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Ian L. Kirby April 15, 2014

Any as a Negative Polarity Item: From Old English to Early Modern English

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Abstract

Any as a Negative Polarity Item: From Old English to Early Modern English
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This paper examines the use of the word *any* from Old English through Early Modern English. In present-day English, *any* is a clear example of a negative polarity item (NPI). NPIs are word or phrase that can appear grammatically under negation, in conditional clauses, in questions, and as a standard of comparison, but are not grammatical in affirmative sentences. For example, it is grammatical to say 'I don't have any apples', but it is ungrammatical to say 'I have any apples'. The traditional story told in the literature is that *any* became an NPI between Late Middle English and Early Modern English as a result of the loss of negative concord. Using corpora of Old English, Middle English, and Early Modern English, I found something quite different. In the Old English corpus, *any* appears with high frequency under negation. This frequency drops in Middle English, and then rises again in Early Modern English. Much of this paper seeks to explain this U-shaped trend in the historical distribution of *any*. I argue that, contrary to the traditional view, *any* was an NPI throughout Old English, Middle English, and Early Modern English. I propose a four-staged model to explain the U-shaped curve.

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Abbreviations

EME	Early Middle English (1150-1350)
EMoE	Early Modern English (1500-1710)
LME	Late Middle English (1350-1500)
ME	Middle English (1150-1500)
MoE	Modern English (1500-contemporary)
NC	Negative concord
NPI	Negative Polarity Item
OE	Old English; Anglo-Saxon (pre-850-1150)
PDE	Present-day English
VP	Verb phrase

1. Introduction

In present-day English (PDE), *any* is a clear example of a Negative Polarity Item (NPI). An NPI can be defined as follows:

1. **Negative Polarity Item (NPI)**: a word or phrase that is acceptable in negative sentences, but unacceptable in corresponding positive sentences. e.g. *ever, at all, give a damn, lift a finger, (for) all the money in the world*

The sentences in 2 show that *any* is an NPI:

2. a. You don't have any reason to be upset.
   b. *You have any reason to be upset.

In 2.a, *any* is licensed by the preceding verbal negator *n't. Any* in 2.b is ungrammatical because the sentence lacks such a licenser.

The structural forces at work in the history of a language that drive a word to be restricted to NPI contexts are not well understood. In this paper, I will attempt to partially fill in this gap through a corpus study of the use of *any* under negation in the history of English. Most studies have focused on the loss of negative concord (NC; see number 3) in Late Middle English (LME) (1350-1500) and Early Modern English (EMoE) (1500-1710). Unlike previous studies, I will also be investigating the situation in Old English (OE) (pre-850-1150).

3. **Negative concord (NC)**: a phenomenon where a language expresses a single logical negation with multiple negative elements in a sentence (Giannakidou 2002).

Old English (OE) and Middle English (ME) were negative concord languages (Mazzon 2004; Horn 1989), as shown in the ME sentence in 4[1]:

[1] Throughout this paper, I will be utilizing linguistic three-line notation. See Appendix A for a brief explanation of how to read these examples.

4. Wheber hade he no helme ne hawbergh nauþer ne no
   Whether had he no helmet nor hauberk neither nor no
   pysan ne no plate…
   neck-guard nor no breastplate
   'Yet he had no helmet, nor hauberk [i.e. chain mail] either, nor a neck-guard, nor a breastplate'

(*Grene Knight*, from Mazzon 2004, 55)

In sentence 4, the multiple negative words resolve to a negative meaning. Unlike in standard PDE, they do not cancel each other out. In standard PDE, we would expect *any* where example 4 uses *no*. Thus, another gloss of the sentence is 'Yet he didn't wear any helmet, or any hauberk, or any neck-guard, or any breastplate'.

The most common argument for the origin of NPI *any* is that it emerged as an NPI after negative concord began to decline during the Late Middle English (LME) and Early Modern English periods (Tieken 1995; Tieken 1997; Iyeiri 2002; Kallel 2011). That is to say, *any* replaced *no*. I call this group of explanations the "ME Negative Concord Loss hypothesis".

In this paper, I will provide evidence from the Penn Corpora of Historical English (Kroch, Santorini, & Diertani 2004; Kroch & Taylor 2000) and the York-Toronto-Helsinki Parsed Corpus of Old English Prose (Taylor et al. 2003) that paints a startlingly different picture from the ME Negative Concord Loss Hypothesis. *Any* shows high frequency of use under negation in Old English, declining frequency during Middle English, and high frequency during Early Modern English. That is, *any* under negation displays a U-shaped curve. The uses of *any* under negation in OE seem to be consistent with NPI *any* in PDE. The use of *any* in conditionals, questions, and comparatives is stable from Old English through Early Modern

English. This suggests that *any* was an NPI earlier than the Middle English period. The scholars who endorse the ME Negative Concord Loss hypothesis acknowledged this as well (Tieken 1997, 1550; Iyeiri 2002, 5; Kallel 2011, 156), but were unable to explain why *any* would be licensed in these contexts, but not negation. Given this, the ME Negative Concord Loss hypothesis cannot be the full picture.

From the evidence provided by the corpus searches, I will argue that *any* was an NPI throughout OE, ME, and EMoE. This paper is largely concerned with explaining why we see the decrease in the distribution of *any* from OE to ME.

The organization of this paper is as follows. Section 2 provides more background on polarity items and negative concord. In large part, section 2 develops the background issues central to the ME Negative Concord Loss hypothesis. Section 3 outlines the methods undertaken for the current study. Section 4 presents the results of the corpus searches. Section 5 is concerned with interpreting the corpus searches. Several hypotheses to explain the high frequency of *any* under negation in OE are examined. I will conclude that the most likely hypothesis is that *any* was an NPI throughout OE, ME, and EMoE. and present a four-stage model to explain the U-shaped distribution. In section 6, I will summarize the paper and provide some directions for future research on the historical developments of *any* as an NPIs.

2. Negative Polarity Items and Negative Concord

Before discussing the results of my corpus searches, it is first necessary to give some background on the study of NPIs in general (§2.1), to explain their significance in the study of linguistics (§2.2), and to discuss the different versions of the ME Negative Concord Loss hypothesis (§2.3).

2.1 Negative Polarity Items: An Overview

Negative Polarity Items (NPIs) have been studied in the literature since the early years of generative grammar (Hoeksema 2000; Klima 1964). A basic definition of NPIs, given by Hoeksema (2000), is "expressions (either words or idiomatic phrases) with limited distribution, part of which always includes negative sentences". NPIs can be single words (e.g. *ever*, *any*, *even*) or phrases (e.g. *lift a finger*, *at all*, *give a damn*). Hoeksema's definition also serves as a useful diagnostic as to whether a given word or phrase is an NPI. Consider the following pairs of sentences (5-6):

5. a. $_{OK}$ He won't ever buy a car.
   b. * He will ever buy a car.
6. a. $_{OK}$ He won't lift a finger to help.
   b. * He will lift a finger to help.

In 5.a, the word *ever* is grammatical because it occurs in a negative sentence. That is to say, it is licensed by the negation in *n't* It is not licensed in the positive variant 5.b. 6.a and 6.b show the same contrast in a phrasal NPI. NPIs produce minimal pairs of an acceptable negative sentence and an unacceptable positive sentence (Hoeksema 2000).

Negative polarity items form a subset of a linguistic phenomenon called polarity items. Polarity items are words or phrases that only appear in a particular grammatical polarity (i.e. affirmative or negative). Thus, negative polarity items are words or phrases that appear in negative sentences, but not affirmative sentences. NPIs contrast with positive polarity items, which can appear in affirmative sentences, but not negative.[2]

[2] An example of a positive polarity item in English is *too*. It is grammatical to say 'John likes me, too', but not '*John doesn't like me too'.

Interestingly, NPIs are also systematically licensed in other syntactic environments. In English, some of these other environments include: clauses and constituents in the scope of a question; in the antecedent of a conditional; as the standard of a comparison; and the complement of certain intensional predicates (e.g. *doubt*, *deny*, *to be sad*, *to be sorry*, *to be surprised*, *to be amazed* (Israel 2011). The licensing contexts are restated with examples in Table 1 below:

NPI Licensing Context	**Example with single-word NPI**	**Example with phrasal NPI**
Negation (also called "simple negation" and "sentential negation")	*I don't have <u>any</u> sunscreen.*	*He didn't have sunscreen <u>at all</u>.*
Scope of a Question	*Do you have <u>any</u> sunscreen?*	*Do you have sunscreen <u>at all?</u>*
Antecedent of a conditional	[*If you have <u>any</u> sunscreen*], *I'd appreciate if you shared.*	[*If you have sunscreen <u>at all</u>*], *you should share*
Standard of a comparison	*He'd rather be sunburnt than ask for <u>any</u> sunscreen.*	*He'd rather be sunburnt than appear <u>at all</u> stupid in front of his date.*
Certain intensional predicates (also called "complements of doubt"	*I doubt he has <u>any</u> sunscreen.*	*I doubt he has sunscreen <u>at all.</u>*

Table 1: List of English NPI licensing contexts with examples

It is important to note that all NPIs are not grammatical in every one of these environments (Israel 2011). For instance, consider the phrasal NPI *give a damn*. While it can be used grammatically under negation (*He didn't <u>give a damn</u> about Suzy*), it is less clearly acceptable as a standard of comparison (? *He'd rather go hungry than <u>give a damn</u> about food*).

Following Ladusaw (1996) and Israel (2011), NPIs present three basic problems for linguistic theory: licensing, sensitivity, and diversity. How do these polarity contexts license

polarity items? What makes a construction polarity sensitive? Why is there such diversity in types of polarity items?

A linguistic theory of NPIs must give a structural reason for how negation is related to these other polarity licensing contexts (Table 1). While there have been numerous proposals[3], all are heatedly contested. An account for the historical development of an NPI faces an additional difficulty. Namely, historical linguistics must rely overwhelmingly on textual evidence. Deciding if a word or phrase is an NPI requires intuitions that cannot be gleaned from textual evidence alone. There is no sure-fire diagnostic for determining if a historical word or phrase is an NPI (Hoeksema 1994). More importantly, historical texts supply the linguist with examples of what was historically grammatical—it does not tell us what was ungrammatical. It is one thing to observe in a corpus of texts that a word appears under negation with greater frequency than other words of the same type; it is another to determine what happens if it does not occur under negation.

Another difficulty in giving an explanation of the history of an NPI comes from "layering" effects (term from Hoeksema 1994). When a lexical item becomes an NPI in the history of a language, the other uses do not uniformly become ungrammatical and obsolete. In fact, it is doubtful that there exists a single pure NPI[4] (Hoeksema 1994); nearly all NPIs have homophonous variants that occur outside of the NPI licensing contexts.

In the case of *any*, the NPI meaning contrasts with the so-called free choice *any* (Horn 2000; Israel 2011). When *any* is used in non-NPI contexts (e.g. affirmative sentences), it has a very different sense. Consider the sentences in 7:

[3] I refer the interested reader to Israel (2011), Hoeksema (2000), and van der Wouden (1997) for summaries of various theories of polarity sensitivity.
[4] A "pure NPI" would be one that appears ONLY in the polarity licensing contexts.

7. a. Bill can do anything.

   b. Anything you can do I can do better.

   c. Pick a card, any card.

While NPI *any* means 'absolutely none', free-choice *any* means something closer to 'everything'. A hallmark of free choice *any* is that it is grammatical to modify it with *just* or *just about* (Horn 2000). The following sentences (8) show the application of this diagnostic to the sentences in 7:

8. a. Bill can do just about anything.

   b. Just about anything you can do I can do better.

   c. Pick a card, just any card.

