always mark definiteness overtly" because the speaker does not have to hypothesize about which context demands overt marking or not.[202]

Finally, the adult speaker, who still has a variable rule does not consider it grammatically ill-formed when somebody marks definite reference all of the time. In a system where definiteness can be marked optionally, someone who opts for the possibility to mark it all the time, linguistically "does the right thing". The adult grammar does not forbid to always mark definiteness explicitly. If two people speak to each other, the one who uses the pattern optionally will not notice anything special in the output of the one who uses it obligatorily. Thus, the child will not receive negative feedback. In other words, to change to a system where definiteness has to be marked obligatorily, is compatible with the parent system, and will thus receive positive feedback. On the other hand, for a speaker who has the rule to always mark definiteness, not marking it will be experienced as ill-formed output. Therefore, for the younger learner generation, the parents (with the optional rule) sometimes "make mistakes". The learner generation may be aware of those instances but as those 'mistakes' occur rarely, they will not stir the learning process in a different direction.

In other words, an obligatory marking rule is able to establish itself in a population of learners because the behavior (linguistic output) it produces can also be produced by the carriers of the optional marking rule. It will not be recognized as unfamiliar. Therefore, the spread of obligatory marking is likely, since bearers of the optional-

[202] As was mentioned in section 3.4, structural simplification is seen as a natural mechanism of linguistic change and especially grammaticalization. Languages have the tendency to simplify as a principle of economy. Some researchers even understand structural simplification as a formal principle of UG (Robert & Roussou 2003: 3).

marking rule are unable to recognize anything alien in the speech output produced on the basis of the obligatory marking system, whereas bearers of the new system would perceive output of pre-change system as ungrammatical. All this leads to an irreversibly one-sided accommodation pressure towards obligatory marking.

Linguistic accommodation derives from instincts that make humans behave more favorably towards others whom they recognize as similar to themselves, and the instinctive response, which makes humans try and present themselves as similar to others (cf. Dawkins 1989; Dunbar 1997; Lieberman, Tooby & Cosmides 2007; Park, Schaller, & Van Vugt, 2008).[203] Generally, speakers will not deviate from the speech of their community for the simple reason that they want to belong. They normally accommodate their style of speaking to become more like that of their group based on a universal, perennial need for social approval and mutual intelligibility (Homans 1961; Giles & Clair 1979; Trudgill 1986; Giles & Coupland 1991). If a younger generation's production deviates from the parent generation, this new way of speaking is more likely to spread, if the parent generation still 'believes' that the younger generation speaks like they do.[204] The choice to mark definiteness all the time is compatible with that.

I would also like to make some remarks on the notion of reanalysis and gradience. The change I argue for (the emergence of a slot which becomes functional itself) can be seen as an instance of reanalysis. In section 3.4, reanalysis was defined as a grammatical reorganization of existing surface patterns. Such a change is initiated by a population of learners, which, due to ambiguities or changing pattern frequencies in their input, converge on a grammatical system which is different from "the system internalized by

[203] A specifically human instinct for imitating one another's behavior is probably the most important property of human organisms for the transmission of linguistic competence constituents. This instinct has been genetically selected to guarantee the acceptance and integration of individuals within groups, and to allow it to benefit from kin based and reciprocal altruism. Competence constituents become stabilized, if they generate behavior which makes their speakers believe that they are similar and therefore biologically related to each other. Such an imitation instinct can be plausibly conceived to have emerged in the biological evolution of the human species, which is characterized by the emergence of social groups that are not only characterized by complex patterns of co-operation but also by an exceptional size (cf. e.g. Dunbar 1997): if co-operative behavior is biologically most likely among kin, it will clearly pay to appear related to organisms on whose co-operation one depends, and the best way to appear related to an organism is to adopt its physiological and behavioral idiosyncrasies and to become as much like it as possible.

[204] Of course, it is also possible that 'stigmatized' linguistic forms spread, even if the parent generation is highly aware of the linguistic deviation; .e.g. *like* as a disourse marker has recently become more and more frequent.

the speakers whose linguistic behavior provides the input to the learners" (Roberts & Roussou 2003: 11).

The formalist framework interprets the grammaticalization of the demonstrative as a formal upward movement from a lower base generated position (Spec) to a higher position (turning into an abstract head) in the functional hierarchy (Roberts & Roussou 2003: 35; cf. van Kemenade 1987, 1997; Lightfoot 1991; van Gelderen 1993, 2004). Note, that such a statement is nothing but a formalized way of expressing the different syntactic behavior of the element. From such a point of view, the creation of a determination slot, which is postulated in this thesis, and which leads to observable changes in the patterning of the linguistic output[205] could also be interpreted as an example of reanalysis. The linguistic system at STAGE 1 with $[X_{determinative} + Z_{cn}]_{NP\{def\}}$ gets reanalyzed by a new speaker generation in their acquisition process as $[[X_{determinative}]_{DETERMINATION} + [Z_{cn}]_{HEAD}]_{NP\{def\}}$ with a local slot, which has to be filled obligatorily.

On top of that, I would like to remark on *se* taking up its new role as a slot filler. *Se*'s recruitment, which increases its frequency, automatically triggers the grammaticalization of the element. Frequent usage of the element leads to its attrition (semantic and phonological reduction) (see next section on frequency effects, 6.1.2). As a matter of fact, however, *se* only starts to grammaticalize in its role as a dependent prehead element in a certain construction. Used independently as a demonstrative pronoun it follows another developmental path and keeps it deictic force.[206] To claim that the form *se* grammaticalizes therefore is a rather superficial statement. The form *se* undergoes grammaticalization but in the 'broader' more abstract NP-construction with *se* (now taking up the role of an article) being a filler of it. The demonstrative – from that perspective – does especially grammaticalize in the context of the $[[X_{determinative}]_{DETERMINATION} + [Z_{cn}]_{HEAD}]_{NP\{def\}}$ – construction.

The observation that linguistic elements often do not grammaticalize on their own but in larger constructions is not new. Bybee makes clear that

[205] For example, the decline of $[X_{determinative} + X_{determinative} + \ldots + Zcn]NP\{def\}$ –patterns.
[206] See section 1.1.

> the grammaticalization of lexical items takes place within particular constructions (Bybee, Perkins, and Pagliuca 1994; Traugott 2003) and further that grammaticalization is the creation of new constructions (Bybee 2003) (Bybee 2007: 965).

One could also argue that the emergence of the slot and the $[[X_{determinative}]_{DETERMINATION} + [Z_{cn}]_{HEAD}]_{NP\{def\}}$ – construction is a grammaticalization process in itself. As Haspelmath points out:

> A grammaticalization is a diachronic change by which the parts of a constructional schema come to have stronger internal dependencies. (Haspelmath 2004: 26)

A new construction is thus a "grammatical primitive" which is "both the source and outcome of grammaticalization" (Traugott & Trousdale 2010: 13). So the change from demonstrative to definite article is a change which was driven by a "lexically underspecified [syntactic] construction" (Van de Velde 2010: 291) – in other words the "grammaticalization of a schematic construction with [a] slot […]" (Trousdale & Traugott 2010: 12; cf. Bybee 2003a,b, 2007; Traugott 2006; De Smet 2008).

Finally, it has been claimed that such a grammatical construction also establishes a gravitational pole that can attract new items (cf. Krug 2000: chapter 5.7). This relates back to the notion of gradience and gradualness (Aarts 2004, 2007a,b; Traugott & Trousdale 2010). In section 2.3.1 it was mentioned that category membership can change diachronically. This can lead to a gradual increase or decrease of the number of members of a certain category. This, in synchrony, explains the notion of gradience with some elements being more prototypical members of a class, while others are less prototypical and often boarder cases which are hard to assign to one or the other category. For example, it can be observed that some elements currently move around in the left periphery of the English NP. Elements which used to behave like modifiers take up the characteristics of intensifiers or determinatives. When doing so they change their position (movement to the left) and also their semantics (cf. the work by Adamson 2000; Davidse 2000; Breban & Davidse 2003; Breban 2008, Davidse, Breban & van Linden 2008; Breban 2010) on subjectification and category shift in the premodifying string). As the demonstrative and the possessive pronoun were two of the first elements

to be used as slot fillers (= determinatives) for the determination slot, their behavior in many ways is more prototypical than the behavior of other 'younger' determinatives. One should not forget that the categorization criteria were modeled after the semantic and syntactic behavior of those elements in the first place. Other elements have joined the category of determinatives later and some elements are still on their way, e.g. developing from being attributive adjectives towards getting a determinative status (e.g. *both*, *all*). [207]

What I argue for in this thesis is that for those developments to take place, a determination function in a local slot has to develop first. Elements will get employed as potential 'slot-fillers' in a gradual manner only if a slot developed in the first place. In a way they are sucked into the positional slot. Krug's idea that constructions establish a gravitation pole in a way is a statement about function but also about form. The term 'pole' already by definition incorporates the notion of locality. Elements move towards a certain position, they become fixed in a certain location. Such a process can definitely be subsumed under the term grammaticalization, but for all this to happen, the emergence of a lexically underspecified slot which needs to be filled obligatorily seems to be a prerequisite.

After this excursus on reanalysis and gradience, I would like to return to the impact of analogy and frequency. In the next sections I will specifically argue that the development of a $[[X_{determinative}]_{DETERMINATION} + [Z_{cn}]_{HEAD}]_{NP\{def\}}$ – construction is caused by analogical processing in the speaker's mind and by the high frequency of certain prehead elements. Let us turn to analogy first.

6.1.1 Analogy

Although analogy has always been considered an essential factor which works in language change, it has not been considered as the main driving force of grammaticalization by most researchers who work in the field. However, the "fundamental importance of extension in most instances of grammaticalization has in the last decade led to significant rethinking of the role of analogy" (Traugott &

[207] Of course, elements which joined the category later, e.g. the indefinite article *a/an*, which developed out of the numeral *one*, can reach a very prototypical status as well.

Trousdale 2010: 32f.; cf. Fischer 2007). Analogy has been defined in many different ways, which often leads to confusion. The classical concept of analogy, which nowadays is termed 'four-part' analogy and which describes individual linguistic changes[208], has recently been refined and conceptually 'upgraded' to an 'explanatory mechanism' (Traugott & Trousdale 2010: 32). The term analogy has been widened to mean 'rule generalization/ extension' and thus has been put on "a higher metalinguistic level of analysis" (Traugott & Trousdale 2010: 36).

In this thesis, the 'wider' conceptualization of 'creative analogy' will be employed. Analogy will be understood as

a) a problem-solving "relation of similarity" (Antilla 2003: 428)
b) a psychologically real phenomenon and
c) a "historical process which projects a generalization from one set of expression to another" (Frawley 2003: 77).

Analogy is defined broadly as "an attempted transfer of a structure from one domain of reality to another" (Antilla 2003: 430).

What makes analogy so attractive as a mechanism of change is that it is an "important cognitive principle working in other domains, thus providing the theory with an external explanatory base" (Fischer 2007: 84). Various cognitive studies have shown that we must postulate an innate faculty of analogizing that is not domain-specific (Itkonen 2005: xi; cf. Hofstadter 1995; Gentner et al. 2001). Studies have shown that pattern-finding is typical of primates (Fischer 2007: 249).[209] Also Itkonen (1994: 45)

[208] Four part analogy is often formalized as A: B = C: X (Campbell 1998: 91).

[209] Primates (animals and children) have to "become aware of the iconic relations (similarities and differences) between one object and another, and learn the indexical relation between an object and its function/use, so that they know what is good to eat and what to avoid, which animal to trust and which to flee. In a next stage, the repeated correlation between an object and its use leads to a higher-order level of iconicity. It is a higher, more abstract level, because they learn by an analogical generalization that any object that looks like object x with a function y, is also bound to have function y. The comparison is now no longer based only on the immediate context but also on a collection of past experiences, on an abstraction. They begin to learn to recognize types from past tokens. All this is still part of animal brains as well as ours. Symbolic representation is one step further still in that at this level the combined iconic/indexical relation begins to be used separately from the individual context, object or occasion in which it was first learned. Symbolic reference happens when we can transfer the referential functions from one set to another. In the earlier learning there was iconic overlap between the members within a set;

points out that primates learn "[t]he properties of co-occurrence and succession, and in particular the causal properties, of things and events […] on the basis of analogy".

For example, psychological experiments (Posner & Keele 1968; Medin & Schaffer 1978) have shown that when subjects are exposed to geometrical objects, patterns of dots, and "line drawings of facial features" they are able to form categories "based on similarity to a prototype that may never have appeared in the experiment" (Bybee 2007: 8). Such studies show that similarity and frequency in experience, which lead the subject to draw certain analogies, determine categorization (Bybee 2007: 8).

> When less central constructions or interpretations are subsumed under the central or prototypical one, it is natural to assume that the latter has been (analogously) extended to them. (Itkonen 2005: 24)

Also in the linguistic domain, an analogical action is performed when the individual a) constructs similarities between two linguistic strings (generalization), b) abstracts a more abstract pattern (analogical reasoning) and c) extends [210] this abstract pattern[211] to a new instance (analogical extension).

> The perception of similarity, or perhaps better the inability to see a difference […] between two linguistic signs or between two referents, may cause the learner/speaker to shift such an element to another set in his processing system, a set that is functionally or formally close (this mechanism is often called 'abduction'). (Fischer 2007: 324)

The speaker has a certain input available, which is categorized in a certain way. The speaker will try to align new (less prototypical) input with those existing categories.

Especially studies in language acquisition have shown how important analogy is (cf. e.g. Bod 2006, 2009). In the brain of the child analogical processes are at work when the child acquires its first language patterns. Some researchers argue that most of the utterances which a child produces cannot be produced purely by imitation. This is

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at the higher symbolic level we distinguish a pattern that distinguishes a set as a whole, and we can then apply this same pattern to another set." (Fischer 2007: 132)

[210] The application to a new instance of course is done subconsciously. The speaker does not actively analyse the input.

[211] An abstract pattern could also be termed 'underlying' structure. Note however, that this usage of 'underlying' does not imply any underlying deep structures in the traditional generative sense.

not possible as children produce novel utterances which they have not heard before. Therefore, certain domain-specific mechanisms (which are part of UG) must be available to the child to build these phrases.

Although the kind of mechanism, which lies behind the ability to create novel utterance, is still being disputed, I argue that the observed ability does not necessarily point to some Language Acquisition Device (LAD) as presupposed by generative linguists. It is more likely that very simple operating principles work on the input. An awareness of 'same' and 'different' – in other words the ability to draw analogies – may help children to produce novelties. Seen from that perspective, they are not really novelties, but extensions of some of the input they have heard most frequently before (Fischer 2007: 72ff; cf. Bod 2006; 2009). In other words, the imitation of existing patterns plays an important role.

Research on such general operating principles has been conducted by Peters (1985) and Slobin (1985a). By being able to categorize what is *same* and what is *not-same*, the individual draws analogies based on the linguistic utterances heard in context. Both, the form and the situated meaning of the utterance are important hints. Additionally frequency plays an important role (Slobin 1985a: 1165-66).

> Peters and Slobin recognise different stages and different types of operating principles (OPs), beginning with simple ones dealing with extraction and segmentation of the acoustic 'noise' children first receive, later followed by OPs recognising internal segments (bound morphemes), OPs to distinguish 'frames' (syntactic patterns) from 'slots' (content words), and OPs monitoring feedback. (Fischer 2007: 73)

Analogy thus becomes "a principle of synchronic grammatical organisation and language use, meaning that it is part and parcel of the cognitive abilities that speakers bring to the task of interpreting, producing, and even acquiring language" (De Smet 2009: 1731). This gives analogy a double status: a mechanism of change and a strategy of synchronic organization at the same time, which gives it even more "substance as an explanation of language change" (De Smet 2009: 1731).

Analogical reasoning is especially compatible with usage-based models of language and change (cf. Bybee 2006; Goldberg 2006, Hawkins 2004; Tomasello 2003a,b, 2006; Langacker 2000: 59-60; Itkonen 1994). Research on 'Analogical

Modeling' has so far concentrated on phonology, morphology and morphological change (cf. MacWhinney 1978; Skousen 1989, 1992; Baayen 2003; Antilla 2003; Chapman and Skousen 2005; Deutscher 2005; Itkonen 2005). Nevertheless, syntax has also been investigated (cf. Itkonen & Haukioja 1997; Anderson 2006).

Itkonen and Haukioja (1997) investigated analogical procedures when it comes to novelties in syntactic structure. They were able to show that complex syntactic structures can be induced by analogical extension on the basis of simpler patterns given in the learner's input and not necessarily on the basis of a presupposed UG (Itkonen & Haukioja 1997: 145ff.) Also Bod (2006, 2009) with his corpus-based computational experiments on the CHILDES database (Data oriented parsing-models; DOP), has shown that the acquisition of more complex abstract syntactic constructions and 'rule-based' aspects of language is possible on a probabilistic exemplar-based basis, where the frequency of input patterns determines which analogies are drawn and which syntactic structures are produced.[212] Those models, driven by structural analogy, allow for productivity and meta-linguistic judgments (Bod 2006: 292) and produce "a new sentence-structure out of *largest* as well as *most frequent* overlaps with structures of previously experienced sentences" (Bod 2009: 753).[213]

Admittedly, analogy has also been criticized as an explanatory mechanism for historical changes. It is often difficult to judge the exact impact of a given analogical model on a given change (Lass 1980; 1998). Analogical reasoning is seen as being too vague and "somewhat tautological" (De Smet 2008: 79). It has been "felt to be too unconstrained to serve as a restrictive hypothesis on change" (Traugott & Trousdale 2010: 6; cf. Kiparsky 1974; Lightfoot 2004: 743). Still,

> the requirement of basic similarity still offers a criterion – if sometimes a frustratingly vague one – on what changes to expect and what changes to

[212] This, according to Bod, is possible because psycholinguistic research has shown "that language users store virtually every linguistic token they encounter (see Tomasello 2003; Jurafsky 2003 for overviews). In fact, without massive storage of exemplars, frequencies can never accumulate, and conventional ways of speaking cannot be learned" (Bod 2006: 293).

[213] Bod points out that 'rules' are frozen generalizations most frequently heard in the input: "The only 'rules' in exemplar-based syntax are the decomposition and recomposition rules that construct new representations out of previous representations. On this account, knowledge of language is viewed not as a grammar but as a statistical ensemble of language experiences"(Bod 2006: 318).

> rule out, and in this way further contributes to explanatory adequacy (De Smet 2009: 1749).

Moreover, analogical change is not completely unconstrained. Which analogies are drawn is influenced by the "[f]requency-sensitive processing system" (Fischer 2007: 326). If a pattern never or rarely occurs in a language, it is not very likely that the speaker will adjust his or her grammatical system around this pattern.

So although it "may take some mental effort to realize that the very concept of structure, as it applies within a single language, is based on analogy" (Itkonen 2005: 8), functional and formal analogy must be seen as one of the essential factors in language learning and change. Analogy should thus be understood in two ways - primary causal motivation and type of linguistic change at the same time (Fischer 2007: 329).

In the present case of article development, it also seems useful to employ analogy as a mechanism. When the speakers analyze their Old English input, they draw the following analogies: First, the speaker assigns the same structure, namely $[X_{determinative} + Z_{cn}]_{NP\{def\},}$ to constructions like Dem+CN or Poss+CN. In a second step, this construction gets extended to the other semantically definite but syntactically bare CN cases (being the less frequent and thus less prototypical). This analogical extension of $[X_{determinative} + Z_{cn}]_{NP\{def\}}$, leads to an increase in frequency of the pattern, which – after a certain threshold is being reached in terms of frequency – will lead some speakers to reanalyze their input and conceptualize a determination slot which has to be filled obligatorily. The existence of such a slot and the 'rules' attached to it increase the consistent marking of definiteness in more instances, which in turn will lead to the recruitment (obligatorification, fixation, etc.) of the default filler.

In such a scenario, analogy implies reanalysis. This directly relates back to the ongoing discussion about the primary status[214] of either reanalysis or analogy in grammaticalization (Lightfoot 1995; Hopper and Traugott 2003; Lehmann 2004; Kiparsky 2005; Fischer 2007; Roberts 2007). Whereas some researchers believe

[214] First of all, it has to be made clear that the ongoing discussion is related to the question if reanalysis deserves to be called a causal mechanism of change at all. This debate is based on the simple wish for "a finite set of mechanisms attributable to human neuromotor, perceptual and cognitive abilities, which interact with linguistic substance" (Bybee 2001: 190). Linguists search for mechanisms which work on linguistic "change in general, not only grammaticalization, and are motivated by various activities in which speakers engage" (Traugott & Trousdale 2010: 32). Therefore, there seems to be the wish to reduce the set to only a short list of the most basic and most powerful mechanisms.

reanalysis to be a primary, causal mechanism others criticize the notion. Traugott and Trousdale (2010: 37) point out that reanalysis has been criticized because of "the 're'-in the term, the association of reanalysis with abruptness, and neglect of relationship between reanalysis (mechanisms) and parsing (motivation)".

I also would like to comment on the debate and question the notion of reanalysis. One problem with re-analysis is that the term only works if we take a meta-, non-speaker based perspective. The individual speaker does not *re*-analyze anything in the process of first language acquisition. The child merely *analyses* the linguistic input available. Moreover, there is "a logical flaw and an unresolved ontological issue" (De Smet 2009: 1729) when it comes to reanalysis. Ambiguity cannot explain the introduction of syntactic innovations.

> The notion of reanalysis suggests that a new category can be created *ex nihilo* on the basis of some structural ambiguity. This is problematic, however, because it is logically impossible for an innovation to be introduced on the basis of an ambiguity that strictly speaking exists only in retrospect – that is, after the change has taken place (Fischer 1988, 2007: ch. 3,p.c.; Los 2005: 117; McDaniels 2003). (De Smet 2009: 1729)

The question remains where innovative structural representations come from ontologically. When it comes to reanalysis, more is involved than the syntactic representations and their syntactic ambiguities. The outcome of reanalysis is influenced by the language stage that exists prior to reanalysis. Speakers store and reproduce regularities which they produce in their output and parse in their input. This does not only imply that they "recycle stable grammatical patterns" but also that "by the same mechanism speakers can also turn out historical innovations" (De Smet 2009: 1731).

