

The Old English Demonstrative:  
A Synchronic and Diachronic Investigation

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## Abstract

David Lewis once stated that if we want to know what meanings are, we need to find out what meanings do. Upon examining what the Old English *se* paradigm is doing, one will see that definiteness, as it is defined in Modern English, does not exist in that language, inviting the question: how did definiteness arise? Scholars have identified the overlap in function between demonstratives and definites as being a crucial part of the story, but few have tried to analyze the change with formal tools. The informational uniqueness theory of definites in English (Roberts 2002, 2003) formalizes the overlap in function via a shared presupposition. I argue that the *se* paradigm in Old English is much like the Modern English demonstrative *that*, but with a few added functions. I then show that by treating the OE demonstrative as requiring a uniqueness presupposition similar to that of its MnE counterpart, the development of definiteness can be outlined in terms invited inferencing (Traugott and Dasher 2005). This account provides pragmatic motivation for the change, rather than suggesting that it is part of a deterministic grammaticalization process.

## Introduction

The semantic details of the English definite article have been debated in the literature for some time. Typically these investigations are synchronic, with little attention paid to the form's ancestor, the Old English demonstrative *se*. It follows from observations made by Greenberg and others that definites tend to develop from demonstratives; however, the exact nature of this tendency cannot be explained without clear definitions of definiteness and demonstrativity. The semantics of the OE demonstrative are often taken for granted; students of the language may learn that it "does duty for 'the' and 'that'..." (Mitchell and Robinson 1982, 105), yet where one might expect it, it is likely to be absent. In this paper I use some of the tools of formal semantics to uncover details about the meaning of *se* and argue that by comparing these details to those of the Modern English article *the*, one can find motivation for the demonstrative > definite change.

The following section is a review of the literature on definiteness and demonstratives in Modern English. Section 2 reviews the semantic change and grammaticalization literature, Section 3 is a synchronic analysis of the OE demonstrative, and Section 4 outlines how invited inferencing explains the evolution of the form. The conclusion summarizes and discusses some difficulties which arise in doing these sorts of analyses.

### 1 What is Definiteness?

Before an adequate diachronic analysis can be achieved, we must thoroughly examine the synchronic facts. There is some disagreement about the semantics of definite NPs in MnE, but in this paper I will show that by using Roberts' theory of informational uniqueness (2002, 2003) as a working account for definite descriptions, the development of the definite article from the OE demonstrative reflects not only a cross-linguistic tendency, as shown by Greenberg (1978), but an intuitively natural semantic extension which conforms nicely to an existing model of semantic change. In this section I briefly discuss the history of the definiteness debate.

## 1.1 Russellian Uniqueness

Russell (1905) proposed that definite descriptions entail existence and uniqueness. By this account, a proposition containing a definite NP is true only if that NP has a referent which both exists and is unique in the world, and thus, to quote Russell's most famous example, the utterance in (1a) has (1b) as its truth condition:

(1a) The King of France is bald.

(1b)  $\exists x [\text{king-of-france}(x) \ \& \ \forall y(\text{king-of-france}(y) \rightarrow y=x) \ \& \ \text{bald}(x)]$

The above sentence, according to this hypothesis, is false, since there no longer exists a King of France. Strawson (1950) took issue with this account, proposing instead that the existence and uniqueness of the NP were presupposed, not entailed.

(2) The King of France is bald. Is the statement I just uttered true or false?

Strawson's justification was that if A were to utter (2) to B, B would be more inclined to explain to A that there is no King of France than he would to directly answer A's question. That is, "...the question of whether the statement was true or false simply *didn't arise...*" (330). It is perhaps easier to see that Russell's uniqueness must be presupposed if we form a question: *Is the King of France bald?* By forming a question we have left open the truth value of (1a), yet still there must exist a King of France in order for the question to be felicitous. By asking this question, one is not inquiring about the existence and uniqueness of the monarch in question; that is presupposed.

The example in (3), taken from Clark (1975), fails Russellian uniqueness in the strictest sense:

(3) I met a man yesterday. The man told me a story.

This certainly does not presuppose that there is one and only one man in the world. Clark proposed that the felicity of this utterance can be explained by a pragmatic phenomenon he called *bridging*, whereby the speaker draws an implicature about the antecedent of the definite NP. In (3), *the man* can

be taken to mean *the man whom I met yesterday*. It is clear from this example that context must play a role in the use of definites. For uniqueness to be a plausible theory, these contextual enrichments must be included in the analysis. This is what Kadmon (1990) calls *liberalization*.

Kadmon also shows that Russell's analysis can be extended to plural NPs, with the definite description presupposing maximality rather than uniqueness, illustrated in the following example:

(4a) The Senators from Arizona are bald.

(4b)  $\exists x$  [senator-from-Arizona(x) &  $\forall y$ (senator-from-Arizona(y)  $\rightarrow y \in x$ ) & bald(x)]

Here,  $x$  is taken to be a set of individuals denoted by the plural NP, and maximal set membership is analogous to uniqueness. Note that (4a) and (5) will have the same presuppositions due to liberalization:

(5) (I met both Senators from Arizona.) The Senators are bald.

Russell's hypothesis and the aforementioned extensions of it can account for many uses of the definite article in MnE; however, it is too strong a claim, as illustrated in the following example, taken from Roberts (2002):

(6) Everyone who bought a sage plant or a rosemary planted the sage plant with extra bone-meal or the rosemary in a well-limed soil, (and if it was a sage plant, bought eight others along with it).

The uniqueness of the sage plant is contradicted by assertion that if a sage plant were purchased, eight others were purchased along with it. Yet this is felicitous. Here it seems the definite NP is referring anaphorically to *a sage plant*, without regard to its uniqueness. Counterexamples such as these led Heim (1982) to give a formal account of the *familiarity theory of definiteness*, which was originally proposed by Christophersen (1939).

## 1.2 Heim's Familiarity

Irene Heim introduced in her 1982 dissertation a model which she calls *file-change semantics*.

A file in Heim's terms is similar to Stalnaker's (1974) notion of a *common ground*, which is the information that is shared by interlocutors. A file consists of an ordered pair  $\langle \text{Dom}, \text{Sat} \rangle$  where Dom is the domain, a subset of the natural numbers, and Sat is the satisfaction set. The satisfaction set consists of the sets of sequences of individuals which satisfy the file. More intuitively, each number in Dom represents a card in the file, which is nothing more than an intuitive and metaphoric term for a discourse referent, introduced by Karttunen (1976), and each sequence in Sat is such that if one were to assign each successive member of that sequence to its corresponding file card in the domain, the information on the file cards would be consistent with the facts about the individuals. Heim attempts to revive the familiarity theory of definiteness using this framework: "For every indefinite, start a new card; for every definite, update a suitable old card." (276). To illustrate, I build a file for the following discourse:

(7a) I met a businessman today. He had a dog.

According to Heim's framework, the indefinite NPs *a businessman* and *a dog* introduce new file cards.

If we take our domain to be  $\{1,2\}$ , then the file looks something like:

[1 is a businessman, met by speaker]                      [2 is a dog, owned by 1]

The satisfaction set for this file is the set of sequences of individuals  $\langle a(1), a(2) \rangle$  such that  $a(1)$  is a businessman whom the speaker met, and who owns a dog, and  $a(2)$  is a dog which is owned by  $a(1)$ .