While there is a clear difference in meaning between free-choice and NPI *any*, it is difficult to articulate it precisely. The literature on this issue has proposed many solutions, but none have conclusively resolved the problem (see Israel 2011; Horn 2000; Vendler 1967). Still, if we look at a minimal pair of a sentence containing free-choice *any* (9.a) and one containing NPI *any* (9.b), there is a clear difference in interpretation that cannot be explained only through the presence of logical negation.

9. a. Bill is miserly. He won't buy any coffee for the office. (NPI)

   b. Bill isn't an Epicurean. He'll buy just any coffee for the office. (free choice)

In 9.a, the presence of the negative suffix *n't* licenses NPI *any*. If we consider the possible coffee that Bill will buy, in 9.a 'any coffee' indicates that there is absolutely no coffee that he will buy. In 9.b, for all the possible coffee in the world, Bill is willing to buy it (Horn 2000). The meaning of NPI *any* is not predictable from free-choice *any*. This is contrary to a common-sense analysis, where we would expect that a negated free-choice *any* would be logically equivalent to NPI *any*. As 10 shows, this is not the case:

10. a. Bill will buy just any coffee. (free-choice)

b. Bill won't buy just any coffee. (free-choice)

c. Bill won't buy any coffee. (NPI)

In 10.b, the free-choice meaning of *any* (10.a) is preserved under negation. *Any* 10.b communicates the implicature that Bill has particular taste in coffee, i.e. there is some coffee that he will not buy, some that he will buy. In 10.c, there is absolutely no coffee that Bill will buy.

This remarkable quality of *any* has aroused fascinating debates[5] in linguistics and philosophy (Horn 2000; Horn 1990). Vendler's quote, "The meaning of *any* is a many-splendored thing" (1967, 79), is often used to characterize its peculiar behavior. At the same time, there is an ongoing debate about how to analyze these two meanings of *any* (Horn 2000; 2004; Israel 2011). Indeed, Israel says that the literature on NPI *any* and free-choice *any* has "wound itself into contortions trying to sort them out" (2011, 164).

While the relationship between free-choice and NPI *any* is outside the scope of this paper, I formulated this project with these questions in mind. It is highly possible that corpus searches of *any* under negation returned examples of negated free-choice *any*. At this point, I see no way of accounting for this problem, as there is no consistent syntactic diagnostic that separates free-choice *any* from NPI *any*, aside from mutually exclusive polarity licensers. In the examples from the OE corpus that I read through, there were some examples that seemed to be negated free-choice *any* like 10.b, but they were by far the minority. Most examples seemed to be consistent with an NPI reading of *any*.

[5] I refer the interested reader to a debate between Sir William Hamilton of Edinburgh and Augustus De Morgen on how many *any*s exist in English is summarized in Horn (2000).

According to Hoeksema (2000), all evidence suggests that NPIs are a statistical universal in human languages[6]. He argues that it follows that polarity sensitivity is a "deeply engrained feature of natural language" (p. 117), because artificial languages (e.g. programming languages, first order logic) do not have polarity sensitivity. Thus, polarity sensitivity is not logically necessary.

Interestingly, there is similarity between NPIs from unrelated languages. Wang (1993) provides the Mandarin Chinese word 任何 *rènhé*, 'any, whatever, whichever, whatsoever', as an example of an NPI[7]. *Rènhé* seems to function much like *any* does in English. NPI *rènhé* is licensed by a preceding negation. There is also a free-choice *rènhé*, although its syntax differs significantly from English free-choice *any*. Consider the examples in 11 below:

11. a. 他 不 喜欢 任何 人
ta bu xihuan renhe ren
he not like any person
'He doesn't like anyone.' (Wang 1993, 271)

b. *他 喜欢 任何 人
*ta xihuan renhe ren
he like any person
*'He likes anyone' (270)

c. 任何 人 他 都 喜欢
renhe ren ta dou xihuan
any person he all like
'He likes everyone' (270)

The *rènhé* in 11.a is licensed by the preceding negator *bù*. Without *bù*, the sentence is ungrammatical (11.b). The free-choice *rènhé* in 11.c must co-occur with *dōu* 'all'.

[6] By 'statistical universal', I mean that it is suspected that all languages have NPIs.
[7] I must thank Laura Zeng for helping me understand these sentences.

2.2 NPI *Any* and Negative Concord

The historical forces that drive a given word or phrase to become an NPI are not well-understood (Hoeksema 1994). Because *any* is one of the commonest NPIs, and one of the most studied, it may present a good case study whereby we can explore the historical processes that cause the distribution of a lexical item to go from free to limited to NPI licensing contexts.

Most studies of the development of *any* have focused on the loss of negative concord (NC) in English. Negative concord is "a phenomenon where a language expresses a single logical negation with multiple negative elements in a sentence" (Giannakidou 2002). Consider 12:

12. He didn't see nobody.

In standard PDE, example 12 does not express a negative meaning, because Standard English is not an NC language. Rather, the two negative elements resolve to a positive[8], so it would mean the same thing as 'He saw somebody'. In NC English dialects, on the other hand, this sentence would mean 'He didn't see anybody' or 'He saw nobody'. Many non-standard dialects of present-day English utilize NC, including many varieties of Southern American English, African American Vernacular English and some British English dialects (Labov 1972; see Mazzon 2004, pp. 118-132 for a discussion of NC in other varieties of English).

Any is very productive in PDE sentences expressing a quantified negation (see 13.a). If standard PDE were an NC language, we would expect the quantified negation to look like 13.b.

13. a. I don't have any paper. (Standard PDE, *any* as NPI)

b. I don't have no paper. (non-standard PDE, NC)

[8] Often, prescriptive grammars refer to negative concord as "double negatives". To distinguish the linguistic phenomenon from normative claims, linguists prefer 'multiple negation' or 'negative concord.

In 13.a, *any* is licensed by the preceding negative element *n't* . In the NC sentence 13.b, *no* is reinforcing the *n't* negator.

Just by looking at examples like 12 and 13, you may think that NC and NPIs are mutually exclusive. This is not the case. So far as we know, all languages have NPIs (see §2.1). Indeed, in this paper, I will be arguing that OE had both. For an example of an NPI in an NC language, consider the Spanish sentences below (14-15). Example 13 shows that Spanish is an NC language.

14. No funciona nada
    Not works nothing
    'Nothing works' (de Swart & Sag 2002, 405)

In 14, the negative words *no* and *nada* do not cancel each other out, but resolve to a negative meaning. In Spanish, the phrase *que digamos* 'that we might say' is an NPI (15):

15. a. Tu Lexus no es muy barata que digamos
       Your Lexus NEG is very cheap we_might_say
       'Your Lexus isn't very cheap, we might say'
       (Gutiérrez-Rexach & Schwenter 2003, 122)

    b. *Tu Lexus es muy barata que digamos

For *que digamos* to be grammatical in 15.a, it must be licensed by a polarity licenser (in this case, the polarity licenser is the sentential negation *no*). Thus 15.b is ungrammatical[9].

Of NC languages, there are two varieties. There are strict NC languages, such as Serbo-Croat and Modern Greek (Giannakidou 2002). In strict NC languages, the presence of a sentential negator is obligatory—the negative sense cannot be expressed by the use of any other negative word alone. Consider the Modern Greek sentence in 16:

[9] I must thank Alex Rodriguez for his assistance in understanding this example.

16. a. Kanenas dhen ipe tipota
nobody not said.SG.3 nothing
'Nobody said anything'

b. *Kanenas Ø ipe tipota
nobody said.SG.3 nothing

(Giannakidou 2002, 20)

16.b is ungrammatical because it lacks the sentential negator *dhen* (16.a). The 'Ø' in 16.b indicates the absence of this sentential negation.

The other variety of NC languages is non-strict (Giannakidou 2002). In non-strict NC languages, sentential negation is not obligatory[10]. Any single negative word can express the negative meaning. This phenomenon is called 'negative spread', because the negative morphology spreads from one negative word to another. Consider the Catalan example in 17:

17. a. OK Cap-estudiant no va dir res
NEG-student not said nothing
'No student said anything'

b. OK Cap-estudiant Ø va dir res
NEG-student said nothing
'No student said anything'

(Giannakidou 2002, 21)

In 17.a, the sentential negation is *no*. The same meaning is expressed by these sentences whether it has sentential negation (17.a) or lacks it (17.b).

[10] Indeed, in some Romance languages, such as Spanish, and Portuguese, if sentential negation co-occurs with negative words, we get a meaning similar to English "double negatives".

Both Old English and Middle English were NC languages (Mazzon 2004). In examples 18 (OE) and 19 (ME) below, we see that the multiple negative elements resolve to a negative meaning, rather than a positive as in PDE.

18. Þæt heo nanne æfter hyre ne forlete
That she none after her NEG leave-3-SUBJUNCTIVE
'That she should leave none behind her'

(Ingham 2006, 241)

19. for we shall neuer knowe noþinge in noon oþur persone
for we shall never know nothing in no other person
'For we shall never know anything in any other person'

(Mazzon 2004, 62)

2.3. The ME Negative Concord Loss Hypothesis

Broadly speaking, the literature paints a picture of the relationship between NC and NPI *any*-words as follows: as negative concord grammars declined, NPI *any*-words increase. I call this hypothesis "The ME Negative Concord Loss Hypothesis". Negative concord is assumed to have been lost some time between the Late Middle English and Early Modern English periods (Mazzon 2004; Kallel 2011) (1350-1569). This is supported by numerous studies (Nevalainen 2006; Nevalainen 1998; Rissanen 2000; Noland 1991). I will outline the arguments made by three linguists who I believe hold some version of this hypothesis in the following sections. While there are important differences between these explanations, they share the assumption that *any*-words did not develop into NPIs until negative concord was lost in EMoE

2.3.1. Tieken's Chain Shift

Tieken-Boon van Ostade argues that the loss of NC in Late Middle English created a chain shift that caused to the extension of NPI *any* into negative sentences in the Early Modern English period (1995; 1997). A chain shift is a linguistic phenomenon where change in one linguistic element disrupts another linguistic element and causes the second element to change, etc. This phenomenon is common in phonological change, such as The Great Vowel Shift in English (Baugh & Cable 1993).

While NC was not lost until the Early Middle English period (Iyeiri 2002; Mazzon 2004), Tieken argues that early signs of its loss can be seen in Middle English. Specifically, she points to two versions of Malory's *Morthe Darthur*: the Winchester manuscript (dated 1469-1470) and Caxton's edition (1485). Medievalists are unsure if Caxton's version of *Morthe Darthur* should be viewed as an edited version of the Winchester manuscript (1997, 1547; 1995, 6-14). For the purposes of this paper, I will accept, as Tieken does, that Caxton had access to the Winchester manuscript. Thus, we can view his edits as reflecting a change in the grammar.

Tieken found that NC was more common in the Caxton manuscript than in the earlier Winchester (1997). Immediately, one could conclude that NC was more productive in the later period, but Tieken denies this for the following reasons. First, she found that many sentences which contained multiple negation in the Winchester manuscript were changed to a single negation in the later Caxton manuscript (1997, p. 1547). An example is given in 20 below.