Also Fischer explains that

> [i]f reanalysis can be said to take place […], it takes place *after* an *analogical process*. I would argue that analogy is primary or at the least stands on an equal footing with reanalysis since a reanalysis, both a semantic-pragmatic and a structural one, takes place within the contours of the communicative situation *and* the grammatical system in which a structure operates. The reanalysis will therefore also be confined and shaped by the formal structures that already exist. My hypothesis is that a reanalysis of a structure will not as a rule result in a totally new structure, but in one that is already in use elsewhere (cf. also Itkonen 2005: 110-13). It is the

> superficial similarity (analogy) that a language user perceives between two structures and between two communicative uses of them that causes a reanalysis in one of them, so as to bring it in line with the other. The *perception of similarity* must be logically primary to the reanalysis. (Fischer 2007: 123)

The result of such a line of reasoning is that in many examples, reanalysis can easily be interpreted as analogy-based (cf. Plank 2004; Kiparsky 2005). Thus, I agree with researcher like De Smet and Fischer that reanalysis "becomes to some extent epiphenomenal as an independent mechanism of change, if not necessarily as a type of change" (De Smet 2009: 1730).

6.1.2 Frequency

As could be seen, an important factor which is directly linked to analogy is frequency. It only seems possible for the speaker to extract the $[\ X_{determinative} + Z_{cn}]_{NP\{def\}}$ schema and extend it analogically, if s/he becomes aware of this schema in the first place. This awareness will be favored and triggered by the high frequency of syntactic patterns which are compatible with such an underlying schematic interpretation. Therefore, frequency plays an important role when it comes to analogical modeling (cf. Itkonen 2005: 60; Hook 1991; Bybee 2003a,b). An exceptionally frequent form of a single word but also a certain linguistic syntactic pattern may constitute a model according to which the forms of semantically related words or patterns are realigned. Already in 1985, DuBois writes that "recurrent patterns in discourse tokens exert pressure on linguistic types" (1985: 359-60).

For a long time, frequency-based approaches have postulated that token frequency often motivates grammatical change and acquisition (Bybee 1994, 2001, 2002, 2003a,b; Bybee & Hopper 2001).[215] Bybee and Hopper (2001: 10-18) list several effects which frequency can have on language:

(1) phonological reduction in high frequency words and phrases;

[215] cf. e.g. Quantitative frequency studies: Hopper & Traugott 2003: 126ff.; Haiman 1994; Boyland 1996; Krug 1998, 2001, 2003; Scheibman 2000; and for diachronic frequency studies: Kroch 1989a,b; Stein 1990a; Hook 1991; Laury 1997).

(2) functional and semantic change (e.g. bleaching, functional shifts, generalizations) due to high frequency of items;
(3) the formation of underlying constructions;
(4) increased accessibility (speed of lexical access of individual words in lexical decision tasks);
(5) the retention of conservative characteristics (frequent units are resistant to reformation) [216]

Article development seems to be an example of (3). A certain degree of type and token frequency "is needed to uncover the structure of words and phrases" (Bybee 2007: 15). High frequency also gives a construction a stronger mental representation, which makes it "more available or accessible for novel uses" (Bybee 2007: 15). In other words, a pattern has to reach a threshold in terms of frequency in order for a speaker to become aware of its abstract structure.

> The frequency with which certain items and strings of items are used has a profound influence on the way language is broken up into chunks in memory storage, the way such chunks are related to other stored material and the ease with which they are accessed. (Bybee & Hopper 2001: 3)[217]

This relates to Langacker's notion of *entrenchment* for modeling the strength of mental representation. The frequency of linguistic items is linked with the neuronal cognitive implementation of such:

> Every use of a structure has a positive impact on its degree of entrenchment, whereas extended periods of disuse have a negative impact. With repeated

[216] Frequency supports linguistic innovation and conservation effects at the same time: "High frequency constructions can also retain conservative morphosyntactic characteristics even in the face of new productive morphosyntactic patterns" (Bybee 2003: 619). "Frequently used words and phrases are highly entrenched and more likely to be accessed as whole units and less likely to be reformed on-line. Thus their general structure – the morphological regularity of high frequency nouns, and verbs, or the structure of high frequency constructions – will tend to be preserved. We can say, then, that repetition has a reductive effect on-line, but a conserving effect in storage" (Bybee 2003: 621). For example, irregular verbs like *ate* or *broke* keep their irregular forms contrasting the productivity of *–ed*, or modals keep up their question and negation building.
[217] This also relates to studies on automation, and the idea that syntactic structures function as formulaic or holistic phrases (cf. Wray 1999; Wray & Perkins 2000; Bybee 2001).

> use, a novel structure becomes progressively entrenched, to the point of becoming a unit. (Langacker 1987: 59)

The notion of entrenchment can be responsible for the emergence of a grammatical structure (Krug 2003: 15).[218] As Fischer specifies:

> Structures or collocations, both at token- and at type-level (or a combination of the two), that occur frequently may become automated because neuronal sequence sets (i.e. token-sets, types or construction-types that are connected to a particular token when it is used) are strengthened every time they are fired. This creates not only formulaic phrases on the token-level (fixed collocations, idioms etc.), but also morphological and syntactic 'formulas' on increasingly higher type-levels, e.g. the typical feature-set of a Noun, the familiar structure of NPs and VPs, and the familiar word orders that obtain within a particular language (e.g. the typical [NPS VP NPO] sequence of English declarative sentences). (Fischer 2007: 139)

Frequency has not only an effect on cognition in general and the structure of the synchronic linguistic system but also on grammaticalization. Bybee & Hopper (2001) point out that frequency is not simply a result of grammaticalization but a 'primary contributor' and 'active force' to the process. This becomes obvious, if we interpret grammar as the result of interplay between conceptualization and communication (Heine 2003: 577). On the one hand, higher frequency in the data (for example a corpus of manuscripts as in the case of this thesis) is important evidence for the degree of grammaticalization. On the other hand, high-token frequency of grammaticalizing elements provides the trigger device for observable changes in the form and function of the grammaticalizing construction, because the high token frequency affects the nature of the cognitive representations in a speaker's brain (Bybee 2003b: 602-605).[219]

Bybee bases many of her assumptions on Haiman (1994) and Boyland (1996). Haiman sees parallels between general cultural phenomena and grammaticalization. He believes that grammaticalization is a kind of ritualization process due to steady

[218] "Frequency and entrenchment have significant consequences for the debate over fixedness and age-thresholds in the grammars of individual speakers. Croft (2000: 57-58) and Aitchison (2001: 202-204) cite evidence for the position that adult grammars (and lexicons) are not fixed but can change through shifting frequency conventions among different social groups." (Krug 2003: 15)

[219] How frequency may influence the cognitive representation on a neural level is shown in neural network and Connectionist models (see e.g. Pulvermüller 2002: 19, 163).

repetition and automatization.[220] Bybee adopts the idea of Haiman: "Frequency of use leads to weakening of semantic force by habituation – the process by which an organism ceases to respond at the same level to a repeated stimulus" (Bybee 2003b: 604). Also, the high frequency and the automated use of grammaticalizing schemata triggers phonological reduction (e.g. *going to- gonna*) as well as phonological fusion.

Additionally, words or phrases with high frequency in some contexts show some other characteristic: a growing autonomy from other uses of the same morpheme. This is known as 'divergence'. The grammaticalized forms are often semantically opaque and independent from the meaning of their relatives because they have strong individual cognitive representations that do not need the a direct comparison with other constructions (Bybee 2003b: 618). For example, "the phrase *(be) going to* is becoming less and less associated with the individual morphemes, *go*, *ing*, and *to*, until a point may well come when speakers are surprised to find out what its etymological source is" (Bybee 2003b: 618).

Also, "the loss of semantic transparency accompanying the rift between the components of the grammaticizing construction and their lexical congeners allows the use of the phrase in new contexts with new pragmatic associations, leading to semantic change." (Bybee 2003b: 604). For example, new pragmatic functions can be attached to the grammaticalized entity as a result of its growing ambiguity and autonomy, e.g. *I don't know* can turn into a discourse marker. Divergence and taking up new functions can be seen as an act of 'emancipation' in Haiman's sense.

Finally, phrases and combinations that often occur together will sometimes be stored as "one chunk" (Bybee & Scheibman 1999). The frequent use of various sequences and words leads to their implementation as "single processing units" in the human brain (Bybee 2003b: 603).

If we apply those ideas to the development of the demonstrative *se* in Old English and its recruitment as a default slot filler of an emerging determination slot (= definite

[220] In a first step called 'Habituation', the steady repetition of some cultural behavior sets in. Repetition then leads to an 'Automatisation', which consequently can lead to some reanalysis of the gesture, as the sequence does not get interpreted as separate entities any longer, but as an automated "chunk". This finally brings about a loss of meaning of the single constituents. Through the weakening of the individual gesture, there is also some 'reduction of form'. This, in a final step, leads to 'Emancipation', as the original instrumental function is substituted by some symbolic gesture (Haiman 1994, 1999).

article), then Bybee's statements on grammaticalization can be confirmed: The frequent co-occurrence of the demonstrative and the noun, leads to the implementation of those items as being members of a particular construction (Bybee & Hopper 2001: 14). Also note the demonstrative's increasing independence from the meaning and usage of its relatives (i.e. the independent demonstrative pronoun). Note how the demonstrative within the construction develops differently from the independent demonstrative pronoun. The form expands syntactically and is used in more cases and thus its pragmatic use is widened. As the form is attached very closely to the head noun, one could even argue for a loss of former constituent boundaries in the NP. For example Bybee and Hopper argue that NPs are often "independent intonation units" (2001: 8; cf. Ono and Thompson 1994; Croft 1995).

So far, it has been stated that the cognitive effects of frequency actively shape grammar. This makes frequency an important triggering factor for linguistic changes. At the same time, a grammaticalization process can also result in an increase of type and token frequency. Then, increased frequency is the result of other mechanisms. Still the question remains, why certain words or constructions are frequent in the first place. Items are frequent for many different reasons. On the one hand, frequency results from content - what speakers want to talk about, e.g. themselves (hence the high frequency of first person pronouns). On the other hand, "the way speakers structure their discourse, leads some elements to be more frequent than others" (Bybee 2007: 18).

It was suggested that the determination slot emerged at some point in the early Old English period (o.2) because the number of $[X_{determinative} + Z_{cn}]_{NP\{def\}}$ and $[X_{determinative} + Y_{modifier} +\ldots+ Z_{cn}]_{NP\{def\}}$ patterns in the input was high enough to affect cognitive representation. This directly leads to the question why the slot did not develop earlier and why demonstrative usage had been increasing even before the emergence of a determination slot.

As was mentioned, the steady repetition of an element leads to its semantic weakening (Haiman 1994; Bybee 2003a,b). Through frequent usage the demonstrative's deictic force started to become weaker. This seems especially likely with the demonstrative. If one uses a demonstrative to literally 'point' to an element in a context where that particular object is visible, then the listener does not only have to rely on the semantic force of the demonstrative but the situational context helps him to identify the

referent anyway. Thus, the demonstrative is not very strong. Bleaching will happen naturally, due to the situational circumstances.

This 'weak demonstrative' then could be used in a broader range of pragmatic situations. When the deictic restriction of the demonstrative is abandoned, the referent's identifiability is "defined relative to the whole (visible) situation or the whole previous text (within memory)" (Hawkins 2004: 84). The demonstrative is then not only used to refer "to objects existing in the immediate situation of utterance" (Hawkins 2004: 84) but also refers to previous discourse sets. In other words, through the loss of its strong deictic force, the demonstrative's usage expands in two directions: from visible to non-visible and anaphoric situations. Also, it expands from

> anaphoric references based on previous mention (*a house: the house*) to general-knowledge-based inferences and stereotypic 'frames' (*a house: the door*) – cf. Minsky (1975), Clark & Marshall (1981). (Hawkins 2004: 85).

Examples of this new kind of usage can be found in *Alefric's Colloquy* (Garmonsway 1938: 19ff.), which was already presented in the introduction:

(136)

ond iugie hie	**to syl**;	[…]	ond gefæstnodan
and I tie them	*to [a] plough;*	*[…]*	*and fastened*

sceare ond cultre	**mid þære syl**,
ploughshare and colter	***to the plough***

ælce dæg	ic sceal erian	fulne æcer oþþe mare.
each day	*I must plow*	*[a] full acre or more.*

In this passage, we find the anaphoric reference *mid þære syl* (to the plough), which is based on the previous introduction of a *to syl* (to a plough). Here, it can be argued that the deictic force of *se* is already very weak or not the primary reason for *se's* usage. Moreover, *se* is used in a context where the farmer refers to an entity which does not exist in the immediate situation of the utterance (i.e. the fictional schoolroom where the teacher and the pupils are talking to each other).

Additionally, *se* can also point forwards:

(137) hie habbað **ða arodnesse** & **ða bieldo** ðæt hie magon anweald habban
They have the spirit and the courage *that they may power have.*
(cocura,CP:5.41.17.224_ID)

Also, the usage of *se* is extended to cases where the speaker has to rely on his world knowledge:

(138) Forðæm cuæð **se sealmscop**.
*For this **the psalmist** says:*
(cocura,CP:36.251.19.1646_ID).

As can be seen, the demonstrative is used for a broader range of pragmatic situations than only marking a visible situation (Hawkins 2004: 85). Such an expansion leads to an increase in demonstrative usage, which also explains why the demonstrative is used 4 times more often than a possessive pronoun or a genitive construction in the Old English prehead (see the results presented in section 5.1.1).

Another factor which may have triggered the increase of demonstrative usage was the fact that the case system started to break down in early Old English. As was pointed out in section 3.1.3 and 3.1.4, the inflectional case and gender system was declining. Due to the syncretism of several endings in the weak adjectival paradigm, case and gender could no longer be distinguished sufficiently, so the demonstrative was needed to disambiguate case and gender (Strang 1970: 301; Fischer 2000: 160). This may have lead to an increase of the demonstrative in front of adjectival modifiers in definite NPs, which, in turn, increased the frequency of the determinative in $[X_{\text{determinative}} + Y_{\text{modifier}} + Z_{\text{cn}}]_{\text{NP\{def\}}}$ - patterns.

To conclude, the weakening of the demonstrative (due to its semantic bleaching) and its case-disambiguating function lead to a first increase in demonstrative usage. This then triggers the conceptualization of the slot which, in a second round, pushes the demonstrative down its grammaticalizing path even further.

6.1.3 The cognitive cycle of grammaticalization

It can be concluded that grammaticalization involves analogical extension and often generalization to greater type and token frequency (Traugott & Trousdale 2010: 36). The combination of analogical reasoning with the influence of frequency seems to provide a plausible explanation for the emergence of a new category (namely the article-category) and the grammaticalization path "demonstrative > article".

Grammaticalization, from that point of view, is more an umbrella term and definitely a notion which can only be applied from an outside perspective. As a matter of fact "clines cannot be part of a speaker's grammar, and hence cannot be [psychologically] real" (Fischer 2007: 117). Grammaticalization thus is an epiphenomenal result and a notion which should be split up into many other speaker internal mechanisms.

So the question is what processes take place at the level of the speaker. For most grammaticalizationists the main mechanisms at this internal cognitive speaker level are metaphorical and metonymic (Hopper & Traugott 200 2003: 84-98; Fischer 2007: 121). Fischer, however, points out that metaphorical and metonymic processes are also based on analogy (Fischer 2007: 122).

I argue that in the process of grammaticalization, the high frequency of certain linguistic items triggers cognitive analogical processes (like categorization or the construction of a formal schema). Those analogies lead to a particular structuring of a speaker's grammatical system. The 'new' interpretation of the linguistic input (of the new generation of learners) is responsible for the fact that certain linguistic items or constructions in return grammaticalize. Evidence for such a process will be 'visible' in such a sense that the overt form of an element is affected (e.g. reduction, fusion of forms, etc.)

To specify this general statement, I would like to propose the following cycle for speaker-internal processes in grammaticalization, which are triggered by the token frequency of certain linguistic forms and patterns in the linguistic input:

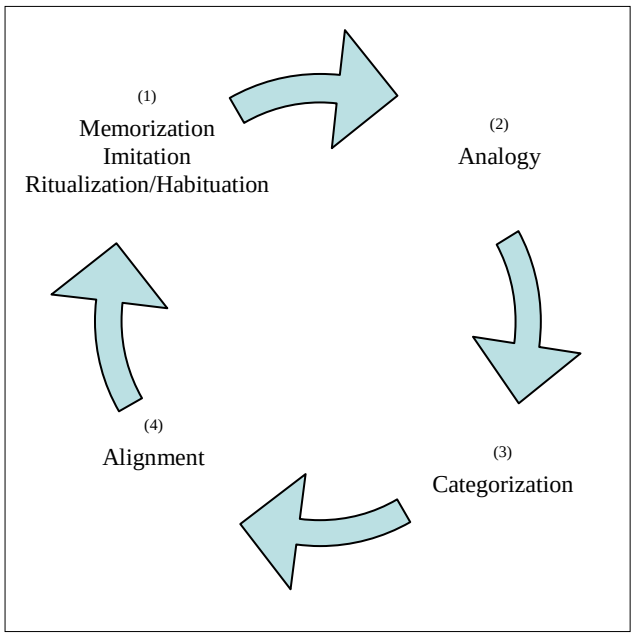


Figure 7: Cognitive cycle of speaker-internal processes in grammaticalization

When the speaker hears certain linguistic items/ patterns and constructions frequently enough, s/he starts to memorize them, imitates the input and thus ritualizes his output through constant repetition. When parsing the input, the learner/speaker also starts to become aware of semantic and structural similarities in the input, which due to his/her ability to draw analogical conclusions, will make him/her categorize the input. This formal and semantic categorization (e.g. into word classes, construction types, etc.) will make him/her align any input into those existing categories or rearrange his repertoire of existing patterns to match the input.

This cycle in return will increase the frequency of certain forms in a speaker's output. An increase in frequency and all the cognitive processes suggested above, have a direct effect on the linguistic form (e.g. ritualization leads to attrition; strong entrenchment leads to a stronger adjacency of forms; the conceptualization of a determination slots leads to fixation on the determinative element; etc.).

This gets us back to Lehmann's parameters, which, from that perspective, rather have to do with the 'fate' of the individual grammaticalizing form and what happens to it in the grammaticalization process. In contrast to Lehmann, the cycle in Figure 7 does

not concentrate on the individual form but on the cognitive processes that go on in the speaker's mind. Analogy is seen as an internal, cognitive, mental psychological process, something that affects and shapes a speaker's mental setup. The cyclic process (including all the notions mentioned above, frequency, analogy, categorization alignment), leads to an increase in frequency of a certain form. Thus the frequency of certain forms and patterns is at the same time a causal mechanism and a result.

Frequency and analogy are primary factors whereas reanalysis and grammaticalization a) come later being effects of the previous factors and b) are not part of processing itself. The generally used term reanalysis (with the (re-) attached) is a term which can only be applied from an outside meta-perspective. A system can undergo some re-interpretation in time, but the individual speaker does not set up his linguistic system by re-analyzing. Only if we omit the *re-* and focus on 'analysis', the perspective is a speaker-internal one.[221]

[221] Admittedly, this statement has to be qualified, as, for example, speakers sometimes do reanalyse their own linguistic system in the course of time. For example, during the language acquisition process, some children go through a period where they store past forms as chunks and are not aware of the regular *–ed* past tense marker. Later, however, they revise their initial hypothesis about that, forming an awareness about the past tense *–ed* marker. Thereby they definitely reanalyse the system which they set up before.

6.2 Additional Factors: processing efficiency, prosody, cognitive salience and syntactic heaviness

What other factors may have supported the conceptual emergence of the determination slot? Although I primarily argue that the demonstrative develops into a definite article because the speaker draws analogies influenced by frequent formal patterns in his input, I also suggest that the observable change is supported by a general tendency to make on-line processing more efficient for the 'parser' (i.e. the speaker/ listener who receives linguistic input one by one in a parse string in real time) (6.2.1). Here the work of John A. Hawkins (1978, 1983, 1991, 2004) is very valuable. Hawkins has not only worked on definiteness, the definite English article and morphosyntactic change, but has also been shaping the theory of 'performance grammar' in which he points out that grammars are profoundly shaped by on-line processing.[222]

Additionally, it will be suggested that prosody may also have exerted an influence on the emergence of the determination slot (6.2.2). Finally, it will be proposed that the speaker's analogical process is not only triggered by prototypical patterns in the domain of the definite NP in Old English, but that also the general structure of the NP (on a more abstract constructional level) and the cognitive general salience of the common noun may have supported the process (6.2.3).

6.2.1 Processing Efficiency

Hawkins (2004) postulates his so called 'Performance-Grammar Correspondence Hypothesis' which states that the common preferences of performance and grammars are structured by general principles of efficiency and complexity. Hawkins believes that those principles can account for "numerous aspects of grammaticalization in the evolution of morphosyntax" (Hawkins 2004: 13).

[222] Drawing his ideas on insights from psycholinguistic models of production (Levelt 1989) and comprehension (Fodor et al. 1974), connectionist insights (MacDonald et al. 1994; Elman 1996) and functional ideas proposed by Givón (1979, 1995), Haiman (1983, 1985), Comrie (1989), Gell-Mann (1992), Sperber & Wilson (1995), Newmeyer (1998), Haspelmath (1999a), Bybee & Hopper (2001), and Croft (2003).

Generally, Hawkins makes the following predictions about grammar: if a certain linguistic structure is preferred over another of the same type in performance, then the preferred one will be more productively grammaticalized, in proportion to its degree of preference. (If A and A' are more equally preferred, then A and A' will both be productive in grammars). Secondly, if there is a preference ranking A>B>C>D among structures of a common type in performance, then "there will be a corresponding hierarchy of grammatical conventions (with cut-off points and declining frequencies of languages)" (Hawkins 2004: 6). Thirdly, if two preferences are in (partial) opposition, a grammar will show variation in performance, with both being realized at the same time, depending on its degree of motivation in a given structure (Hawkins 2004: 6).