We can then update the discourse with (7b):

(7b) The businessman was taking the dog to the vet.

The file is then updated to look like this:

[1 is a businessman, met by speaker,                      [2 is a dog, owned by 1,  
was taking 2 to the vet]    was being taken to the vet by 1]

### 1.3 Weak Familiarity

The above framework nicely explains discourses such as (6), yet it is obviously not the whole

story. Consider the following:

(8) I went to a bar last night. The bartender was friendly.

(9) (Driving home during a rain storm.) The rain is sure slowing things down, isn't it?

In both of these discourses, the definite NPs are novel, i.e. there is no prior existing discourse referent. Rather than being in the common ground, they are entailed by the common ground. A trip to a bar entails an encounter with a bartender because all bars have a bartender, and presumably the interlocutors know this. The existence of the definite NP in (9) is entailed by the physical surroundings. According to Heim, these sorts of utterances require presupposition accommodation to be felicitous. They also require bridging; (8) makes sense only if *the bartender* is synonymous with *the bartender who was working at the bar that I went to last night*. This would be easier to deal with if we incorporated into the theory those discourse referents which are entailed, but not given, by the context. Roberts (2003) proposes a taxonomy of familiarity which classifies Heim's familiarity as *strong familiarity*, and defines *weak familiarity* to include strong familiarity as well as those NPs which are in the common ground but do not have discourse referent antecedents. Weak familiarity, however, does not seem to be a sufficient analysis of definite descriptions in English; the definite article is often used when weak familiarity fails:

(10) I opened the box and pushed the button I found inside.

This is one example where Russell's proposal is appropriate and Heim's is not. The best account is one which can reconcile these two approaches. Although other such attempts have been made, including Abbot's (2004) identifiability proposal, in this paper I use informational uniqueness (Roberts 2002, 2003) as my working theory, the details of which are briefly outlined below.

#### 1.4 Informational Uniqueness

According to the theory of informational uniqueness, definite NPs presuppose existence and uniqueness, following Russell, but the theory differs from Russell's in that by this account definites

need not exist uniquely in the world, but rather they must exist uniquely in the common ground. That is, for an NP to be informationally unique, it must have a discourse referent antecedent which is weakly familiar, and furthermore, that discourse referent must be the only suitable discourse referent (under the NP's description) that exists in the common ground. Roberts' informal definition is as follows:

Given a context C, use of a definite description NP<sub>i</sub> presupposes that there is a discourse referent in the Domain of C which is the unique familiar discourse referent contextually entailed to satisfy the descriptive content of NP<sub>i</sub>. (17).

This theory can successfully account for all of the examples given thus far in this paper. Let's first examine the more straightforward ones.

- (3) I met a man yesterday. The man told me a story.
- (6) Everyone who bought a sage plant or a rosemary planted the sage plant with extra bone-meal or the rosemary in a well-limed soil, (and if it was a sage plant, bought eight others along with it).
- (8) I went to a bar last night. The bartender was friendly.
- (9) (Driving home during a rain storm.) The rain is sure slowing things down, isn't it?
- (10) I opened the box and pushed the button I found inside.

In both (3) and (6), informational uniqueness is satisfied because the NP<sub>i</sub> is strongly familiar (familiar in Heim's sense, and thus weakly familiar, since the former entails the latter), and there are no other strongly familiar discourse referents which satisfy the relevant descriptive content. In (6), it is not relevant that *the sage plant* fails semantic uniqueness, because the indefinite description introduces a unique strongly familiar file card, to which the definite description anaphorically refers. Informational uniqueness is also satisfied in examples (8) and (9) because the NP<sub>i</sub> in each of these discourses is uniquely weakly familiar. Notice that (8) is felicitous only if there is one and only one bartender who served you when you went to the bar. If this condition is not met, informational uniqueness fails. Thus, not knowing the facts, the hearer must accommodate the semantic uniqueness

of the NP<sub>i</sub>, provided that the hearer is under the assumption that the speaker is being cooperative and thus trying to be felicitous. This conversational implicature is responsible for what Roberts calls the *uniqueness effects* which arise in definite descriptions. Heim's framework alone can adequately explain examples (3), (6), (8), and (9). The uniqueness implicature is needed to account for (10). What is really meant by this sentence is that there is one and only one button that I found inside the box in question, and I pushed that button. This meaning arises from the failure of the NP<sub>i</sub> to satisfy weak familiarity. By using a definite rather than an indefinite description, the speaker is expecting the hearer to accommodate the failed presuppositions of weak familiarity and informational uniqueness; however, it would be uninformative to expect the hearer to accommodate these directly. By accommodating semantic uniqueness instead, which entails weak familiarity and informational uniqueness, the speaker has conveyed a non-natural meaning (as in Grice 1957) in the form of information about that NP<sub>i</sub>, namely that its referent is semantically unique.

This brings us back to Russell's famous example:

(1a) The King of France is bald.

This is infelicitous not simply because uniqueness fails, but because the lack of existence entails that there can be no discourse referent in the common ground which satisfies the denotation of *King of France*. The hearer is forced to accommodate, but, since presumably the hearer knows that there is no such monarch, accommodation is impossible and infelicity results.

The last class of definite descriptions which needs to be analyzed here is titles (Roberts 2003, 22-23). Chicago is often referred to as *The Windy City*; Chicago is not unique in being windy (or in having windbag politicians, if that is indeed the etymology; this should not bear on the semantics of the definite article), and presumably interlocutors will know this, and thus there is no way for informational uniqueness to be satisfied, and yet we can talk about "The Windy City" with no problem. This is because the definite article is part of the title, which was presumably coined by one who knew

of other windy cities, but wanted to distinguish his or hers from all of the others. Thus, the effect here is not a uniqueness effect as in (10), but instead a pragmatic phenomenon whereby the definite article is being used to distinguish one entity from all of the others which share that entity's descriptive content. In other words, Chicago is not unique in being a city which experiences a great amount of wind, but it is unique in bearing the title *The Windy City*.

### 1.5 Demonstratives

Roberts (2002) proposes that demonstratives and definite descriptions share an informational uniqueness presupposition. This account formalizes the intuitive relationship which exists between these two forms, and accounts for the observation that they are often interchangeable, as in (11):

(11a) My friend has a dog and a cat. She can't seem to keep those pets under control.

(11b) My friend has a dog and a cat. She can't seem to keep the pets under control.

In many contexts, though, either the demonstrative or definite article is unavailable. Consider the following sentences:

(12a) My friend visited the Great Wall of China last week.

(12b) #My friend visited that Great Wall of China last week.

(13a) That picture (pointing to picture A) is prettier than that picture (pointing to picture B).

(13b) #The picture (pointing to picture A) is prettier than the picture (pointing to picture B).

While (12a) and (13a) are perfectly ordinary sentences of English, the other two are infelicitous (except perhaps in some extreme contexts). The demonstrative in English presupposes informational uniqueness, but this is not a sufficient statement of its meaning; it must be differentiated from the definite descriptions to account for the above examples. Roberts does this by incorporating the notion of an accompanying demonstration into its meaning:

Given a context  $C$ , use of a (non-)proximal demonstrative  $NP_i$  presupposes (a) that there is an accompanying demonstration  $\delta$  whose unique demonstratum, correlated with a weakly familiar

discourse referent by virtue of being demonstrated, lies in the direction indicated by the speaker at a (non-)proximal distance to the speaker, and (b) that the weakly familiar discourse referent for the demonstratum is the unique familiar discourse referent contextually entailed to satisfy the (possibly liberalized) descriptive content of NP<sub>i</sub>. (29).