20. a. I may nat here no such langayge of hym. (W 1080.32-33)

    b. I maye not here such langage of hym. (C 523.32)

    'I may not hear such language of him'

(Tieken 1997, p. 1547)

Secondly, she found that many sentences which contained a single negation in the Winchester manuscript were changed to negative concord in Caxton (example 21):

21. a. and so ded never knight but he (W 208.14-15)

b. and soo dyd neuer no knight but he (C250.34-35)

'and no knight but he did so'

(Tieken 1995, p. 125)

Taken together, she argues that Caxton chose to make the text sound more archaic by using NC more than the contemporary grammar would have allowed (1995, p. 125). That is to say, the greater presence of NC in Caxton is a hypercorrection (1997, p. 1550).

How, then, does Tieken explain the spread of *any*? She agrees with Tottie (1991, p. 306) that *any* was not licensed by negation in Middle English. At the same time, she holds that *any* could be used under negation for an emphatic negative, close to PDE 'nothing at all'. The conflicting uses of NC in Caxton's edition, she argues, shows that the loss of NC would create "a vacuum that needed to be filled" (Tieken 1995, p. 1550). This vacuum would be filled by the creation of NPI *any*. In section 5.2 below, I will consider that the instances I found (in section 4) of *any* under negation are emphatic negatives. I will argue that this is not qualitatively different enough from *any*'s NPI analysis to be considered a separate phenomenon.

2.3.2. Iyeiri's Response to Tieken

Iyeiri (2002) argues that the emergence of NPI *any* has a looser relationship with the loss of NC in Early Modern English than stated by Tieken (1995). Drawing from four Late Middle English texts (*The Canterbury Tales, Confessio Amantis, Sir Gawain and the Green Knight,* and *The York Plays*), she examined the frequency of *any* used under the scope of negation. She found that there was a significant decrease in NC and an increase in *any* used in negative

sentences. Crucially, she found that there were very few uses of *any* in negative sentences in *The York Plays.* This text came from the North of England. Given that most historical changes in Middle English, including the loss of NC, came from the North of England (Iyeiri 2002; Blake 1992; Fischer 1992; Lass 1992; Bergs & Brinton 2012; Molenckim 2012; Smith 2012), this is unexpected. If, as Tieken argued, there is a strong causal relationship between the loss of NC and the rise of NPI *any*, then we would expect *The York Plays* to exhibit a high frequency of *any* in negative sentences. She concludes that the relationship between *any* and NC becomes visible "only after the development of *any* has reached a certain level" (Iyeiri 2002, 15). That is, *any* was increasing in frequency in negative sentences even before the disruption of the NC system of ME. Thus, while eventually still replacing NC, NPI *any* was a separate linguistic development.

2.3.3. Kallel's Parametric Variation

Kallel (2011), adopting a Principles and Parameter theory of historical syntax, argues that both the loss of NC and the replacement of negative words by *any*-words was triggered by a change in a single underlying parameter setting. Kallel's argument is based on Haegeman's (1995) claim that the variation between NC languages and non-NC languages can be explained syntactically. She holds that the principal method of negation in OE and EME was *ne*+VP (verb phrase) (22-23).

22. heo ne beon na þreo Godæs, ac is an Almigtig God…
there NEG be NEG three gods but is one almighty God
'There are not three Gods, but one Almighty God…'

(Mazzon 2004, 3)

23. here nys no peril
here NEG+is NEG peril
'Here there is no peril'

(Mazzon 2004, 33)

In the OE sentence in 22, we see the *ne*+VP pattern in *ne beon* 'are not'. In the EME sentence in 23, we see the same pattern in the contracted *nys* 'is not'. The negative words (i.e. *na* in 22, *no* in 23) had to be licensed by a *ne*+VP higher in the clause.

Kallel holds that the initial change was a disruption in this *ne*+VP pattern. To understand the nature of this change, it is first useful to discuss a tendency in language change. There is a phenomenon known as Jespersen's cycle, whereby the negation system of languages changes, driven by a weakening in the principal sentential negator (Jespersen 1917; Fischer et al. 2000). Fischer et al. (2000) summarize Jerspersen's cycle as follows:

"i. negation is expressed by one negative marker

ii. negation is expressed by a negative marker in combination with a negative adverb or noun phrase

iii. the second element in stage (ii) takes on the function of expressing negation by itself; the original negative marker becomes optional

iv. the original negative marker becomes extinct" (305)

In the terminology developed in section 2.3 above, languages at stage ii of the Jespersen cycle are strict NC languages. Languages at stage iii and iv are non-strict varieties.

The Jespersen cycle has been show to happen in languages as diverse as French (Mazzon 2004), Mayan (Romero 2012), and Berber dialects (Lucas 2007). Because nearly all of the extant texts of OE and EME demonstrate NC[11], it is difficult to empirically validate stage i in the history of English. OE and EME seem to be at stage ii of the cycle. That is, OE and EME are strict NC languages.

Back to our discussion of Kallel, it is stage iii of Jespersen's cycle that she holds to be the disruption in the negation system that ultimately led to the development of *any* as an NPI. In LME, the use of *ne*+VP declined and sentences could express negation with only negative elements following the verb (Kallel 2011, 21; Frisch 1997; Fischer 1992; Mazzon 2004). This is shown in 24:

24. For we shall <u>neuer</u> knowe <u>noþinge</u> in <u>noon</u> oþur persone

'For we shall never know nothing in any other person'

or: 'for we won't ever know anything in any other person'

(Mazzon 2004, 62)

In this ME sentence, the *ne*+VP pattern is conspicuously absent. Mazzon (2004) provides further empirical evidence that this is the direction of the change.

[11] Notably, the oldest OE texts that we have simple *ne*+VP (without any reinforcing negative elements) as their most dominant pattern of sentential negation (Fischer et al. 2000, 308).

Kallel proposes that, during the period that *ne* +VP was weakening, the other negative words were reanalyzed to have a new semantic feature: [+NEG]. That is to say, these negative words did not simply exist in concord with the sentential negation *ne* in the *ne*+VP structure, but could actually express true logical negation on their own. In the *ne*+VP pattern of OE and EME, only the first negative element, *ne*, would be [+NEG]. Kallel found that, during LME, as the *ne*+VP pattern was becoming obsolete (rather than just optional, as it would have been in EME), the use of *any*-words in contexts where negative words previously appeared began to increase.

Kallel demonstrates that for around 150 years (1450-1599), both NC and the use of NPI *any* existed in variation, on both the community level and within individual speakers. NC and NPI *any* were competing for the same structural spot. Her data show that, during ME and EMoE, there is a correlation between increasing uses of NPI *any*-words and decreasing uses of NC. She argues that the use of NPI *any* served as a structural trigger for a non-NC grammar for children learning English in the Middle Ages and early Renaissance.

2.3.4. Licensing of *Any* in Conditionals, Questions, and Comparatives in OE, ME

In all of these versions of the ME Negative Concord Loss hypothesis it assumed that *any* was not an NPI in Old English. Thus, the studies summarized above do not consider the use of *any*-words in Old English. At the same time, they acknowledge that, in OE and ME, *any* shows up with high frequency in conditionals, questions, and comparatives (Tieken 1997, 1550; Iyeiri 2002, 2; Kallel 2011, 156). As I discussed in sections 1 and 2.1, negation is considered to be the primary licenser of NPIs.

In section 4 below, I will provide evidence that suggests that *any* was an NPI in OE, as well as ME and EMoE. This explains why these studies found that *any* occurred with in conditionals, questions, and comparatives in ME. The biggest flaw of the ME Negative Concord Loss Hypothesis is that it does not examine the behavior of *any* in Old English. If we just considered *any* in ME and EMoE, their studies would be correct. Given the evidence from Old English (presented in 4 below), there must be more to the development of NPI *any* than just the loss of negative concord.

3. Methods

This study utilizes the Penn Corpora of Historical English, which includes the Penn-Helsinki Parsed Corpus of Early Modern English (PPCEME) (Kroch, Santorini, & Diertani 2004) and the Penn-Helsinki Corpus of Middle English 2nd edition (PPCME2) (Kroch & Taylor 2000). Old English data was gathered from the Penn Corpora's sister corpus, the York-Toronto-Helsinki Parsed Corpus of Old English Prose (YCOE) (Taylor et al. 2003). Corpus searches were performed using the interface from the Icelandic Parsed Historical Corpus (IcePaHC) (Wallenberg et al. 2011). These corpora are based on the Diachronic Part of the Helsinki Corpus of English Texts. The texts constitute a variety of genres, including translations of the Bible, religious treatises, philosophy, letters, drama, diary entries, and others. The corpora each include three versions of the texts: a plain text file, a part of speech tagged (POS) file, and a parsed file. The parsed files allow searching based on syntactic structure. This is absolutely necessary for any corpus search of NPIs, because NPI licensing contexts are, in essence, syntactic contexts.

These three corpora were created for research in historical English syntax (Kroch & Taylor 2000; Kroch, Santorini, & Diertani 2004). The texts are parsed with in the Penn

Treebank Project's annotation conventions (Marcus, Santorini, & Marcinkiewicz 1993), to minimize discrepancies in large-scale diachronic studies like the present. The corpora are accessed through CorpusSearch, a search engine designed to search through corpora in the Penn Treebank annotation.

There is a tradition of using these corpora together in this way for projects describing long-term changes in English. Pintzuk and Taylor (2006) used the Old and Middle English corpora to explain the change from OV to VO word order. Haeberli & Ingham (2007) used the Old and Middle English corpora to argue that the syntactic placement of negation and adverbs in OE and EME was principled, contrary to previous claims in the literature. Allen (1997) used the Middle and Early Modern English corpora to account for the origin of 'group genitive' constructions like *the king of England's daughter*. Because the dates covered in the corpora are continuous (OE: ?-1150, ME: 1150-1500, EMoE: 1500-1710), these corpora can fluently be used together.

For the present study, the total number of *any*-words was calculated for each period in the corpus. Because there is significant variation in historical English orthography, spelling variants were included in the search. For example, *any* was variously spelled *ænig, æni, anyg, eini, eani, ænie, eni, ani, anie, eny, enye, anye, anny, æniȝ, aniȝ, ony, onye*, etc. The spelling variants were those indicated by the OED. After the total number of *any*-words was calculated for each period, searches for *any*-words in the most productive PDE NPI licensing contexts (negation, conditionals, questions, and comparatives) were done. The number of *any*-words in each of these contexts was divided by the total number of *any*-words in each period to calculate the percent of NPI *any*-words. These periods will be compared with the results of Israel's corpus

search of PDE *any*-words. (2011). This is exactly the same way of calculating frequencies of NPIs used by Israel (2011).

Because many of the texts included in the OE corpus were not tagged for the date of composition, many (n=329) examples of *any* are not included in the calculations of frequency by time period.[12]

Any linguistic study of historical syntax is limited in the strength of the claims it can make based on written data from an earlier period in a language (Fischer 2007). This is coupled with the general difficulty in detecting NPIs in a corpus—because of the "layering" effects (discussed in section 2.1), each polarity licensing context must be investigated separately and compared to the total use of the word suspected to be an NPI (Hoeksema 1994). Careful controls must be observed. If a given lexical item appears much more frequently in polarity licensing contexts, particularly negation, one must consider the possibility that there are comparatively more of these contexts in the corpus (i.e. there are more negated VPs in the corpus).

To rule out the null hypothesis that *any*-words appear more frequently under negation simply because there are more negative clauses in the corpus, searches for *many* in the same contexts were performed. In PDE, *many* can be seen as a sort of counterpart to NPI *any*. Whereas NPI *any* is only licensed by the various negative polarity contexts (25.a-25.b), *many* is grammatical in both positive and negative sentences (25.c-25.d):

[12] Of the 329 total undated entries in the corpus, 103 appeared under negation (31%), 24 appeared in conditionals (10%), 20 appeared in questions (6%), and 22 appeared in comparisons (7%).