Moreover, Hawkins argues that all grammars strive for an increase in system internal efficiency. Such a statement is, for example, inspired by the observable linguistic fact that the more common a word is, the shorter it is in general.[223] Efficiency, according to Hawkins, is increased in various ways. It is "increased by minimizing the domains (i.e. the sequences of linguistic forms and their conventionally associated properties) within which certain forms are assigned" (Hawkins 2004: 9). Moreover, speakers also increase efficiency when they not only minimize the overt form of their linguistic entities (e.g. phonemes, morphemes…), but when they also reduce their conventionally associated functional properties.[224] Finally, efficiency is increased by providing an early access to as much of the syntactic and semantic representation as possible. This is being reached by arranging linguistic strings in such a way that on-line property assignment is maximized (Hawkins 2004: 9).

It is important to note that, according to Hawkins, efficiency can either involve more complexity or less complexity in a grammar, depending "on the proposition to be expressed and the minimum number of properties that must be signaled in order to express it" (Hawkins 2004: 9). A language will develop in a certain direction because it will compare "alternative form-property parings for expressing the same proposition" and will favor the most efficient one being "the one which has the lowest overall complexity in on-line processing and that provides the earliest possible access to

[223] The same correlation was proposed by Greenberg (1966) in relation to markedness hierarchies such as Singular>Plural> Dual.
[224] This will at the same time maximize the role of contextual information.

properties in the ultimate proposition to be communicated" (Hawkins 2004: 25). Low overall complexity is reached when the speaker has to parse "fewer forms and properties and smaller domains […] while still communicating the same proposition" (Hawkins 2004: 25).

Hawkins ideas on 'natural' economic principles are not new. Moreover, performance economy is not the only factor that is conventionalized in syntactic structure. A language also strives for explicitness and communicative creativity, which are competing motivations. "[S]triving for clarity" will lead to other developments than "striving for ease" (cf. Haspelmath 1999 a,b).[225]

To specify this line of argumentation, Hawkins proposes three major principles: *Minimize Domains*, *Minimize Forms* and *Maximize On-line Processing* (Hawkins 2004: 28). [226] The first principle, Minimize Domains (MiD) is defined as follows:

> The human processor prefers to minimize the connected sequences of linguistic forms and their conventionally associated syntactic and semantic properties in which relations of combination and/ or dependency are processed. The degree of this preference is proportional to the number of relations whose domains can be minimized in competing sequences or structures, and to the extent of the minimization difference in each domain. (Hawkins 2004: 31)

Domains are to be minimized. For example, parsing the dependency and meaning of a lexical combination like *count + on* is more efficient if the two words occur next to each other (e.g. *count on my father in my college years*) than if they occur separated from each other (*count in my college years on my father*). This is the case because the combinatorial dependency in the first example can be parsed on the basis of only two words. Therefore, a language strives to reduce domains which ultimately reflect "the size of any constituent intervening between *count* and *on*" (Hawkins 2004: 26). MiD thus results in "proximity effects" (Hawkins 2004: 27) and also offers a potential explanation for adjacency in syntax. Elements in time get attached closer to each other

[225] For a discussion of such competing preferences see Dressler's notion of *natural principles in conflict* (Dressler 1977, Dressler et al. 1987) or the idea of *competing motivations* (Haiman 1983; DuBois 1985; Croft 1990) and Langacker's optimality (1977) (Haspelmath 1999a).

[226] To model the precise role of these processing principles in relation to typology and evolution of language, Hawkins suggests to use a multi-factor Complex Adaptive System-model described by Gell-Mann (1992) (Hawkins 2004: 93).

and sometimes are even stored as a single unit. MiD also implies that phrase dependents and their heads will not easily be split up (Hawkins 2004: 26).

The second principle, Minimize Forms (MiF) is defined in the following:

> The human processor prefers to minimize the formal complexity of each linguistic form F (its phoneme, morpheme, word, or phrasal units) and the number of forms with unique conventionalized property assignments, thereby assigning more properties to fewer forms. These minimizations apply in proportion to the ease with which a given property P can be assigned in processing to a given F. (Hawkins 2004: 38)

Any receptive or productive processing of linguistic items requires effort. If one reduces the "set of units a form that need to be articulated and processed", this minimizes this effort (Hawkins 2004: 38). MiF is based on notions like "Say as little as necessary" (Levinson 2000: 114; cf. Haiman 1983; 1985) and has the aim to reduce forms to "the minimum point at which communicative goals can [still] be met" (Hawkins 2004: 27). MiF is a principle of least effort and is strongly influenced by frequency. The more often a linguistic form is produced the more it will get reduced. Hawkins applies his ideas to grammaticalization of the demonstrative in English, which is based on the predictions of MiF (Hawkins 2004: 81).

Using his theory of definiteness (1978, 1991), Hawkins presents four major semantic/ pragmatic stages in the languages of the world in which demonstratives develop into definite articles by expanding their semantic and pragmatic range. Stage 1 and 2 were already mentioned in 6.1.2 but shall be mentioned again:

In Stage 1, the deictic restriction of the demonstrative is abandoned. "The explicit or implicit contrast between entities near the speaker and far from the speaker" (Hawkins 2004: 84) is no longer expressed. The notion of identifiability of referents (see also 2.2.2) is "now defined relative to the whole (visible) situation or the whole previous text (within memory), and uniqueness (more generally, inclusive reference)" (Hawkins 2004: 84). At this stage, definite articles are restricted "to anaphoric references to the previous text and /or to objects existing in the immediate situation of utterance" (Hawkins 2004: 84).

In a 2nd stage, article usage expands in two directions: from visible to non-visible and larger situations (compare *mind the step* vs. *the king has abdicated*) and from

> anaphoric references based on previous mention (*a house: the house*) to general-knowledge-based inferences and stereotypic 'frames' (*a house: the door*) – cf. Minsky (1975), Clark & Marshall (1981) (Hawkins 2004: 85).

In Stage 3, article usage is extended to generic references

> that signal inclusiveness only, with little or no pragmatic delimitation (*the lion is a mammal, the Italians eat pizza*). The level of accessibility that is required at the end of Stage 2 has become so weak that it can be abandoned and the definite article can be used with semantic and truth-conditional content only. At the same time, pragmatic conditions of appropriateness still apply to NPs that are not used generically, and hearers must disambiguate between generic and non-generic, find the P-set when this is required, and assign a pragmatically unrestricted inclusive interpretation when it is not. (Hawkins 2004: 85)[227]

In other words, in the 3rd stage, pragmatic delimitation is abandoned and NPs are permitted to refer universally and generically. In a 4th stage, when the definite article is extended to specific indefinite references in addition to definiteness, "the definite article has abandoned uniqueness/inclusiveness, in certain uses, while maintaining the existence claim" (Hawkins 2004: 85). NPs with the definite article now only assert existence. The article now not only marks identifiable references but also generic reference and purely existential claims.

Finally, further extensions can be observed as the form loses all connections to definiteness when it only gets used for syntactic purposes like agreement or as a noun class marker (Hawkins 2004: 86). Generally, each stage keeps the previous stages' usage but introduces more ambiguity and polysemy. Especially the later use of the article involves a gradual expansion "in the set of NPs that are compatible with the erstwhile demonstrative marking" (Hawkins 2004: 83). One can attach the article to more NPs than the demonstrative (e.g. attach it to adjectives, *the rich* or relative clauses *the Mary who lives next door*) because the definite article has semantic, pragmatic and

[227] According to Hawkins the middle and modern periods of the Germanic languages seem to be an example of this stage (Hodler 1954). German has developed slightly further than English using the definite article with generic plurals contrasting English which does not. For example, a sentence like *Er zieht den Rosen die Nelken vor* (he prefers Def+ Dat+Pl roses Def + Acc+Plural carnations) is ' *he prefers carnations to roses*' in English. Generic plural usage is also much further extended in French (cf. Lyons 1999:52): compare *elle adore les romans policiers* (she adores DEF novels detective) with *she adores detective stories'*(Hawinks 2004: 85).

syntactic properties that permit such a high frequent use. In other words, when the article extends it's pragmatic and semantic range, it becomes more productive in the syntactic rules of the grammar (hence more frequent).[228] In this diachronic process, the demonstrative loses phonological substance. English *the* has more reduced segments than the demonstrative: CV rather than CVC, a schwa vowel and reduced stress. This is a consequence of MiF.

Additionally, according to Hawkins, the rise of the definite article is also based on the predictions of his third major principle: Maximize online-processing efficiency (MaxOP). To attach the article before the lexical item is efficient because, otherwise important aspects of syntactic and semantic interpretation would be delayed (Hawkins 2004: 89).

The parser receives linguistic elements "one by one in a parse string" (Hawkins 2004: 20). When doing so

> [t]he human processor prefers to maximize the set of properties that are assignable to each item X as X is processed, thereby increasing O(n-line) P(roperty) to U(ltimate) P(roperty) ratios. The maximization difference between competing orders and structures will be a function of the number of properties that are unassigned or misassigned to X in a structure/sequence S, compared with the number in alternative. (Hawkins 2004: 51)

In other words, it is not efficient "to delay the assignment of properties in the on-line parsing string. Speech is a linear sequence of forms and properties, each of which contributes to the ultimate syntactic and semantic representation of the sentence in the string." (Hawkins 2004:28). Thus, a speaker will always prefer early properties

[228] From a formal syntactic viewpoint the definite article joins the set of categories that can construct or project to NP, i.e. N, pronouns, other determiners, even inflected adjectives within general NP analysis (Hawkins 1993,1994: 352f., 403ff.) (thus becoming more productive). All those categories are normally uniquely dominated by NP not by VP, PP or AdjP, etc. In this position they can act as "unambiguous signals" for construction in comprehension as well as production models (Hawkins 2004: 87). In other words, the definite article constructs a (case-marked) NP and attaches specified categories to the (case-marked) NP. Hawkins thus predicts a syntactic processing function of the expanding article: "The definite article constructs a (case-marked) NP" (Hawkins 2004: 87). This function also helps to understand why definite articles are very productive in NPs with modifying adjectives or relative clauses whose "attachment to NPs is not guaranteed by their own projection properties" (Hawkins 2004: 90). In those NPs the article acts as a nominalizer. For example, in an NP like *the rich* the article is obligatory because it helps the parser to interpret rich as a noun not as an attributive adjective (2004: 90f). Also, with ambiguous nouns and verbs, the determinative helps to disambiguate a clause like *they want to film* from *they want the film*. The article constructs the NP. Increased article usage then means a greater activation of this NP construction in performance (Hawkins 2004: 89).

assignment, so that he can build his or her "ultimate representations sooner" (Hawkins 2004: 29). For example, the parser will prefer a clause where already at the beginning of the clause most properties are assigned. Compare:

a) *John went in the late afternoon to London after a long siesta.* [229]
b) *John went to London in the late afternoon after a long siesta.*

In the first sentence, the second PP daughter of the VP (*to London*) is delayed. In b) however, the parser gets this information earlier. The effect can be observed in an example with a noun clause and the presence and absence of an explicit complementizer:

a) *I believe the boy knows the answer.*
b) *I believe that the boy knows the answer.*

A verb like *believe* allows a complementation pattern which the parser can immediately identify when he hears *that*. In the absence of *that* he will need to wait until the end of the clause until he can correctly parse the intended meaning of it. This at the same time can lead to some kind of "misassignment" (Hawkins 2004: 51ff.). *Believe* can also take a direct object. This means that without the overt *that*, it can be the case that the parser interprets *the boy* as a direct object although the speaker did not intend this. Hawkins claims that grammars strive to avoid such misassignments.[230] If one applies this to the case of the definite article, it can be said that

> [w]hen the parser receives the first two words of a sentence, e.g. *the boy* in English, it can recognize the category determiner + noun, it can attach them to a mother noun phrase, it can assign lexical-semantic content to *boy* and a uniqueness semantics to the definite determiner (Hawkins 2004: 20).

[229] The examples are taken from Hawkins (2004).
[230] Related to the principle of MaOP is the notion of 'unassignment'. It simply states that unassignment takes place when "a particular syntactic structure or semantic property which could be assigned earlier in a structure/ sequence S is assigned later in an alternative S'" (Hawkins 2004: 51).

This argument is supported by typological research, which shows that "there is a strong tendency for the definite article, if a free form, to occur initially in the noun phrase, independently of a language's general constituent-order pattern" (Lyons 1999: 4). [231]

One can also simplify MiF and MaOP with the slogans 'Express the most with the least' and 'Express it earliest'. The *Minimize Forms* follow from the former, while *Maximize On-Line Processing* follows from the latter (Hawkins 2004: 25).

Finally, Hawkins argues that in the case of Old English the development of the definite article also preserved a processing regularity: He again refers to the breakdown of the inflectional system. Generally, any determiner "is not only the first constructor of NP in on-line processing", but can also be a case assigner (Hawkins 2004: 92). In contrast to pronouns, which are often rich in case marking and which therefore can assign case simultaneously with NP construction, the noun lost its inflectional distinctiveness in the older periods of Germanic. Thus

> [t]he expansion of the definite article succeeded in converting many NPs of the form Np[N] into Np[defN], thereby preserving a processing regularity that was threatened by case syncretisms on nouns (Hawkins 2004: 92).

The expansion of the demonstrative determiner is related to the availability or loss of other devices in the life cycle of grammatical categories, which are able to perform these functions as well (Hawkins 2004: 93; cf. section 6.1.2 and 3.1.3 & 3.1.4).

So in order to answer why the definite article "should be recruited for more and more NPs in performance and grammar and gradually jettison the semantic-pragmatic conditions of its deictic source" (2004: 91), Hawkins believes that processing of grammar is the reason.

What is important in Hawkins' theory is that the expanded semantics and pragmatics of the definite article compared with the demonstrative are a consequence not a cause of the grammaticalization process. According to Hawkins,

> [t]here is no compelling semantic/pragmatic reason why the definite article should emerge out of a demonstrative to express meanings that are perfectly expressible in languages without definite articles. But there are some

[231] The majority of languages which used phrasal clitic articles also prefer the left-periphery of the NP.

> compelling reasons, involving the processing of grammar, that can motivate an expansion of the determiner category, and that can motivate it in language types and at historical stages at which it appears to happen. And these reasons can also make sense of a number of properties in the grammar of definiteness that would otherwise be mysterious. (Hawkins 2004: 84)

Moreover, there is no plausible semantic reason for Hawkins why the article should expand to generic NPs and indefinites resulting in polysemy, which requires disambiguation and enrichment, when a language has expressive alternatives for these meanings (2004: 92).

This relates back to a point which has already been made by Mithun (2003) and Fischer (2007) in section 3.3.3 on grammaticalization. It does not always seem to be the case that changes in grammar are only driven by pragmatic-discourse needs. Speakers also change their grammatical system (e.g. by analogical leveling), in order to increase systematic regularity. This, however, does not necessarily increase communicative efficiency. Generally, as was mentioned before, languages do not seem to become more efficient over time. A certain change which leads to more efficiency in one realm, may disturb certain structures in another realm.

In the case of article development in English, I argue for a so-called form-driven change (Fischer 2007: 66). As can be seen, the overall shape of the synchronic system leads to the formation of a new productive grammatical schema. The emergence of the $[[X_{determinative}]_{DETERMINATION}$ $+Zcn]_{NP\{def\}}$ – construction is mostly influenced by the existence of specific majority patterns in the Old English NP. The speaker becomes aware of this majority pattern and automatically applies it to get rid of the odd-man-outs which do not fit the pattern. Such a strategy is simply more efficient as it represents a simplification for the speaker, with a change from a more complex, variable rule to a simpler 'unconditioned' rule.

Thus the motivation for the change is not only semantic or pragmatic. As Fischer points out "[T]he formal similarity of patterns and the adjacency (contiguity) of signs are […] an important formal force in grammaticalization." (Fischer 2007: 122). I advocate that in the case of article development, semantic change and structural change co-occur. Efficiency, from that perspective, is system internal but does not necessarily

lead to any communicative advantages for the speaker (i.e. increase in expressiveness, clarity…).

Admittedly, a principle like MaxOP can make parsing 'easier' for the listener, which in a way increases communicative efficiency. On top of that, any 'ease of effort' principle fits the idea that also the speaker profits. Still, the arguments presented here stress the fact that a preference for regularity does not necessarily lead to communicative efficiency.

This relates back to my thoughts on grammaticalization in section 3.3.3. Heine and many others believe that grammaticalization is motivated by speaker-hearer interaction and the improvement of communicative efficiency (improving informativeness, expressivity, etc.) (Heine 1991a: 150-151; cf. Hopper and Traugott 2003). I cannot completely agree with this idea of goal-oriented problem solving, because it seems to underline the whole metaphor that the speaker actively sits down and makes adjustments to his or her language to solve communicative problems. Instead, I suggest that the emergence of the $[[X_{determinative}]_{DETERMINATION} + [Z_{cn}]_{HEAD}]_{NP\{def\}}$ – construction should be interpreted as a diachronic kind of form driven, systemic grammar optimization, which takes place in language acquisition.

6.2.2 Prosody

Another factor which may have supported the speaker's abstraction of the $[X_{determinative} + Z_{cn}]_{NP\{def\}}$–schema and the emergence of the $[[X_{determinative}]_{DETERMINATION} + [Z_{cn}]_{HEAD}]_{NP\{def\}}$ – construction is prosody. Studies have shown that prosody, rhythm and melody can exert influence on morphosyntax and morphosyntactic change (Peters 1995; see Schlüter 2005 for overview). For example, research on so called 'fillers' and 'protomorphemes' in first language acquisition supports the claim that speakers do not only become aware of the determination slot easily, but are also quite willing to fill it.

When moving from the 'one-word' to the 'two-word' stage, many young children already produce vague schwa- or nasal like 'filler' syllables in positions where particular free target morphemes are required. Fillers typically occur at positions that are occupied by function morphemes in the adult language (like articles or pronouns). An adult target is generally more likely to be approximated by a filler syllable when the

target is a full unstressed syllable which tends to have a fixed position (or slot), but is not particularly salient semantically (Peters 1995: 184).

Filler production is strongly influenced by the prosody, (i.e. rhythm and melody) of a particular language. In English, filler insertion reflects the prosodic characteristic that open-class words are often preceded by unstressed syllabic function words. Close-class morphemes tend to be part of unstressed syllables and open-class words generally contain at least one stressed syllable. This distinction influences the rhythm of the language, as the open class items provide the strong beats, whereas the closed class items contribute the weak ones. So-called 'formulaic children', who are sensitive to rhythm and intonation, try to reproduce these rhythmic patterns from early onwards (Peters 1995: 472ff; 1997).

In the beginning children's utterances contain multisyllabic unsegmented chunks, which they only learn to segment in time.

> As learners become able to segment these chunks, they find structure in the form of "frames with open slots" (Peters 1983, 1986) […] The fixed elements of many of these frames are grammatical morphemes such as pronouns or demonstratives. The next step for these children is to combine and expand these patterns. (Peters 1995: 476)

Therefore, two major, often simultaneous strategies can be indentified for the acquisition of grammatical morphemes in English: on the one hand, the child discovers and fills in the gaps between open-class items, and ,on the other hand, it generalizes the fixed part of a frame to include other elements that can occur there (Peters 1995: 477).

Taelman (2007) [232] refers to the concept of 'form driven' learning.

> […] [Fillers] are instantiations of an important language learning mechanism that has only recently been recognized as such: 'form-driven' learning. 'Form-driven' learning entails that the child first acquires the form, and gets full grips on the meaning and function of this form only later on. In other words, the child has discovered sound material at particular positions in the input, but has not yet analyzed the form and the function of this material accurately. Nevertheless, the child tries to integrate these elements in her own speech utterances. Little by little the child discovers the full distribution, function and shape of what turns out to be function morphemes.

[232] http://www.cnts.ua.ac.be/~taelman/postdoc.html

In other words, the child tries to imitate the structure of the input as closely as possible and by all means (using 'protomorphemes'), even if or rather because it has only become aware of the surface structure and draws analogies from it.

If we apply the insights gained in these fields to the ideas in this chapter, we can state that, when learning or analogizing, the learner, who is helped by intonation and position, favors the $[[X_{determinative}]_{DETERMINATION} + [Z_{cn}]_{HEAD}]_{NP\{def\}}$ – schema in order to fulfil the prosodic and syntactic conventions of English mentioned above.

6.2.3 'Heaviness' of the prehead: a general $[X+CN]_{NP}$ preference

Another factor, which may have also led to the emergence of the determination slot, is that in English one finds a general 'one word' prehead pattern preference for NPs with common nouns. As will be shown, most NPs follow an $[X + Z_{cn}]_{NP}$ – schema with one prehead element before the head (including all types of common noun phrases).[233] In this section it will be argued that the most frequent common noun pattern in Old English is the $[X+ Z_{cn}]_{NP}$ - construction with only one prehead element preceding the common noun. This prototypical construction, which is far more frequent than the $[Z_{cn}]_{NP}$ - construction where the common noun occurs without any prehead elements, may have also had a subtle but underestimated impact on the (emerging) structures on the definite NP level.

Especially Construction Grammar has long been aware of the formal influence of taxonomically related constructions on other constructions (Traugott 2007: 525; cf. Hopper 1988; Goldberg 2003, 2006; Tomasello 2003a,b, 2006; Croft & Cruise 2004; Fischer & Stefanowitsch 2007; Bergs & Diewald 2008; Trousdale & Gisborne 2008). Construction Grammar is a usage-based framework that is essentially cognitive and holistic (non-modular) (Fried & Östman 2004: 257) and which has recently also dealt with the phenomenon of grammaticalization (Traugott 2007, 2008; Trousdale 2008). Construction Grammar treats

> all types of expressions as equally central to capturing grammatical patterning (i.e. without assuming that certain forms are more 'basic' than

[233] i.e. indefinite, definite, referential or non-referential.