Of course the criteria with which we define a demonstration must be relaxed to include more than merely physical gestures as in (13). The felicity of (11a) must also be explainable in these terms.

Roberts proposes that a demonstration is that which gives “adequate evidence to enable a hearer to infer the speaker’s intended demonstratum.” (32). In the case of (13), the pointing gesture allows the referent to be identified. In the case of what Lyons (1977) calls *textual deixis*, which one may view as a sort of metaphorical extension of deictic usages like in (13), the demonstratum is the antecedent of the demonstrative adjective itself, as below:

(14) This sentence illustrates textual deixis.

Closely related yet distinct is *discourse deixis*, where the discourse referent of the antecedent is intended (Roberts 2002, 34). The use of *former* and *latter* is an example of this. Anaphoric uses as in (11a) are a special case of discourse deixis. It is in these cases, which stray far from the gestural use of the demonstrative, where we find overlap in function with the definite article. Generally, demonstratives differentiate; that is, they select from all suitable discourse referents that which is identified by an accompanying demonstration, which can be physical or part of the discourse. This function necessitates a uniqueness presupposition, because if there were more than one discourse referent which could be intended by the speaker, the referent would not be identifiable and the utterance would be uninformative. Similarly maximality must be presupposed by plural demonstrative constructions.

(15) All of the students are doing well in the class, but it is those students who do the extra credit assignments who learn the most.

The above example shows a relative clause being used to differentiate one group of students from a larger one (I call this the *contrastive* use of the demonstrative). The utterance must be taken to mean that *all* of the students who do the extra credit learn from it. Note that it is because there is no physical demonstration, but rather a demonstration in the discourse, that a mere definite description would be felicitous as well. It is the goal of this paper to show how such an overlap in function between the demonstrative and the definite article resulted in the loss of the demonstration requirement of the OE *se* paradigm.

## 2 The Development of Definites

Much literature has been published on the tendency of definites to develop from demonstratives, though often it is marred by a lack of clear definitions and heavy reliance on intuition. Before introducing my views, I quote and discuss the significance of some passages of this literature, and then I review the mechanisms of semantic change and grammaticalization outlined in Hopper and Traugott (1993) and Traugott and Dasher (2005), which are essential to this paper.

### 2.1 Definites from Demonstratives

Greenberg (1978) proposed a three-stage cycle of the definite article, of which the demonstrative, he claims, is stage zero, the starting point from which definites tend to (but need not!) develop. This development marks the first stage. The second stage is what he calls a non-generic article, which then evolves into a noun-class marker, the final stage of the cycle. The point along that timeline which is relevant to this paper is the transition from stage zero to stage one. It should be emphasized that this cycle is probabilistic, not deterministic. Demonstratives need not undergo any semantic change, and conversely there are other mechanisms by which it is possible for definiteness to arise (see Lyons (1999, 331) for examples). The following quotation best summarizes Greenberg's view on the development of definites from demonstratives:

The point at which a discourse deictic becomes a definite article is where it becomes

compulsory and has spread to the point at which it means something "identified" in general, thus including typically things known from context, general knowledge, or as with 'the sun' in non-scientific discourse, identified because it is the only member of its class. (31-32).

This is an intuitively sound, and perhaps obvious, description, but Greenberg does not attempt a more precise account. This seems to touch on the facts of the phenomenon, but one must ask what it means to be "identified" (he even indicates the definitional uncertainty by putting *identified* in quotes). Recall the example *I opened the box and pushed the button I found inside*. Is the button "identified"? Clearly the description must contain more nuances than Greenberg cares to address.

One of the most famous cases of a demonstrative to definite shift is that of the Romance definite articles, which descend from the Latin demonstrative *ille*. It is mentioned in passing in Greenberg (1978), and one can find a more detailed summary in Lyons (1999, 332-34). There was competition between *ille* and *ipse* 'self', with the former used cataphorically, as well as in cases of textual deixis, and the latter being used anaphorically. Both exhibited characteristics of the modern Romance article, but the demonstrative won out, so to speak, presumably because it was less restricted in its use. Lyons is led to conclude the following:

The point for the diachrony is that a demonstrative does not immediately become a general definite article; the new article begins by being restricted to the area of overlap already available to the demonstrative, and expands from there. (334).

This statement is empirically well-grounded but the exact nature of the area of overlap and the ways in which it influences the change are not considered. Semantic overlap is also touched on by Quirk and Wrenn in their 1955 *A Guide to Old English*, who note that, "the problem partly disappears when we reflect that in many instances of their use today, *the* and *that* are interchangeable..." (70). The "problem" they are addressing is the one which Mitchell (1985) refers to as "the unreal problem of the OE 'definite article'." (131). In other words, the tendency that scholars have to draw the same

grammatical distinctions in OE as in MnE is a roadblock to analysis. Yet Mitchell goes on to address another problem of analyzing the OE *se* paradigm: we have no access to prosodic information; this is problematic, Mitchell speculates, because *se* the article may have been differentiated from *se* the demonstrative determiner by lack of stress. Here it seems the author is contradicting himself by referring to the *se* paradigm as if were truly polysemous. The solution of the "unreal problem", as Mitchell elsewhere implies, and which I follow, is to treat the form in question as one entity. For simplicity's sake, I call it the OE demonstrative.

I believe it is the case that the above passages rely heavily on the reader's intuition to make the point for them. The diachronic literature on definiteness often takes for granted the close relationship between definites and demonstratives. This is not trivial; that there exists a cross-linguistic tendency for this sort of development to occur implies a close semantic relationship and some vehicle which exploits it, resulting in polysemy. I follow Roberts' (2002, 2003) proposal that the relationship is that of a shared informational uniqueness presupposition, and show below that the vehicle for the change in English was a multi-step process by which invited inferences, as explained in Traugott and Dasher (2005), rendered the relationship opaque, opening the doors for reanalysis (and later, exaptation). But before the details are explained, it is necessary to review the relevant theories of semantic change and grammaticalization.

## 2.2 Semantic Change

The quantity of work that has been done in the field of diachronic semantics is minimal when compared to the rich body of literature devoted to historical phonology and morphology. The chapter in Hock's *Principles of Historical Linguistics* (1991) on semantic change, although more thorough than some, is a scant 29 pages in length, after which it is concluded that semantic change is largely unpredictable. And he's right; yet this conclusion alone does not account for the relative difficulty of diachronic semantic study. In fact, all language change is unpredictable. Sound change is easier to

study because there is regularity in the Neogrammarian sense, which allows deep comparisons, but one cannot predict whether a certain change will occur in a given language. There is, however, the notion of phonetic naturalness, which is analogous to the presence of the mechanisms outlined in this section in that it can determine the likelihood of a particular event. Just as unnatural sound changes are possible, semantic changes need not follow an exact path. Apart from the pragmatic forces which drive semantic shifts, there are a number of social and other considerations which cannot be ignored. Nonetheless, the tendencies that have been found are cross-linguistic and motivated, and thus it is desirable to describe changes in terms of these tendencies provided that it is possible and that there is no evidence to support a contrary hypothesis.

