English Negative Concord, Negative Polarity, and Double Negation

by

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Abstract

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In Negative Concord (NC) sentences, single negative meanings are expressed by two or more negative words. English speakers that use NC also employ Double Negation (DN), where two negatives yield a logical affirmative. The same speakers also use Negative Polarity Item (NPI) constructions, where words like *anything* and *anybody* depend on a preceding negation (e.g. 'I didn't eat anything' vs. 'I ate anything'). This dissertation accounts for the distributions of NC, NPI, and DN constructions in English.

I apply the theory of NPIs in Postal (2005) and Collins and Postal (2014) to NC and DN. These authors argue that some NPIs have the form [NEG SOME X], with a single NEG, while others have two: [[NEG [NEG SOME]] X]. I propose that negative constituents have a structure identical to Collins and Postal's (2014) unary NEG NPIs. Like NPI constructions, NC with a negative marker (*-n't*/*not*) and a negative object involves syntactic NEG raising from the negative constituent. I further propose that the locus of variation between NC and NPI constructions lies at the level of morphophonological spell out. NPI constructions involve deletion of lower occurrences of a single NEG, but NC does not. Using data from the *Audio-Aligned and Parsed*

Corpus of Appalachian English (Tortora et al., In Progress), I show that all predictions concerning the distribution of NC, DN, and NPI constructions across clause boundaries are borne out.

Two types of NC with negative subjects are also analyzed. NC declaratives like 'didn't nobody eat' and 'nobody didn't eat' are derived via NEG raising from a negative constituent. In these cases, NEG raising is followed by remnant raising of the negative constituent. To explain restrictions on subject type in inverted structures ('didn't nobody eat'), I defend a condition stating that the subject must always be negative, despite the fact that it is not always morphologically negative. Differences in usage and interpretation of negative object and negative subject constructions are derived by appeal to a remnant raising condition. The results of a gradient acceptability study support the hypothesized grammatical distinction between Subject and Object NC.

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For Mom and Dad

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Chapter 1

Introduction

> "By innocence I swear, and by my youth I have one heart, one bosom, and one truth, And that no woman has; nor never none shall be mistress of it, save I alone." (from William Shakespeare's *Twelfth Night*, Act III, Scene I)

> "And till today I can work enough arithmetic that nobody can't cheat me out of nothing, and I can pretty well balance my books, even though nobody else can't read my books nor they can't tell nothing about what I've done."
> (from the *Audio-Aligned and Parsed Corpus of Appalachian English*, Tortora et al., In Progress)

> "When I say 'Eat' I am encouraging you to eat (positive). But when I say 'Do not eat' I am saying the opposite (negative). Now if I say 'Do not NOT eat!', I am saying I don't want you to starve, so I am back to saying 'Eat' (positive). So, two negatives make a positive, and if that satisfies you, then you don't need to read any more."
> (from https://www.mathsisfun.com/multiplying-negatives.html)

Since ancient times, philosophers and linguists alike have justifiably given negation a prominent role in debates on the nature of human language and thought: Linguistic negation is both fundamental and complex. The research on negation presented in this dissertation focuses on three broad types of contemporary English negative sentences. The first type is illustrated in the first two quotes above, taken from Shakespeare's *Twelfth Night* and from the *Audio-Aligned and Parsed Corpus of Appalachian English*, respectively. These quotes contain sentences in which two or more negatives mark a single negative meaning. For example, in the second quote, when the speaker says 'nobody can't cheat me out of nothing', she means that there is no one who

can cheat her. Concurrently, when Shakespeare's character states 'nor never none shall be mistress of it', he means no woman will ever possess his heart.

Sentences with multiple negative elements corresponding to a single semantic negation are termed "Negative Concord" constructions. Negative Concord is found in many natural languages, including: Spanish, Italian, Hungarian, and Serbo-Croatian. One important difference between contemporary English and other languages that employ Negative Concord is that there is a heavy social stigma associated with the use of English Negative Concord. Even English speakers who use Negative Concord regularly are quick to proclaim its incorrectness. This stigmatization is a relatively recent development, made explicit by prescriptive grammarians in the mid-eighteenth century. But the quote from Shakespeare shows that Negative Concord in English is hardly a recent innovation.

The social stigmatization of contemporary English Negative Concord makes its study somewhat difficult for the modern day linguist. Traditional forms of linguistic data such as acceptability judgments are heavily influenced by the extreme sociolinguistic pressures imposed upon this construction type. Given that, one of the contributions of this work is to demonstrate methodologies for collecting and analyzing data on English Negative Concord in a manner that accounts for the influence of extra-linguistic pressures that inherently shape those data.

In any given discourse context, the negative words or constituents like *nobody* and *nothing* in Negative Concord sentences are interchangeable with words like *anybody* and *anything*, which contain no overt negative morpheme. Thus, 'nobody can't cheat me out of nothing' can equivalently be stated as 'nobody can cheat me out of anything'. This translation is not a Negative Concord sentence because it contains only one overtly

negative word: the negative subject *nobody*. Words like *anything* and *anybody* are Negative Polarity Items. These items may require a preceding negation, as illustrated by the fact that 'nobody ate anything' is perfectly acceptable, but 'somebody ate anything' is not. What is it about words like *anything* and *anybody* that makes them depend on a preceding negative? While this question is not new within the field of linguistics, this dissertation addresses it in a new way. I apply the theory of Negative Polarity in Postal (2005) and Collins and Postal (2014) to English Negative Concord, and argue that the syntax of Negative Concord is equivalent to the syntax of Collins and Postal's (2014) unary NEG Negative Polarity Item constructions.

In addition to Negative Concord and Negative Polarity sentences, this research also addresses Double Negation sentences, in which two negatives yield an affirmative. We have already seen that English sentences with two negatives may have a negative and not an affirmative meaning. However, sometimes two negatives do yield an affirmative. A sentence like 'nobody didn't eat' can mean either that nobody ate, or that everybody ate. What are the conditions that derive these two possible meanings? This dissertation addresses this and other questions concerning differences between Negative Concord (and Negative Polarity) sentences and sentences with true Double Negation. I extend the theory of Negative Polarity in Postal (2005) and Collins and Postal (2014) to both Negative Concord and Double Negation. Using data from an in progress corpus of Appalachian English, I show that speakers use both Negative Concord and Double Negation, and account for the syntactic conditions that yield one or the other. I also report the results of an experimental gradient acceptability study showing that speakers who do not accept Negative Concord nevertheless prefer it over Double Negation, but only under

certain syntactic conditions. This study indicates that speakers who do not accept Negative Concord nevertheless have grammatical knowledge of it.