> others) and in viewing all dimensions of language (syntax, semantics, pragmatics, discourse, morphology, phonology, prosody) as equal contributors to shaping linguistic expressions. [234]

Thus "constructions may range from fully substantial to fully schematic" (Fischer 2007: 143). Most researchers, who work in the framework, subscribe to the idea that the formal and functional development of linguistic forms and constructions is influenced by the analogical links to other constructions in a larger taxonomic network (Croft & Cruise 2004: 262-264).

Two notions of Construction Grammar are especially appealing: On the one hand, constructions are seen as "automated routinized chunks" (De Smet & Cuyckens 2007: 188) that are stored holistically. On the other hand, constructions, which are seen as independent, are nevertheless related to other constructions of varying degrees of complexity and abstractness (Croft & Cruise 2004: 262-264). Due to this kind of relatedness "constructions are organized into networks of overlapping patterns related through shared properties" (Fried & Östman 2004: 12).

> These complex hierarchical networks involve taxonomic links which relate different constructions in terms of schematicity (e.g. Croft & Cruise 2004: 262-4).[235] What this means is that individual constructs (i.e. the concrete realizations and empirically attested tokens of the more abstract constructions; e.g. Goldberg 1995) are hierarchically linked to (sanctioned by) other more abstract schemas, with several levels of schematicity. (Kaltenböck 2010: 29)

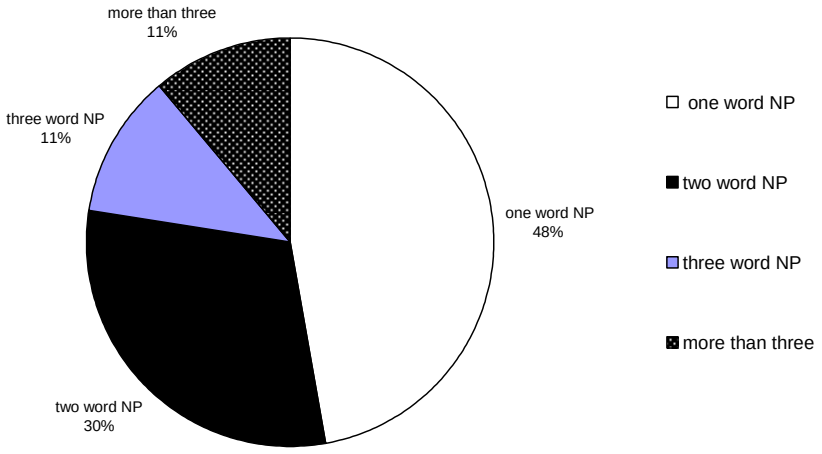
This also means that the more abstract constructions (also known as 'macro'-constructions) can exert influence on the more–concrete, (sometimes purely lexical) so called 'micro-' and 'meso-' constructions (Traugott 2007: 525). The nature of this influence is still debated but may include analogical relationships which are based on the language- user's perceived (conscious or subliminal) recognition of the similarity of the two constructions (Givón 1991: 258; Kaltenböck 2010: 33).

In the following section, I would like to discuss how such a network conceptualization with its assumed analogical transfer between various constructions

[234] www.constructiongrammar.org
[235] See Croft and Cruise (2004: 264) for such a taxonomic hierarchy.

may also exert influence on the development of the determination slot in Old English. The argument which I have in mind is related to the concept of 'heaviness' and 'syntactic weight'. The term 'heaviness' is also known as 'linguistic complexity', 'syntactic weight' or 'syntactic length' (Crystal 2003: 90, 263, 499). 'Weight' is a relative concept which "relates the relative length/complexity of different elements of sentence structure" (Crystal 2003: 499). A clause as subject or object is considered to be heavier than a lexical NP. A pronoun as subject is considered less heavy than an NP with a prehead (cf. Crystal 2003: 499). The order of elements in languages seems to be influenced by their heaviness. Short elements are, for example, positioned before longer ones in right-branching VO languages whereas longer elements tend to occur before short ones in left-branching OV languages. In this thesis 'heaviness' was interpreted as the amount of words within the NP. Again the *Peterborough* and the *Parker Chronicle* were investigated, to provide empirical support for the following argumentation.

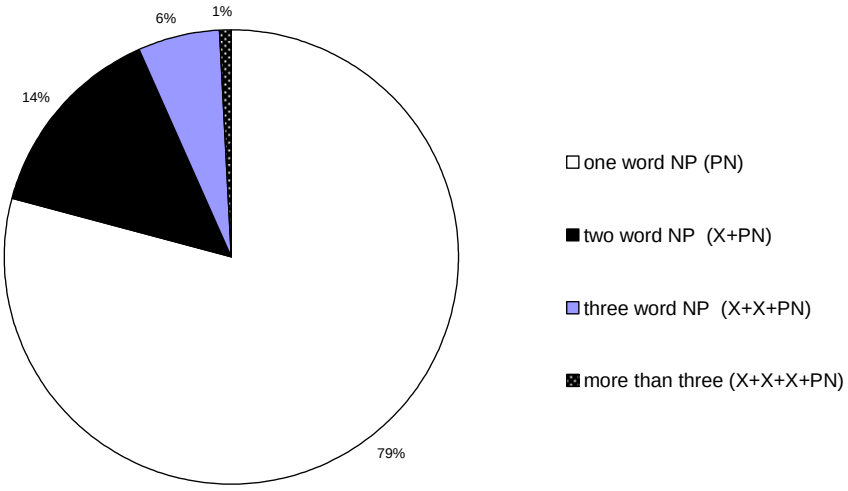
To investigate the influence of heaviness, one possible question is how 'heavy' the prehead is in general. In other words, how many NPs have no word, one word, two words, three or more than three words as prehead elements. As a first step it was investigated how heavy NPs are in general. Graph 5 shows the result for all NPs in the *Peterborough Chronicle*. Quite unsurprisingly, most NPs (48%) are one word NPs because this search includes NPs with common nouns, proper nouns and the class of pronouns (S60-S63).



Graph 5: Heaviness in the *Peterborough Chronicle*

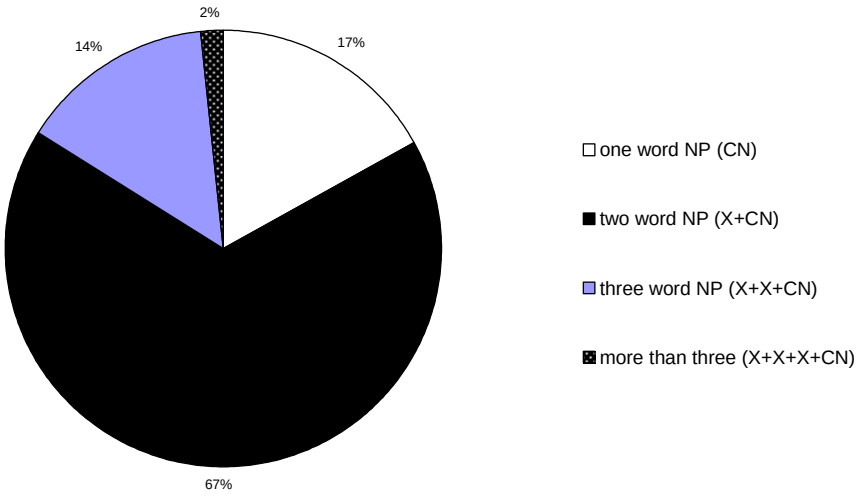
As a next step, prehead patterns and the "heaviness of the prehead" was investigated. If we look at the class of Proper Nouns, we can see that NPs with no element preceding the head[236] are the vast majority (S60c-S63c).

[236] Note that in the YCOE corpus nouns and pronouns have not been tagged as heads or prehead elements. Thus, when conducting searches in the corpus, it was not possible to distinguish between nouns which function as heads or those which have another function in the NP. Still, it seemed necessary to only concentrate on those cases where a proper noun or a common noun functions as a head. That is why the search query was designed in such a way that only those NPs were counted in which the proper and common noun occurs in the last position of the string. This means that for this study, a common or proper noun was considered to head a phrase if it occurred in the last, right most position of the NP. This was decided in order to increase the chance to really analyze NPs where the CN functions as a head. This also means that the results presented in Graph 6a,b and 6a,b do not include the statistics for all NPs where the 'head' noun is followed by a relative clause or any other posthead complementation pattern. However, this does not seem to be a severe problem, as the main interest lies on the heaviness of the prehead and preferred pattern preferences in the prehead.



Graph 6a: Heaviness in the *Peterborough Chronicle* with Proper Noun NPs

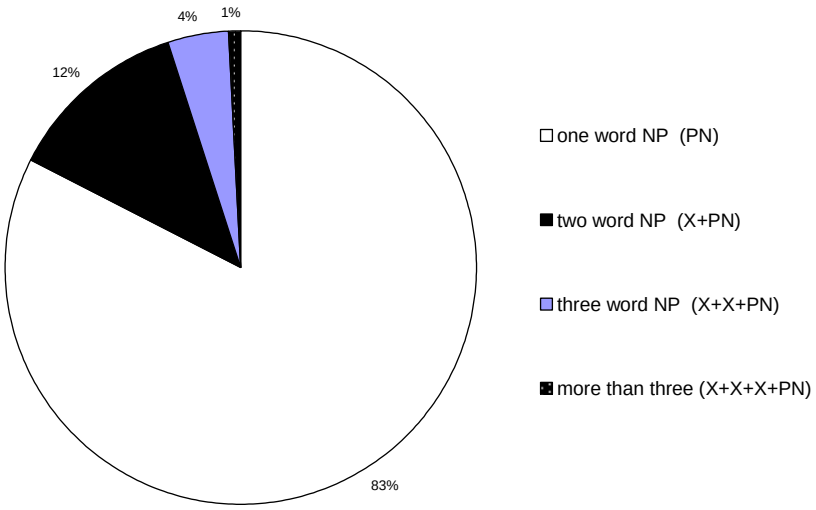
However, with NPs that have a common noun as their head, relations are completely different (S60b-S63b). In this case, 67% have a prehead which consists of one element. 16% have a prehead with two elements or more than two elements, and only in 17% of all the cases the common noun has no prehead.



Graph 6b: Heaviness in the *Peterborough Chronicle* with Common Noun NPs

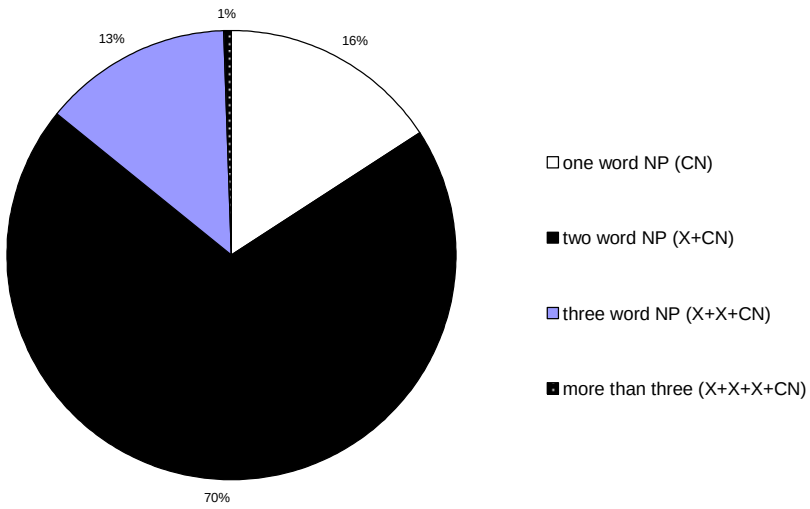
This means that two out of three NPs show a pattern preference for a one word prehead, and one third follows a different pattern. It is important to understand that $[X+Z_{cn}]_{NP}$ includes definite and indefinite NPs as well as NPs with modifiers in adnominal position. NPs like *my king, no king, one king, two kings, that king, great king*... are included here.

The Parker Chronicle shows the same results. Again, with proper nouns an empty prehead is the vast majority:



Graph 7a: Heaviness in the *Parker Chronicle* with Proper Noun NPs

Again with common nouns, we face a 'one element as prehead' - preference. In the *Parker Chronicle*, the vast majority of NPs with a common noun as head are NPs with one prehead element (70%). About 13% have two prehead elements, 1% of all NPs has a prehead which has more than three elements and 16% have no prehead.



Graph 7b: Heaviness in the *Parker Chronicle* with Common Noun NPs

What conclusions can be drawn from this? It can be observed that also on the level of the general NP (including definite and indefinite context) a preference for at least one prehead element exits. In other words, a single element before the CN is the most common discourse pattern in the general NP. Thus, when the speaker hears a common noun, most of the time s/he will only find one element preceding it. This suggests three possibilities:

a) the speaker may observe that syntactically most of the time the common noun is preceded by another (one more) element; a general $[X + Z_{cn}]_{NP}$ preference.

b) the speaker may become aware that the element before the common noun semantically always restricts the scope of possible reference. *My king*, *one king* or even *great king* all have one thing in common, they specify or determine the common noun in a particular way and

c) the speaker possibly recognizes a frequent prosodic stress pattern with X being the unstressed element that precedes the stressed head noun.

From that, the speaker may come up with a general abstract NP schema for NPs with a common noun as a head:

$[X + Z_{cn}]_{NP}$ - construction[237]

This construction, so to speak is the prototypical productive schema for NPs with common nouns. If this is the case, it may easily have had some supporting effect on the emergence of the determination slot and especially on the fact that it has to be filled obligatorily (i.e. marking definiteness overtly).

If a speaker observes that the $[X + Z_{cn}]_{NP}$ - construction is generally most common with common nouns, s/he consequently may apply this schema on a 'lower' level, namely the level of the definite NP. S/He puts an element in front of the common noun simply to stick to the observed preference of the speech community. Remember that also in the definite NP the $[X_{determinative} + Z_{cn}]_{NP\{def\}}$ - schema is the most frequent pattern, so that this structural pattern preference can be observed on more than one level. From that point of view, a particular pattern preference does not only exist in the definite NP but also on the more general level. This consequently will reinforce the use of demonstratives.

The proposed pattern preference with common nouns in definite NPs is also based on the idea that the speaker is generally very sensitive about common nouns. It has been argued that the speaker becomes aware of the $[X+Z_{cn}]_{NP}$ preference. Why should this be the case? On a superficial level, many definite one word NPs exist which do not show a $[X+Z_{cn}]_{NP}$ preference. If we look back at graph 5, we can see that most NPs are one word NPs, because pronouns and proper nouns often head an NP on their own. Why then should the speaker even become aware of a preferred schematic pattern $[X+Z_{cn}]_{NP}$ if such NPs are embedded in a vast amount of 'one word NPs'? Regarding this question, I believe in what might be called the supremacy of the common noun.

The class of common nouns has a dominant position because of its high frequency. In the *Peterborough Chronicle* we find 6210 words tagged as common nouns in a manuscript with 40,641 words altogether. This is twice as much as the proper nouns in the text.

[237] Again note that a potential NP posthead is not included in this annotation.

	CN	PN	Pro
PB	6210	3019	2832
PA	2160	1847	849

Table 31: Noun classes in the Peterborough and Parker Chronicle

Even if we add the number of pronouns and proper nouns (5851), common nouns are still the most frequent noun class. A similar situation can be found in the *Parker Chronicle* with 2160 common nouns in a text of 14,583 words. Here, the group of common nouns is still the most frequent one, although Proper Nouns are relatively frequent. Additionally, several studies have shown that the common noun generally is a very prototypical category from a psychological point of view. Note the predominance of common nouns in the early acquisition process (cf. Benedict 1979; Drama 1987; Hoff 2001; Clark 2003; also see Whaley 1997 for the common noun as a typological universal). This prototypical character also gives the common noun a salient status in psychological computation.

Thus, I argue that speakers differentiate between the subcategories common noun, proper noun and pronoun among NP heads. Linguistic categories are a psycholinguistic reality and although it is hard to pin down the exact cognitive processes, categorization is not arbitrary and originates from semantic and syntactic features (cf. Aarts 2004, 2007). It has repeatedly been pointed out that especially syntactic features (for example, position in certain syntactic slots) might even be more influential than semantic features when it comes to assigning categorical membership of certain words.

NPs with no prehead element are the most frequent ones in both chronicles because most of them are pronoun NPs. Nevertheless, the speaker might not take their behavior into account when it comes to determination patterns. As a matter of fact, the syntactic behavior of pronouns differs vastly from the syntactic behavior of nouns as, for example, modification is not possible (* *the nice she*). Thus, it is highly debatable if the speaker cognitively links pronoun usage to common noun usage and if the structure of pronoun NPs plays a role in the speaker's analogical reasoning when dealing with CN NPs.

6.3 Preliminary conclusions: multi-level frequency and analogy effects as triggers for article development

In this chapter, various potential triggers for the emergence of the determination slot in the $[[X_{determinative}]_{DETERMINATION} + [Z_{cn}]HEAD]_{NP\{def\}}$ – construction and the development of the new definite article category in English have been presented. It has been argued that the increasing usage of the Old English demonstrative and its consequential grammaticalization mirrors a change in the grammar, namely the emergence of a determination slot that has to be filled accordingly. A determination slot emerges as an innovation in early Old English and as a consequence the demonstrative acquires its new status as an article. The demonstrative is recruited as the default filler because of its semantics, syntactic position and its early high frequency. What makes such a process likely is a) the broad semantic overlap between demonstrative and definite article (which can be seen as a deictically unmarked demonstrative) and b) the demonstrative's high overall frequency. On the one hand, the demonstrative was closest in terms of semantic content (after all, all it had to lose was its deictic force). On the other hand, the demonstrative was already quite frequent in the beginning. Its high frequency made it a prominent candidate for 'the job'. One explanation why the demonstrative was already frequent, even before it was recruited as a default slot filler, is the fact that its deictic force weakens due to frequent usage:

First, definite reference is inferred from context. Only if a speaker wants to express spatial deixis, s/he uses the demonstrative. Whenever the speaker wants to express spatial relations, s/he will use the demonstrative. As this will be the case relatively often, the frequent usage of the demonstrative leads to its semantic bleaching. Semantic and formal reduction is the simple result of any ritualization or habituation process. The demonstrative's deictic force becomes weaker so that it can be used in a broader range of pragmatic situations. This increases the overall frequency of the demonstrative. Another factor which may have led to a higher number of demonstratives in Old English may be that the demonstrative's usage increases in combination with the weak adjective paradigm to disambiguate case and gender.

In a next step, the increased frequency of the demonstrative triggers the conceptualization of the determination slot, which, in a second round, pushes the demonstrative down its grammaticalizing path even further. The conceptualization of this slot is not only triggered by the frequency of the demonstrative but by the suggested analogical and cognitive processes on different levels. At a certain stage the speakers conclude that that definiteness is expressed overtly. At that point, the speaker changes from a system where definiteness marking is optional to a system where it becomes obligatory. For various reasons, the option to mark it overtly is exploited more often, which leads to the fact that a learner generation constructs a different grammar, based on the idea that marking definiteness is obligatory. This interpretation is compatible with the adult grammar input and is easier to learn at the same time.

The following Figure visually sums up what has been stated so far:

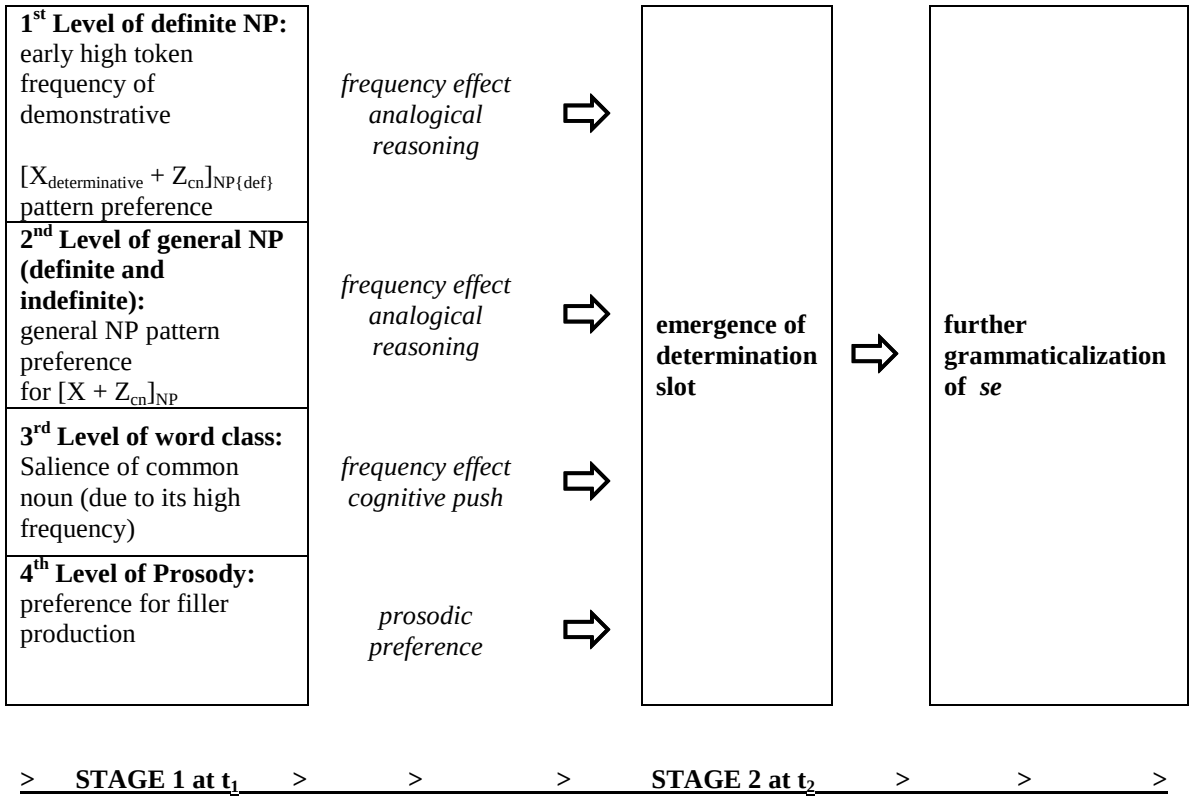


Figure 8: Multi-level frequency effects that trigger an increase in demonstrative usage and the emergence of a determination slot in early Old English

The first frequency effect takes place on the level of the definite NP. We can observe a general pattern preference for $[X_{determinative} + Z_{cn}]_{NP\{def\}}$ in the definite NP. This is especially based on the fact that the demonstrative widens its scope due to losing its deictic force.