25. a. $_{OK}$ I don't have any apples.

b. *I have any apples.

c. $_{OK}$ I don't have many apples.

d. $_{OK}$ I have many apples.

The rationale behind using *many* as a control for *any* is that *any* could be appearing with a high frequency under negation due not to its being an NPI, but because a given corpus period has more negative clauses. If this affects the distribution of *any*, we would expect to see similar effects in the distribution of *many*.

4. Results from Corpus Searches

Up to this point, I have only looked at polarity sensitivity of *any* in Middle English and PDE. The picture painted by the literature is that *any* was not an NPI in the early years of ME, but became one in response to the decline of negative concord. I have called this group of explanations the "ME Negative Concord Loss Hypothesis" (see section 2.3). In the following section, I will provide evidence from corpus searches of Old English that expands on this hypothesis.

4.1 *Any* under Negation

The results of the corpus searches reveal an unexpected picture of *any*'s frequency under negation. On the one hand, *any*-words do not seem to display polarity sensitivity in the Middle English period (1150-1500), consistent with the ME Negative Concord Loss Hypothesis (Tieken 1995; Tieken 1997; Iyeiri 2002; Kallel 2011). The frequency of *any*-words under negation during the Early Modern English period (1500-1710) is consistent with PDE usage (Israel 2011) (EMoE 53% vs. PDE 39%). On the other hand, in the Old English period, texts from 850-950

and those from 950-1050 show a higher frequency of *any* under the scope of negation (27% and 38%, respectively). The data is summarized in table 2 below.

	Period	**Percent of *any* under negation (total *any* under negation/total *any*)**	**Percent of *any* under negation by larger language period**
Old English	?-850[13]	0% (0/1)	35% (278/793)
	850-950	27% (66/238)	
	950-1050	38% (212/552)	
	1050-1150	0% (0/2)	
Middle English	1150-1250	17% (39/220)	20% (245/1202)
	1250-1350	25% (32/130)	
	1350-1420	21% (119/559)	
	1420-1500	19% (55/293)	
Early Modern English	1500-1569	57% (633/1115)	53% (2129/4033)
	1570-1639	48% (733/1540)	
	1640-1710	53% (733/1378)	
Present-day English (Israel 2011)	Contemporary	39% (123/316)	39% (123/316)

Table 2: Distribution of any from Early Old English to Early Modern English.

To get a sense of how this compares to the frequency of *any*-words under negation in PDE, we can compare these to Israel's results from the Linguistic Data Consortium's *Wall Street Journal* corpus (2011, pp. 174-145). Out of the total number of *any* present in the corpus (n=316), he found that 39% occurred under the scope of negation. Taking this to be the PDE distribution, we see that, as expected, ME distribution is low (range: 17%-25%). EMoE, while higher than PDE distribution, displays a higher frequency of polarity sensitivity than ME. Most interestingly, the frequency of OE *any* under negation (35%) is closer to PDE distribution (39%) than either ME (20%) or EMoE (53%).

[13] '?' indicates that the true date of composition is not known.

These data display a U-shaped curve (see Figure 1). *Any*-words were used under negation with high frequency during the Old English period. This frequency decreased in the Middle English period, and then increased in the Early Modern English period.

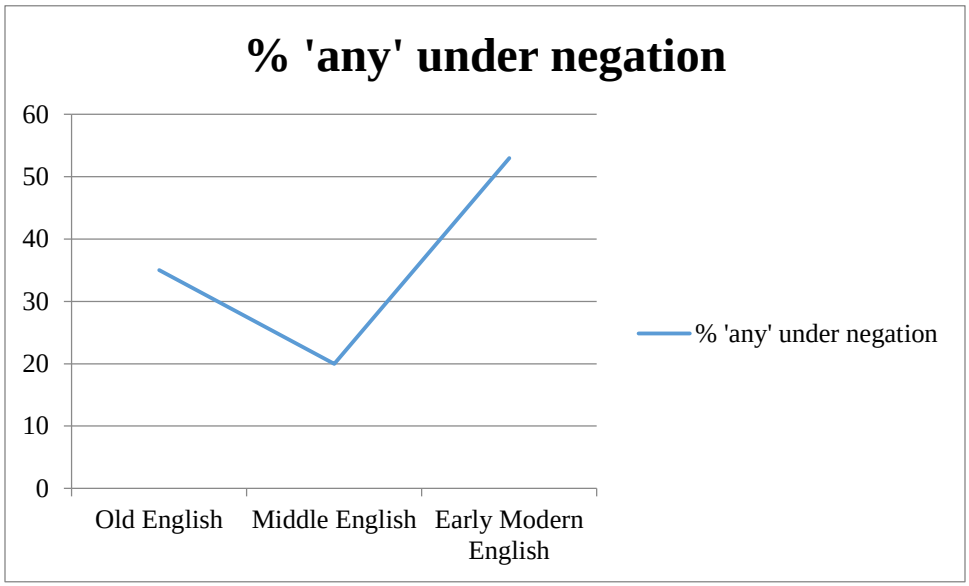

Figure 1: Graph of frequency of *any*-words under negation in Old English, Middle English, and Early Modern English[14]

The immediate difficulty that these findings present us with is whether or not the *any*-words which occur under negation are, in fact, polarity sensitive. Consider example 26:

26. ne ænig man myrtenes æfre ne abite
NEG any man diseased_meat ever NEG devour

'Not any man is to ever eat diseased flesh'

If *ænig* in example 26 is an NPI, then it is licensed by the preceding negator *ne*. The presence of the NPI *æfre* 'ever' supports this analysis. The picture given by the literature is that

[14] See Appendix B for the "complete" graph of *any*'s distribution under negation. Rather than being divided by language period, it is divided by corpus period.

this does not happen in OE because it is ruled out by negative concord (Tieken 1995; Tieken 1997; Mazzon 2004; Fischer et al. 2000). Compare example 26 to 27 (below):

27. Nis heo nanes haliges mægnes bedæled, ne nanes
NEG_is she NEG holy power deprived NEG NEG
Wlites, ne nanre brihtnysse
Appearance NEG NEG brightness

'She is not deprived of holy power, or of any appearance, or of any brightness'

(Mazzon 2004, 42)

Example 27 demonstrates negative concord: the verbal negator and the reinforcing negatives *nanes* and *nanre*, 'no', resolve to a negative, not a positive meaning. The noun phrase *ne ænig man* 'not any man' (26) can be seen as a minimal pair of the noun phrases *nanes haliges mægnes* 'no holy power', *nanes wlites* 'no appearance', and *nanre brihtnysse* 'no brightness' (27). In 27, the preceding sentential negator *ne* licensed NC *na*. In 26, it appears that the preceding sentential negator *ne* licenses NPI *ænig*. It is uncontested that Old English was a negative concord language. Indeed, example 26 demonstrates both negative concord and what appears to be NPI *ænig*. Why would there be a need for an NPI *ænig* in 26?

To confront the possibility that the reason *any* is occurring with such high frequency under negation is because there are more negative clauses in the corpora, a search of *many* under negation was performed (see Table 3 below). *Many* is grammatical in both negative and affirmative sentences. Thus, if we see disproportionate frequency of *many* under negation, it is possible that there are simply more negative clauses in the corpora.

	Period	**Percent of *many* under negation (total *many* under negation/total *many*)**	**Percent of *many* under negation by larger language period**
Old English	?-850	0% (0/0)	9% (28/301)
	850-950	9% (22/239)	
	950-1050	9% (6/62)	
	1050-1150	0% (0/0)	
Middle English	1150-1250	9% (17/181)	5% (109/2005)
	1250-1350	11% (17/158)	
	1350-1420	6% (50/897)	
	1420-1500	3% (25/769)	
Early Middle English	1500-1569	8% (69/853)	11% (276/2555)
	1570-1639	9% (83/910)	
	1640-1710	16% (124/792)	

Table 3: Distribution of *many* from Old English to Early Modern English.

From Table 3, we see that the distribution of *many* is relatively static from OE to EME. From this, we can conclude that it is unlikely that the OE and ME corpora have disproportionate occurrence of negative clauses. If we compare the OE data for *any* from Table 2 to Table 3, it is clear that something beyond pure coincidence is going on. If *any* were not an NPI, it would appear freely in negative and positive sentences. We would expect that its frequency would be much closer to *many* in these periods. In none of the periods is the frequency of *any* under negation close to *many* under negation.

4.2 *Any* in Conditionals, Questions, and Comparatives

Results from the other polarity licensing contexts (i.e. antecedent of a conditional, in questions, in comparative clauses) were less unexpected, but still of interest for this thesis. Contrasting *any*'s use under negation, the frequency of *any* in these other polarity licensing contexts is more static. For the frequencies by each context, see Table 4 below.

	Period	Percent of *any* in conditionals	Percent of *any* in questions	Percent of *any* in comparatives
Old English	?-850	0% (0/1)	0% (0/1)	0% (0/1)
	850-950	16% (39/238)	30% (72/238)	11% (25/238)
	950-1050	10% (54/552)	11% (58/552)	5% (25/552)
	1050-1150	0% (0/2)	50% (1/2)	0% (0/2)
Middle English	1150-1250	26% (58/220)	7% (16/220)	5% (12/220)
	1250-1350	18% (23/130)	8%(11/130)	5% (7/130)
	1350-1420	16% (87/559)	7% (39/559)	4% (25/559)
	1420-1500	12% (36/293	8% (22/293	4% (12/293
Early Modern English	1500-1569	18% (200/1115)	12% (131/1115)	4% (44/1115)
	1570-1639	15% (234/1540)	9% (141/1540)	4% (56/1540)
	1640-1710	12% (171/1378)	12% (159/1378)	5% (68/1378)

Table 4: Distribution of *any* in conditionals, questions, and comparatives

To compare this situation with the distribution in PDE, it is pertinent to consider Israel (2011) again. According to his corpus search, the frequency of *any* in conditionals is 2%; in questions 2%; in comparatives 2%. From Table 4, we can see that frequency is much higher in the OE, ME, and EME corpora.

It is hard to determine the direction of change in these three polarity licensing contexts, or if there is any change at all. When we compare them to the frequency of *any* under negation, we do not see the same sort of U-shaped curve in the other contexts (Figure 2).

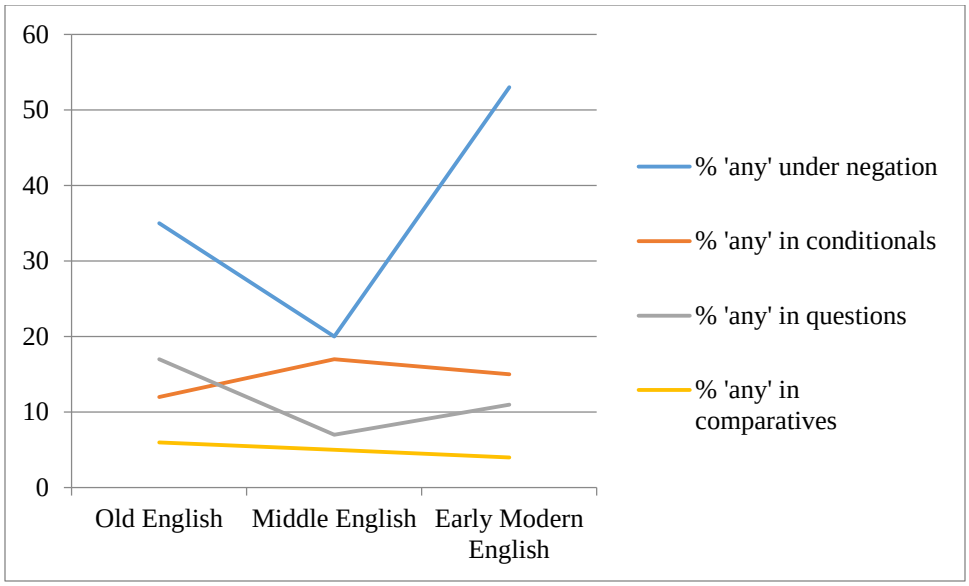

Figure 2: Graph of frequency of *any* under negation, and in conditionals, questions, and comparatives in Old English, Middle English, and Early Modern English

As we see from Figure 2, the frequency of *any* in conditionals, questions, and comparatives does not display a U-shaped pattern like *any* under negation does. This presents the possibility that *any* was an NPI licensed by these other three contexts, but its use was suppressed in negative contexts for some mysterious reason in ME. This will be considered below in section 5.