This dissertation is structured as follows. Chapter 2 introduces the data, as well as the source from which much of the data are drawn: *The Audio-Aligned and Parsed Corpus of Appalachian English* (Tortora et al., In progress). Chapter 2 also discusses two types of diachronic change in English Negative Concord, and situates contemporary English Negative Concord within the broader Negative Concord typology. In Chapter 3 I provide theoretical background, with a particular focus on the theory of Negative Polarity constructions initiated in Postal (2005) and further developed in Collins and Postal (2014). Chapter 4 applies the model of Negative Polarity sentences in Postal (2005) and Collins and Postal (2014) to English Negative Concord and Double Negation. Chapter 4 also describes and analyzes intra-speaker variation between Negative Concord and Negative Polarity constructions exhibited in the corpus data. The focus in Chapter 4 is on sentences where the negative constituent is in object position (e.g. 'I didn't eat nothing'). Chapter 5 extends the analysis to two sentence types with negative subjects (e.g. 'nobody didn't eat' and inverted 'didn't nobody eat'). Lastly, Chapter 6 presents an original experimental study of gradient acceptability, and discusses how the results bear on the theory developed in Chapters 4 and 5.

Chapter 2

Empirical Background

0. Introduction

The examples below illustrate (broadly) the three sentence types this dissertation addresses: Negative Concord (NC), Double Negation (DN), and Negative Polarity Item (NPI) constructions. Negatives are in bold and NPIs are underlined here and throughout:

(1) John did**n't** paint the house with **no brush**. (NC)

(2) John did**n't** paint the house with **no windows**. (DN)

(3) John did**n't** paint <u>anything</u>. (NPI)

NC is the marking of a single negative meaning in a sentence by two or more negative elements. In (1), the marker *–n't* and the constituent *no brush* contribute to the same semantic negation, and the sentence means that it is not the case that John used a brush to paint the house (though he may have used a spray can). In (2), the negative marker and constituent each contribute a semantic negation, and the sentence means that it is not the case that John painted the house that does not have windows. In (3), the negative marker co-occurs with the NPI *anything*, and the sentence is true if John painted nothing. Replacing the NPI in (3) with the negative constituent *nothing* yields an NC sentence with the same meaning.

The empirical background I provide in this chapter focuses primarily on English NC. Section 1 introduces the data source (an in progress parsed corpus) from which I extract many of the examples in Chapters 3 through 5, and explains why my analysis draws data primarily from this particular source. Section 2 describes two types of diachronic change in English Negative Concord, and section 3 situates English NC within the typology of NC in natural languages. Section 4 describes two types of DN, and shows that speakers who use NC also use DN. I defer description of NPI constructions to Chapter 3, and section 5 concludes.

1. *The Audio-Aligned and Parsed Corpus of Appalachian English*

Most of the examples this dissertation come from *The Audio-Aligned and Parsed Corpus of Appalachian English* (AAPCAppE; http://csivc.csi.cuny.edu/aapcappe/), an in progress corpus co-authored by Christina Tortora, Beatrice Santorini, and myself. Once completed, the corpus will approximate one million words. The AAPCAppE is made up of five different oral history project recordings housed at various institutions in the Appalachian region of North America. The Joseph Hall Collection (JHC) consists of interviews conducted by Joseph Hall in 1939 with residents of the Great Smoky Mountains in Tennessee. The Dante Oral History Project (DOHP) contains interviews conducted in 1997–1998 by Kathy Shearer with residents of Dante, Virginia. The Appalachian Oral History Project housed at Alice Lloyd College (AOHP-ALC) in Pippa Passes, Kentucky consists of interviews conducted in Central Eastern Kentucky between 1971 and 1975. The Appalachian Oral History Project housed at Appalachian State University (AOHP-ASU) in Boone, North Carolina contains interviews conducted from

the 1960s through the 1980s with speakers from Western North Carolina. The Appalachian Archive (SKCTC) is housed at Southeast Community and Technical College in Cumberland, Kentucky, and consists of interviews conducted with speakers from Eastern Kentucky from the 1960s through the 1980s.

This dissertation uses examples from an unparsed ~420,000-word sub-corpus of the AAPCAppE. This sub-corpus includes speech from four of the five collections listed above: JHC, DOHP, AOHP-ASU, and SKCTC. Under each example, I cite the collection as well as the speaker code (e.g. AAPCAppE: AOHP-ASU-TP).

There are many examples of English NC, NPI, and DN constructions available in the literature (Labov et al. 1968; Wolfram and Christian 1976; Feagin 1979; Foreman 1999; Smith 2001; Weldon 1994; Green 2000, 2011, and others), and several readily available corpora of contemporary English (e.g. *The Corpus of Contemporary English* (COCA); http://corpus.byu.edu/coca/). Given this, it is reasonable to ask why this thesis focuses mainly on AAPCAppE data. There are two reasons for this. First, NC and NPI constructions are interchangeable in many contexts, and there is both inter- and intra-speaker variability in the use of these construction types. The AAPCAppE contains relatively large amounts of speech for individual speakers, and identifies the speaker of each utterance (which is often but not always the case in other literature). Focusing on primarily AAPCAppE examples allows me to make testable claims about both inter- and intra-speaker variability specifically for the speakers represented in the AAPCAppE. The second reason I focus on AAPCAppE data is that many other English language corpora are created partially or entirely from written texts (e.g. Kroch et al. 2004), and include speakers from many different regions (as in the COCA). There is a heavy sociolinguistic

stigma associated with English NC. Furthermore, Smith (2001) shows that NC usage patterns display regionally based microsyntactic variation, and NC patterns in Appalachia are distinct from those in (e.g.) Inwood, New York. The AAPCAppE contains only spontaneous speech, and in some cases (except JHC and DOHP) the interviewers and interviewees are members of the same speech community. Therefore, I focus on AAPCAppE data as one way of controlling for the effects of regional variation and normativization.

2. Two types of diachronic change in English Negative Concord

In this section I review two types of diachronic change in English NC. Section 4.1 discusses the diachronic replacement of negative constituents with negative polarity items, and section 2.2 discusses the loss of bipartite negation (The Jespersen Cycle).