The second frequency effect can be found on an abstract level (2^{nd} level), namely on the level of the general common noun NP (including definite and indefinite NPs). A general $[X + Z_{cn}]_{NP}$ prehead bias with common nouns exists. The speaker prefers to fill at least one slot before the head noun. This quite superficial tendency and pattern preference might also influence the speaker in his decision to take the $[X_{determinative} + Z_{cn}]_{NP\{def\}}$ as an exemplary model. One takes in many different structures, abstracts what they have in common, namely one element before the common noun, and then, through a process of analogical reasoning, uses this pattern on the level of the definite NP.

On a third level of word class, the psychological supremacy of the common noun (due to its high frequency and its semantic load) might have pushed the process even further. Finally, on yet another level (a 4^{th} one), prosodic pattern preferences – namely a preference for filler production – seems to support the process as well. This relates to the often underestimated interface between prosody and morphosyntax, as prosody can exert influence on the grammatical components it interacts with.

I argue that these factors combined lead to the emergence of the determination slot and the entrenchment of the $[[X_{determinative}]_{DETERMINATION}+[Z_{cn}]_{HEAD}]_{NP\{def\}}$ – construction. In other words, one faces a complex multi-level frequency and analogy effect that influences the observable linguistic change.

As soon as a fixed determination slot comes into existence, this influences the system in several ways. Only after the emergence of a determination slot, various further developments can occur. On the one hand, only then a 'real article' develops. The demonstrative is recruited as the default filler. Only then, will it undergo further morphosyntactic change (further attrition, further reduction, further expansion of scope). For example, the article will expand in its range of application; being applicable to generics or specifics. Also, a point might come at which the article is analyzed as grammatically and semantically empty, and it might even be the case that the definite-indefinite distinction collapses. Finally, languages cannot only acquire the category but also lose it again (Lyons 1999: 340).

On the other hand other modifying elements, (possessive pronouns etc.) will be interpreted as determinatives as well. The class of determinatives also gradually continues to accrue its membership by the recruitment of more and more slot fillers. The slot filler status, originally associated with the article, is also extended to other words it shares semantic or pragmatic traits with it. The determination slot, an innovation of early Old English is then consolidated in late Old English. A first instance of this consolidation is the more predictable and stringent distribution of the article (Denison 2006; Van de Velde 2010).

"We shall not cease from exploration and the end of all our exploring will be to arrive where we started and know the place for the first time" (T.S. Eliot)

7. Conclusion

In current comprehensive descriptions of English Grammar (cf. Quirk et al. 1985; Huddleston & Pullum 2002) the definite article *the* is treated as the most prototypical member of the class of determinatives and as an important element of the English NP. In Modern English, where the overt marking of definite reference is obligatory, the definite article is the default marker to fulfil this grammatical function. As a matter of fact, *the* is the most frequently used word in the English language.[238]

One of the most interesting aspects of the English article system and the definite article in particular is their rather late diachronic development (cf. Christophersen 1939: 84; Mustanoja 1960: 169; Kisbye 1972: 1; Traugott 1972: 85-87; Mitchell 1985: 127ff). Typological facts illustrate that article development is not frequent among the languages of the world (Gardiner 1932: 47; McColl Millar 2000: 309)[239], and the birth of this grammatical category in English has even been called a "historical accident" (McColl Millar 2000b: 275), which took place under "obscure conditions" (Christophersen 1939: 18).

Scholars seem to agree that whereas West Germanic had no definite article as such, the masculine nominative form of the Old English simple demonstrative *se* grammaticalized and developed into the definite article (van Gelderen 2007: 297 cf. Christophersen 1939: 84; Mustanoja 1960: 169; Mitchell 1985: 127ff). What scholars do not agree on is why the category developed and whether the form *se* should already be analyzed as an 'article' in early Old English (after 890 AD). In other words,

[238] http://www.world-english.org/english500.htm

[239] As was discussed in section 3, article usage is not a frequent tendency among languages (Himmelmann 1997; Lyons 1999; van Gelderen 2007). The languages that mark the semantic concept of definiteness overtly in their morphosyntax are a distinct minority. Those languages that mark definiteness do not necessarily employ a definite article for this. Also position, case or morphological affixation are used to mark definite reference (cf. Chestermann 1991; Diesing 1991; Buchholz 2004; Giusti 1997; Leiss 1994, 2007; Abraham 1997; Karlsson1983[1995]).

researchers disagree whether the article already existed in the early Old English period or developed only later in late Old English/early Middle English.

All these facts and open questions have made it especially interesting to revisit category emergence and explore the phenomenon from a diachronic perspective. Thus, the overall aim of this thesis has been to describe the linguistic change. The question which seems most interesting when discussing language change is why some changes are set in motion in one language at a particular time, but not in another language. For a scientific community seeking 'the truth', it is simply not enough to label a certain linguistic phenomenon. To observe a diachronic process and state that, for example, it is a case of grammaticalization or reanalysis, does not explain what has triggered the reanalysis or the grammaticalization of the particular element. Thus, one specific goal of this thesis has been to explore and discuss the causal triggers which led to the development of the article.

With regard to the highly debated "vexed question" (Quirk and Wrenn (1958: 70) when the definite article emerged as a new category in English, it has hopefully become clear in the course of this thesis, that a 'correct' answer to this question heavily depends on how one defines articlehood in the first place, and what grammatical features one believes to be affected by the postulated change. Unfortunately, proposals to clearly define the category have remained 'sketchy' so far. Most authors have avoided setting up criteria or a definition of the category. That is the reason why 7 criteria for articlehood have been proposed and applied on Old English data.

Some scholars refuse to set up and impose demarcation criteria on linguistic output because they question Aristotelian categories all together arguing that category membership is fuzzy. Syntactic categories are epiphenomenal and vary across and within languages. Thus, hard-and-fast boundaries between categories and clear conditions for membership are often impossible to set up. Being aware of the phenomenon of gradience, I still believe in the general usefulness of categorization in synchronic grammar description. Thus, a second objective of this thesis has been to check how successfully criteria which are based on the semantic and syntactic behavior of an element in Present Day English can be applied to an older language stage.

When sifting through the literature on the development of the article, it can be observed that not many studies have tested their assumptions against large text samples.

Repeatedly, the grammaticality of a certain construction is postulated based on the existence of one or two examples found in the handbooks on Old English. A lack of large-scale corpus studies on the topic can be detected. By analyzing a large data set (using a computer accessible corpus), I wanted to fill this empirical gap and check some of the claims that have been made in the grammar books (e.g. Mitchell 1985; Hogg 1992).

The empirical part of this thesis includes a qualitative and quantitative analysis of NP types and nominal determination patterns in various Old English prose texts in the *York-Toronto-Helsinki Parsed Corpus of Old English Prose (YCOE)*[240]. For analysis, the *CorpusSearch Program*[241] and *AntConc*[242] have been used. By using corpus linguistics as a method, this thesis has also attempted to introduce the notion of frequency as a crucial factor which helps to judge the grammaticality of a certain construction. High frequency is seen as evidence for the cognitive salience and entrenchment of a grammatical construction.

In the following sections, I will once again present the most important ideas and findings of this thesis (7.1). Note that section 3.5, 5.5 & 6.3 also provide detailed summaries of the ideas and results which have been discussed in the individual chapters. I will close this thesis with a discussion of some theoretical implications of my findings (as well as their weaknesses and strengths) and potential directions for further research (7.2).

[240] http://www-users.york.ac.uk/~lang22/YCOE/YcoeHome.htm
[241] http://corpussearch.sourceforge.net/index.html
[242] http://www.antlab.sci.waseda.ac.jp/software/AntConc_Help_3.1.2/AntConc_Help.htm

7.1 Summary

To answer the question why the category developed in English, several explanations on the article's emergence have been discussed in the first part of this thesis. First, traditional views on the development of the definite article have been presented. Especially scholars at the turn of the last century dealt with the phenomenon and concluded that the definite article already existed in Old English and that it developed as a necessary tool due to the decline of the inflectional system and the general shift of English from a synthetic to an analytic language (Flamme 1885; Philipsen 1887; Behagel 1923; Bruggmann 1904; Christophersen 1939; Grimm 1837; Heinrichs 1954; Rennhard 1962). Although their methodology is rather weak and their conclusions are of a rather descriptive nature, their work has been mentioned because it represents the idea that the article already existed from 890 onwards (cf. Christophersen 1939: 92; Kisbye 1972:1). I have also elaborated on the refined hypothesis that article emergence is linked to changes in the adjective paradigm (weak-strong distinction). Although my analysis of adjectival patterns has confirmed that in definite NPs the weak adjective is used more or less consistently in combination with *se*, I have argued that it does not seem likely that the article developed primarily to disambiguate case and gender (5.1.1.2).[243]

Functionalist and formalist explanations on article development have been presented as well. Whereas functionalist research understands the development from demonstrative to article as a grammaticalization path *par excellence* (cf. e.g. Traugott 1982, Lehmann 1982[95]; Himmelmann 1997; Lyons 1999; Hawkins 2004), which was mostly triggered by semantic-pragmatic factors (Traugott 1982), the formalist framework argues that the observable change is an example of reanalysis towards or within Determiner-Phrase structure (cf. e.g. Philippi 1997; Lyons 1999; Roberts & Roussou 2003; Osawa 2007). As has been shown, it is indeed possible to apply Lehmann's grammaticalization parameters successfully when tracing the steps of *se's*

[243] Also language contact was presented as a potential trigger and external cause (Scandinavian influence from the North) which may have been responsible for the observable demonstrative split in the nominal system.

development. Generative proposals are also of interest because they manage to formalize the linguistic change in a precise way (at least theory-internally).[244] Nevertheless, as this thesis has tried to reveal, some challenges remain. Although most of the presented accounts provide schemes that more or less fit the phenomenon descriptively, the given explanations were felt to be insufficient because they do not really concentrate on the causal triggers for the change. Moreover, I have supported the idea that reanalysis and grammaticalization are epiphenomenal descriptive terms rather than 'real' causal mechanisms and thus should be broken down "into more fundamental mechanisms of language change, including (among others) analogy" (De Smet 2009: 1730).

As a reaction to those perceived theoretical and methodological shortcomings, a non-nativist, usage-based, form-driven, analogical model of morphosyntactic change has been proposed (Fischer 2007: 4; cf. Bybee 2003a,b; Krug 2003; Tomasello 2003a,b; De Smet 2008; 2009). Although the development of the article category was definitely a multi-causal phenomenon, I have argued that it can be explained best if one takes into account a) the frequency of linguistic surface forms (i.e. concrete tokens), b) the importance of analogical reasoning as a mechanism for change, c) the influence of taxonomically related constructions and d) preferences in cognitive on-line processing (cf. Hopper 1988; Goldberg 2006; Tomasello 2006; Fischer 2007; Trousdale & Gisborne 2008).

7.1.1 Article development as a consequence of the previous emergence of a determination slot

Above all other things, this thesis is based on the idea that a proper understanding of grammaticalization has to take into account that formal constructions can be driving forces of linguistic change. The change from demonstrative to definite article has been conceptualized as a change which was driven by a "lexically underspecified [syntactic] construction" (Van de Velde 2010: 291) – in other words, the grammaticalization of a

[244] The formalist model, which positions the demonstrative in Spec position, defines article emergence as a diachronic movement (raise) from Spec into the Head position further up in the syntactic tree.

schematic construction with a slot (Trousdale & Traugott 2010: 12; cf. Bybee 2003a,b, 2007; Traugott 2006; De Smet 2008).

It has been argued that the article category developed due to the previous emergence of a positional, syntactic, lexically underspecified 'determination slot'. This functional determination slot is an integral part of the definite NP construction in English, which has been formalized in the following way:

$$[[X_{\text{determinative}}]_{\text{DETERMINATION}} + [Z_{\text{cn}}]_{\text{HEAD}}]_{\text{NP\{def\}}}$$

The emergence of this schematic construction which employs a determination slot is seen as a necessary precondition and the main trigger for the grammaticalization of the demonstrative. The fact that the determination slot developed and became functional itself leads to the recruitment of the demonstrative as a default slot filler (= definite article). It is this employment as an obligatory slot filler which triggeres the grammaticalization of the demonstrative. Therefore, in the case of English, the term article should only be introduced, when we also can identify a fixed positional determination slot in the definite NP.

This relates to the general observation that linguistic elements often do not grammaticalize on their own but in larger constructions. It is a rather superficial statement to state that the form *se* grammaticalizes. *Se* only starts to grammaticalize in its role as a dependent prehead element. It undergoes grammaticalization but in the 'broader' more abstract NP-construction with *se* (now taking up the role of an article) being a filler of it. The demonstrative – from that perspective – only grammaticalizes in the context of the $[[X_{\text{determinative}}]_{\text{DETERMINATION}} + [Z_{\text{cn}}]_{\text{HEAD}}]_{\text{NP\{def\}}}$ – construction.

7.1.2 Grammaticalization of *se* as a form-driven change triggered by complex analogy and frequency effects

A second line of reasoning presented in this thesis has been that complex analogy and frequency effects are the main motivating forces behind the emergence of this schematic construction (Fischer 2007: 4, cf. Hawkins 2004). Analogy has been conceptualized in a wider sense as 'rule generalization/ extension' at a higher meta-

linguistic level (Traugott & Trousdale 2010: 36; Fischer 2007) and has been treated as a "psychologically real phenomenon which has causal efficiency […] in language" (Itkonen 2005: xii). Pattern recognition and the analogical transfer of formal patterns from one domain to another is seen as one of the main reasons for the observable change. Influenced by the high frequency of prehead patterns like Dem+CN or Poss+CN in the definite Old English NP, the learner analogically abstracts a pattern preference for $[X_{determinative} + Z_{cn}]_{NP\{def\}}$, which finally licenses the conceptualization of a specific local determination slot and the cognitive entrenchment of the $[X_{determinative}]_{DETERMINATION} + [Z_{cn}]_{HEAD}]_{NP\{def\}}$ – construction.

A central characteristic which has emerged out of the present analysis is that in Old English the overt marking of definite reference is already very frequent and the demonstrative pronoun is the most frequently used element to do so[245]. Thus, when the speakers analyze their Old English input, they draw the following analogies: First, the speaker assigns the same structure, namely $[X_{determinative} + Z_{cn}]_{NP\{def\},}$ to constructions like Dem+CN, Poss+CN or GenP+CN. At this stage ($STAGE_1$ at t_1), definiteness marking is not yet obligatory. In a second step, however, some speakers extend this schema to the semantically definite but syntactically bare CN cases (being the less frequent and thus less prototypical). This leads to an increase in frequency of the pattern which supports the conceptualization of a determination slot that has to be filled obligatorily. The existence of such a slot and the 'rules' attached to it increase the consistent marking of definiteness in even more instances, which in turn will lead to the recruitment (obligatorification, fixation, etc.) of the default filler.

It has also been argued that the cognitive entrenchment of the $[[X_{determinative}]_{DETERMINATION} + [Z_{cn}]_{HEAD}]_{NP\{def\}}$ construction is not only sanctioned by a pattern preference in the definite NP, but that a pattern preference for $[X + CN]_{NP}$ on the level of the general NP (with definite and indefinite reference) also exerts an influence on the level of the definite NP. In Old English most CN NPs follow an $[X + Z_{cn}]_{NP}$ – schema with one prehead element before the head (including all types of common noun phrases).[246] In other words, the most frequent common noun pattern is the $[X+ Z_{cn}]_{NP}$ -

[245] In all the investigated texts the pattern Dem+CN makes up between 25% and 30% of all NPs which include a common noun.
[246] i.e. indefinite, definite, referential or non-referential.

construction with only one prehead element preceding the common noun. This prototypical construction, which is far more frequent than the 'bare' $[Z_{cn}]_{NP}$ - construction (i.e. the common noun occurs without any prehead elements), may have also had a subtle but underestimated impact on the (emerging) structures on the definite NP level.

Finally, it has also been suggested that rhythmic pattern preferences on the level of prosody have influenced article development as well. Studies have shown that rhythm and melody can influence morphosyntax and morphosyntactic change (Peters 1995; see Schlüter 2005 for overview). When learning or analogizing, the learner, who is helped by intonation and position, favors the $[[X_{determinative}]_{DETERMINATION} + [Z_{cn}]_{HEAD}]_{NP\{def\}}$ − schema in order to fulfill the prosodic and syntactic conventions of English mentioned above. This line of reasoning makes article development a kind of "form-driven change" (Fischer 2007: 66). The formal shape of the most frequent syntactic (but also semantic and prosodic) NP patterns is analogically extended to new instances (see section 7.2.).

7.1.3 Obligatory definiteness marking as a means to increase efficiency

Another point that has been made was that the demonstrative only starts to grammaticalize because the overt marking of definiteness becomes obligatory. This motivates the speaker to employ a default marker in all those cases where definiteness is not yet expressed 'parasitically' by another determinative (e.g. demonstrative, possessive pronoun, etc.). This line of reasoning directly leads to the question why definiteness marking becomes obligatory and why the speaker extends the demonstrative's usage to all those 'unmarked' definite NP cases, which still used to occur bare in early Old English (i.e. $[Z_{cn}]_{NP\{def\}}$). Here, it has been reasoned that marking definite reference obligatorily by employing a functional element in the prehead can be interpreted as an example of structural and cognitive simplification as a means to make on-line processing more efficient.

First, it has been assumed that it is more difficult for a speaker to establish a detailed hypothesis when to mark or not mark definiteness overtly, than to base

linguistic production on a much 'simpler rule', namely marking definiteness all of the time. A variable (conditioned) rule is more complex than an unconditioned rule which states: "always mark definiteness overtly with common nouns" because here the speaker does not have to hypothesize about which context demands overt marking or not. Thus, the obligatorification process is a matter of systemic simplification.

Additionally, it has been suggested that an obligatory marking rule is able to establish itself in a population of learners because the behavior (linguistic output) it produces can also be produced by the carriers of the optional marking rule. It will not be recognized as unfamiliar. Therefore, the spread of obligatory marking is likely, since bearers of the optional-marking rule are unable to recognize anything alien in the speech output produced on the basis of the obligatory marking system, whereas bearers of the new system would perceive output of pre-change system as ungrammatical. All this leads to an irreversibly one-sided accommodation pressure towards obligatory marking.

Second, it has been proposed that the article's development increases on-line processing efficiency. Based on Hawkins' 'Performance-Grammar Correspondence Hypothesis' (2004), which argues that grammars are structured by general principles of efficiency and complexity, it has been assumed that many aspects of grammaticalization and developments in morphosyntax can be accounted for if one takes into account the speaker's striving for structural and cognitive efficiency (Hawkins 2004: 13).

Hawkins' *Maximize On-line Processing – principle'* (Hawkins 2004: 28) predicts that it is highly efficient to attach an article before the lexical item because otherwise important aspects of syntactic and semantic interpretation would be delayed (Hawkins 2004: 89).[247] As a speech string is a linear sequence, it is not efficient "to delay the assignment of properties in the on-line parsing string" (Hawkins 2004: 28). In the case of English, the listener receives the first two words of a sentence, e.g. *the boy*, and already recognizes the category determinative and noun. Already then, the speaker will

[247] Every form and property contributes to "the ultimate syntactic and semantic representation of the sentence in the string" (Hawkins 2004: 28). Thus, a speaker will always prefer early properties assignment, so that he can build his or her "ultimate representations sooner" (Hawkins 2004: 29).

be able to attach the elements to a mother noun phrase and assign lexical-semantic content to *boy* and uniqueness semantics to the determinative (Hawkins 2004: 20)[248].

7.1.4 Slot emergence in the early Old English period (o.2)

The empirical investigation has revealed that the speakers of early Old English already employed a determination slot in their grammars. In order to shed light on the question as to when the article developed, several cases studies have been set up. In those studies, the semantic and syntactic behaviour of the demonstrative *se* has been analyzed thoroughly.

In one case study, I have tried to investigate the development of *se* diachronically. When splitting up the *Peterborough* and *Parker Chronicle* into periods, it can be observed that a) the token frequency of *se* + CN drastically increases in both Chronicles; b) the use of the compound demonstrative *þes* increases; c) using *se* with singular proper names decreases. This has been interpreted as strong evidence for the fact that the form *se* already loses it deictic force quite early and takes up article function, whereas the compound demonstrative gets employed more often to express proximity or emphasis, thereby filling a semantic gap that was opened by the grammaticalization of *se*. In other words, the observable diachronic developments suggest that the form *se* took up article function from early Old English onwards. Still, the existence of a determination slot and a definite article in Old English could not be attested free of doubt by exclusively looking at the *Peterborough* and the *Parker Chronicle*.[249]

[248] This argument is also supported by typological research, which shows that "there is a strong tendency for the definite article, if a free form, to occur initially in the noun phrase, independently of a language's general constituent-order pattern" (Lyons 1999: 4).

[249] For example, it was observed that type frequency only increases in the *Parker* but not in the *Peterborough Chronicle*. Additionally, the diachronic development of the compound demonstrative *þes* shows some unexplainable fluctuation in the *Peterborough Chronicle*. Thus it has to be concluded that the diachronic investigation of the *Peterborough Chronicle* yielded inconclusive results.

To investigate the change from demonstrative to article qualitatively, 7 criteria for articlehood[250] were set up:

1) PREDICATION: a pre-head dependent which cannot function as a predicative complement is likely to be an article
2) INDEPENDENCE: a pre-head dependent which cannot occur independently of its head is likely to be an article
3) CO-OCCURRENCE: a pre-head dependent which cannot co-occur with itself and other determinatives is likely to be an article
4) RELATIVE POSITION: a pre-head dependent which occurs to the left of any modifier is likely to be an article
5) OBLIGATORINESS: a pre-head dependent which is an obligatory default marker to indicate referentiality is likely to be an article
6) EXCLUSIVENESS: a pre-head dependent which exclusively expresses (in)definiteness is likely to be an article
7) SYNTACTIC MOTIVATION ONLY: a pre-head dependent which is exclusively syntactically motivated is likely to be an article

These criteria are based on PDE usage and at this diachronic stage the definite article meets all of them. Still the criteria are in a way arbitrary and setting them up a *post hoc* decision.