Each of the scholars I grouped under the Negative Concord Hypothesis (2.3) acknowledged that *any* occurred with high frequency in other NPI licensing contexts before it became an NPI (Tieken 1997, 1550; Iyeiri 2002, 5; Kallel 2011, 156). This is consistent with my findings here. However, they denied that it was licensed by negation. Why would *any* appear with such high frequency in conditionals, questions, and comparatives, but not be an NPI licensed by negation? Kallel (2011) states that "negative polarity items spread to other negative contexts [i.e. other NPI licensing contexts], as they already behaved as such in other contexts such as some restricted negative contexts, conditionals, and interrogatives" (156).

Even without considering the situation in OE, there is a larger theoretical issue at stake here. For a word or phrase to be an NPI, it must be at least licensed by negation (Hoeksema 2000; Israel 2011). The other contexts are secondary to negation.

To confront the possibility that *any* is showing up with this frequency in conditionals, questions, and comparatives, a search of *many* in the same syntactic environments was performed (Table 5). Note that, due to time constraints, I was unable to compile the frequencies for EMoE.

	Period	**Percent of *many* in conditionals**	**Percent of *many* in questions**	**Percent of *many* in comparatives**
Old English	?-850	0% (0/0)	0% (0/0)	0% (0/0)
	850-950	0% (0/239)	7% (17/239)	2% (5/239)
	950-1050	1% (1/62)	3% (2/62)	3% (2/62)
	1050-1150	0% (0/0)	0% (0/0)	0% (0/0)
Middle English	1150-1250	1% (2/181)	6% (10/181)	0% (0/181)
	1250-1350	1% (2/158)	6% (9/158)	3% (4/158)
	1350-1420	2% (16/897)	4% (34/897)	1% (7/897)
	1420-1500	4% (3/769)	3% (20/769)	0% (2/769)

Table 5: Distribution of *many* in conditionals, questions, and comparatives

From Table 5, we can see that the frequencies of *any* in these NPI licensing contexts in OE and ME are higher than the frequency of *many* in the same contexts. This suggests that *any* was an NPI licensed by these syntactic contexts in OE and ME.

If we consider some of the individual results produced by these corpus searches, we see that *any*'s use in these periods seems to be consistent with PDE NPI *any*. Consider the OE sentence in 28:

28. & gif synne is ænig þing, þonne geworhte God hit
And if sin is any thing then make-PST-SUBJ God it
For he geworhte ealle þing
For he make-PST-SUBJ all thing
'And if sin is anything, then God made it, for God made all things'

In example 28, *ænig* appears to be used in exactly the same way as PDE *any*. It is within the antecedent of the conditional clause initiated by *gif*: [*gif synne is ænig þing*], *þonne geworhte God hit for he geworhte ealle þing*. Further, like PDE NPI *any*, *ænig* in this example clearly has an existential meaning. This is evident from the presence of the universal quantifier *ealle* 'all' in the consequent of the conditional.

Likewise, ME sentence produced by the search appear to demonstrate polarity sensitivity. Consider the ME sentence in example 29:

29. 3ef ani god mon is of feorren icomen, hercneð his speche
    If any god man is of foreign arrive hark his speech
    'If any God man arrives from a foreign place, (then) listen to his speech.'

In this sentence, *ani* seems to be used in exactly the same way as PDE *any* in the antecedent of a conditional.

Questions found from OE seem also to be consistent with an NPI reading of *any*. Consider example 30:

30. Ac hu mæg þone æfre ænig mann hine inweardlice to God
    but how may then ever any man him inwardly to God
    gebiddan, but he hæbbe inweardlice soðe lufe & rihtne
    pray but he has inwardly true love & right
    geleafan to Gode?
    belief to God
    'But then, how may any man ever inwardly pray to God without inwardly having true love and right belief in God?

In PDE, NPI *any* would be licensed in questions of this type. It appears that *ænig* in this sentence is a candidate for an NPI.

ME questions with *any* also appear to demonstrate polarity sensitivity. Consider 31:

31. How shold ony man handle hony, but yf he lycked
    How should any man handle honey but if he licked
    his fyngres?
    his fingers
    'How should any man handle honey without licking his fingers?'

Like the OE question in 30, the ME question in 31 demonstrates what appears to be NPI *any* licensed by being in a question.

Likewise, the comparative sentences found by the searches appear to demonstrate polarity sensitivity. Consider the OE sentence in example 32:

32. & heo æfre tyrnð onbuton us swyftre ðonne ænig
And she ever turns about us swifter than any
Mylenhweowul, eal swa deop under þyssere
Movement_of_the_heavens all as deep under this
Eordan swa heo is bufon
Earth as she is on
'And she always turns around us, swifter than any movement of the heavens, all as deep as this world she is on.'

In 32, the phrase *swyftre ðonne ænig mylenhweowul* 'swifter than any movement of the heavens', *any* seems to be licensed by the morphological comparative in *swyftre*.

ME comparative sentences also seem to display to same polarity sensitivity in *any*. Consider sentence 33:

33. And suffred of God for to hungren more þan any
And suffered of God for to hunger more than any
Oþur dide
Other did
'And suffered of God in order to hunger more than any other person did.'

In 33, the phrase *more þan any other* 'more than any other', *any* appears to display polarity sensitivity under comparison in the same way that PDE *any* does.

4.2.1. Multiple Licensing of *Any* in OE and ME

There is another important characteristics of NPIs: multiple licensing. NPIs can be licensed by more than one licenser. Consider 34:

34. What if he isn't better than any average dictator?

In 34, each of the four licensing contexts searched for in 4.1 and 4.2 occurs. It is impossible to say which one is licensing *any*, or indeed if *any* is only licensed by one of these or if all four are on equal footing in licensing.

Many of the results of my corpus searches included multiple licensing contexts, consistent with standard PDE usage. For example, consider the OE sentence in 36 and the ME sentence in 35:

35. And his cynerice wæs wunigende on sibbe, swa þæt man
And his kingdom was dwelled on peace so that one
ne gehyrde gif ænig scyphere wære buton
NEG heard_about if any fleet were but
Agenre leode þe ðis land heoldon
Against people who this land possessed
'And his kingdom was lived in in peace, so that nobody heard if any fleet were against the people who possessed this land'

In 35, we see *ænig* occurring along with both negation *ne* and a conditional clause marked with *gif*.

36. Eke if he flatere or blandise moore than hym
Additionally if he flatters or persuades more than him
Oghte for any necessitee
Ought for any necessity
'Additionally, if he flatters or persuades more than he ought for any necessity'

In 36, we see *any* in the antecedent of a conditional and as a standard of comparison.

5. Interpreting the Data: Some Hypotheses

At this point, I will explore some hypotheses to explain the mysterious U-shaped distribution of *any* under negation (§4.1). First, I will rule out a few hypotheses. I will conclude that *any* was an NPI throughout OE, ME, and EMoE (§5.5). I will propose a four-staged model to explain why we see such a decrease in the frequency of *any* under negation in ME.

5.1. Latin Influence Hypothesis

In considering change in the English language, it is necessary to consider foreign language influence. During the OE period, large influence on English came from Latin (Blake 1992). Latin is not a negative concord language (Wheelock & LaFleur 2011). It is possible that OE writers were influenced by the presence of a word like NPI *any* in Latin, and thus used *any* to translate that word.

The best candidate I found for a Latin word like PDE NPI *any* is the word *ullus* (Wheelock & LaFleur 2011; *The Classic Latin Dictionary* 1961).[15] Consider examples 37-38:

[15] I must thank Cole Furrh for assistance with the Latin language and translations.

37. Neque ullam in partem disputo
    And_not any in part dispute.1.SG
    'And I did not disagree with any (one person) in the group'
38. Neque ullam picturam fuisse, quin conquisierit
    And_not any picture exist which seek.SUBJ
    'And there does not exist any picture which he ought to seek'

(*The Classic Latin Dictionary* 1961, 596)

Ullus tends to occur under negation, or with words implying negation like 'without' (Wheelock & LaFleur 2011). While I was not able to find literature describing *ullus* as an NPI, we can assume that its use in 37 and 38 is licensed by the negation in *neque* 'and not'. It is possible that OE writers were influenced to translate *ullus* as *ænig*, and this is why I saw such great frequency of *any* under negation in OE. In this hypothesis, *any* under negation is a calque from Latin, not a part of the grammars of OE speakers.

To investigate this possibility, I looked at the texts in the OE corpus in which *any* appeared under the scope of negation, and determined how many were translations from Latin sources. The rationale behind this is that, if *ænig* under negation is a product of Latin, this construction should show up more when the author is directly translating from Latin, because he would be primed for the construction.

I found that the texts that were translations from Latin used *ænig* under negation less than the native OE texts. In total, the corpus includes 410 instances *any* under negation in OE. Note that the discrepancy between this number and the one provided in 4.1 is due to the fact that 123 of the instances of *any* under negation were not dated texts, and thus were not included

(discussed in §3). Because the dates are less important here, I have included these other instances to give us a fuller picture.

Of the 410 total instances of *any* under negation, 129 instances came from translations from Latin. The total number of texts that are translations from Latin is 33. Of native OE texts (n=42), there were 222 instances of *any* under negation. Additionally, I found 59 instances of *any* under negation in texts where it is uncertain if the text is a translation of Latin (n=26). The frequency of *any* under negation per 10,000 words is presented in Table 6:

	Frequency of *any* under negation per 10,000 words
Native OE Texts	3.95
Translations from Latin	2.01
Uncertain if Translation from Latin	2.57

Table 6: Frequency of *any* under negation per 10,000 words by native OE text, translations from Latin, and uncertain

In Table 6, I have calculated the average number of *any* under negation per 10,000 words. In other words, I calculated the total number of words in Latin translations (n=642,609), Old English native texts (n=562,561), and those texts where it is uncertain if it is a translations of Latin (n=229,692). From this, we can see that the frequency of *any* under negation per 10,000 words in OE is almost twice as much as for Latin (3.95 vs. 2.01).

This provides some evidence against the hypothesis that the use of *any* under negation in OE is a product of Latin influence. For the Latin influence hypothesis to explain why there are so many instances of *any* under negation in OE, we would expect the average number of *any* under negation per text to be much higher for translations from Latin. Thus, I conclude that this hypothesis can be ruled out.