2.1 The shift from negative constituents to negative polarity items

Consider the following Middle English sentence and its prose translation (Wallage's (2012) example (55) p. 29; originally extracted from Kroch and Taylor (2000)):

(4) but he was so hard, þat **no** begger might gete **no** good of hym by **no** maner_
but he was so hard that no beggar might get no good of him in no manner
wyse
way
'But he was so hard-hearted that no beggar might get any good of him in any kind of way.'
(fifteenth century; MIRK,104.2825)

Example (4) contains three negative constituents: *no begger* 'no beggar', *no good*, and *no maner wyse* 'no manner way'. The prose translation, however, contains only one: *no beggar*, the subject of the embedded clause. The other two negative elements are translated as NPIs *any good* and *any kind of way*. Written records show that until the late 18th century, NC constructions like the one in (4) were prevalent in a wide variety of English texts including letters, poetry, literature, and official documents (see, e.g., Kroch and Taylor 2000; Kroch et al. 2004). Horn (2010) cites Bishop Lowth (1762) as among the first prescriptive grammarians to decree that, in English, two negatives equal an affirmative.

Nevalainen (1998, 2006) shows that, even before Lowth's (1762) decree, there was already a shift occurring from the use of negative elements such as *no good* in (4) to their NPI alternatives (e.g. *any good*). Results from Nevalainen's (1998, 2006) corpus studies of Middle (c. 1100–c. 1500) and Early Modern English (c. 1500–c. 1800) support the hypothesis that the shift in written texts from negative constituents to negative polarity items in sentences like (4) was socially motivated. Nevalainen shows that in the mid to late eighteenth century, "socially mobile" individuals, or individuals trying to move up in social class, began to avoid NC in their writing, and that the use of NPIs tended to mark the writings of formally educated and "professional" speakers of Early Modern English.

The social stigmatization of NC persists in contemporary English speaking society. Almost all English varieties exhibit some form of NC (Wolfram and Fasold 1974), including Appalachian English (Wolfram and Christian 1974; Montgomery 2004; a.o.), African American English (Green 2002, 2011; a.o.), Belfast English (Henry 1995),

Alabama English (Feagin 1979), West Texas English (Foreman 1990), and New York English (Labov et al. 1968). Nevertheless, and despite a prevalence of evidence to the contrary, Bishop Lowth's (1762) assertion that two negatives should equal a positive continues to be a widely accepted maxim in English speaking society.

2.1.1 The interchangeability of contemporary NC and NPI constructions

The following examples show that in contemporary English, negative constituents and NPIs are interchangeable:

(5) I **didn't** have **no lice**, and I **didn't** have <u>any itch</u>.
'I didn't have any lice, and I didn't have any itch.
(AAPCAppE: SKCTC-EA)

(6) Or at least they **never** said **nothing**.
'Or at least they never said anything.'
(AAPCAppE: SKCTC-EA)

(7) But we **never** did take <u>any milk and butter</u> to town.
(AAPCAppE: SKCTC-EA)

The example in (5) contains two nearly identical sentences, one of which contains a negative constituent and the other an NPI. The examples in (6) and (7) show that the adverb *never* co-occurs with negative constituents in NC constructions and also with NPIs. These examples thus show that in English, negative constituents and NPIs can appear in identical syntactic and semantic environments.

2.2 The Jespersen Cycle

The distribution of negative markers (*–n't* and *not*) in contemporary English is different from languages like French. In French, two negative markers can mark a single sentential negation, as the following example shows. (Negative markers are glossed as 'neg'.)

(8) Jean **ne** parle **pas**.
Jean neg talks neg
'Jean doesn't talk.'

In (8) the markers *ne* and *pas* surround the verb. Setting aside variation in contemporary French (in which one of the negative markers may be dropped), the pattern in (8) is not possible in contemporary English, and the presence of two negative markers results in a double negative meaning. The following dialogue, taken from the modern day U.S. evening soap opera Empire (season 1, episode 3), contains two sentences in which DN results from the presence of two negative markers. The first was uttered out of the blue, and the second serves to deny the first.

(9) Speaker A: I **didn't** know I **wasn't** supposed to tell him.
Speaker B: You **wasn't WASN'T** supposed to tell him.
'It is not (necessarily) the case that you were not supposed to tell him.'

Jespersen (1917) observed that historically, English passed through a stage in which its negative markers patterned like French example (8). He shows that English passed through a three-stage cycle during the course of Middle English. During the first stage, negation could be marked by a single preverbal negative marker. In the second stage, both a preverbal and a postverbal negative marker were used. In the third stage, a

postverbal marker alone could mark negation. The following examples from Wallage (2012: 18, exx. (37)–(39)) illustrate the three stages of the Jespersen Cycle in English:[1]

(10) we **ne** mugen þat don
we NEG can that do
'We cannot do that.'
(thirteenth century; TRINIT,108.1370)

(11) I **ne** may **nat** denye it
I NEG may not deny it
'I may not deny it.'
(fourteenth century; BOETH,435.C1.262)

(12) I know **nat** the cause
I know not the cause
'I do not know the cause.'
(fifteenth century; MALORY,627.3549)

Example (11) shows that at the intermediate stage of the Jespersen Cycle, two negative markers yielded a singularly negative meaning. Under the definition of NC in which two or more negatives yield a singularly negative meaning, (11) is an NC construction. Following Jespersen (1917), researchers generally assume this cycle was initiated by a "weakening" of the preverbal negative marker (Zeijlstra 2004; Wallage 2012; a.o.). Under this assumption, the addition of the postverbal negative marker is motivated by a need to strengthen the preverbal negative marker so that the sentence itself will have negative "force", where force is synonymous with meaning. Concurrently, the disappearance of the preverbal negative marker in (12) is assumed to result from the fact

[1] For his corpus analysis Wallage (2012) uses the York Corpus of Old English Prose (Taylor et al. 2003), the Penn-Helsinki Parsed Corpus of Middle English (2nd edition) (Kroch & Taylor 2000), the Penn-Helsinki Parsed Corpus of Early Modern English (Kroch, Santorini, & Delfs 2004), and the Parsed Corpus of Early English Correspondence (Taylor et al. 2006).

that the postverbal negative marker carries sufficient negative force to negate the sentence, and the preverbal marker is no longer needed.

2.2.1 Two different reasons for two types of change

There are three ways in which the pattern of change in negative markers is distinct from that of negative constituents. First, while the negative marker change involves replacement, the replacement takes place in two steps and not one, unlike the single-step replacement of negative constituents with NPIs. Second, the three-step process of negative marker change results in a change in syntactic position relative to the verb: The marker is preverbal in (10) and postverbal in (12). This is not so in the change from negative constituents to NPIs, which involved replacement but no change in syntactic position. Third, the weakening assumption makes no reference to sociolinguistic pressures, and the weakening is assumed to be grammatical in nature. These three facts indicate that the diachronic loss of NC that occurred between steps two and three of the Jespersen cycle is distinct from the diachronic loss of NC that occurred when negative constituents were replaced by NPIs.