When applying the criteria, some of them have not lead to conclusive results, or their application has turned out to be problematic. For example, the EXCLUSIVENESS criterion could not be applied to the Old English language stage at all. The criteria PREDICATION, INDEPENDENCE and SYNTACTIC MOTIVATION ONLY could be applied but the results have not revealed much about *se* in its function as a prehead determinative. Thus, only three criteria have turned out to be helpful for investigating the role of *se* in the Old English prehead. Those were RELATIVE POSITION, CO-

[250] Generally, it has been suggested that articlehood is an 'umbrella term' for an element which fulfills several different sub-conditions at the same time (i.e. shows a certain semantic and syntactic behavior). One criterion on its own does not constitute articlehood, only when several criteria are met, it makes sense to speak of a definite article.

OCCURRENCE and OBLIGATORINESS. Interestingly, those criteria are directly linked to the existence of a determination slot.[251]

Based on the results for all three criteria, it has been concluded that the speakers of early Old English already used a grammatical system in which a determination slot was implemented. Already in early Old English it became the 'rule' to mark definiteness obligatorily by filling this positional slot.

The fact that exceptional patterns still existed (e.g. co-occurrence of Dem+Poss, Poss+Dem) has shown that the emergence of such a determination slot is a gradual process. Obviously, it took some time until the system reached a point where definiteness marking became regular and got extended to all the cases that we know of today. For example, the definite article expanded in its range of application to generics or specifics only later. This shows that it is simply impossible to exactly determine a point in time when the article's existence can be confirmed beyond doubt (see 7.2). All that can be said is that as soon as a determination slot developed, the speakers of English started to employ the form *se* as a default filler. As I have concluded that the determination slot already existed in early Old English, it seems reasonable to argue that the demonstrative took up article function in this period.

7.1.5 The cognitive cycle of grammaticalization

Echoing comments on grammaticalization and reanalysis, another major argument in this thesis has been that those two notions are rather epiphenomenal and should be split up into many other, speaker-internal mechanisms. Grammaticalization, from that point of view, is more an umbrella term and a notion which can only be applied from an outside perspective. As a matter of fact "clines cannot be part of a speaker's grammar, and hence cannot be [psychologically] real" (Fischer 2007: 117). Whereas a system can undergo some re-interpretation in time, the individual speaker generally does not set up his linguistic system by re-analyzing.

[251] The fact that an article does not co-occur with other determinatives, the fact that it occurs to the left of the modifier and the fact that is has to be used as an obligatory default, even in cases where in the context semantic definiteness plays no role anymore (see generic usage), is not so much a feature of the particular form, but rather the result of the existence of a syntactically underspecified slot, which is functional in itself.

To specify this general statement, I have conceptualized a cycle for speaker-internal processes in the grammaticalization process, which are triggered by the token frequency of certain linguistic forms and patterns in the linguistic input:

(1)MEMORIZATION/ IMITATION/HABITUALIZATION/RITUALIZATION > (2)ANALOGY > (3)CATEGORIZATION > (4)ALIGNMENT.

It has been argued that when the speaker hears linguistic items and constructions frequently enough, s/he starts to memorize them, imitates the input and thus ritualizes his/her output through constant repetition. When parsing the input, the learner/speaker also starts to become aware of semantic and structural similarities in the input, which due to his/her ability to draw analogical conclusions, will make him/her categorize the input. This formal and semantic categorization (e.g. into word classes, construction types, etc.) will make him/her align any input into those existing categories or rearrange his repertoire of existing patterns to match the input. For example, the emergence of the determination slot has led to the increased production of the very types of definite NP patterns that had been frequent in the first place.

This cycle in return will increase the frequency of certain forms in a speaker's output. This increase in frequency also has a direct effect on the linguistic form (e.g. ritualization leads to attrition; strong entrenchment leads to a stronger adjacency of forms; the conceptualization of a determination slots leads to fixation on the determinative element; etc.).

In contrast to Lehmann's parameters, the postulated cycle does not concentrate on the individual form but on the cognitive processes that go on in the speaker's mind. Analogy is seen as an internal, cognitive, mental psychological process, something that affects and shapes a speaker's mental setup. The cyclic process (including all the notions mentioned above, frequency, analogy, categorization alignment), leads to an increase in frequency of a certain form. Thus the frequency of certain forms and patterns is at the same time a causal mechanism and a result. Frequency and analogy are primary factors whereas reanalysis and grammaticalization a) come later being effects of the previous factors and b) are not part of processing itself.

7.2 Theoretical implications and directions for future research

Having summarized the main findings of the analysis, this section will address some theoretical implications and potential directions for future research. First of all, it has to be admitted that the idea to set up criteria for articlehood based on Modern English and to apply them on an older language stage has failed. Out of 7 criteria, only 3 turned out to be useful and out of those 3, only 2 clearly speak for the existence of a determination slot. This failure, however, underlines what scholars have repeatedly stated about, gradualness, the fuzziness of categories and the inability to capture linguistic reality by Aristotelian categorization (cf. Aarts 2004, 2007a,b; Denison 2006; Traugott & Trousdale 2010).

The notion of gradience can be understood much better if one takes a diachronic perspective and understands that language is constantly changing. When an element grammaticalizes, it may change its category membership. In the process of grammaticalization, a form can lose old and take up new characteristic features. Thus, it is possible that an element – from a synchronic perspective – does not fulfill all 'necessary' criteria at a certain time and must be considered as a non-prototypical but valid member of the category, and may meet more and more criteria in due course. Additionally, the number of the overall members of a certain category can increase or decrease diachronically. This, in synchrony, explains why some elements are more prototypical members of a class, while others are less prototypical and cases, which are hard to assign to one or the other category. In the end, it has to be concluded that linguistic behavior at one stage may not be analyzable with tools that have been set up for analyzing linguistic behavior at an earlier stage.

Another issue, I would like to comment on once again, is that article development has been conceptualized as a form-driven change where mostly formal 'system-internal' factors (e.g. pattern preferences, structural regularization as a principle of economy) are responsible for the grammaticalization of the demonstrative. "The formal similarity of patterns and the adjacency (contiguity) of signs are […] an important formal force in grammaticalization" (Fischer 2007: 122). Generally, in grammaticalization studies

semantic or pragmatic change is said to often precede structural change. However, as Mithun (2003), Hawkins (2004) and Fischer (2007) have pointed out, it does not always seem to be the case that changes in grammar are only driven by pragmatic-discourse needs. Speakers also change their grammatical system (e.g. by analogical leveling), in order to increase systematic regularity.[252] In the case of article development in English, it has been argued that the overall shape of the synchronic system leads to the formation of a new productive grammatical schema. The emergence of the $[[X_{determinative}]_{DETERMINATION}\ +Z_{cn}]_{NP\{def\}\ -}$ construction is mostly influenced by the existence of specific majority patterns in the Old English NP. Thus, I have suggested that in the case of article development, semantic change and structural change co-occur.

Several important issues could not be dealt with in this thesis. While my analysis has first and foremost concentrated on simple definite NP patterns, more complex NPs have not been investigated. For example, the OBLIGATORINESS criterion has only been checked on one-word NPs. It will therefore be necessary to also investigate 'heavier' NPs with post head complementation (e.g. relative clauses, etc.). Additionally, it would have gone beyond the scope of this thesis to look at the development of the definite article in other languages. It has never been my intention to set up criteria which are universal and which can thus be applied to other languages. However, as a next step, it would be interesting to compare article development in other languages, and check if it may also be interpreted as a form-driven change.

I have also not discussed the development of the indefinite article. However, I believe that the emergence of the $[[X_{determinative}]_{DETERMINATION}\ +Z_{cn}]_{NP\{def\}\ -}$ construction has led to the development of the indefinite article as well. We know that Old English had no indefinite article (cf. Rissanen 1967; Mitchell 1985). The indefinite article *a/an* developed out of the numeral *one.* Compared to definiteness, indefiniteness was completely unmarked in Old English. In a few instances it was marked by *ān* or *sum*. Clearly, however, those elements were not nearly as frequent as *se*. As many languages again show, a language can do perfectly without indefiniteness marking. Thus, it seems

[252] Also Hawkins (2004) suggests that expanded semantics and pragmatics of the definite article compared with the demonstrative are a consequence not a cause of the grammaticalization process.

likely that the indefinite article also emerged as a consequence to the prior emergence of the determiner slot in the NP.

Many other questions remain. One of them is why one cannot observe the frequent use of an article before proper nouns in English. Why does the assumed preference for obligatory definiteness marking not seem to count in the case of proper nouns? As could be seen, such a structure was possible but not frequent in Old English. However, it decreased. In PDE, **I like the Susi* is considered grammatically incorrect but such structures can be found in many dialects of Italian and of German, e.g. *Ich mag die Anna* [*I like the Anna*] (Austrian German). Here, it has been pointed out that proper nouns are different from common nouns. As the proper noun generally has a "unique denotation" (Quirk et al. 1985[95]: 288), this semantic feature seems to block the use of an additional marker. A constraint for obligatory definiteness marking with this subcategory seems likely.

Finally, I would like to stress once more that the outline presented in this thesis is based on evidence which comes from prose texts, not from poetry. Also note that my conclusions in this study are based on a limited set of data. It may be the case that by looking at even more texts or other genres, the outcome may be different. As was already mentioned before, an extensive study on the law texts would be an interesting future project. In conclusion, I hope that the present study has succeeded to show that handbook statements should not be taken for granted, that the formal and functional diachronic development of linguistic forms and constructions is influenced by the analogical links to other formal constructions, and that analogy and frequency have been underestimated as driving forces of linguistic change.

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Appendix I: Manuscript information

The *York-Toronto-Helsinki Parsed Corpus of Old English Prose* or *York Corpus of Old English*[253] (YCOE for short), is part of the *English parsed corpora series*[254] and was compiled by Ann Taylor, Anthony Warner, Susan Pintzuk, Frank Beths at the Department of Language and Linguistic Science, University of York. The YCOE is a 1.5 million word, syntactically-annotated corpus with the main goal "to facilitate automatic searching for syntactic constructions" (Taylor 2003)[255].

The corpus (i.e. the annotated text files) is distributed by the *Oxford Text Archive*[256] free of charge for non-commercial use. Regarding annotation, it follows its sister corpora the *Penn-Helsinki Parsed Corpus of Middle English II (PPCME2)*[257] and the *York-Helsinki Parsed Corpus of Old English Poetry*[258] and can be accessed by the same search engine, *CorpusSearch*[259] (Taylor 2003). However, due to the inflected nature of Old English there are some essential differences in annotation between the Middle English and the Old English corpus.

There are two types of annotation in the corpus. On the one hand, texts are syntactically parsed according to the *Penn Treebank format* which is based on earlier versions of generative (x-bar) syntax. Those files have the final extension *.psd*. On the other hand, part-of-speech tagged files with the extension *.pos* exist as well (Taylor 2003).[260]

In terms of filenames, all of them "begin with **co** following Helsinki practice. Texts that were included in the Helsinki Corpus have the same filename […] [and] have the Helsinki period attached as an extension following PPCME2 practice. […] When Helsinki provides two periods, the first being period of composition, and second, period of manuscript, both periods are included in the filename" (Taylor 2003).[261]

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[253] For detailed information on text files and annotation see http://www-users.york.ac.uk/~lang22/YCOE/YcoeHome.htm
[254] http://www-users.york.ac.uk/~lang22/YCOE/doc/annotation/parsed-corpora-series.htm
[255] http://www-users.york.ac.uk/~lang22/YCOE/doc/annotation/YcoeLite.htm#introduction
[256] http://www.ota.ahds.ac.uk/
[257] http://www.ling.upenn.edu/hist-corpora/PPCME2-RELEASE-3/index.html
[258] http://www-users.york.ac.uk/~lang18/pcorpus.html
[259] http://corpussearch.sourceforge.net/CS-manual/Contents.html
[260] http://www-users.york.ac.uk/~lang22/YCOE/YcoeFiles.htm
[261] http://www-users.york.ac.uk/~lang22/YCOE/YcoeFiles.htm

For example, the *Parker Chronicle* and the Old English part of the *Peterborough Chronicle* can be found under the filename *cochronA.o23* and *cochronE.o34* in the YCOE. *cochronA.o23* is a text composed in period 2 for which the manuscript was written in period 3. Also note that "[s]ome of the texts in the corpus are included in more than one manuscript version. The texts involved have the same filename but end with a capital letter, different in each case, indicating the manuscript. This letter is in most cases the traditional letter name for the manuscript (e.g., cochronA is the A manuscript of the Anglo-Saxon Chronicle, the others being designated cochronC, cochronD, cochronE)" (Taylor et al. 2003).[262]

Similar to the information provided in the *Helsinki Corpus of Old English*[263], the following background information is given about the manuscripts which have been investgated in this thesis (Taylor 2003)[264]:

Information on cochronA.o23
Text name: Anglo-Saxon Chronicle A
File name: cochronA.o23
DOE short title: ChronA
Cameron number: B17.1
Manuscript: Cambridge, Corpus Christi College, 173
Manuscript date: s. ix/x-x^2
Dialect: West Saxon
Genre: History
Latin translation: NO
Word Count: 14,583
Edition: Plummer, Charles. 1965 (1892-1899). *Two of the Saxon Chronicles Parallel.* Oxford: Clarendon Press. Reissued D. Whitelock, Oxford 1952.
Remarks: Attached to the filename within the ID is an indication of scribe, where cochronA-1 indicates scribe 1, cochronA-8a indicates scribe 8a, etc. Bately 1986: xxi-xliii (The Anglo-Saxon Chronicle: A Collaborative Edition) was used as the source for information about and identification of the scribes. Note that CorpusSearch treats each scribe as a separate text and computes the statistics appropriately.

Information on cochronE.o34

Text name: Anglo-Saxon Chronicle E
File name: cochronE.o34
DOE short title: ChronE

[262] http://www-users.york.ac.uk/~lang22/YCOE/YcoeFiles.htm
[263] http://icame.uib.no/hc/
[264] http://www-users.york.ac.uk/~lang22/YCOE/info/YcoeTextInfo.htm#coadrian.o34

Cameron number: B17.9
Manuscript: Oxford, Bodleian, Laud Misc. 636
Manuscript date: s. xii[1], xii med.
Dialect: West Saxon/X
Genre: History
Latin translation: ?
Word Count: 40,641
Edition: Plummer, Charles. 1965 (1892-1899). *Two of the Saxon Chronicles Parallel.* Oxford: Clarendon Press. Reissued D. Whitelock, Oxford 1952.
Remarks: Only the text up to the first continuation is included. The interpolations are indicated in the token ID by cochronE-INTERPOLATION

Information on coaelive.o3
Text name Ælfric's Lives of Saints
File name coaelive.o3
DOE short title ÆLS
Cameron number B1.3.2 - B1.3.35
Manuscript London, British Museum, Cotton Julius E.VII
Manuscript date s. xi in.
Dialect West Saxon
Genre Biography, lives
Latin translation No
Word count 100,193
Edition Skeat, Walter William. 1966 (1881-1900). *Ælfric's Lives of Saints*. EETS 76, 82, 94, 114. London: OUP.

Information on cocathom1.o3
Text name Ælfric's Catholic Homilies I
File name cocathom1.o3
DOE short title ÆCHom I
Cameron number B1.1.2 - B1.1.42
Manuscript Cambridge, University Library, Gg.3.28
Manuscript date s. x/xi
Dialect West Saxon
Genre Homilies
Latin translation No
Word count 106,173
Edition Clemoes, P. 1997. *Ælfric's Catholic Homilies: The First Series*. EETS s.s. 17. Oxford: OUP.

Information on cobede.o2
Text name Bede's History of the English Church
File name cobede.o2
DOE short title Bede
Cameron number B9.6
Manuscript Cambridge, University Library Kk.3.18
Manuscript date s. xi2

Dialect West Saxon/Anglian
Genre History
Latin translation Yes
Word count 80,767
Edition Miller, Thomas. 1959-1963 (1890-1898). *The Old English Version of "Bede's Ecclesiastical History of the English People"*. EETS 95, 96, 110, 111. London: OUP.

Information on coboeth.o2
Text name Boethius, Consolation of Philosophy
File name coboeth.o2
DOE short title Bo
Cameron number B9.3
Manuscript London, British Museum, Cotton Otho A.VI
Manuscript date s. x med.
Dialect West Saxon
Genre Philosophy
Latin translation Head: ?
Proem: No
Body: Yes
Word count 48,443
Edition Sedgefield, Walter John. 1899. *King Alfred's Old English Version of Boethius de Consolatione Philosophiae*. Oxford: Clarendon Press. Reprinted Darmstadt 1968.

Information on cocura.o2
Text name Cura Pastoralis
File name cocura.o2
DOE short title CP
Cameron number B9.1.2, B9.1.3
Manuscript Oxford, Bodleian, Hatton 20
Manuscript date s. ix ex.
Dialect West Saxon
Genre Religious treatise
Latin translation Yes
Word count 68,556
Edition Sweet, Henry. 1958 (1871). *King Alfred's West-Saxon Version of Gregory's Pastoral Care.* EETS 45, 50. London: OUP.
Remarks Defective section 33 replaced by Cotton Tiberius B.XI, see cocuraC

Information on coorosius.o2
Text name **Orosius**
File name coorosiu.o2
DOE short title Or
Cameron number B9.2.1 - B9.2.7
Manuscript London, British Museum, Add. 47967
Manuscript date s. x1
Dialect West Saxon
Genre History

Latin translation Yes
Word count 51,020
Edition Bately, Janet. 1980. *The Old English Orosius*. EETS s.s. 6. London: OUP.

Information on colawaf.o2
Text name Laws of Alfred
File name colawaf.o2
DOE short title LawAf 1
Cameron number B14.4.4
Manuscript Cambridge, Corpus Christi College, 173
Manuscript date s. ix/x - x2
Dialect West Saxon
Genre Laws
Latin translation No
Word count 3,314
Edition Lieberman, F. 1903-16. *Die Gesetze der Angelsachsen*. Halle. Reprinted Aalen 1960.

Information on colawafint.o2
Text name Alfred's Introduction to Laws
File name colawafint.o2
DOE short title LawAfEl
Cameron number B14.4.3
Manuscript Cambridge, Corpus Christi College, 173
Manuscript date s. ix/x - x2
Dialect West Saxon
Genre Laws
Latin translation No
Word count 1,966
Edition Lieberman, F. 1903-16. *Die Gesetze der Angelsachsen*. Halle. Reprinted Aalen 1960.

Information on colawine.ox2
Text name Laws of Ine
File name colawine.ox2
DOE short title LawIne
Cameron number B14.4.5
Manuscript Cambridge, Corpus Christi College, 383
Manuscript date s. xi/xii
Dialect West Saxon
Genre Laws
Latin translation No
Word count 2,755
Edition Lieberman, F. 1903-16. *Die Gesetze der Angelsachsen*. Halle. Reprinted Aalen 1960.

Appendix II: The corpus: YCOE

I have no intention to present a detailed account of all the annotational intricacies to be found in the YCOE. However, some characteristic feature of the corpus seem noteworthy, as the reader needs to know about some basic features, in order to understand the query and output files of the presented analysis. Especially the lack of certain annotation labels or the lack of some search function calls makes it difficult to search for certain structures of interest. If this was the case, it was pointed out in the various chapters. Generally, however the corpus is an invaluable tool to analyze the syntactic structures of Old English.

II.i Annotational features[265]

II.i.i General annotation

All texts which have been annotated for the corpus are divided into 'tokens'. "A token consists most basically of one main verb (or verb sequence) with all associated arguments and adjuncts" (Taylor 2003). Mostly, tokens are either matrix IPs (IP-MAT), or CPs (e.g. direct questions CP-QUE). Each token is enclosed in a 'wrapper', which is a pair of unlabelled parentheses. The wrapper contains the parsed text, a unique ID node to identify the token (including the filename), the short title for the text, and page or line numbers to find the token in the text (Taylor 2003).[266]

For example, the beginning of the *Peterborough Chronicle* is annotated the following way:

[265] The following chapter has been adapted from the *YCOE CorpusSearch Lite: a beginner's guide, the YCOE Lite: A beginner's guide to the York Corpus of Old English***,** the *YCOE Syntactic Annotation Reference Manual* and the *YCOE Part-of-speech Reference Manual.*

[266] http://www-users.york.ac.uk/~lang22/YCOE/doc/annotation/YcoeLite.htm#tokens
http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#structure_of_tokens

```
( (CODE <T22060_ChronE_[Plummer]_B17.9>))
( (CODE <T22060000100,0.1>)
  (IP-MAT (NP-NOM (NP-GEN (NR Brittene))
          (N^N igland))
      (BEPI is)
      (ADJP-NOM-PRD (ADJP-NOM (NP-EXT (NUMP (NUM ehta) (NUM hund))
                     (NP-GEN (N^G mila)))
                  (ADJ^N lang))
            (, .)
            (CONJP (CONJ &)
                   (ADJP-NOM (NP-EXT (NUMP (NUM twa) (NUM hund)))
                     (ADJ^N brad))))
      (. .)) (ID cochronE,ChronE_[Plummer]:0.1.2))
```

The first parsed token in the *Parker Chronicle* is:

```
( (CODE <T22010_ChronA_[Plummer]_B17.1>))
( (CODE <T22010000100,0.1>)
  (CODE <SCRIBE:1>)
  (IP-MAT (NP-DAT-TMP (D^I þy) (N^D geare)
             (CP-REL (WADVP-TMP-1 0)
                 (C þe)
                 (IP-SUB (ADVP-TMP *T*-1)
                     (BEDI w+as)
                     (VBN agan)
                     (PP (P fram)
                     (NP (NP-GEN (NR^G Cristes))
                         (N acennesse)))
                     (NP-NOM (NP (NUM cccc)
                         (NP-GEN (N^G wintra)))
                         (, .)
                         (CONJP (CONJ &)
                            (NP (NUM xciiii)
                            (NP-GEN (N^G uuintra))))))))
      (, .)
      (ADVP-TMP (ADV^T þa))
      (NP-NOM (NP-NOM (NR^N Cerdic))
          (CONJP (CONJ &)
             (NP-NOM (NR^N Cynric)
                 (NP-NOM-PRN (PRO$ his) (N^N sunu)))))
      (VBDI cuom)
      (PP (RP up) (P +at)
          (NP (NP-GEN (NR^G Cerdices))
          (N oran)))
      (, .)
      (PP (P mid)
          (NP-DAT (NUM v) (N^D scipum)))
      (. .)) (ID cochronA-1,ChronA_[Plummer]:0.1.2))
```

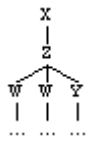
As can be seen in these examples, the syntactic annotation in the *.psd* files uses “limited hierarchical bracketing made up of labelled parentheses to represent syntactic trees […]. Relations on the tree are defined with respect to nodes. A node is any label in the tree;

in the parse, nodes are represented as a labelled open parenthesis" (Taylor 2003) [267]. In the examples above, IP-MAT, NP-NOM, N^G, PP, VBDI etc. are all nodes.