5.2. *Any* as N-Word Hypothesis

It is possible that the instances of *any* I observed under negation in OE were not actually NPIs, but n-words. In NC languages, an n-word is a word which only used in sentences with a negative meaning. Depending on the type of NC language (discussed in 2.2), n-words can express logical negation with or without the presence of sentential negation. They tend to be marked with a negative morpheme, but this is not logically required. In OE and ME, the proclitic *n-* marked n-words. An example of this which has was fossilized in PDE is *never*. In a negative sentence, *ever* became *never*. In fact, the main OE and ME negative quantifier *na/nan* 'no' was formed by adding a proclitic *n-* to *an* 'one'.

Because OE ad ME were NC languages, it is possible that *any* had the same status as the other negative elements in negative sentences. In essence, this hypothesis would hold that *any* was a synonym for the n-word *na* 'no' in OE and EME. To elaborate on this, consider example 39 (repeated from 26 above):

39. ne ænig man myrtenes æfre ne abite

NEG any man diseased_meat ever NEG devour

'Not any man is to ever eat diseased flesh'

To say that *ænig* is an n-word in 39 is to say that it means basically the same thing as *na* (i.e. *nanes, nanre*) in 40 (repeated from 27 above):

40. Nis heo nanes haliges mægnes bedæled, ne nanes

NEG_is she NEG holy power deprived NEG NEG

Wlites, ne nanre brihtnysse

Appearance NEG NEG brightness

'She is not deprived of holy power, nor of any appearance, nor of any brightness'

(Mazzon 2004, 42)

This hypothesis would explain why I found such a high percentage of *any* under negation in Old English (35%). On the other hand, it fails to fully explain the behavior of *any*.

To begin with, *any* still shows high frequency in other NPI contexts (see Table 4 in §4.2). We would not expect this of an n-word, unless it was co-occurring with negation. After all, modern speakers of non-standard dialects of English with NC do not use n-words in these contexts (Labov 1972). Consider the following sentences:

41.	a.	I ain't got no reason to do that.	(NC; *no* as n-word)
	b.	If you had any brains.	(*any* licensed by conditional)
	c.	*If I got no reason to do that…	(*no* in conditional)
	d.	Do you have any reason to do that?	(*any* licensed by question)
	e.	*Do you have no reason to do that?	(*no* in question)

In 41, *no* cannot occur in c or e. Note that these sentences are not intended to express a negative meaning, but one identical to NPI *any*. Rather, these speakers would say 41.b rather than 41.c, and 41.d rather than 41.e. On the other hand, 41.c and 41.e could be grammatical if they intended to express negation.

If we consider the distribution of the control word *many* in conditionals, questions, and comparatives, we see that the distribution of *any* is still higher than we would expect in these

contexts (see Table 4, section 4.2). Compared to the distribution of *any* in these contexts, *many* occurs with lower frequency in each of these contexts (see Table 5, §4.2). Taking the distribution of *many* to be indicative of a word with free distribution, we see that *any*'s use in the same syntactic contexts is skewed to the NPI licensers.

Further evidence against the *any* as n-word hypothesis comes from the presence of *nænig* 'not any' in OE. When *ænig* was used under negation, it could be contracted with a preceding negator and become *nænig* (Fischer et al. 2000; Tieken 1997; Mazzon 2004). In other words, *nænig* was is definitely an n-word, and is an n-word version of *ænig*. The fact that this occurred at all casts doubt on an explanation of *any* as an n-word. The distribution of *nænig* is overwhelmingly skewed to negative contexts (see Table 7):

	Period	**Percent of *nænig* under negation (total *nænig* under negation/total *nænig*)**	**Total *nænig* by larger language period**
Old English	?-850	0% (0/3)	40% (109/275)
	850-950	41% (108/265)	
	950-1050	14% (1/7)	
	1050-1150	0% (0/0)	
Middle English	1150-1250	83% (5/6)	71% (5/7)
	1250-1350	0% (0/0)	
	1350-1420	0% (0/0)	
	1420-1500	0% (0/1)	

Table 7: Frequency of *nænig* under negation in Old English and Middle English

Aside from occurring with explicit sentential negation, most other results of *nænig* occurred in phrases with an implied negative in the form of words like 'without'. *Nænig* in the other NPI contexts produced negligible results. Searches of *nænig* in conditionals yielded just 4 hits, two of which also contained negation. In searches of questions containing *nænig*, 10 results

were found, all of which contained negation. In searches of comparatives, 6 results were found, all of which contained negation.

Thus, from the arguments outlined in this section, we can rule out the possibility that *any* was an n-word in OE and ME.

5.3 Atavism Hypothesis

If we accept that *any* was an NPI in OE, we are faced with a dilemma. Why does the frequency of *any* under negation drop in the ME period?[16] As I see it, there are two ways of answering this question. In this section, I will explore the hypothesis that *any* was an NPI in OE, not an NPI in ME, and became and NPi once again in EMoE. In §5.5, I will explore an alternative hypothesis, that *any* was an NPI throughout OE, ME, and EMoE.

In the Atavism Hypothesis *any* is proposed to be an NPI in OE. In ME, NPI status is lost. That is to say, *any*'s distribution went for being limited to NPI licensing contexts to free distribution. *Any* would then become an NPI again in EMoE. Something about the syntactic function and lexical semantics of *any* would lend itself to be an NPI.

This hypothesis would hold that the 15% drop in frequency of *any* under negation from OE to ME indicates that *any* has lost its status as an NPI. There is a problem with taking this as evidence that *any* is not an NPI, though. In sections 4.1 and 4.2, I discussed the distribution of *any* compared to the control word *many*. During the ME period, *any* occurred under negation with much greater frequency than *many* did (20% vs. 5%). Moreover, the frequency of *any* in the other licensing contexts was much greater than that of *many* (see §4.2)

This hypothesis is, in my opinion, quite radical. I am not aware of an analogous situation of a linguistic phenomenon reverting back to its ancestral form, much less a form it had around 500 years before. We can be almost certain that EMoE speakers would not have been influenced

[16] 35% of instances of *any* are under negation in OE, 20% in ME, and 53% in EMoE.

by OE texts. Even if they had knowledge of OE, it is unreasonable to expect that this alone would influence them to innovate *any* into an NPI.

I conclude that the Atavism Hypothesis can be rule out.

5.4. Emphatic *Any* Hypothesis

The Oxford English Dictionary (OED) gives some etymological information on the various uses of *any*. While it does not refer to NPIs as such, in definition I.1, it does say that one meaning is an "indeterminate derivative of *one*". In I.1.a, it says that "its primary use is in interrogative, hypothetical, and conditional forms of speech". The earliest example it includes of one of these syntactic environments is from around the year 1000 (see 42):

42. Hwæðer ænig man him mete brohte
    Whether any man him food/meat brought
    'Whether any man brought him meat/food'

In definition I.1.b, the OED says "with a preceding negative it denies of a person or thing, without limitation as to *which*, and thus, constructively, of *every* being or thing of the kind. It thus becomes an emphatic negative, with its unqualified or uncompromising scope brought into prominence". The earliest example of this use is, likewise, from around 1000 (43):

43. He ne geþafode þæt ænig man ænig fæt ðurh þam
    He NEG allowed that any man any vessel through the
    Templ bære
    Temple bare
    'He did not allow that anybody carry any vessels through the temple'

On first glance, this seems like an alternative hypothesis to assuming that *any* was an NPI in OE, but it is actually not qualitatively different. If *ænig* was an NPI, then it was inherently

emphatic. Indeed, NPI *any* in PDE seems to be inherently emphatic. Consider the subtle difference between the use of *any* and the indefinite article *a* in 44:

44.	a.	You don't have a reason to be upset.	(Negation)
	b.	You don't have any reason to be upset.	(Negation)
	c.	If you had a reason to be upset, I would help you.	(Conditional)
	d.	If you had any reason to be upset, I would help you.	(Conditional)
	e.	Do you have a reason to be upset?	(Question)
	f.	Do you have any reason to be upset?	(Question)
	g.	He is happier than a normal man.	(Comparison)
	h.	He is happier than any normal man.	(Comparison)

The main difference between these sentences is that *any* seems to contribute more emphasis to the meaning than *a.* For example, consider the possible worlds that 44.a and 44.b entail. In both situations, the total number of reasons that *you* has to be upset is zero. The main difference is that 44.b puts more emphasis on the fact that there are zero reasons to be upset.

Viewing OE *any* as an emphatic negative is insufficient, in and of itself, to fully explain the U-shaped distribution of *any* under negation. In the following section, I will combine this analysis of *any* into a single hypothesis: that *any* was always an NPI.

5.5. *Any* Always NPI Hypothesis

In this section, I will argue that *any* was an NPI throughout OE, ME, and EMoE. To make sense of this hypothesis, we can combine it with the *any* as emphatic negative hypothesis (§5.4). I will present a four-staged model to explain the U-shaped distribution of *any* under negation.

The frequency of *any* in NPI licensing contexts in OE is consistent with standard PDE frequency (see §4.1). While the frequency of *any* in conditionals, questions, and comparatives is stable, there is a 15% drop in the use of *any* under negation between the OE and ME periods. At the same time, the frequency of *any* under negation in the ME period (20%) is higher than that of the control word *many* (5%). Thus, it is not crazy to assume that *any* could have been polarity sensitive to negation in the ME period.

The difficulty in this account is explaining why we see this 15% drop in ME. In other words, why do we see this U-shaped curve? As I see it, we must consider *any* and the n-word *na* at each stage of this change. In Table 8, I summarize the first stage.

Stage 1 (OE)	
Any [+ NPI] [- N_WORD] [+ EMPH] [- NEG][17]	*Na* [- NPI] [+ N_WORD] [- EMPH] [- NEG]

Table 8: Stage 1 of *Any*'s Historical Distribution (OE)

In Stage 1, *any* was an NPI with an emphatic negative meaning. To say that *any* in OE was used for emphatic negation is to say that it meant 'absolutely none', 'none at all', or 'not a single'. From this, we could predict that *ænig* in 45 is more emphatic than *na-* in 46.

[17] *Any* is listed as [- NEG] because NPIs cannot license themselves (Hoeksema 2000). NPIs cannot express logical negation alone. *Na* is listed as [- NEG] because only the sentential negator *ne* could express logical negation in OE and ME (see §2.3.3.)

45. [ne ænig man] myrtenes æfre ne abite
NEG any man diseased_meat ever NEG devour
'Not any man is to ever eat diseased flesh'

46. Nis heo nanes haliges mægnes bedæled,[ne nanes
NEG_is she NEG holy power deprived NEG NEG
Wlites], [ne nanre brihtnysse]
Appearance NEG NEG brightness
'She is not deprived of holy power, nor of any appearance, nor of any brightness'
(Mazzon 2004, 42)

As an emphatic negation, 45 would be translated more accurately as 'Not a single man is to ever eat diseased flesh'. When *any* was used for emphatic negation, *ænig* and *na-* would have been two clearly discrete quantifiers. In 46, the n-word *na* is a non-emphatic n-word. Thus, *any* would not be in competition with *na-*. This would change in Stage 2 (Table 9 below).

Stage 2 (Late OE-EME)	
Any [+ NPI] [- N_WORD] [- EMPH] [- NEG]	*Na/no* [- NPI] [+ N_WORD] [- EMPH] [- NEG]

Table 9: Stage 2 of *Any*'s Historical Distribution (Late OE-EME)

In Stage 2, *any* was still an NPI, but it lost its emphatic status. This means that in pairs of sentences like 45 and 46 above, *any* and *na* would have contributed largely the same meaning.