2.3 Conclusion to section 2

This section discussed two types of diachronic change in English NC. The first involved a sociolinguistically motivated shift from negative constituents to NPIs in negative contexts, and the second involved a change from two negative markers (the intermediate stage of the Jespersen Cycle) to one. Contemporary NC usage patterns continue reflect these two types of change: While two negative constituents can enter into

a concord relation with one another (as can two negative polarity items, as we will see in Chapter 3) two negative markers yield DN (see example (9)). I assume that the change in usage patterns from negative constituents to NPIs reflects a change in performance or E-language (Chomsky 1965), but that this change is not syntactic or semantic, and only the change in negative markers reflects a true syntactic change. This assumption underlies the analysis of contemporary NC and NPI constructions I present in Chapters 4 and 5, in which I hypothesize that the syntax of these two construction types is the same.

3. NC Typology

The vast literature on NC includes studies of Spanish (e.g. Herburger 2001), Greek (e.g. Giannakidou 2000), West Flemish (e.g. Haegeman and Lohndal 2010), English (e.g. Green 2002, 2011; Horn 2010), Afrikaans (e.g. Biberauer and Zeijlstra 2012), and French (e.g. De Swart and Sag 2002). NC typologies invoke constraints on negative markers. Den Besten (1986) describes an NC type that he calls "negative concord proper", in which a negative marker and one or more negative constituents mark a single negation. In NC proper, the negative marker is required, as following Spanish examples show:

(13) ***(No)** hay **nada** de comer.
Neg is nothing of eat.inf
'There is nothing to eat.' (= 'There isn't anything to eat.')

(14) Juan ***(no)** comió **nada**.
Juan neg ate nothing
'Juan ate nothing.' (= 'Juan didn't eat anything.')

I follow (e.g.) Den Besten (1986), Giannakidou (1997, 1998, 2000), and Zanuttini (1997) in assuming that the obligatory presence of the negative marker in sentences like (13) is grammatical in nature. English NC displays no such constraint: The negative marker is optionally present, as the following examples from the same AAPCAppE speaker show:

(15) You may have to buy your insurance or something, because there'll be **no money** there to pay your bills with if there's **no union fund** a-going in to the hospital fund. (AAPCAppE; SKCTC-LP)

(16) I do**n't** know **nothing** about that.
I know nothing about that. (= 'I don't know anything about that.')
(AAPCAppE; SKCTC-LP)

Sentence (15) contains two negative constituents but it is not an NC construction; each negative constituent contributes a negation. (This is because the negative constituents are separated by a tensed clause boundary, a DN type I discuss below.) There is no negative marker in either clause in (15), illustrating that its presence is not required. However, NC constructions like (16), with a negative marker and a negative constituent in object position, are prevalent. As such, while English contains constructions that fit Den Besten's (1986) description of NC proper, it does not behave like true NC proper languages in that the negative marker is not required.

Den Besten (1986) describes another NC type in which two negative constituents mark a negation without a negative marker. He calls this type "negative spread", as illustrated by the following Spanish example:

(17) **Nunca** vino **nadie**.
never came nobody
'Nobody ever came.'

In (17) the negative adverb *nunca* ‘never’ and the negative constituent *nadie* ‘nobody’ together mark a single semantic negation, and no negative marker is present. Negative spread is also possible in English, as the following AAPCAppE example from the same speaker as above shows:

(18) It’s some question that should **never** leave **nobody**’s mind.
‘It’s a question that should never leave anybody’s mind.’
(AAPCAppE;SKCTC-LP)

In Giannakidou’s (1997, 1998, 2000) terms, languages that allow “negative spread” as in (17) and (18) are “non-strict” NC varieties, while languages that require the negative marker (e.g. Greek, Hungarian, and Polish) are “strict”. Because they both allow negative spread, English and Spanish are both non-strict. However, in English a single negative constituent can appear with no negative marker (as in (15)), whereas this is not the case in Spanish (cf. (13)). So while English is a non-strict NC variety, it is not typologically identical to other non-strict NC varieties like Spanish.

Another NC type is bipartite negation, in which two negative markers mark a single negation. In the previous section we saw that while in contemporary English only one negative marker is used, historically English had bipartite negation. French and Ewe, a contemporary Niger-Congo language, exemplify bipartite negation. The following Ewe example is from Collins et al. (2015: 2, ex. 3a):

(19) Kofi **mé-** ɖu nú **o**.
Kofi neg- eat thing neg
‘Kofi didn’t eat.’

In Ewe, the preverbal negative marker *mé* and the VP-final marker *o* together mark a single negation in (19).

In sum, English is a non-strict NC language that allows for single negative constituents to appear in non-subject positions with no preceding negative marker (unlike, e.g., non-strict Spanish). Furthermore, unlike Ewe, contemporary English NC does not have bipartite negation.

4. Double Negation

Blanchette (2013) describes two types of English DN: long distance DN and pragmatic (or metalinguistic; Horn (1989 [2001])) DN. In long distance DN, two negative elements are structurally too far apart from each other to enter into a concord relation, and it is the long syntactic distance between them that yields the DN interpretation (where "long" = structurally complex). In pragmatic DN, one of the negations in the sentence serves to deny a previous utterance. Pragmatic DNs are context dependent in a way that NC and long distance DN constructions are not. The following examples illustrate Long Distance and Pragmatic DN, respectively:

Long Distance DN:

(20) John did**n't** paint [the house with **no windows**].

Pragmatic DN:

(21a) Denial Context: You ate **no** breakfast this morning.

DN: I DID**n't** eat **no** breakfast this morning. I had eggs.

(21b) Out of the blue context: I had toast for breakfast.

DN: #I DID**n't** eat **no** breakfast this morning.