### 2.3 Invited Inferencing

Traugott's and Dasher's 2005 book *Regularity in Semantic Change* outlined what is called the Invited Inferencing Theory of Semantic Change (IITSC) model. It should be emphasized that, despite the book's title, this model does not reflect regularity in any Neogrammarian sense, but rather a strong tendency for certain changes to occur analogous to the prevalence of paradigm leveling or some other irregular yet frequent process. True regularity in semantic change is impossible, because there is no domain which can change across the board the way phonemes do. That is, the only semantic analog to phonological features is the facets of a lexeme's meaning, but these facets, which are not grounded in the physical world, are overlapping and infinite in number, in contrast to articulatory features, which comprise a closed class. This is fundamental and perhaps obvious, which may explain the use of the word *regularity* without fear of confusion. Let us now put problematic terminology aside and discuss the nuts and bolts of this framework.

IITSC is really a theory of polysemy. It is rare that one meaning shifts to another without an intermediate, if not persistent, stage where both meanings are available. That is, pragmatic inferences often lead to competition between two meanings, which may, but need not, be resolved. Traugott and

Dasher illustrate it with variables:  $A > A \sim B (>B)$  where ">" indicates a possible change and where the change enclosed in parentheses is less likely to occur. One example the authors give is MnE *since* (12), which is polysemous with the following change having occurred: TEMPORAL > TEMPORAL ~ CAUSAL. That is, the causal meaning of *since*, as in (16), is innovative and arose from the temporal meaning, as in (17):

(16) I should be tired, since you woke me up early this morning.

(17) I haven't done anything since you woke me up this morning.

Some polysemies arise by accident. For example, some speakers may have a polysemy between *ear* (of corn) and *ear* (on your head), though these come from different roots and any semantic relationship that exists has been imposed by speakers as a result of homonymy (Hock 1991, 282). Therefore, it cannot be the case that invited inferencing is the only process by which multiple meanings arise, but rather that the process is one which has been observed to be the force behind a number of semantic shifts and so-called grammaticalization phenomena.

The driving force of IITSC is pragmatic. As the name would suggest, invited inferences are the building blocks of this model. An invited inference, not unlike a conversational implicature, is a meaning which is non-natural in the Gricean sense which the speaker invites the hearer to infer. They arise through metaphoric and metonymic processes; that is, speakers invite inferences which are either similar in meaning to or in some way associated with the natural meanings of the utterances which carry the inferences. The three-step process by which these non-natural meanings compel change is as follows:

Step 1:	Invited Inference (IIN)	not generalized, situation-specific
Step 2:	Generalized Invited Inference (GIIN)	inference is preferred, but cancellable
Step 3:	Coded Meaning	second natural meaning becomes available

IITSC is more complex than this, with nuances I do not address here; however, the basics of the

framework should be enough to explain the details of how the definite article arose in English. The spirit of the theory is well demonstrated by the following quotation: "the prime objective of IITSC is to account for the conventionalizing of pragmatic meanings and their reanalysis as semantic meanings."

(35). For the sake of clarity, I summarize two examples.

As the first example of invited inferencing at work, consider MnE *as long as* (Traugott and Dasher 2005, 36-38). This construction in OE had the meaning of 'for the same length of time that' (which may have in turn arisen metaphorically from its spatial reading). The three steps applied to the construction yielded a second available meaning, 'provided that', as illustrated below.

- Step 1:        *You can stay as long as you need to.* The temporal meaning in this context invites the 'provided that' meaning as an IIN.
- Step 2:        *She will respect him as long as he respects her.* Here, both meanings are possible, but, whereas early OE only allowed the temporal reading, the IIN came to be preferred by speakers of ME; it was generalized.
- Step 3:        *As long as he cuts the grass, I will pay him.* Although the temporal reading persists in the lexicon, one cannot get that reading with this example. This shows that the GIIN has become encoded into the semantics.

Another example of this process is found in Hopper and Traugott (1993): the development of the MnE *be going to* construction into a future marker. Sentences like *I am going to visit my mother*, though they may be read with the compositional meaning which predated the future tense interpretation, necessarily describe a future event, and thus it is easy to see here how the IIN arose and then was generalized, eventually becoming a coded meaning of that construction. The same mechanisms are at work here, yet this is cited as an example of *grammaticalization*. This invites the question: how does grammaticalization differ from mere semantic change? I conclude this section by briefly discussing this question.

## 2.4 Grammaticalization

Meillet (1912) was the first to use the term, which he defined as the development of an autonomous word ("*mot jadis autonome*") into a grammatical form. He uses as an example the development of the Greek future marker *tha* from *thelo ina* 'I wish that'. Grammaticalization has been defined in various ways since Meillet's work. Most definitions involve some sort of reduction in semantic content, as well as phonological complexity. Heine and Kuteva (2002) posit four defining criteria: desemantization, extension to new contexts, loss of morphosyntactic properties, and phonetic reduction. The *be going to* example seems to fit the bill: the construction as a future marker is arguably less complex semantically, as its content is no longer compositional, certainly the number of contexts in which we find *be going to* has increased significantly, it has been reanalyzed as one syntactic constituent, and it has undergone phonetic reduction as in the form *gonna*.

It is important to note that the mechanisms by which these grammaticalizations occur are often identical to those by which other changes occur. The development of polysemies like the causal *since* and the epistemic *must* seem not to fit as easily into this classification. Thus we are presented with a terminological issue: without a clear definition of grammaticalization, just where do we draw the line? Joseph (2001) eschews grammaticalization in favor of morphologization, the process by which forms become a part of the morphology (i.e. lexicon) of a language. The *be going to* construction can also be seen as an example of morphologization, as its change in syntactic behavior and development of a non-compositional meaning would require that it be incorporated into the lexicon. Joseph outlines in detail the development of the Greek future marker *tha*, and how this is an example of morphologization. He notes that the developments do not adhere to the four-stage "chain of grammaticalization" often proposed in the literature (Hopper and Traugott 1993, 7, Heine and Kuteva 2002, 4): lexical form > grammatical form > clitic > affix. While the facts of the Greek case study may not conform to any traditional definitions of grammaticalization, if we compare only the initial and final stages of the

process, as Meillet noted, the case appears stronger. That is, it may still be useful to talk about grammaticalization as a long term result rather than a process. This certainly isn't the predominant view on this subject, but it is useful to view it in these terms. I return to this concept later, focusing on how it relates to the demonstrative > definite change in English.

### 3 The OE Demonstrative

The *se* paradigm in Old English is that morphological paradigm which is said to correspond to both *the* and *that* in Modern English. It is laid out in the table below, taken from Mitchell and Robinson (1982, 15):

(18)		<i>Singular</i>		<i>Plural</i>
	<i>Masc.</i>	<i>Neut.</i>	<i>Fem.</i>	<i>All Genders</i>
<i>Nom.</i>	<i>se</i>	<i>þæt</i>	<i>seo, sio</i>	<i>þa</i>
<i>Acc.</i>	<i>þone</i>	<i>þæt</i>	<i>þa</i>	<i>þa</i>
<i>Gen.</i>	<i>þæs</i>	<i>þæs</i>	<i>þære</i>	<i>þara, þæra</i>
<i>Dat.</i>	<i>þæm, þam</i>	<i>þæm, þam</i>	<i>þære</i>	<i>þæm, þam</i>
<i>Inst.</i>	<i>þy, þon</i>	<i>þy, þon</i>		

It was only the nominative masculine form *se* which evolved into the MnE definite article. Although all forms of the paradigm underwent the first stages of the demonstrative>definite change, the non-nominative and plural forms were lost on the way to MnE, while the neuter *þæt* ended up as the non-proximal demonstrative *that*, and the feminine *seo* replaced the feminine personal pronoun *heo*, eventually yielding *she*. The development of this paradigm has implications for grammaticalization theory because, as I later discuss, in order for the neuter form to have yielded a demonstrative in MnE, a GIIN must have been lost. For this reason, I claim that the outcome of *þæt* is a counterexample to unidirectionality.