Rather than *any* meaning ‘absolutely none’ under negation, it would mean simply ‘none’. This means that *any* would have to compete with the *na* for the same structural positions, because they now mean the same thing. Because OE and EME were firmly negative concord languages, *any* probably lost most of the time in this competition. Thus, the frequency of *any* under negation drops from 39% in OE to 20% in ME (§4.1).

Were NC to be maintained in ME, it is possible that *any* would have been driven out of the language. It did not, because NC began to weaken in ME around the same time that *any*’s frequency drops. The changes in the NC system of ME are what lead to Stage 3 (Table 10).

Stage 3 (LME)	
Any [+ NPI] [- N_WORD] [- EMPH] [- NEG]	*Na/no* [- NPI] [+ N_WORD] [- EMPH] [+ NEG]

Table 10: Stage 3 of *Any*’s Historical Distribution (Late OE-EME)

Following Kallel (2011) (discussed in §2.3.3), in LME all n-words, including *na/no*, changed from being [- NEG] to [+NEG]. *Any* and *na*/*no* were still in competition for the same structural position. Thus, this stage does not immediately affect the relationship between *any* and *na*/*no*. One exception is that *any* could now be licensed by n-words, rather than just sentential negation in the *ne*+VP structure. The weakening of these constraints led to the loss of NC, which is Stage 4 of the proposed model (Table 11).

Stage 2 (LME-EMoE)	
Any [+ NPI] [- N_WORD] [- EMPH] [- NEG]	*Na* [- NPI] [- N_WORD] [- EMPH] [+ NEG]

Table 11: Stage 4 of *Any*'s Historical Distribution (LME-EMoE)

At this stage, the negative elements ceased to be n-words. It is at this stage that n-words like *no, nobody,* and *nowhere* are replaced with NPIs like *any, anybody,* and *anywhere* in negative sentences. At this point, I am willing to accept that the structural reason for this is the same as those proposed by Kallel (2011) (discussed in §2.3.3).

6. Conclusions and Directions for Future Research

In this paper, I have attempted to shed some light on the historical use of *any* as an NPI. Corpus searches revealed that *any* was used with high frequency under negation in OE, lower frequency in ME, and high frequency in EMoE. This mysterious U-shaped curve was the primary motivation for this study. We do not see similar U-shaped trends in the historical distribution of *any* in the other NPI licensing contexts (i.e. conditionals, questions, and comparatives).

Previous studies (Tieken 1995; Tieken 1997; Iyeiri 2002; Kallel 2011) argued that *any* emerged as an NPI as a product of the loss of negative concord in Middle English. One notable flaw with this hypothesis, which I called the ME Negative Concord Loss Hypothesis, is that it cannot explain why *any* occurs with such high frequency in conditionals, questions, and comparatives in OE and ME (before they hold that it became an NPI). As these are NPI

licensing contexts, it is odd that *any* would be licensed in these contexts but not negation, since negation is the primary licenser of NPIs.

In §5.5, I proposed a four-staged model based on syntactic and semantic features of *any* and *na/no* to explain why we see this U-shaped trend. In OE, *any* was an emphatic negative meaning 'not a single' or 'none at all'. This emphatic feature was lost in EME. This meant that *any* and *na/no* meant the same thing and were competing for the same structural position. This resulted in a drop in the frequency of *any* under negation. After negative concord was lost between LME and EMoE, *any* started to fill these same structural positions, resulting in the increased frequency of *any* under negation in EMoE.

This project was a very broad overview of a very narrow phenomenon. Polarity sensitivity is a seminal topic in discussions of the architecture of the grammar of human language (Israel 2011). I began this research because I was disappointed at the few instances of historical accounts of NPIs available. After undertaking it, I found that, like many things in historical linguistics, it is incredibly difficult to tease cause and effect apart. For example, did the loss of negative concord lead *any* to develop into an NPI, or did the increase in *any*-words lead to the loss of negative concord?

Future research in the historical behavior of *any* as an NPI is needed to make more sense of what I have found in the present study. Further, this issue should be examined on more dimensions, including historical dialectal variation in the use of *any* as an NPI. One important factor that I was unable to take into account is the historical frequency of free-choice *any*. At this point, it is not clear to me when free-choice *any* emerged. Further research is needed to establish how many of the instances of *any* under negation that I found were actually examples of negated free-choice *any*.

Appendices

In the following section, I provide some background information on linguistic three-line notation (A). This is to help the reader unfamiliar with linguistic examples up to speed on the conventions of the field. It is by no means exhaustive. In B, I provide some tables and figures that were not included in the body of the paper due to lack of space, or because their complexity require so much explanation as to take away from the discussion in the paper.

A: A Brief Overview of Three-Line Notation

When translating foreign language sentences, linguists typically use three-line glosses (Bauer 2007). For the level of depth required to discuss the grammar of a foreign language sentence, it is often insufficient to simply provide the foreign language sentence or phrase and an English translation. In this paper, I translate all Old English examples in three-line notation. I do not do so with all examples of Middle English, because the word order is often identical to present-day English.

The first line provides the sentence in the foreign language. The second provides literal translations of each word used in the phrase (into whatever language the paper is written in). The third line provides colloquial English (or whatever the language of the paper is) translations. In order to keep the word translations lined up with the original language, many linguists use a monospaced font such as Courier, a practice that I adopt in this paper. It is easiest to understand how this notation works with an example. Say you want to translate the German sentence *Ich will einen Apfel essen*, 'I want to eat an apple'. In a three-line gloss, this sentence would look like this:

a. Ich will ein-en Apfel essen

I want a-ACC apple eat

'I want to eat an apple.'

As we can see, the first line of *a* provides the original German sentence. In the second line, each word is translated literally. *Einen* is broken down with a hyphen, because *–en* is a word ending that marks accusative (i.e. the objects of verbs) case. One of the strengths of this notation is that readers who are unfamiliar with the language can understand structural elements in the language that would not be transparent from a translation alone. If the above sentence were simply translated as 'I want to eat an apple', it is unlikely that readers unfamiliar with German would notice that the verb *essen* 'to eat' follows the object noun phrase *einen Apfel* 'an apple'.

The amount of structural information included in the second line varies, depending on what the linguist wants to highlight. If one were discussing the German pronoun system, for instance, he could break down the first word *ich* 'I' from *a* in more depth, like the following:

b. ich will…

1.SG want…

In *b*, 1 marks that *ich* is first person. SG indicates that the word is singular.

If the language uses a non-Latin script, linguists may utilize four-line notation. In four-line notation, the order is: native script in the first line; Romanization in the second line; word-by-word translation in the third line; colloquial English translation in the fourth line. An example is provided in *c* below.

There is one other linguistic convention relevant to this paper. When the foreign language uses a single word where we have multiple words in English, the foreign word is

translated with underscores. For example, consider the Mandarin Chinese word 哥哥 *gēge*, 'older brother'. This word would be translated as follows:

c. 我 哥哥 吃 饭

Wo gege chi fan

I older_brother eat food

'My older brother is eating food'

Example *c* shows that the Chinese word *gēge* does not translated to a single English word, but rather two words 'older brother'.

B: Other Figures and Tables

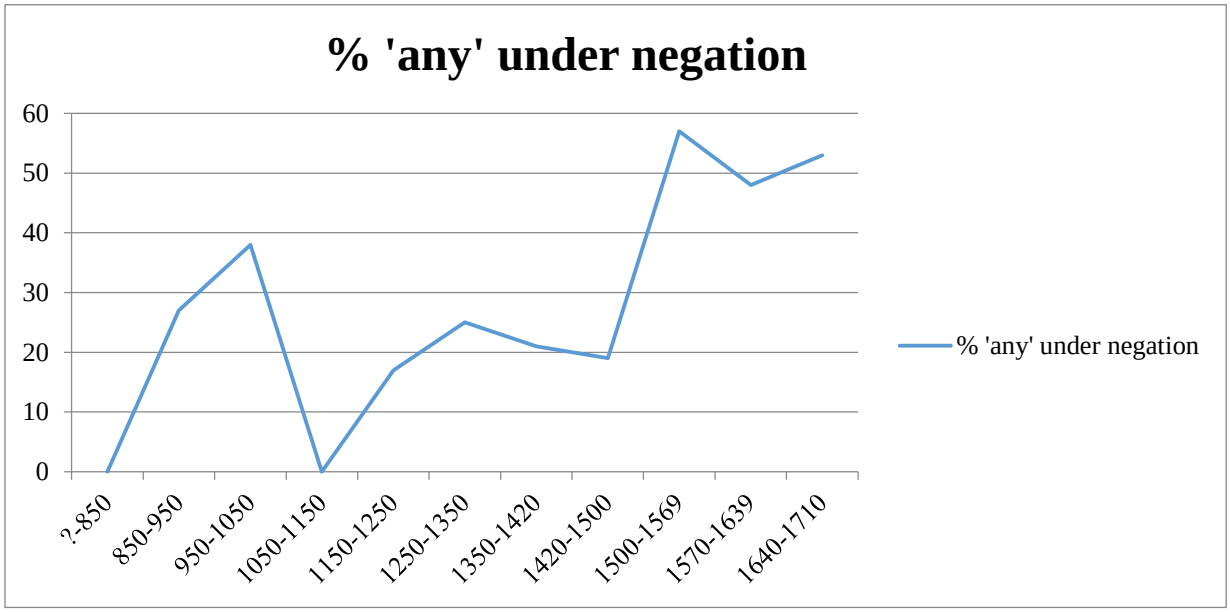

Figure 3: Graph of frequency of *any*-words under negation from Early Old English to Early Modern English, by corpus period

Figure A is a fuller picture of *any*'s distribution under negation, divided by the corpus time periods rather than aggregate language periods. This figure is very hard to parse. Are we to conclude that *any* was not used at all before the 850-950 period? What is more, are we to

conclude that there was a drop in polarity sensitivity during 1050-1150? We cannot conclude anything about the status of *any* in the grammar during these periods, because the total number of *any*-words for either of these periods is so low (range: 1-2).

There are similar problems with Figure B, which includes the frequency of *any* under negation, in conditionals, questions, and comparatives.

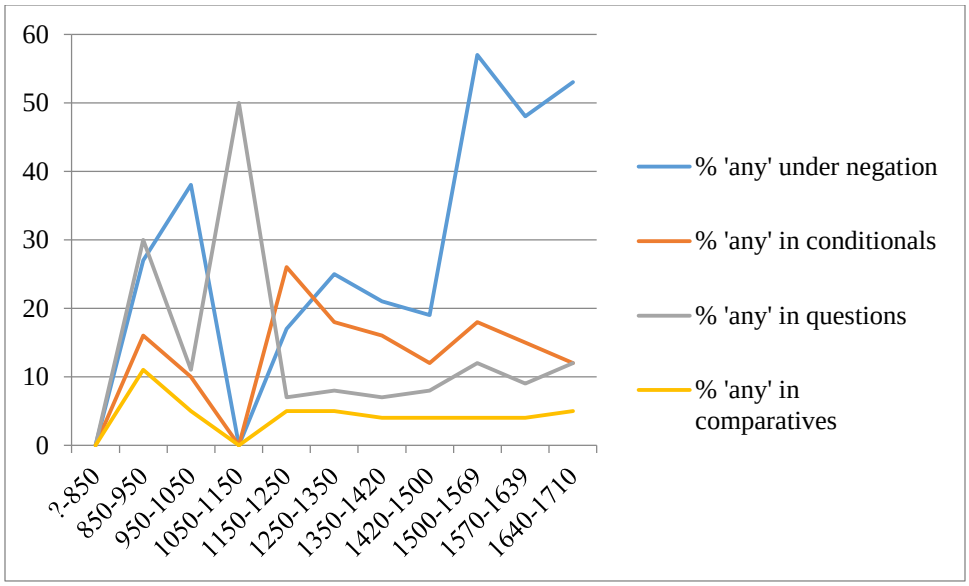

Figure 4: Graph of frequency of *any* under negation, in conditionals, in questions, and in comparatives. From Old English to Early Modern English.