4.1 Coexistence of NC and DN

Zeijlstra (2004) proposes that in Universal Grammar, languages are either NC or DN. Under this proposal, speakers with NC Grammars are not expected to use DN. The following AAPCAppE examples from the same speaker show that in English, NC and DN coexist:

(22) NC: We used to pick a lot of Balm of Gilead buds up here, but they got so cheap now you ca**n't** make **nothing** [by selling them]. (AAPCAppE: AOHP-ASU-SJ)

(23) DN (Regarding appendicitis, and the fact that it was a treatable disease that killed many people): Yeah that's killed a many a one, and they did**n't** know it was **nothing**. (AAPCAppE: AOHP-ASU-SJ)

In the NC sentence in (22), the speaker asserts that you can no longer make money by selling Balm of Gilead buds. The sentence contains the marker *-n't* and the constituent *nothing*. In (23), those same negative elements each contribute a negation in the sentence 'they didn't know it was nothing', which means that they (possibly the doctors) did not know that appendicitis was not something people had to die from. The DN in (23) is long distance in that the negative marker and the constituent are separated by a tensed claused boundary.

I return to a discussion of DNs like (23) in Chapter 4. In that Chapter, I argue that the same English grammar generates NC and DN, a proposal motivated by data such as

those in (22) and (23), and contra the proposal for separation of NC and DN grammars in Zeijlstra (2004).

Neither of the DN types illustrated above involve a negative constituent in subject position. In Chapter 5 I illustrate a fourth type of DN, which I call Subject DN. In that chapter, I discuss Subject DN constructions within a broader discussion of subject-object asymmetries in English sentences with two negatives.

5. Summary and Conclusion

This chapter introduced the AAPCAppE, one of the primary data sources I will employ for the remainder of this dissertation. It also illustrated and discussed two distinct forms of diachronic change in English NC: the shift from negative constituents to NPIs, and the Jespersen Cycle, a change in negative markers. The fact that the diachronic change from negative constituents to NPIs is attributed to sociolinguistic pressures is relevant to my Chapter 4 and 5 analyses, in which I argue that contemporary English NC and some NPI constructions have identical syntactic and semantic structures. In support of this argument, I also showed how NC and NPI constructions are interchangeable, and described how certain syntactic and pragmatic conditions invariably yield DN and not NC. Lastly, I showed how NC and DN are used by the same speaker, a fact that is unexpected under proposals that separate NC and DN grammars. With this empirical background in place, I turn in Chapter 3 to a discussion of the theoretical background needed for my analysis of NC, DN, and NPI constructions in Chapters 4 and 5.

Chapter 3

Theoretical Background

0. Introduction

This chapter lays the groundwork for the development of a model that accounts simultaneously for the distributions of English Negative Concord (NC), Negative Polarity Item (NPI), and Double Negation (DN) constructions, with a focus on the account of NPIs put forth in Postal (2005) and elaborated in Collins and Postal (2014). Collins and Postal's (2014) theory is relatively new, and it differs significantly from many other accounts of NPIs. For this reason, I dedicate a significant portion of this chapter to characterizing it.

1. Negative Polarity

In Chapter 2 I showed that NC and NPI constructions may appear in identical syntactic and semantic conditions. This section describes general patterns of NPI constructions, and discusses theories that have accounted for them. There exists a vast body of literature on NPIs. (See, for example, Linebarger (1980); Zwarts (1998); Collins and Postal (2014); and the references therein.) Given that NPI constructions are one of three construction types I analyze, and given that the theoretical scope of this thesis is relatively narrow, my discussion of the relevant literature is limited.

1.1 Downward Entailing Environments

The defining property of NPIs has been described in terms of their need to appear in the scope of expressions that are downward entailing (Ladusaw 1979), or synonymously, monotone decreasing (Barwise and Cooper 1981).[2] In Ladusaw's (1979) terms, "downward entailing expressions create semantic contexts which make inferences run on a downward scale" (p. 112). Put differently, downward entailing expressions create semantic contexts that make inferences literally run downward on scales like the following:

(1a) Nobody can sit still for a whole day.

(1b) Nobody can sit still for two whole days.

(1c) Nobody can sit still for more than two whole days.

The inferences run downward in (1) because if (1a) is true, then we infer that (1b) and (1c) are true, and if (1b) is true then (1c) must also be true. The inference or entailment pattern thus runs downward on written scales (or lists of sentences) presented as in (1).

Compare now the sentences in (1) with the sentences in (2):

(2a) Everybody can sit still for one minute.

(2b) Everybody can sit still for two minutes.

(2c) Everybody can sit still for more than two minutes.

[2] Giannakidou (2002) argues that a characterization of NPI distribution in terms of (non)veridicality is superior to decreasingness accounts. I set this debate aside here.

The pattern of inferences in (2) is the reverse of (1): If (2c) is true then both sentences above it are also true, and the same applies to (2b). Setting aside the difference in units (days vs. minutes) on the scales in (1) and (2), the only difference between the sentences in both scales lies in the nature of the logical and structural subject, which in (2) is *everybody*, and which in (1) is *nobody*. We thus conclude, in Ladusaw's terms, that the negative constituent *nobody* exemplifies a downward entailing expression, while *everybody* does not.[3]

Returning to NPIs, observe the following sentences:

(3a) **Nobody** watched <u>any hockey games</u> last night.

(3b) #Everybody watched <u>any hockey games</u> last night.[4]

The contrast in (3) shows that NPIs such as *any hockey games* in (3a) must be c-commanded by a downward entailing expression. This behavior is particular to NPIs.

1.2 A typology of negative contexts and negative polarity (Zwarts 1998)

While central to any discussion of NPIs, the observation that (some) NPIs can only appear in downward entailing environments serves merely as a descriptive generalization, and as it turns out, an inadequate one. The typology in Zwarts (1998)

[3] The universal quantifier *everybody* is in fact an upward entailing expression, in that the inferences run upward on scales presented as in (2). For more on upward entailment patterns see, for example, Sczabolsci (2004).

[4] But see the following example, in which the NPI is embedded within a subject relative clause:

(i) Everybody who/that watched <u>any hockey games</u> last night is tired today.

The NPI in (i) is analyzed in Postal (2004) and Collins and Postal (2014) as a reversal NPI. I return to this issue below.

provides a more refined picture of the negative contexts that appear to license negative polarity items. I review it here as a way of introducing some of the basic concepts and general observations on which the models in Postal (2005) and Collins and Postal (2014) are constructed.

Zwarts (1998) formalizes three types of downward entailment on the basis of de Morgan's laws.[5] The first and weakest of these three types is merely monotone decreasing. He provides the following formal definition for monotone decreasingness (p. 214):

(4) Monotone Decreasingness:
Let *B* and *B** be two Boolean algebras. A function *f* from *B* to *B** is said to be monotone decreasing iff for each two elements *X* and *Y* of the algebra *B*:

if $X \subseteq Y$, *then* $f(Y) \subseteq f(X)$

This formula states that for some element X, if X is a proper subset of Y, then if a function *f* applied to Y yields the value true, that same function *f* applied to X must also yield true. To illustrate:

(5a) **No more than five people** watched the hockey game.