I now turn to a synchronic analysis of the *se* paradigm in Old English, which I will call the OE demonstrative. The reason I refer to it as such, rather than calling it an article, I now outline beginning

with an example, taken from Ælfric of Eynsham's homily *Nativitas Domini* (henceforth *N.D.*), as printed in Pope (1967). (A note on the glosses and translations: I used Butcher's (2006) MnE translation of *N.D.*, Chickering's (1977) MnE translation of *Beowulf*, and Toller (1898) as guides to glossing and translating the OE texts used in this paper; however, the glosses and translations are my own, and I am responsible for any mistakes found therein.)

(19)

In principio erat Verbum, ET RELIQUA: *þæt is on Engliscre spræce, On*  
*In principio erat Verbum, ET RELIQUA:* which is in English.fem.dat language.fem.dat, In  
*angynne wæs Word, & þæt Word wæs mid Gode, &*  
beginning.neut.dat was Word.neut.nom, and dem.neut.nom Word.neut.nom was with God.dat, and  
*þæt Word wæs God. Ðis wæs on anginne mid þam ælmihtigan*  
dem.neut.nom Word.neut.nom was God.nom. This was in beginning.neut.dat with dem.masc.dat almighty.masc.dat  
*Gode. Ealle þing syndon gesceapene þurh þæt Word, & butan þam*  
God.dat. All.pl.nom things.pl.nom are shaped through dem.neut.acc Word.neut.acc, and without dem.neut.dat  
*Worde nis geworht nan þing. Ðæt geworht is wæs lif on him sylfum, &*  
Word.neut.dat not is created nothing. which created is was life.neut.nom in himself, and  
*þæt lif witodlice wæs manna leoht. And þæt leoht scean*  
dem.neut.nom life.neut.nom surely was man.pl.gen light.neut.nom and dem.neut.nom light.neut.nom shone  
*on ðeostrum, & þa ðeostru ne underfengon þæt foresæde*  
in darkness.pl.dat, and dem.pl.nom darkness.pl.nom not received dem.neut.acc prophesied.neut.acc  
*leoht.*  
light.neut.acc

"... 'In the beginning there was the Word, and the Word was with God, and the Word was God.' This existed in the beginning with the Almighty God. All things are shaped by the Word, and without it nothing exists. That which is created was life in himself, and that life truly was the light of man. And that light shone in the darkness, and the darkness did not receive that

prophesied light." (lines 27-36).

We see in this passage that *se* is behaving quite differently than the MnE definite article; where one might expect some form of *se* to precede NPs like *angynne*, and *Word*, whose denotations are unique, and whose modern counterparts necessitate a definite description, a bare noun is used. Uniqueness effects do not arise in this passage as they do in its translation; this is because in MnE, semantically unique NPs *require* a definite article, as to use an indefinite would implicate the possibility of more than one discourse referent being suitable under the NP's description. If the encoded meaning of the *se* paradigm were the same as that of the article *the*, this implicature would necessarily arise, and use of a semantically unique NP without *se* would not be available. Furthermore, the form is mostly anaphoric in this passage, a common usage of the forms we call demonstratives. Although it differs from MnE *that*, the OE form in question is more like a demonstrative than a definite article, and thus I refer to it as such. Note that the syntax of the Latin Vulgate passage which is the source for the opening line of (19) does not appear to have an effect on Ælfric's language; while *Verbum*, as with *Word*, is not preceded by a demonstrative or definite article when it is introduced, no such forms are present in the Vulgate even when referring anaphorically to *Verbum*:

(20) *In Principio erat Verbum et Verbum erat apud Deum et Deus erat Verbum.* (John 1:1).

We can conclude, then, that such uses of the demonstrative are indeed Anglo-Saxon. Consider also line 386 of *N.D.*, which is part of the sermon itself, not translated from any Latin source:

(21)

*Crist is ancenned Sunu of þam ælmihtigan Fæder...*

Christ.nom is only-begotten.masc.nom Son.masc.nom of dem.masc.dat almighty.masc.dat Father.masc.dat...

"Christ is the only-begotten son of the Almighty Father..."

Here the NP *ancenned Sunu* is inarguably semantically unique, and yet there is no determiner. However, the demonstrative form *þam* modifies *ælmihtigan Fæder*, implying that uniqueness is

somehow associated with the use of *se*. I propose that cases like these are instances of demonstratives being contained within a title, similar to the use of the definite article in "The Windy City".

### 3.1 Demonstratives in Titles

Note that in (19) all but one of the demonstratives are being used to signify a strongly familiar discourse referent. The one exception is *þam ælmihtigan Gode*, which is a title. I argue that it is this status as a title, and not the semantic uniqueness of the NP, which licenses the demonstrative's use. We find numerous examples throughout *N.D.*, as in (22), as well as in other texts; Ælfric's preface to Genesis makes reference to "*Petrus se apostol*", where the use of *se* is not taken to mean that Peter is the one and only apostle, but rather it has come to be part of his title. Even in *Beowulf*, which is quite conservative in its use of *se*, we find in line 92, "*cwæð þæt se Ælmihtiga eorðan worhte*".

(22)

<i>And he</i>	<i>him bead þa þreora daga fæsten,</i>	<i>&amp; æfter þam fæstene</i>
and 3sg.masc.nom	3pl.dat asked then three.pl.gen day.pl.gen fast.neut.acc, and after	dem.neut.dat fast.neut.dat
<i>he wearð swa afylled mid þam Halgan Gaste þæt he</i>		
3sg.masc.nom	became so full with dem.masc.dat holy.masc.dat ghost.masc.dat that	3sg.masc.nom
<i>ongann to writenne þa halgan Cristes boc swa swa we her secgað...</i>		
began to write	dem.fem.acc holy.fem.acc Christ.gen book.fem.acc as	1pl.nom here say...

"And he asked them for three days of fasting, and after that fast he became so full of the Holy Spirit that he began to write the holy gospel that we now discuss..." (*N.D.* lines 23-26).

Here we have another example of a demonstrative in a title (*þam Halgan Gaste*), as well as a different sort of usage in *þa halgan Cristes boc*. This NP does not seem to be a title; *þa* is modifying *boc*, not the genitive *Cristes*. However, its referent is still differentiated from others that share its descriptive content via the adjunct that follows: *swa swa we her secgað*. This is reminiscent of the MnE construction found in example (15).

(15) All of the students are doing well in the class, but it is those students who do the extra credit assignments who learn the most.

That is, Ælfric is using an adjunct as a demonstration, which enables the hearer to single out one referent (the Gospel of John) from multiple possible referents (the four Gospels). I refer to this use as the contrastive use.