Note that the drastic rise in frequency of *any* in questions during 1050-1150 is due to the fact that there are only two instances of *any* in this corpus period. Thus, a single example forces the frequency up to 50%.

The following tables were not included because the space they have broken up the discussion in section 4.2. They are nearly identical to the table in 4.2. The main difference is that they are separated by frequency of *any* in conditionals, questions, and comparatives (rather than being compressed into one graph) and include the frequency by larger language period.

	Period	Percent of *any* in conditionals	Percent of *any* in conditionals by larger language period
Old English	?-850	0% (0/1)	12% (93/793)
	850-950	16% (39/238)	
	950-1050	10% (54/552)	
	1050-1150	0% (0/2)	
Middle English	1150-1250	26% (58/220)	17% (204/1202)
	1250-1350	18% (23/130)	
	1350-1420	16% (87/559)	
	1420-1500	12% (36/293	
Early Modern English	1500-1569	18% (200/1115)	15% (605/4033)
	1570-1639	15% (234/1540)	
	1640-1710	12% (171/1378)	

Table 12: Distribution of *any* in conditionals, fuller picture

	Period	Percent of *any* in questions	Percent of *any* in questions by larger language period
Old English	?-850	0% (0/1)	17% (131/793)
	850-950	30% (72/238)	
	950-1050	11% (58/552)	
	1050-1150	50% (1/2)	
Middle English	1150-1250	7% (16/220)	7% (88/1202)
	1250-1350	8%(11/130)	
	1350-1420	7% (39/559)	
	1420-1500	8% (22/293	
Early Modern English	1500-1569	12% (131/1115)	11% (431/4033)
	1570-1639	9% (141/1540)	
	1640-1710	12% (159/1378)	

Table 13: Distribution of *any* in questions, fuller picture

	Period	Percent of *any* in comparatives	Percent of *any* in comparatives by larger language period
Old English	?-850	0% (0/1)	6% (50/793)
	850-950	11% (25/238)	
	950-1050	5% (25/552)	
	1050-1150	0% (0/2)	
Middle English	1150-1250	5% (12/220)	5% (56/1202)
	1250-1350	5% (7/130)	
	1350-1420	4% (25/559)	
	1420-1500	4% (12/293	
Early Modern English	1500-1569	4% (44/1115)	4% (168/4033)
	1570-1639	4% (56/1540)	
	1640-1710	5% (68/1378)	

Table 14: Distribution of *any* in comparatives, fuller picture

Works Cited

Baugh, Alfred C. And Thomas Cable. 1993. *A History of the English Language: 4th Edition.* Prentice Hall.

Bauer, Laurie. 2007. *The Linguistics Student's Handbook*. New York: Oxford UP.

Bergs, A. & L. Brinton (eds.). 2012. *English Historical Linguistics: An International Handbook*. Boston: De Gruyter Mouten.

Bernstein, Melissa. *Wulfstan's "Sermo Lupi ad Anglos": An Electronic Hypertext Edition.*

Blake, N. (1992). *The Cambridge History of the English Language: Volume II 1066-1476*. Cambridge UP.

The Classic Latin Dictionary. 1961. Chicago: Follett Publishing Company.

Fischer, Olga. 1992. "Syntax". in N. Blake (ed.).

Fischer, Olga. 2007. "What Counts as Evidence in Historical Linguistics", from *What Counts as Evidence in Linguistics: The Case of Innateness.* Penke, Martina and Anette Rosenbach (eds.). Philadelphia: John Benjamins Publishing Company.

Fischer, Olga, Ans van Kemenade, Willem Koopman, and Wim van der Wurff. 2000. *The Syntax of Early English.* NY: Cambridge UP.

Frisch, S. 1977. "Reanalysis Precedes Syntactic Change: Evidence from Middle English". *Studies in the Linguistic Sciences* 24: 187-201.

Giannakidou, Anastasia. 2002. "N-words and Negative Concord", *The Linguistics Companion*. Blackwell.

Gutiérrez-Rexach, Javier and Scott A. Schwenter. 2003. "A Scalar Propositional Negative Polarity Item in Spanish". Rafael Núñez-Cedeño, Luis López, and Richard Cameron

(eds.) *A Romance Perspective on Language Knowledge and Use: Selected Papers from the 31st Symposium on Romance Languages (LSRL).* Philadelphia: John Benjamins.

Haeberli, Eric, and Richard Ingham. 2007. "The Position of Negation and Adverbs in Early Middle English", *Lingua* 117:1.

Haegeman, Liliane. 1995. *The Syntax of Negation*. Cambridge, UK: Cambridge UP.

Hoeksema, Jack. 2000. "Negative Polarity Items: Triggering, Scopes, and C-command". From Horn & Kato 2000.

Hoeksema, Jack. 1994. "On the Grammaticalization of Negative Polarity Items" from *Proceedings of the Twentieth Annual Meeting of the Berkeley Linguistics Society: General Session Dedicated to the Contributions of Charles J. Fillmore.* 273-282

Horn, Laurence. 1989. *A Natural History of Negation*. Chicago: University of Chicago Press.

Horn, Laurence. 1990. "Hamburgers and Truth: Why Gricean Explanation is Gricean", from *Proceedings of the Sixteenth Annual Meeting of the Berkeley Linguistics Society*.

Horn, Laurence. 2005. "Airport '86 Revisited: Toward a Unified Indefinite *Any*." In G. Carlson and F. J. Pelletier (eds.), *The Partee Effect*. Stanford, CA: CSLI Publications.

Horn, Laurence and Yasuhiko Kato. 2000. *Negation and Polarity: Syntactic and Semantic Perspectives*. New York: Oxford UP.

Horn, Laurence. 2000. "Pick a Theory (Not Just *Any* Theory): Indiscriminates and the Free-Choice Indefinite". From Horn & Kato 2000.

Ingham, Richard. 2006. "On Two Negative Concord Dialects in Early English". *Language Variation and Change* 18: 241-266.

Israel, Michael. 2011. *The Grammar of Polarity: Pragmatics, Sensitivity, and the Logic of Scales*. New York: Cambridge UP.

Iyeiri, Yoko. 2002. "The Development of Non-assertive *Any* in Later Middle English and the Decline of Multiple Negation", in *And Gladly Wolde He Lerne and Gladly Teche: Essays on Medieval English Presented to Professor Matsuji Tajima on His Sixtieth Birthday.* Yoko Iyeiri and Margaret Connolly (eds). Tokyo: Kabunsha. 127-143.

Jespersen, Otto. 1917. *Negation in English and other Languages*. Det Kgl. Danske Videnskabernes Selskab. Historisk-filologiske Meddelelser 1. 1-151. Copenhagen.

Kallel, Amel. 2011. *The Loss of Negative Concord in Standard English*. Cambridge Scholars Publishing.

Klima, Edward S. 1964. "Negation in English", in J.A. Fodor and J.J. Katz (eds), *The Structure of Language: Readings in the Philosophy of Language.* Englewood Cliffs, NJ: Prentice Hall.

Kroch, Anthony, Beatrice Santorini, and Ariel Diertani. 2004. *Penn-Helsinki Parsed Corpus of Early Modern English*.

Kroch, Anthony, and Ann Taylor. 2000. *Penn-Helsinki Parsed Corpus of Middle English: Second Edition.*

Labov, William. 1972. "Negative Attraction and Negative Concord in English Grammar", *Language* 48.4 (773-818).

Ladusaw, William. 1996. "Negation and Polarity Items". In S. Lappin (ed.) *The Handbook of Contemporary Semantic Theory*. Oxford: Blackwell Publishers.

Lass, R. 1992. "Phonology and Morphology" N. Blake (ed.).

Lucas, Christopher. 2007. "Jespersen's Cycle in Arabic and Berber". *Transactions of the Philological Society* 105: 398-431.

Marcus, Mitchell P., Beatrice Santorini, and Mary Ann Marcinkiewicz. 1993. "Building a

Large Annotated Corpus of English: the Penn Treebank", *Computation Linguistics* 19.

Mazzon, Gabriela. 2004. *A History of English Negation*. New York: Pearson.

Molenckim, R. 2012. "Old English Syntax". In Bergs & Brinton.

Nevalainen, Terttu. 2006. "Negative Concord as an English "Vernacular Universal": Social History and Linguistic Typology". *Journal of English Linguistics* 36.

Nevalainen, Terttu. 1998. "Social Mobility and the Decline of Multiple Negation in Early Modern English", from Fisiak, Jacek & Marcin Krygier (eds.) *Advances in English Historical Linguistics*. New York: Mouten de Gruyter.

Noland, Daniel W. 1991. "A Diachronic Survey of English Negative Concord". *American Speech* 66.2 (171-180).

Pintzuk, Susan, and Ann Taylor. 2006. "The Loss of OV Order in the History of English", from *The Handbook of the History of English.* A.van Kemenade and B. Los (eds.). Blackwell.

Romero, Sergio F. 2012. "A Maya Version of the Jespersen's Cycle: The Diachronic Evolution of Negative Marking in K'iche' Maya". *International Journal of American Linguistics* 78.1: 77-96.

Rissanen, Matti. 2000. "Standardization and the Language of Early Statutes", in Wright, Laura (ed.). *The Development of Standard English, 1300-1800: Theories, Description, Conflicts.* Cambridge, UK: Cambridge UP.

Smith, J. 2012. "Middle English Syntax" from Bergs & Brinton.

de Swart, Henriëtte and Ivan A. Sag. 2002. "Negation and Negative Concord in Romance", *Linguistics in Philosophy* 45 (4): 373-417.

Taylor, Ann, Anthony Warner, Susan Pintzuk, Frank Beths. 2003. *The York-Toronto-Helsinki Parsed Corpus of Old English Prose (YCOE).*

Tieken-Boon van Ostade, Ingrid. 1997. "Functional Spread of Non-Assertive *any*", from Hickey, Raymond & Stanislaw Puppel (eds), from *Language History and Linguistic Modelling: A Festschrift for Jacek Fisiak on his 60th Birthday. Volume II.* New York: Mouten de Gruyter.

Tieken-Boon van Ostade, Ingrid. 1995. *Two Versions of Malory's Morte Darthur: Multiple Negation and the Editing of the Text*. Cambridge.

Tottie, Gunnel. 1991. *Negation in English Speech and Writing: A Study in Variation*. New York: Academic Press Inc.

Vendler, Zeno. 1967. *An Historical Syntax of the English Language.* Leiden: E J. Brill.

Wallenberg, Joel C., Anton Karl Ingason, Einar Freyr Sigurðsson, and Eiríkur Rögnvaldsson. 2011. *Icelandic Parsed Historical Corpus (IcePaHC). Version 0.9.*

Wang, Yu-Fang Flora. 1993. "The Chinese NPI *Renhe* in Contexts with Negative Values", in *Cahiers de Linguistique-Asie Orientale* 25 (1): 35-62.

Wheelock, Frederic M. and Richard A. LaFleur. 2011. *Wheelock's Latin: 7th Edition*. New York: HarperCollins Publishers.

van der Wouden, Ton. 1997. *Negative Contexts: Collocation, Polarity, and Multiple Negation*. New York: Routledge.