(5b) **No more than five people** watched the hockey game at home.

---

[5] De Morgan's laws are named after Augustus De Morgan, a 19th century mathematician. The laws express the relations between disjunction and conjunction in terms of negation. They are stated as follows:

(i) $\neg(X \vee Y) = \neg X \wedge \neg Y$
(ii) $\neg(X \wedge Y) = \neg X \vee \neg Y$

The first law states that the negation of a disjunction of sets X and Y is the same as the negation of each of those sets conjoined. The second law states that the negation of the conjunction of sets X and Y is the same as the disjunction of the negation of each of those sets.

The property of downward monotonicity is reflected in the fact that (5a) entails (5b): If no more than five people watched the game, then it must be the case that no more than five people watched the game at home.

Zwarts (1998) defines antiadditivity as follows (p. 222):[6]

(6) Antiadditivity:

Let *B* and *B** be two Boolean algebras. A function *f* from *B* to *B** is said to be monotone decreasing iff for each two elements *X* and *Y* of the algebra *B*:

$f(X \cup Y) = f(X) \cap f(Y)$

Antiadditivity is thus a property of a function such that when applied to the union of two sets, the output is logically equivalent to its application to the intersection of those two sets.

Antiadditive functions are a proper subset of downward entailing functions. Example (1) showed that the negative constituent *nobody* is downward entailing. The following entailments, which apply the logical equivalence in (6), show that *nobody* is also antiadditive:

(7a) **Nobody** watched the hockey game or the movie. →
Nobody watched the hockey game and **nobody** watched the movie.

(7b) **Nobody** watched the hockey game and **nobody** watched the movie. →
Nobody watched the hockey game or the movie.

[6] This is essentially De Morgan's first law (see fn. 5), with the function *f* replacing the negative operator.

The same entailment pattern does *not* apply to the negative constituent 'no more than five people', seen to be downward entailing. Specifically, the second entailment in the logical equivalence fails; the union does not entail the intersection:

(8a) **No more than five people** watched the hockey game or the movie. → **No more than five people** watched the hockey game and **no more than five people** watched the movie.

(8b) **No more than five people** watched the hockey game and **no more than five people** watched the movie. -/→ **No more than five people** watched the hockey game or the movie.

Therefore, under the typology in Zwarts (1998), some but not all negative constituents are both downward entailing and antiadditive (e.g. *nobody*).

The third class of downward entailing context Zwarts (1998) describes is the antimorphic class, formally defined as follows (p. 224; see also Giannakidou 2011:1669):[7]

(9) Antimorphicity:

Let B and B^* be two Boolean algebras. A function F from B to B^* is said to be antimorphic iff for each two elements X and Y of the algebra B:

a. $f(X \cup Y) = f(X) \cap f(Y)$
b. $f(X \cap Y) = f(X) \cup f(Y)$

The first logical equivalence in this pair is the same as in the definition of antiadditivity. Therefore, the entailment patterns in (6) through (8) should also hold of antimorphic

[7] These are De Morgan's first and second laws, again with the function *f* replacing the negative operator. (See fn. 5.)

functions. The property in (9) adds that a function, when applied to the conjunction of two sets, is equivalent to the union of the individual values of that function on each set.

Applying this definition of antimorphicity to *nobody*, we find that antiadditivity does not entail antimorphicity. *Nobody* fails to meet the condition in (9), which breaks down into the following entailments:

(10a) $f(X \cap Y) \rightarrow f(X) \cup f(Y)$
Nobody watched the hockey game and the movie. -/→
Nobody watched the hockey game or **nobody** watched the movie.

(10b) $f(X) \cup f(Y) \rightarrow f(X \cap Y)$
Nobody watched the hockey game or **nobody** watched the movie. →
Nobody watched the hockey game and the movie.

The entailment in (10a) fails, so *nobody* is downward monotonic and antiadditive, but not antimorphic.

1.2.1 A brief aside: The status of English negative markers

In Chapter 2 I showed that while two negative constituents (e.g. *nobody* and *never*) participate together in NC, two negative markers cannot. I now apply the entailment patterns derived from the logical equivalences in (9) to English negative markers, to see if their behavior is distinct from constituents like *nobody*:[8]

[8] Here I am testing negative markers as they behave in what is often called predicate or sentential negation. I set aside the case of *not* when employed as a negative determiner in phrases like *not everyone*.

(11a) *f(X ∪ Y) → f(X) ∩ f(Y)*:
John **didn't/did not** watch the hockey game or the movie. →
John **didn't/did not** watch the hockey game and John **didn't/did not** watch the movie.

(11b) *f(X) ∩ f(Y) → f(X ∪ Y)*
John **didn't/did not** watch the hockey game and John **didn't/did not** watch the movie. →
John **didn't/did not** watch the hockey game or the movie.

(11c) *f(X ∩ Y) → f(X) ∪ f(Y)*
John **didn't**/did **not** watch the hockey game and the movie. →
John **didn't**/did **not** watch the hockey game or John **didn't**/did **not** watch the movie.

(11d) *f(X) ∪ f(Y) → f(X ∩ Y)*
John **didn't**/did **not** watch the hockey game or John **didn't**/did **not** watch the movie. →
John **didn't**/did **not** watch the hockey game and the movie.

The entailments in (11a) and (11b) succeed, showing that English negative markers are antiadditive. Both entailments in (11c) and (11d) succeed, showing that they are also antimorphic Zwarts (1998:232)). Given that two English negative markers cannot enter into NC, one might extend this conclusion to state that it is the property of antimorphicity that blocks the concord relation, such that double-antimorphicity invariably yields DN. I set this issue aside.

1.2.2 Laws of Negative Polarity

Zwarts (1998) applies his typology of downward entailing contexts in order to classify NPIs on the basis of their strength. He asserts the following three laws of negative polarity (p. 233):

(12) "Laws of Negative Polarity

(a) Only sentences in which a monotone decreasing expression occurs can contain a negative polarity item of the weak type.

(b) Only sentences in which an antiadditive expression occurs can contain a negative polarity item of the strong type.

(c) Only sentences in which an antimorphic expression occurs can contain a negative polarity item of the superstrong type."

This typology describes three types of NPI: weak, strong, and superstrong, corresponding to the three types of downward monotonicity (monotone decreasing, antiadditive, and antimorphic, respectively). English terms *any* and *ever* correspond to the weak category, and NPIs such as *budge an inch* or *lift a finger* are strong.