In terms of formal labels, "each set of parentheses represents a constituent. The open parentheses have an associated label, identifying the constituent as either a phrase label (CP, IP, NP, ADJP, etc.) or a word label (also called a part-of-speech (POS) tag) (N, ADJ, etc.). The initial part of the label provides formal information (i.e., part of speech (N, ADJ, etc.) or type of phrase (NP, etc.), and for inflecting categories, case (NP-NOM = nominative NP, N^N = nominative noun, etc.)) while further labels, if present, generally provide functional information (-LFD = left-dislocated, -PRD = predicate, etc.)." (Taylor 2003)[268]

"Terms used to define nodes in relation to other nodes are the same as those used in family trees (mothers, daughters, sisters, descendants). […] Tree structures can be defined by a combination of two relations: dominance and precedence. On the tree, a node X dominates a node Y, if Y is a descendant of X; and in the parse, a node X dominates a node Y, if Y is contained within the parentheses labeled by X. X immediately dominates Y if no other node intervenes between X and Y." (Taylor 2003)[269]

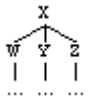
```
X dominates Y:

(X (Z (W...)
      (W ...)
      (Y ...)))
```



X immediately dominates Y

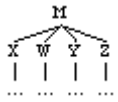
```
(X (W ...)
   (Y ...)
   (W ...))
```

[267] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#structure_of_tokens
[268] http://www-users.york.ac.uk/~lang22/YCOE/doc/annotation/YcoeLite.htm#labels
[269] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#structure_of_tokens

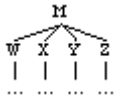


"Precedence in CorpusSearch is defined over sisters; that is, over two or more nodes that are immediately dominated by the same node (the mother). Therefore, in the tree a node X *precedes* a node Y, if X and Y are sisters (i.e., have the same mother) and X is to the left of Y. In the parse, X *precedes* Y, if X and Y are *immediately dominated* by the same node, and X is to the left of Y. (In the parse as it appears on the page, X may be physically above Y, or to its left, because of the way the parses are lined up, but the relations are the same.) X *immediately precedes* Y if no other node appears between X and Y. All the basic search functions in CorpusSearch […] are based on these two concepts." (Taylor 2003)[270]

```
X precedes Y

(M (X ...)
   (W ...)
   (Y ...)
   (Z ...))

or

(M (X ...) (W ...) (Y ...) (Z ...))
```




```
X immediately precedes Y

(M (W ...)
   (X ...)
   (Y ...)
   (Z ...)))

or

(M (W ...) (X ...) (Y ...) (Z ...)))
```



[270] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#structure_of_tokens

Regarding syntactic phrases, the major phrasal labels are given below:[271]

```
NP          noun phrase
WNP         wh- noun phrase
NUMP        number phrase
QP          quantifier phrase
WQP         wh- quantifier phrase
ADJP        adjectival phrase
WADJP       wh- adjectival phrase
ADVP        adverbial phrase
WADVP       wh- adverbial phrase
PP          prepositional phrase
WPP         wh- prepositional phrase
CONJP       conjunction phrase
INTJP       interjection phrase
XP          X phrase
```

Some major part-of-speech categories[272] (most of them occurring in NPs) are:

Nominals and Pronominals

```
N         Common noun, singular or plural
NR        Proper noun, singular or plural
MAN       Indefinite "man"
PRO       Personal pronoun
PRO$      Possessive pronoun
```

Adjectives and Adverbs

```
ADJ       Adjective
ADJR      Comparative Adjective
ADJS      Superlative Adjective

ADV       Adverb
ADVR      Comparative Adverb
ADVS      Superlative Adverb
```

Quantifiers and numerals

```
Q         Quantifier
QR        Comparative Quantifier
QS        Superlative Quantifier
NUM       Numeral
```

[271] for a complete list, see
http://www-users.york.ac.uk/~lang22/YCOE/doc/annotation/YcoeLite.htm#syntactic_labels
[272] For a complete list, see:
http://www-users.york.ac.uk/~lang22/YCOE/doc/annotation/YcoeLite.htm#pos_labels

Wh-words

```
WPRO      Wh-pronoun
WADJ      Wh-adjective
WADV      Wh-adverb
WQ        WHETHER

CONJ      Coordinating conjunction
C         Complementizer
D         Determiner
P         Preposition or subordinating conjunction
NEG       Negation (note that NEG can adjoin to verbs,quatifiers,
           conjunctions, etc.)
RP        Adverbial particle (note that RP can adjoin to verbs)
FP        Focus particle
FW        Foreign word
INTJ      Interjection
XX        unknown or problematic word
```

II.i.ii Annotational structure of NPs[273]

Generally, the internal structure of all phrases is similar. "The phrasal node (NP, PP, ADJP, etc.) immediately dominates the head category (N, P, ADJ, etc.); that is no intermediate bar-levels are indicated" (Taylor 2003).[274] For example:

```
(NP-DAT (N^D anginne))
(ADJP-NOM (ADJ^N hwilwendlic))
(ADVP-TMP (ADV^T +afre))
(ADVP (ADV soðlice))
```

As can be seen, noun phrases also may be labelled for case.

```
-NOM   nominative
-ACC   accusative
-GEN   genitive
-DAT   dative
```

[273] http://www-users.york.ac.uk/~lang22/YCOE/doc/annotation/YcoeRef.htm#noun_phrases and http://www-users.york.ac.uk/~lang22/YCOE/doc/annotation/YcoeRefToc.htm
[274] http://www-users.york.ac.uk/~lang22/YCOE/doc/annotation/YcoeRef.htm#examples

At the word-level, case is indicated by a label attached to the main category label with a carat^ (Taylor 2003).[275] Essentially, nouns, adjectives, quantifiers, determiners, numbers and participles may be labelled for case.

```
nominative        N (N^N, ADJ^N, D^N, etc.)
accusative        A (N^A, ADJ^A, D^A, etc.)
genitive          G
dative            D
instrumental      I
```

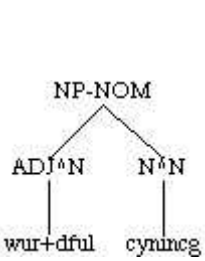
Heads always project a phrasal node, except determinatives, which do not project DPs but may head NPs alone (Taylor 2003).[276]

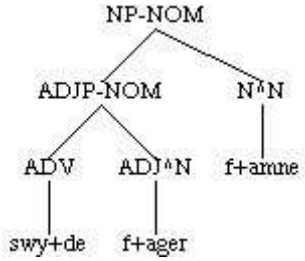
```
(NP-NOM (D^N se) (N^N sunu))
(NP-ACC (D^A þas) (N^A boc)
(NP-NOM (D^N þ+at))
```

"Secondly, single-word modifiers may not project a phrasal node when that node is predictable on the basis of the head within the annotation schema. Multi-word modifiers, on the other hand, (i.e., modified modifiers *very happy*) always project a phrase in order to make relations with the phrase clear" (Taylor 2003).[277]

```
(NP-NOM (ADJ^N wurðful) (N^N cynincg))
 <-- single-word modifier "wurðful" does not project a phrase


(NP-NOM (ADJP-NOM (ADV swyðe) (ADJ^N f+ager)) (N^N f+amne))
<-- multi-word "swyðe f+ager" projects a phrase
```

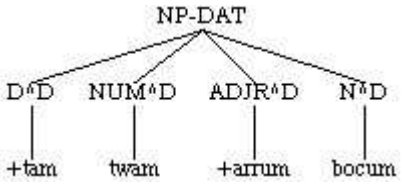
[275] While case is a fully productive category in Old English, many case forms are formally ambiguous, and sometimes remain ambiguous even in context. The basic approach to indicating case in the corpus is to mark it when it is clear, but not when it is ambiguous, or potentially ambiguous.
see http://www-users.york.ac.uk/~lang22/YCOE/doc/annotation/YcoeLite.htm#pos_labels
[276] http://www-users.york.ac.uk/~lang22/YCOE/doc/annotation/YcoeRef.htm#examples
[277]http://www-users.york.ac.uk/~lang22/YCOE/doc/annotation/YcoeRef.htm#advp





"Each single-word modifier in a constituent with multiple single-word modifiers appears as sister of the head" (Taylor 2003)[278].

```
(NP-DAT (D^D þam) (NUM^D twam) (ADJR^D +arrum) (N^D bocum))
```



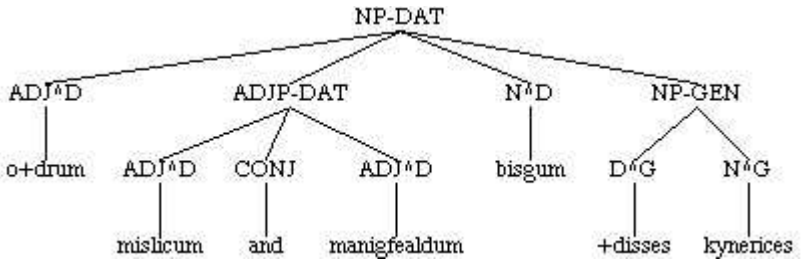
"Complements of the head, on the other hand, always project a phrasal node, whether they consist of a single word or not. Genitives are always treated as complements" (Taylor 2003).[279]

```
(NP-NOM (NP-GEN (NPR^G Godes))
        (N^N gesceaft))

(NP-DAT (Q^D sumum)
        (NP-GEN (N^G þinga)))

(NP-NOM (NP-GEN (D^G þ+are) (N^G sawle))
        (N^N gecynd))

(NP-ACC (NUM^A Tw+agen)
        (NP-GEN (D^G þissera) (N^G d+ala)))
```

"Thus in the annotation, both modifiers and complements are sisters of the head" (Taylor 2003)[280]:

[278] http://www-users.york.ac.uk/~lang22/YCOE/doc/annotation/YcoeLite.htm#structure_of_phrases
[279] http://www-users.york.ac.uk/~lang22/YCOE/doc/annotation/YcoeLite.htm#structure_of_phrases
[280] http://www-users.york.ac.uk/~lang22/YCOE/doc/annotation/YcoeLite.htm#structure_of_phrases

```
(NP-DAT (ADJ^D oðrum)
        (ADJP-DAT (ADJ^D mislicum) (CONJ &) (ADJ^D manigfealdum))
        (N^D bisgum)
        (NP-GEN (D^G ðisses) (N^G kynerices)))
```



II.i.iii Annotational idiosyncrasies

Note that in the YCOE, all forms of *se* and *þes* are tagged D(eterminer), no matter if they are used independently, (for example as a relative pronoun) or when when used as a determinative (Taylor 2003).[281]

```
(D^N se)
(D^A þone)
(D^G þisses)
(D^D þ+am)
```

Be aware that this kind of annotation makes it difficult to differentiate between those demonstratives that are part of an NP and those which act independently as demonstrative, relative or even personal pronouns. Thus, search queries were always written in such a way that the demonstrative is supposed to (immediately) preceed a noun (see chapter 5.1.1)

Generally, this study is not interested in the development of the compound demonstrative *þes*. Therefore, it was sometimes necessary to exclude all forms of *þes* (find and subtract them from the number of hits). This was done with the help of the CorpusSearch 'lexicon function';[282] a function of the program which takes the content

[281] http://www-users.york.ac.uk/~lang22/YCOE/doc/annotation/YcoePos.htm#determiners
[282] http://corpussearch.sourceforge.net/CS-manual/Lexicon.html

of a file and creates a lexicon listing including the total number of occurrences of each lexical entry. (5.1.2).[283]

Also number in not labeled in the corpus. No distinction is being made between singular and plural. Singular, plural and collective nouns are all tagged N, whereas all personal names, places, dates, languages and names of *God* are tagged NR. This enables the researcher to differentiate between Common Nouns and Proper Nouns in the queries but not between singular and plural (Taylor 2003).[284]

Finally, note that adjectives are not tagged differently if they are weak or strong.[285] Moreover, adjectives are treated the same way no matter which side of the noun they appear as modifiers. This applies to numbers as well as quantifiers, which makes it slightly harder to analyze postmodification. As a consequence, it was sometimes necessary to sift through the output and analyze every hit individually (e.g. when investigating adjectival modification patterns (5.1.1.2), the development of se diachronically or in the study on bare common noun NPs).

[283] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSRef.htm#lexicon
[284] http://www-users.york.ac.uk/~lang22/YCOE/doc/annotation/YcoePos.htm#nominals
[285] http://www-users.york.ac.uk/~lang22/YCOE/doc/annotation/YcoePos.htm#adjectives

Appendix III: CorpusSearch[286]

III.i Basic concepts

CorpusSearch, written by Beth Randall, is a very powerful program which finds linguistic structures in a corpus of parsed, labeled sentences (in the Penn Treebank format). In order to do that, it needs two pieces of information. On the one hand, a corpus of sentences to search (source/input files) and a specification of what structures to search for (query/command file). The files used by CorpusSearch have dedicated extensions. Query/command files must end in **.q**. Input files are not restricted in their extension, but all corpus files end in **.psd**. In the default case, CorpusSearch will name the output file with the same base as the query, but with the extension **.out.** (Taylor 2003)[287]

file type	**extension**
query/command file	.q
source/input file	.psd
output file	.out
e.g. query file	**e.g. output file**
nouns.q	nouns.out

source file:[288]

A source/input file is any file that contains parsed, labeled sentences, in our case these are the parsed text files from the YCOE. Moreover, one of the most important features of CorpusSearch is that it was also designed to search on its own output files. In other words, the source file can also be the former output file of a previous search. This makes it relatively slow, but increases utility. All relevant data, such as the complete

[286] The following information is taken from
http://corpussearch.sourceforge.net/CS-manual/Contents.html,
http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#running_cs
http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSRefToc.htm
[287] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#running_cs
[288] http://corpussearch.sourceforge.net/CS-manual/WhatIs.html#source

text of the token and the ID tag, which tells you where the example comes from, is passed along from search to search (Taylor 2003).[289]

command file:[290]

The query/command file contains a query which describes the structures being searched for as well as possible control and output specifications. Such control and output specifications are called 'output format commands' and do not influence the search in terms of counting, but only tell the program how the current search should be printed out. For example, one can decide whether to print indices or not, whether to remove certain nodes or not, whether to print out the whole sentence or just the phrase consisting the token or not etc. (Taylor 2003).[291]

In terms of structure, a query file minimally contains two things: a specification of the node, and the query itself.[292] Every query requires a specification of a node in order to run, which is introduced by the node command. The node command gives CorpusSearch a domain to search within. Setting the node properly is key to using CorpusSearch effectively. Generally, it is a good idea to always set the node as IP*, which is a good general default. However, as this thesis deals with NP structure, the basic node has been set to NP* (Taylor 2003).[293]

```
node: NP*
```

The query itself tells CorpusSearch the structure to search for and is introduced by the command query. The simplest query consists of a single search function call. Each call is enclosed in parentheses.

```
node: NP*
query: (D^* iprecedes N^*)
```

[289] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#intro
[290] http://corpussearch.sourceforge.net/CS-manual/CommandFile.html
http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#structure_of_a_query
[291] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#some_useful_commands
http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#advanced_commands
[292] Technically the node and the query are commands as well, but they are usually just referred to as the node and the query.
[293] Search terms are always node labels. The asterisk following the **NP** indicates any label starting with **NP**, including **NP** itself; that is, ***** can match any number of things or nothing. The asterisk can be used anywhere within a search term. **NP*ADT** will match for example **NP-ACC-ADT, NP-DAT-ADT, NP-DAT-RFL-ADT, NP-ADT**, etc.

In this query, we can identify the following parts: D^* and N^* are search terms while *iPrecedes* is a search function. This query, for instance, searches for structures within NPs in which a determiner immediately precedes a common noun. Most search functions in CorpusSearch, as seen before, are binary (take two arguments), but a few (such as *exists*) take only one argument:

```
node: NP*
query:(PRO exists)
```

Here, all those NPs are searched for in which a pronoun (potentially beside other elements) exists (see III.iii).

output file:[294]

CorpusSearch always builds an 'output file', which contains the sentences with the specified structure. The output is divided into three parts: preface, body, and summary (Taylor 2003).

The preface contains the date and time, the name of the command file (i.e., the query/coding file), the name of the output file, the specified node and the query[295] .

For example,

```
/*
PREFACE:
CorpusSearch copyright Beth Randall 2005.
Date:  Wed Jul 25 14:08:30 CEST 2007

command file:     C:\CSWB\S12.q
output file:      C:\CSWB\S12PBcomp.out

node:   NP*
query:  ((D^* iprecedes  ADJ*)
  AND  (ADJ* iprecedes  N^*))
*/
/*
HEADER:
source file:  C:\CSWB\cochronE.o34.psd
*/
```

The body of the output files contains the hits.[296] In the final section (summary) statistics are listed showing a) the number of hits (distinct constituents containing the structure),

[294] http://corpussearch.sourceforge.net/CS-manual/Understand_Output.html
http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#output
[295] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#output_preface
[296] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#output_body

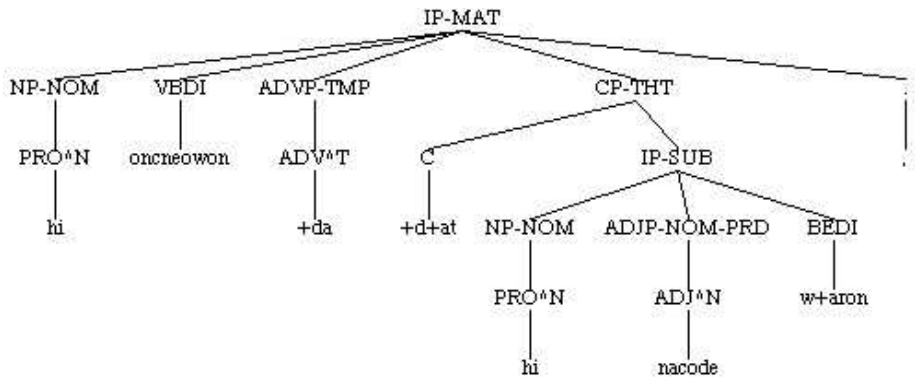
b) the number of matrix sentences ("tokens") containing hits and c) the total number of tokens in a file (Taylor 2003)[297]. For example,

```
/*
SUMMARY:
source files, hits/tokens/total
C:\CSWB\cochronE.o34.psd   262/252/3644
whole search, hits/tokens/total
        262/252/3644
```

III.ii Main search functions and logical operators

Several search functions exist in CorpusSearch. In this study, the following are used regularly and thus should be described briefly: *exists, iPrecedes, iDomsOnly, iDomsLast#, domsWords#, domsWords<#.* As has been pointed out earlier, all those functions are based on the two annotational tree-structure concepts of dominance and precedence. Nodes either precede or dominate each other:

```
( (IP-MAT (NP-NOM (PRO^N hi))
          (VBDI oncneowon)
          (ADVP-TMP (ADV^T ða))
          (CP-THT (C ð+at)
                  (IP-SUB (NP-NOM (PRO^N hi))
                          (ADJP-NOM-PRD (ADJ^N nacode))
                          (BEDI w+aron)))
          (. ,))
  (ID cootest,Gen:3.7.132))
```



Note that in the example given, the NP-NOM dominates the pronoun *hi* and *hi* also precedes the adjective *nacode*.