### 3.2 Contrastive *se*

When the demonstrative is used contrastively, it marks that the NP is being differentiated from other NPs which share its descriptive content via an adjunct or argument. Note that the differentiating factor requires that the discourse referent of the NP is informationally unique (or maximal). Thus, in these cases, MnE *the* is a more natural translation. The passage below shows how a maximality implication follows from plurality and the contrastive use of the demonstrative:

(23)

<i>Ða</i>	<i>þry</i>	<i>oðre</i>	<i>godspelleras</i>	<i>awriton</i>	<i>heora</i>	<i>godspell</i>	<i>be</i>	<i>Cristes</i>
dem.pl.nom	three.pl.nom	other.pl.nom	evangelist.pl.nom	wrote	3pl.gen	gospel.pl.acc	about	Christ.gen
<i>menniscnysse,</i>	<i>hu</i>	<i>he</i>	<i>to</i>	<i>mannum</i>	<i>com,</i>	<i>&amp;</i>	<i>eac</i>	<i>be</i>
humanity.fem.dat,	how	3sg.masc.nom	to	man.pl.dat	came,	and	also	about
<i>þam</i>	<i>wundrum</i>	<i>þe</i>	<i>he</i>	<i>geworhte</i>	<i>on</i>	<i>life.</i>		
dem.pl.dat	miracle.pl.dat	that	3sg.masc.nom	performed	in	life.neut.dat		

"The three other evangelists wrote their gospels about Christ's humanity, and how he came to men, and also about the miracles that he performed in his life." (*N.D.* lines 17-19).

For purposes of identifiability, *þam wundrum þe he geworhte on life* must refer to *all* of the miracles he performed that were known to the other evangelists. Below are two more example passages, which contain a mixture of titles and contrastive demonstratives:

(24)

*Ða bædon þa bisceopas binnan Asian lande þone halgan Iohannem þæt*  
 then asked dem.pl.nom bishop.pl.nom within Asian.pl.gen land.neut.dat dem.masc.acc holy.masc.acc John.acc that  
*he him awrite sume gewissunge be þæs Hælendes godcundnyse.*  
 3sg.masc.nom 3pl.dat write some wisdom.fem.sg about dem.masc.gen Savior.masc.gen divinity.fem.dat

"Then the Bishops in Asia asked The Holy John to write some wisdom about the Savior's divinity." (N.D. lines 20-22)

(25)

*Swa wæs iu Pharao, þe wann ongean God, se Egiptisca*  
 thus was formerly Pharaoh.nom, who struggled against God.acc, dem.masc.nom Egyptian.masc.nom  
*cyning, swa swa us cydde Moyses, þæt God hyne gewylde mid gnættum*  
 king.masc.nom, as 3pl.dat told Moses.nom, that God.nom 3sg.masc.acc conquered with gnat.pl.dat  
*& fleogum, þæt he oft abæd are æt Gode þurh Moyses þingunge*  
 and fly.pl.dat, that 3sg.masc.nom often asked mercy.fem.acc at God.dat through Moses.gen intercession.fem.dat  
*& ne mihte (na fleo)n þa mæðleasan hundes lys þe him on*  
 and not could not flee dem.pl.acc ravenous.masc.gen dog.masc.gen lice.pl.acc which 3sg.masc.dat in  
*þone muð flugon ne þæra (fleog)ena meniu þe his mete*  
 dem.masc.acc mouth.masc.acc flew nor dem.pl.gen fly.pl.gen multitude.fem.acc which 3sg.masc.gen meat.masc.acc  
*besæton, ne þæra gærstapena þe gnogon (his wæstmas)...*  
 surrounded, nor dem.pl.gen locust.pl.gen which gnaw 3sg.masc.acc fruit.pl.acc

"And thus was the Pharaoh of old, who fought against God, the Egyptian King, as Moses told us, that God conquered him with gnats and flies, that he often asked mercy from God via Moses' intercession, and could not flee the ravenous dog's lice that flew into his mouth, nor those many flies that surrounded his meat, nor the locusts that ate his fruit..." (N.D. lines 228-235).

The contrastive use is rarer in *Beowulf*, but can be found:

(26)

<i>oðþæt</i>	<i>him</i>	<i>æghwylc</i>	<i>þara</i>	<i>ymb-sittendra</i>
until	3sg.masc.dat	each.nom	dem.pl.gen	surrounding.pl.gen
<i>ofer</i>	<i>hron-rade</i>	<i>hyran</i>	<i>scolde</i>	
over	whale-road.fem.dat	obey	must.past	

"...until each of the surrounding nations over the whale-road had to obey him..."(lines 9-10).

There are also two examples I found which seem to be contrastive, but in a way that might seem odd to speakers of Modern English. These passages reflect a wish to contrast the NP which follows the demonstrative adjective not with other possible discourse referents, but rather with the discourse referent of some other NP in the sentence. Consider (27) and (28):

(27)

<i>Swa fela swa hine</i>	<i>underfengon, þam he</i>	<i>forgeaf anweald Godes bearn</i>
as many as 3sg.masc.acc	received, 3pl.dat 3sg.masc.nom	gave power.masc.acc God.gen child.pl.acc
<i>to beonne, þam þe on his</i>	<i>naman gelyfað; þa þe na of blodum,</i>	
to be, 3pl.dat who in 3pl.masc.gen	name.masc.dat believe;	which not of blood.pl.dat,
<i>ne of þæs flæsces willan, ne of þæs weres willan, ac ða þa</i>		
nor of dem.neut.gen flesh.neut.gen will.masc.dat,	nor of dem.masc.gen man.masc.gen will.masc.dat,	but which
<i>of Gode synd acennede.</i>		
of God.dat are	born	

"As many as received him, those people he gave the power to be God's children, those who believe in His name, who are not born of blood, neither of the will of the flesh, nor of the will of man, but rather of God." (*N.D.* lines 47-50).

(28)

<i>He</i>	<i>cwæð, God sylf gestod on þæra goda gesamnunge, &amp; he</i>
3sg.masc.nom said,	God.nom himself stood in dem.pl.gen god.pl.gen synagogue.fem.dat, and 3sg.masc.nom
<i>on middewardan þa godas toscæt...</i>	

in middle dem.pl.acc god.pl.acc judged...

"He said, God himself stood in the assembly of the gods and he judged between them..." (*N.D.* lines 21-22).

In (27), the author is contrasting flesh and blood with God. In (28), a translation of the opening line of Psalm 82, he is contrasting the mortal gods (the leaders of men) with God (both from Latin *deus*). While more analysis is needed, I believe these are but special cases of the contrastive use of the demonstrative.

### 3.3 The OE Demonstrative as a Differentiating Device

Taking gestural deixis, which has a biological basis, to be the most basic use of the demonstrative (see Lyons 1977), we can see how the uses outlined above are mere metaphorical extensions of this meaning; anaphora, title-marking, and contrasting are all ways of achieving that same goal which is achieved by a physical gesture. In the simplest of terms, demonstratives differentiate. Although an exact formal analysis of the OE *se* paradigm is likely impossible without native speakers' intuitions from which to draw conclusions, there is ample evidence that its use presupposed, in a similar way to MnE, that the discourse referent of its NP was able to be determined by the hearer on the basis of accompanying information, either linguistic or extralinguistic. As a result of its broad range of functions, the demonstration presupposition became opaque, after which the demonstrative was reanalyzed as presupposing mere informational uniqueness, which gave way to uniqueness effects. In the following section I outline this change in terms of pragmatic inferencing.