In the next section I summarize Postal (2005), which builds on the typology in Zwarts (1998) and lays the foundation for the model of English NPI constructions in Collins and Postal (2014), a model that I adopt, modify, and extend in Chapter 4.

2. Two structures for English NPIs: Postal (2005)

Postal (2005) adopts a view of semantic negation in which it is not a propositional operator, but one that applies to any constituent to denote its complement. This uniform view departs from a more standard view of negation as either sentential or constituent (Klima 1964). Under this view, all negation is constituent negation, and if propositional (or sentential) negation exists, then it is simply constituent negation applied to the proposition as a whole.

Postal (2005) asserts that NPIs originate as the lexical instantiation of a semantic negation (NEG) plus some element Y. Under this view, NPIs are lexically negative

constituents, and each NPI introduces one or two negations. Postal schematizes this notion as follows (adapted from his (2a), p. 5):

(13a) Base structure: […[$_Z$…[$_Q$ NEGx + Y]…]…]

(13b) Derived structure: […[$_Z$… NEGx… [$_Q$ Y]…]…]

Under this view, the NPI passes through both stages in (13), and the derived structure in (13b) is the structure that gets spelled out phonologically.

Postal's model allows for NPIs of different types, placing the locus of variation on the number of lexical NEGs contained in the NPI. He exploits this possibility in explaining data like the following:

(14a) **Nobody** painted <u>any houses</u> (except for the blue one).

(14b) The painter **didn't**/did **not** paint <u>any houses</u> (except for the blue one).

(14c) At most five painters painted <u>any houses</u> (#except for the blue one).

In (14a) and (14b) the phrase [except for the blue one] felicitously attaches to the NPI *any houses*, but in (14c) it does not.[9]

Citing Moltmann (1995) and Horn (1999), Postal notes the necessary (though not sufficient) descriptive condition on exceptives that they only attach to phrases representing an "endpoint quantifier". An endpoint quantifier is either a universal or a negative existential quantifier. Note now that the NPI *any houses* in sentences (14a) and

[9] The sentence 'at most five painters painted any houses' in (21c) is marginal in my judgment. I set this issue aside.

(14b) is c-commanded by an element that is antiadditive (hence downward entailing): (14a) has the constituent *nobody*, and (14b) contains the marker *n't*. In (14c), however, *any houses* is not c-commanded by a downward entailing element, and exceptive attachment is infelicitous.

On basis of the facts in (14) (among others, the details of which are beyond the current scope), Postal asserts that the NPI *any houses* in (14a) and (14b) is not the same NPI as *any houses* in (14c). The structure he proposes for the NPI in (14a) and (14b) instantiates "the small analysis/structure", while the NPI in (21c) has "the large analysis/structure". Both are illustrated here (from Postal 2005: 10–11):

(15) Postal's (2005) two NPI types:

(a) The small analysis/structure: $[_{DP}\ [_{D}$ NEG SOME] X]

(b) The large analysis/structure: $[_{DP}\ [_{D}$ NEG $[_{D}$ NEG SOME]] X]

Looking ahead to Collins and Postal (2014), I will henceforth call NPIs corresponding to the small analysis "unary NEG" NPIs, and those corresponding to the large analysis "reversals". The difference between (15a) and (15b) is that (a) has only one NEG while (b) has two. The semantics of the unary NEG structure yields a negative quantifier, while the reversal yields an element that is non-negative. The semantics of the reversal are non-negative because the outer NEG cancels the negative force of the inner one. Given that exceptives only attach to endpoint quantifiers, the analyses in (15) explain why both (14a) and (14b) allow exceptive attachment while (14c) does not: In (14a) and (14b) the NPI represents a negative endpoint quantifier, unary [NEG SOME thing], equivalent to

nothing. However, the NPI in (14c) has the reversal structure and is semantically equivalent to *something*, which is neither negative nor universal.

One question that arises is: Why, if the NPI in (14a) and (14b) is a unary NEG NPI, are the semantics not affirmative, given the other apparently negation-contributing element in each structure (the negative constituent *nobody* in (14a) and the negative marker in (14b)). As a preview to Collins and Postal (2014), for (14b) we will say that the negative marker is the overt realization of the NEG contributed by the NPI, which following Postal's (2005) analysis in (19), raises in the syntax and is unpronounced in its base position. For cases like (14a), which contain a negative constituent in subject position, Postal (2005) hypothesizes that these are NC constructions, and the negation contributed by the NPI enters into a concord relation with the negation contributed by *nobody*. The question of how to analyze a sentence like (14a) thus becomes a part of the broader question of how to analyze NC constructions with multiple negative constituents in general, a question I address below in section 3. As a preview, Collins and Postal (2014) assert these are polyadic quantification structures in the sense of De Swart and Sag (2002), an analysis that involves a shared NEG determiner and no NEG raising for sentences like (14a).

Another question that arises is: Why does the sentence in (14c) mean 'did you paint some houses', which is the reversal reading, and not 'did you paint *no* houses', which is the unary NEG reading? From what I have stated to this point, Postal's (2005) analysis predicts that a sentence like (14c) should have the following two possible structures:

(16a) Unary NEG: At most five painters painted [[NEG_1 SOME] houses]]

(16b) Reversal: At most five painters painted [[NEG_2 [NEG_1 SOME] houses]]

The problem is that the structure in (16a) with the unary NEG constituent yields the wrong meaning for the sentence in (14c). To explain how this problem is resolved I again look ahead to Collins and Postal (2014), and in particular, to a component of their system of NEG deletion. As part of this system, the authors propose the following condition (p. 75), which they adapt from Sczabolsci (2004, ex. (132)):

(17) "*The NEG Deletion Evenness Condition (second and final version)*

> If G is a NEG deletion chain whose initial element is not a lexical NEG deleter, and whose deleted NEGs are not copies (in a polyadic quantification structure), then G contains an even number of NEGs."[10]

How does the condition in (17) rule out the unary NEG interpretation for (14c), in which *any houses* means 'no houses'? The structures in (16a) and (16b) yield the following two NEG deletion chains respectively:

(17a) *<[at most five painters], NEG_1>

(17b) <[at most five painters], NEG_1, NEG_2>

[10] For expository purposes I will not discuss the meaning of the term "lexical NEG deleter", which does not apply to the NPI cases addressed in this thesis (but see Collins and Postal (2014) Ch. 7), and I defer discussion of copies in polyadic quantification structures until section 3.2. Note, however, that under the analysis of (21a) as involving polyadic quantification, this sentence is explicitly excluded from the structural description of NEG Evenness Deletion.