[297] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#output_summary

exists:[298]

The simplest command in CorpusSearch is *exists*. It specifics only that a node exists. *Exists* searches for labels or text anywhere in the sentence (Taylor 2003). This command is useful in initial searches if one wants to find out, for instance, how many NPs exists.[299]For example,

```
query:(NP* exists)
```

iprecedes:[300]

A node X immediately precedes a node Y if X and Y are sisters and X is to the immediate left of Y. In other words, X and Y are adjacent and there is no sister in-between. For example, in this study, tokens were searched for strings, in which a determiner immediately precedes a nominative, accusative, dative or genitive common noun (Taylor 2003).

```
query:(D^* iprecedes N^N|N^A|N^D|N^G)
```

Running such a query in the YCOE, the following NPs (among many others) are listed as output:

> ta noldon hi faron ofer **þone ford**.
> (cochronE,ChronE_[Plummer]:0.30.27)

> geferdon **þis land** norþanweard.
> (cochronE,ChronE_[Plummer]:0.13.13)

As can be seen in the query above, search terms (which are node labels) may also contain so-called 'logical operators'. For example, **OR** represented by a vertical bar (|) representing the idea of EITHER/ OR as well as **NOT** represented by an exclamation point (**!**). **OR** allows a list of alternates to be used as a single search term. CorpusSearch

[298] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#exists
[299] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#exists
[300] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#iPrecedes

interprets **NOT** (as for example **!D)** as everything that is not a determiner. Note that these operators only work on search terms and not on search functions (Taylor 2003).[301]

iDominates, iDomsLast & iDomsOnly:[302]

Generally, *iDominates* translates as "immediately dominates". That is, X dominates Y if Y is exactly one generation apart. *iDomsLast* means "immediately dominates as last child" holding the most right position in the node.[303] *iDomsOnly* means "immediately dominates as only child". This last function is useful for finding, for instance, pronominal NPs or all NPs consisting of only a common noun (no genitives) as in the following query (Taylor 2003):[304]

```
query:(NP* iDomsOnly N^N|N^A|N^D|N^I)
```

with the output:

> ac him com to on **niht** se apostol Petrus.
> (cochronE,ChronE_[Plummer]:616.4.267)

or

> Her se eadiga apostol Petrus geset **biscopsetl** on Antiochia ceastre.
> (cochronE,ChronE_[Plummer]:35.1.46)

idomsWords# & domsWords>#:[305]

These commands specify that the dominating constituent contains a specific number of words (*domWords#)* or more (*domsWords>#*) or less (*domsWords<#*) than a specified number. Such a command is useful if one, for instance, is interested in the 'heaviness' of a constituent (see 6.2.3). The query below searches for NPs (without Genitive NPs) with 3 words.[306]

---

[301] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#logical_operators
[302] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#iDoms
[303] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSRef.htm#iDomsLast
[304] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#iDomsOnly
[305] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSRef.htm#domsWords
[306] users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSLite.htm#advanced_search_functions

```
query:(NP-NOM*|NP-ACC*|NP-DAT*|NP domswords 3)
```

There a many structures that fulfill such a search function. For example,

> & bed Beorn þæt he sceolde faran mid him to ðam cynge to Sandwic. & fylstan him to **þæs cynges freondscipe**. (cochronE,ChronE_[Plummer]:1046.35.2200)

or

> Leidon þa Godes curs & **ealre halgane curs** & **al Cristene folces** þe aniþing undyde þæt þær wæs gedon.
> (cochronE-INTERPOLATION,ChronE_[Plummer]:656.113.467)

or

> Siððon com **an oþre ærcebiscop** to Cantwarbyrig. seo wæs gehaten Theodorus. swiðe god man & wis.
> (cochronE-INTERPOLATION,ChronE_[Plummer]:656.128.479)

Also note that a third logical operator, namely **AND**, can be used to join more than one search function call. The output then satisfies the conditions before and after **AND.**[307] For example, the following query searches for all those nominative, accusative and dative NPs consisting of two elements which have a proper noun as their last element.

```
query:((NP-NOM*|NP-ACC*|NP-DAT*|NP domswords 2) AND (NP-NOM*|NP-
ACC*|NP-DAT*|NP iDomsLast NR^*))
```

The output file lists, for example, the following hits:

> þar **se Columban** getimbrade mynster,
> (cochronA-8,ChronA_[Plummer]:565.5.213)
>
> Her cuom micel sciphere on **West Walas**,
> (cochronA-1,ChronA_[Plummer]:835.1.668)

[307] http://www-users.york.ac.uk/~lang22/YCOE/doc/corpussearch/CSRef.htm#logical_operator_AND

Appendix IV: Old Germanic forms of the compound demonstrative

COMPOUND DEMONSTRATIVE Old English:

	singular			plural
	masc.	fem.	neuter.	all genders
N	*þes*	*þēos*	*þis*	*þās*
A	*þisne*	*þās*	*þis*	*þās*
G	*þisses*	*þisse, þisre*	*þisses*	*þissa, þisra*
D	*þissum*	*þisse*	*þissum*	*þissum*
I	*þys*		*þys*	

(Campbell 1959: §711 in McColl Millar 2000: 21)

COMPOUND DEMONSTRATIVE Old High German:

	singular			plural		
	masc.	fem.	neuter.	masc.	fem.	neuter.
N	*dëse, dëser*	*dësiu, disiu*	*diz*	*dëse*	*dëso*	*dësiu, disiu, thisu*
A	*dësan*	*dësa*	*diz*	*dëse*	*dëso*	*dësiu, disiu, thisu*
G	*dësses*	*dësera*	*dësses*		*dësero*	
D	*dësumu*	*dëseru*	*dësumu*		*dësem/n*	

(Instrumental missing)

(Braune 1963: §288 in McColl Millar 2000: 19f.)

COMPOUND DEMONSTRATIVE Old Saxon:

	singular			plural		
	masc.	fem.	neuter.	masc.	fem.	neuter.
N	*these*	*thius*	*thit*	*these/a*	*thius*	*thesa/e*
A	*thesan/en/on*	*thesa/e*	*thit*	*these/a*	*thius*	*these/a*
G	*theses/as*	*thesara/o, thesoro*	*theses/as*	*thesaro/oro*	*thesaro/oro*	*thesaro/oro*
D	*thesumu*	*thesaru*	*thesumu*	*thesum/n/on*	*thesum/n/on*	*thesum/n/on*

(Holthausen 1921: § 338 in McColl Millar 2000: 20f.)

COMPOUND DEMONSTRATIVE Old Norse:

	singular			plural		
	masc.	fem.	neuter.	masc.	fem.	neuter.
N	*sja, þessi*	*sja, þessi*	*þetta*	*þessir*	*þessar*	*þessi*
A	*þenna*	*tessa*	*þetta*	*þessa*	*þessar*	*þessi*
G	*þessa*	*þessar*	*þessa*	*þessa*	*þessa*	*þessa*
D	*þessum*	*þessi*	*þessu*	*þessum*	*þessum*	*þessum*

(Gordon 1957:§ 111 in McColl Millar 2000: 23)

In early documents the new determinative could occur independently as a premodifier, thus suggesting that its grammaticalization was at a relatively early stage. More common however is an enclitic usage, whose paradigm in 'classical' Old Norse was:

	singular			plural		
	masc.	fem.	neuter.	masc.	fem.	neuter.
N	*inn*	*in*	*it*	*inir*	*inar*	*in*
A	*inn*	*ina*	*it*	*ina*	*inar*	*in*
G	*ins*	*innar*	*ins*	*inna*	*inna*	*inna*
D	*inum*	*inni*	*inu*	*inum*	*inum*	*inum*

(Gordon 1957: § 112) McColl Millar 24)

Appendix V: Abstract

Contributing to the ongoing debate about the existence of a definite article in Old English, the present thesis discusses patterns of nominal determination in Old English and their influence on the phenomenon of the emergence of the category 'article'. Specifically, a usage-based study of the Old English demonstrative *se (seo - þæt)* and its development into the definite article *the* is carried out. Theoretically, this study is embedded into a broader discussion of linguistic gradience, diachronic gradualness, grammaticalization and reanalysis. Empirically, it is based on a large quantitative and qualitative analysis of definite NP patterns in several early Old English prose texts in the *The York-Toronto-Helsinki Parsed Corpus of Old English Prose* (YCOE)). For analysis, the *CorpusSearch Program* and *AntConc* were used.

To shed some light on the causal mechanisms behind the given observable linguistic change – from a grammar that has no definite article to a grammar that employs this functional category –, this study elaborates a possible WHEN and WHY. A central aim in this regard was to set up clear, testable criteria for 'articlehood' and to check if these criteria can be successfully applied to an older language stage. It is shown that demarcating the category 'article' from other categories like the 'demonstrative' is by no means a simple task. To answer the question of whether the article already existed in Old English, the semantic and syntactic behavior of the demonstrative pronoun is investigated thoroughly by analyzing a large data set with a special focus on the *Peterborough* and *Parker Chronicle*.

It is argued that the article category developed due to the previous emergence of a positional, syntactic, lexically underspecified 'determination slot', which becomes functional itself. Thus, it is proposed that the change from demonstrative to definite article is a change driven by a "lexically underspecified [syntactic] construction" (van de Velde 2010: 291) – in other words, the grammaticalization of a schematic construction with a slot (Trousdale & Traugott 2010: 12; cf. De Smet 2008; Bybee 2003a,b 2007; Traugott 2006). The empirical evidence adduced suggests that this determination slot already existed in early Old English.

Next to being influenced by semantic-pragmatic factors, the development of the definite article is conceptualized as a so-called "form-driven change" (Fischer 2007:

66), where mostly formal 'system-internal' factors (e.g. structural simplification as a principle of economy) are responsible for the grammaticalization of the demonstrative (cf. Hawkins 2004). It is demonstrated that the grammaticalization of the schematic construction was mostly triggered by analogical reasoning (formal pattern recognition and transfer) (cf. Fischer 2007; De Smet 2010). Grammaticalization is seen as an epiphenomenal result and a notion which should be split up "into more fundamental mechanisms […] including (among others) analogy" (De Smet 2009: 1730). Analogy is treated as a "psychologically real phenomenon which has causal efficiency both in language as in culture" and is not simply a "descriptive device" (Itkonen 2005: xii). Analogy is thus conceptualized in a wider sense as 'rule generalization/ extension' at a higher meta-linguistic level (Traugott & Trousdale 2010: 36; Fischer 2007).

Although the development of the article category is definitely a multi-causal phenomenon, this study suggests that complex analogy and frequency effects are the main driving forces behind the observable linguistic change (Fischer 2007: 4). The frequency of linguistic surface forms (i.e. concrete tokens), the influence of taxonomically related constructions, and preferences in cognitive on-line processing are in particular seen as reasons for the diachronic development.

Appendix VI: Zusammenfassung

Die vorliegende Dissertation beschäftigt sich mit dem altenglischen Demonstrativum *se (seo - þæt)* und dessen diachroner Entwicklung zum bestimmten Artikel *the*. Grundsätzlich wird die altenglische Nominalphrase und der Einfluß ihrer generellen, formalen Struktur auf die Emergenz des Artikels analysiert. Theoretisch ist die Frage nach der Entstehung des Artikels in eine breitere Diskussion der Themen ʻGradualness', ʻGradience', ʻGrammaticalization' und ʻReanalysis' eingebettet. Empirisch basiert die Dissertation auf einer großen qualitativen und quantitativen Korpusstudie früher altenglischer Prosatexte (syntaktisch annotierte Manuskripte im *York-Toronto-Helsinki Parsed Corpus of Old English Prose* (YCOE)). Zur Analyse wurden weitgehend das *CorpusSearch* und das *Antconc* Programm benutzt.

Die zwei Hauptfragen der Dissertation sind a) WANN der definite Artikel im Altenglischen auftritt und b) WARUM sich eine englische Grammatik etabliert, welche das obligate Markieren von definiter Referenz verlangt. Ein zentrales Ziel der Arbeit ist es, die definite Nominalphrase im Altenglischen näher zu beleuchten und klare testbare Kriterien für die Kategorie ‚Artikel' zu erstellen. Es soll überprüft werden, ob diese Kriterien auch erfolgreich auf ältere Sprachstufen angewendet werden können. Im Laufe der Dissertation wird sichtbar, dass es kein leichtes Unterfangen ist, die Kategorie ‚definiter Artikel' von anderen Kategorien wie dem ‚Demonstrativum' im Altenglischen einwandfrei abzugrenzen. Dies ist eine Konsequenz der historisch gesehen graduellen Grammatikalisierung des Demonstrativums hin zum definiten Artikel. Um der möglichen Existenz des bestimmten Artikels im Altenglischen auf den Grund zu gehen, wird das semantische und syntaktische Verhalten des Demonstrativums an Hand von mehreren frühen Manuskripten, mit einem besonderen Fokus auf dem *Peterborough* und *Parker Chronicle,* analysiert.

Grundsätzlich wird argumentiert, dass die Entwicklung des definiten Artikels von der vorangehenden Entwicklung eines so genannten, syntaktischen ‚determination slots' abhängt. Dieser Slot ist innerhalb der NP formal fixiert und lexikalisch unterspezifiziert. Die Grammatikalisierung des Demonstrativums wird also hauptsächlich von der Grammatikalisierung einer größeren syntaktischen, lexikalisch nicht spezifizierten ‚construction' (im Sinne der Konstruktionsgrammatik) vorrangetrieben. Das

Demonstrativum grammatikalisiert in diesem Sinne nicht allein, sondern eingebettet in eine größere syntaktische Konstruktion (vgl. van de Velde 2010: 291; Trousdale & Traugott 2010: 12; Bybee 2003a,b, 2007; Traugott 2006; De Smet 2008). Die empirischen Studien weisen darauf hin, dass dieser determination slot bereits im frühen Altenglischen existiert.

Weiters wird die Entwicklung des Artikels als sogenannter „form-driven change" (Fischer 2007: 66) verstanden. Neben semantisch-pragmatischen Faktoren werden system interne Faktoren (z.B. strukturelle Vereinfachung als Prinzip der Ökonomie; vgl. Hawkins 2004) als Auslöser für die Grammatikalisierung gesehen. Grammatikalisierung wird zum Epiphänomen und basiert auf grundlegenderen Mechanismen. Einer dieser Mechanismen ist ‚analogical reasoning' (formales Mustererkennen und deren Transfer) (vgl. Fischer 2007; De Smet 2010). Analogie wird als psychologisch reales Phänomen verstanden und nicht nur als deskriptiver Terminus. In der Dissertation wird Analogie als ‚rule generalization/ extension' interpretiert, was wiederum Sprachwandel motivieren kann (vgl. Traugott & Trousdale 2010: 36; Fischer 2007).

Obwohl die Entwicklung des Artikels definitiv ein multi-kausaler Prozess ist, wird argumentiert, dass hauptsächlich komplexe Analogie- und Frequenzeffekte für dessen Emergenz verantwortlich sind (vgl. Fischer 2007: 4, Hawkins 2004). Im Speziellen scheinen die hohe Frequenz von gewissen NP Mustern, der Einfluß von verwandten, nominalen Konstruktionen sowie psychologische Präferenzen im kognitiven ‘On-line Processing' für den Sprachwandel verantwortlich zu sein.

Appendix VII: Curriculum Vitae

Persönliche Daten

Lotte Sommerer
09.01.1980 in Salzburg geboren,
31 Jahre alt,
ledig
Österreicherin.

Ausbildung

1986 – 1990, Großgmain	VS Großgmain
1990 – 1998, Salzburg 12. 06. 1998	BGIII Musisches Gymnasium Reifeprüfung
1998 – 1999, Wien	Studium der Volkswirtschaft/ Japanologie (WU-Wien)
1998 – 2005, Wien	Studium der Anglistik und Amerikanistik/ dt. Philologie (UniWien)
Sep. 2003 – Jun. 2004, Toronto	2-semestriger Forschungs- und Studienaufenthalt an der University of Toronto
06. 12. 2004, Wien 27. 01. 2005, Wien	Diplomprüfung Sponsion, Universität Wien
2005 –…, Wien	Doktoratsstudium Anglistik und Amerikanistik (Spezialgebiet diachrone Sprachwissenschaft Kennzahl: 092 343)
2005 Nov./Dez.,Wien	Universität Wien, Institut für Anglistik und Amerikanistik Projekt: Erstellung einer Access Datenbank/ Korpuslinguistik
01.02.06 – 31.07.06, Wien 01.04.07 – 31.09.08, Wien	wissenschaftliche Mitarbeiterin in Ausbildung („Säule 1“) Karenzvertretung am Institut für Anglistik und Amerikanistik, Uni Wien
24.03.09 – 23.03.10, Wien	wissenschaftliche Mitarbeiterin in Ausbildung („Säule 1“) am Institut für Anglistik und Amerikanistik, Uni Wien

Forschungsinteressen

Language variation and change
Syntax (nominal determination)
First language acquisition
Cognitive linguistics /psycholinguistics /neurolinguistics /anthropological linguistics
Evolution of Language
Speech impairment

Publikationen

Monographien

Sommerer, Lotte. (2005). *Learnability of Syntax – An Evolutionary Approach.* Unpublished MA thesis. University of Vienna.

Sommerer, Lotte. (forth.). *Old English se: from demonstrative to article. A usage-based study of nominal determination and category emergence*. Unpublished PhD thesis. University of Vienna.

Artikel

Sommerer, Lotte. (2006). 'Language acquisition revisited – a network based approach to two-word stage syntax'. VIEWS, 15 (1) [Vienna English Working Papers], 25-57.

Sommerer, Lotte. (2008). 'Noun phrase typology and the emergence of the definite article: analogy, accomodation and frequency effects'. VIEWS, 17 (1) [Vienna English Working Papers], 63-90.

Ritt, Nikolaus, Lutzky, Ursula, Illes Theresa & Sommerer, Lotte (2010). 'Historical linguistics in modern English Studies curricula: the Viennese approach'. VIEWS, 19 (4) [Vienna English Working Papers]. Special Issue, 52-65.

Besuchte Konferenzen und gehaltene Vorträge

2005, 16 – 20 Juli, Santiago de C., Spanien	NRG3 (New Reflections on Grammaticalization)
2005, 29 – 30 Oktober, Graz, Österreich	ÖLT (Österreichische Linguistentagung). Vortrag: 'Grammatikalisierung aus historisch-konnektionistischer Perspektive: Demonstrativa im frühen English' with Prof. Dr. Ritt, N.

2006, 6 – 8 April, Manchester, UK	DELS (Directions in English Language Studies).
2006, 17 – 21 Juli, Paris, Frankreich	LCM 2 (Language, Culture and Mind 2). Vortrag: 'Languages as Darwinian cultural systems: optimality, evolutionary stability, and human interest' with Prof. Dr. Ritt, N.
2006, 21 – 25 August, Bergamo, Italien	ICEHL 14 (International Conference on English Historical Linguistics). Vortrag: 'The emergence of *the* as a definite article in late Old English: an evolutionary connectionist perspective'.
2008, 11 – 15 März, Barcelona Spanien	EVOLANG (7th Evolution of Language Conference)
2008, 4 – 5 April, Sheffield, England	Workshop on the History and Structure in the English Noun Phrase, Philological Society of English. Vortrag: '...towards the emergence of the definite artice: Old English noun phrase typology and mulit-level frequency effects'.
2008, 15 – 19 Juli, Leuven, Belgien	NRG4 (New Reflections on Grammaticalization 4). Vortrag: 'Getting going on a path: Old English noun phrase typology and the emergence of the definite article *the*'.
2008, 25 – 29 August, München, Deutschland	ICEHL 15 (International Conference on English Historical Linguistics). Vortrag: 'Old English noun phrase typology and the emergence of the definite article: a quantitative study based on the the *Peterborough* and *Parker Chronicle*'.
2009, 2 – 3 Oktober, Vigo, Spanien	NP1 (International Workshop on the Structure of the Noun Phrase in English: Synchronic and Diachronic Explorations). Vortrag: 'DP in Old English? Category emergence, noun phrase typology and multi-level frequency effects'.

2010, 23 – 27 August, Pecs, Hungary	ICEHL 16 (International Conference on English Historical Linguistics). Vortrag: 'Investigating bare common nouns in definite contexts in Old English'.
2011, 15-15 April, Salzburg, Austria	AAUTE, Austrian Association of University Teachers of English (19. Jahrestagung) Vortrag: 'Analogical transfer in Old English syntax: article emergence caused by formal pattern recognition and transfer'

Lehre

VK 102 – Language Analysis
101 VO – Language Analysis
PS 1 – Linguistic Proseminar: Introductory Seminar
PS 2 – Historical linguistics without history: variation and change in ELF
PS 2 – Mechanisms of Language Change: 1810 - 2010
Language Competence 1-6
Phonetics and Phonology
Business English
English Conversation Skills
Deutsch als Zweitsprache

Weitere wissenschaftliche Tätigkeiten

Funktion in Zeitschriften

01.08.2009 – 01.02. 2011	VIEWS (Vienna English Working Papers) – Editor in Chief
01.04.2010 - -…	FOLH (Folia Linguistica Historcia) – Ediotrial Team

Funktion in Gremien

19.05.2010 – …	Ersatzmitglied der Fakultätskonferenz der philologisch-kulturwissenschaftlichen Fakultät

Weitere berufliche Tätigkeiten

1998 – 2000, Wien	Kellnerin mit Inkasso T.G.I. FRIDAY'S

1999 – 2003, Wien	PR-Event Marketing Agentur ON DUTY, PR-Agentur SALES TEAM; PR-Event-Marketing Agentur FCB (in allen als Freier Mitarbeiter; hauptsächlich tätig für Opel Austria, Nokia, Bosch, Tirol Tourismus, u.a.)
2001 – 2003, Wien	Nachhilfeinstitut STUDIENKREIS 1 (Englisch, Deutsch, DAF)
2001 – 2008, Wien	Lerninstitut/Maturaschule DR. RAMPITSCH (Englisch, Deutsch, DAF)
2004 – 2008, Wien	LERNEN 8 Maturaschule, (Englisch, Deutsch)
2001 – 2004, Wien	Leiterin des DISC (Deutsch im Sacre Coeur) – DAF-Feriencamps, Pressbaum
2005 Aug./Sep./Okt., Wien des	LANGENSCHEIDT Verlag, Projekt: Neubearbeitung Lehrwerks YOU & ME Bd.1/Bd.2
2005 Nov./Dez.,Wien	Universität Wien, Institut für Anglistik und Amerikanistik Projekt: Erstellung einer Access Datenbank Korpuslinguistik
2006, Wien	SOZIALES NETZWERK, Bildungs und Forschungszentrum Lehrauftrag Deutsch als Zweitsprache - Deutschkurs
2006 – 2007, Wien	VHS Alsergrund, Englische Grammatik & Englische Konversation (Unterricht)
2008 – 2010, Wien	Fachhochschule BFI-WIEN Studiengang HR und Arbeitsrecht, externe Lektorin Business English
2008 – …, Wien	KPH-Wien Strebersdorf (katholisch Pädagogische Hochschuleexterne Lektorin für Englische Sprachkompetenz

Kenntnisse/ Fähigkeiten/ Interessen

EDV Kenntnisse
WINDOWS Office, Access, Corpus Serach, Antconc, Wordsmith

Fremdsprachen
English, Latein (6 Jahre), Französisch (7-monatiger Intensivkurs)