## 4 The Development of Definiteness in English

In this section I propose a scenario whereby definiteness in English arose from an invited inference (IIN), examine the sample texts in light of this scenario, briefly comment on the development of the MnE demonstrative, and then revisit the concept of grammaticalization to determine if this account fits into that framework.

## 4.1 Definiteness as an Invited Inference

Recall the three steps of IITSC:

Step 1:	Invited Inference (IIN)	not generalized, situation-specific
Step 2:	Generalized Invited Inference (GIIN)	inference is preferred, but cancellable
Step 3:	Coded Meaning	second natural meaning becomes available

Below I apply these steps to the OE demonstrative, demonstrating how definiteness arose from an invited inference:

(29)

- Step 0: The demonstrative, in its canonical deictic usage, presupposes an accompanying physical gesture and the existence of a discourse referent which can be sufficiently identified by the gesture. Through metaphorization, the requirements of the presupposition are relaxed to include textual deixis, discourse deixis, anaphora, and contrastive uses.
- Step 1: The demonstrative presupposes a discourse referent which is uniquely (or maximally) demonstrated by an accompanying demonstration; a demonstration can either be a physical gesture, an antecedent in the discourse, or an adjunct which allows the hearer to single out the intended discourse referent. Mere informational uniqueness is not sufficient to satisfy the presupposition, and thus uniqueness effects do not arise, allowing for bare nouns whose denotations are unique. In many cases where the demonstration is not physical, (as in(23)) uniqueness (and maximality) is necessarily satisfied, as otherwise no single demonstratum could be determined, and thus the meaning of the demonstrative *could* be analyzed as a mere informational uniqueness presupposition, and the utterance would retain its felicity. The invites the inference (IIN) that an NP with a unique weakly familiar discourse referent is marked with

the demonstrative.

Step 2: In those cases such as (23), the IIN comes to be the preferred meaning; the IIN becomes generalized (GIIN). The GIIN is involved in the creation of titles (like *se ælmyhtige Fæder*) for weakly familiar and semantically unique entities, but it is not yet a polysemy. Uniqueness effects still do not arise in NPs which are not titles, and bare unique NPs (as in *on angynne*) are still allowed.

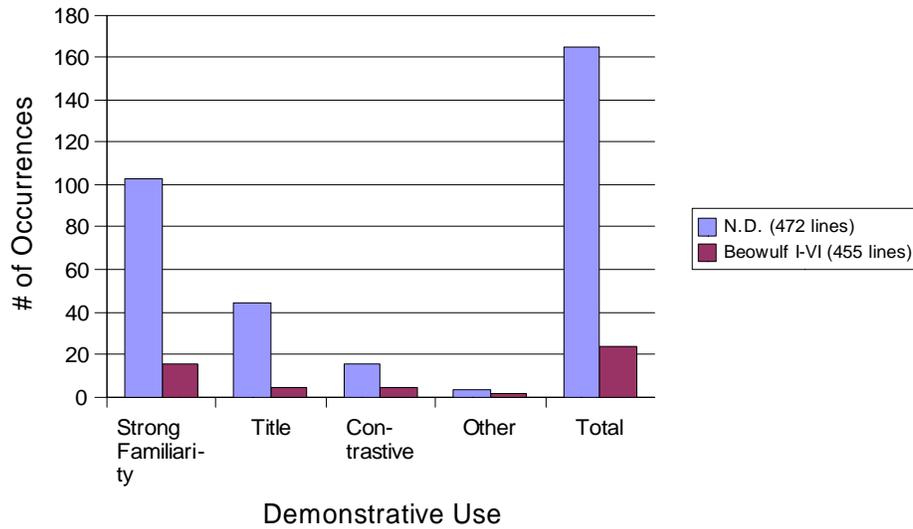
Step 3: The GIIN becomes an encoded meaning of the demonstrative, giving rise to the implicature that all semantically unique NPs must be marked by what can now be called the definite article.

Examination of *Beowulf* and Ælfric's homilies shows that by the 11th century AD the demonstrative had undergone Step 2. I now provide further evidence from these texts in the form of a numerical analysis.

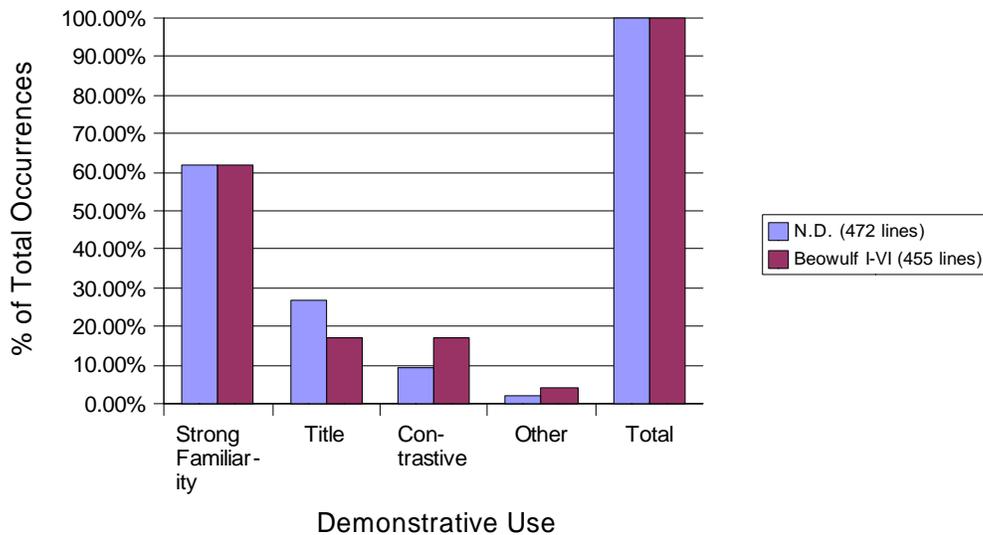
#### 4.2 Analyzing *Beowulf* and *Nativitas Domini*

The manuscripts of both of these texts date to around 1000 AD, but *Beowulf* may have been composed as many as two hundred years before this time (Chickering 1977, 247, Butcher 2006). Because it is older and in the traditional Anglo-Saxon poetic style, it is likely that the epic reflects older usages of *se* than *Nativitas Domini*. One would expect to find fewer instances of the demonstrative in *Beowulf* if it were still at the stage in its development where the canonical deictic usage was most prevalent. This is exactly what we find; when comparing Ælfric's homily to a passage of roughly equal length in *Beowulf* we find that the former has more than six times the number of *se* forms than the latter. The following graphs illustrate the distribution of the various uses of the demonstratives, both in terms of number of occurrences, and percentage of occurrences:

Frequency of Demonstrative Uses



Frequency of Demonstrative Uses



Although *Beowulf* shows a greater percentage of contrastive uses and a reduced percentage of title uses, it is comparable in its distribution to *N.D.*; the most salient difference between the texts is the tremendous gap in the number of total occurrences. These numbers show that at the time of *Beowulf's* composition, *se* was in the same stage of development as it was in *N.D.*, but that the former was much

more conservative in its overall use of that determiner, perhaps suggesting that the non-deictic use of the demonstrative was still somewhat new. The definiteness implication is strong, especially in the works of Ælfric, but it cannot be a coded meaning of the paradigm because of the lack of uniqueness effects. At this time, *se* had undergone the second step of IITSC semantic change. This led to a redeployment of the neuter form *þæt* to those functions served by the demonstrative before the change took place.

#### 4.3 Exaptation of *þæt*

Lass (1990) introduced the term *exaptation* to describe a certain type of linguistic change; borrowed from biology, the term refers to the development of novel functions for mechanisms. In the context of semantic change, it refers to the redeployment of some grammaticalized form to a new grammatical function; Lass proposed this as a counterexample to the unidirectionality which is assumed in much of the grammaticalization literature. Hopper and Traugott (1993, 138) claim that such counterexamples "are sporadic and do not pattern in significant ways". The sporadicity claim, however, is slightly weakened when one realizes that the demonstrative > definite change in English, which is often taken for granted to be part of a grammaticalization process (as in Greenberg 1978), involves such a process. The semantic development of MnE *that* is not an exaptation in the same sense that Lass proposes, as the form had not completely lost its function before it was redeployed (Lass might call it a "peripheral example" (99)); however, this still may serve as a counterexample to unidirectionality in that it involves a partial reversal of the process by which the demonstrative came to be a definiteness marker.

The details of this change are outlined in Jones' (1988) manuscript *Grammatical Gender in English*. By his account the neuter form *þæt* came to serve a novel discourse function. Jones examines Northumbrian texts and analyzes the occurrences of "wrong" gender assignments, concluding that, "unhistorical 'neuter' forms were being used as discourse tracking mechanisms and as a means of

expressing the extent of shared knowledge between reader and writer concerning individual nominal items." (103). Interestingly, most of the examples he cites are straightforward instances of strong familiarity. Consider (30), from the Peterborough Chronicle, cited by Jones (136):

(30)

*Crist ræde for þa wrecce muneces of Burch & for þet wrecce stede!*

Christ counsel for dem.pl.acc wretched monk.pl.acc of Burch and for dem.neut.acc wretched place.masc.acc

The neuter form *þet* is modifying the historically masculine *stede* to mark that it has a strongly familiar antecedent in the discourse, introduced by *Burch*. Note that the demonstrative can be used in such contexts in MnE, whereas it is generally not used in titles.

Jones cites examples from the gloss of the Lindisfarne Gospels, dating back to the tenth century, which suggest that by the time of Ælfric's West Saxon writings speakers of the Northumbrian dialect had begun to use gender as a way of differentiating uses of the demonstrative. One might predict then that the neuter form would come to be associated less with contrastives and titles as gender is lost in English, and the GIIN would be lost; this is, of course, consistent with the MnE outcome, where the descendant of *þæt* is not a marker of mere informational uniqueness. Thus, I insert an intermediate step into the account seen in (29):

Step 2.5: After the redeployment of the neuter form to uses which are closer to the canonical use of the demonstrative, its GIIN is lost, exempting *þæt* from the third step.

Of course, this is but one part of a larger story, which includes the redeployment of the feminine *seo* as a 3SG feminine pronoun and the loss of case. More importantly, however, this account shows that there was actually a reversal in a process by which a so-called grammaticalization was unfolding. The contradicts the hypothesis that semantic change is unidirectional.

#### 4.4 Grammaticalization Revisited

Recall the four characteristics of grammaticalization outlined in Heine and Kuteva (2002):

desemanticization, extension to new contexts, loss of morphosyntactic properties, and phonetic reduction. Now let's examine the demonstrative > definite transition with respect to these four criteria. The forms did not undergo significant phonetic reduction; a change from [s] to [θ] affected the masculine form, and the neuter form remained nearly identical in its shape. One could view MnE *the* as a reduced form, inasmuch as it is often pronounced with a schwa, but the same cannot be said for *that*. The morphosyntactic properties have been reduced only in that grammatical gender and case have been lost in English, and thus the paradigm has collapsed; however, this is a complex development and surely not solely the result of any heuristic which may have driven the change in the demonstrative. The OE demonstrative was in fact extended into new contexts, but after the exaptation of the neuter form, if we look at either one of the resulting determiners individually, the range of contexts is actually more limited than before the exaptation occurred. Finally, the desemanticization question does not necessarily apply to determiners such as these; when dealing with changes in complex presuppositions, at what point has semantic "bleaching" occurred? It seems that, based on these criteria, the case for grammaticalization is flimsy at best.

If one were to look at this change through a telescope, analyzing only the beginning and end of the story, grammaticalization as a process may seem quite plausible. One could hypothesize that only the masculine form underwent grammaticalization, and the neuter form remained stagnant. However, as I have shown, this is not the case. The meaning of the demonstrative became generalized without regard to grammatical gender. It was after the fact that the neuter *þæt* was reassigned to a more demonstrative-like position in the language. This is one more piece of evidence that the processes by which we achieve the result of grammaticalization are reversible. In summary, the data support the view that language change does not follow any cline, and that the development of a *mot jadis autonome* into a grammatical form is the aggregate result of reversible processes of semantic change, not a process itself.

### Conclusion

I have argued that the OE demonstrative, while not identical, is similar in usage to the MnE demonstrative in that it acts as a differentiating device, and thus necessarily involves a kind of uniqueness presupposition, and that if we assume Roberts' informational uniqueness hypothesis, which accounts for the overlap in function and distribution between the demonstrative and the definite article by positing that the two forms share such a presupposition, it is possible to account for the development of definiteness in English in terms of pragmatic inferencing. Also I have argued that, although this change seems to conform to the grammaticalization cline, the redeployment of the neuter form of the demonstrative as a strong familiarity marker is evidence that semantic change is not unidirectional.

The approach I have taken engenders two methodological concerns, the first being the extent to which it is productive to do semantic analysis on a language with no existing native speakers. This is surely an obstacle, especially in an analysis which depends so crucially on context, as texts generally do not provide explicit information about what discourse referents exist in the common ground of the author and his audience, yet the obstacle is not insurmountable. It simply requires that assumptions be made on the basis of what is known about the texts and the intended audiences thereof. For example, in order for the IIN to arise in NPs like *þam wundrum þe he geworhte on life* 'those miracles that he performed in life', with *he* anaphoric to Christ, I must assume that it is in the common ground of Ælfric and his intended audience that Christ performed miracles during his life. This is a reasonable assumption to make, as the text is a sermon intended for a church audience, and generally such audiences know the basic facts about the deity whom they worship.

Another concern is whether an approach based on the deep analysis of a small number of texts should be preferred to a corpus-based approach. The former imposes the risk that one may find false significance in idiosyncratic aspects of the author's style, while the latter often provides insufficient information from which to make inferences about the context. When analyzing pragmatic phenomena,

context is key, and thus analyzing numbers from a corpus is not adequately informative. (A corpus does, however, confirm that the lack of uniqueness effects in OE is not unique to the texts which I have examined; for example, of 100 sample occurrences of the semantically unique noun *anginn* in the Dictionary of Old English Corpus, only 3 were accompanied by some form of *se* which was not obviously anaphoric.) In spite of the difficulties of viewing semantics and pragmatics from a historical perspective, I believe it is useful to incorporate the tools of formal linguistics into diachronic studies. It is perhaps impossible to make any bold formal claims about Old English; however, the tools can eliminate the definitional uncertainties which often plague otherwise well-formed arguments.

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