Under the NEG Deletion Evenness Condition, the chain in (17a) is ungrammatical because the number of NEGs it contains is odd. This is how the Evenness Condition rules out the non-existent reading for the sentence in (14c).

To conclude the discussion of Postal (2005), the structure for unary NEG NPIs explains the descriptive generalization discussed above, in which NPIs need to appear in downward entailing contexts: The NEG of the unary NEG NPI itself provides the downward entailing context. This fact about Postal's model is one significant advantage it has over other accounts of NPI constructions (e.g., Ladusaw 1992, 1996; Giannakidou and Quer 1997; Horn 2000; among many others). However, this explanation does not apply to reversal NPIs, which are restricted to non-upward entailing environments (and which I discuss in further detail below and in Chapter 4). Thus, as in other theories, conditions on the distribution of reversal structures are still stipulated in Postal (2005) (and in Collins and Postal (2014)). Nevertheless, the fact that Postal's view of unary NEG NPIs serves to explain the downward entailment pattern represents progress. Furthermore, as we will see below, his account applies straightforwardly to English NC. Under Postal (2005), the antiadditivity of the downward entailing contexts in (21a) and (21b) turns out to be epiphenomenal, derived from the inherent negativity of the NPI.

3. Collins and Postal (2014)

Collins and Postal (2014) builds directly on Postal's (2005) model of NPI constructions. The authors employ Postal's model to explain (among other things) the semantically equivalent reading for pairs of sentences like the following:

(18a) I did **not** expect that John would arrive on time.

(18b) I expected that John would **not** arrive on time.

Sentence (18a) has two readings: (i) one in which the negation takes its scope over the matrix verb *expect* (¬expect), denoting a negative expectation regarding John's arrival, and (ii) one in which the negation scopes below *expect* (expect ¬ arrive), yielding an affirmative expectation about John's late arrival. Syntactic accounts of this phenomenon, which C&P call "Classical NEG Raising (Classical NR)", originated with Fillmore (1963), but have since fallen out of favor. Most current work appeals instead to semantic and pragmatic accounts (e.g. Jackendoff 1971; Bartsch 1973; Pollack 1974; Horn 1978, 1989; Gajewski 2005, 2007, 2011; Romoli 2012, 2013; a.o.). In their monograph, C&P revive a syntactic account of Classical NR, showing that it accounts for a broad constellation of facts.

Horn (1975, 1978, 1989) describes and attempts to generalize over a particular class of predicates that allow Classical NR (CNRPs). This class includes predicates formed with the verb *expect* and many others. Here I name only a small subset of CNRP forming verbs: *feel*, *believe*, *seem*, *think*, and *appear*. (See C&P (2014:4) for a longer list.)

The following examples illustrate that not all predicates allow Classical NR:

(19a) I did **not** claim that John arrived on time.

(19b) I claimed that John did **not** arrive on time.

Unlike (18a), sentence (19a) has only one reading, in which the negation scopes over the verb *claim*. The resulting statement is true in a world in which I made no claim regarding John's timely arrival. Notably, there is no reading of (19a) under which John was claimed not to arrive on time, which is the only reading for (19b). Therefore, verbs like *claim* (as well as *order*, *demand*, *command*, *know*, and many more) are not CNRPs.

The sentences in (18) and (19) are biclausal, and the matrix verb is either a CNRP or a non-CNRP. Under a syntactic approach to Classical NR, the two readings for (18a) reflect two possible positions for the negation. For the high scope reading (¬expect), the negation merged in the higher clause. For the low scope reading (¬arrive), the negation merged in the lower clause, where it is interpreted, and then raised to its surface position in the matrix clause. Under this account, complements selected by verbs like *claim* block syntactic raising of the negation from the lower to the higher clause. Therefore, for sentences like (18b), the only available reading is the one in which negation scopes below the verb *expect*, reflecting the surface position of the negative marker in the lower clause.

The syntactic approach to Classical NR makes predictions for the view of NPIs in Postal (2005), which C&P (2014) build on. To understand these predictions, I first discuss some separate but related properties of NPIs.

3.1 Strict vs. non-strict NPIs

On the basis of an extensive set of observations regarding apparent restrictions on syntactic movement, Ross (1986:76) makes the following descriptive generalization, formulated as a constraint on "Complex NPs":

(20) "The Complex NP Constraint: No element contained in a sentence dominated by a noun phrase with a lexical head noun may be moved out of that noun phrase by a transformation."

This constraint accounts for why (for example) in the following interrogative, *when* can only be construed with the higher and not the lower clause:

(21) When did you make the claim that John arrived?

Sentence (21) can only be interpreted as a question about the time of the claim making, and not as one about the time at which John arrived. Ross asserts that noun phrases like 'the claim that John arrived', headed by a lexical head noun (*claim*) whose complement is a clause, are islands out of which syntactic movement is not possible. Under Ross's Complex NP constraint, (22a) is a possible derived structure for (21) and (22b) is not:

(22a) [When$_1$ did you t_1 [$_{VP}$ make [$_{NP}$ the claim that John arrived]]]

(22b) * [When$_1$ did you [$_{VP}$ make [$_{NP}$ the claim that John arrived t_1]]]

Structure (22b) is ungrammatical because it violates the constraint in (20). Specifically, the *wh*-adverbial is extracted from a sentence that is dominated by a noun phrase with the lexical head noun *claim*. No such extraction occurs in (22a).

I discussed above how English NPIs are licit in downward entailing environments, and how NPIs like English *anything* and *any painter* have two distinct

underlying structures (Postal's (2005) large and small analyses). The following examples show that the English phrase *lift a finger* is also an NPI:

(23a) John did**n't** lift a finger (to help).

(23b) John lifted a finger (to help).

Sentence (23b) does not receive the idiomatic NPI reading that (23a) can receive. Sentence (23a) means John did nothing to help, but in (23b), the only possible reading is one in which John literally lifted one of his digits. We see therefore that the idiomatic reading of *lift a finger* is an NPI in that, like prototypical English *any X* NPIs, it needs to be in the scope of a downward entailing expression.

Consider now how the NPIs *anything* and *lift a finger* behave in a complex NP island:

(24a) I did**n't** make the claim that John did anything to help.

(24b) I did**n't** make the claim that John lifted a finger (to help).

While the NPI *anything* in (24a) survives embedding within the complex noun phrase headed by *claim*, in my judgment the phrase *lifted a finger* cannot be construed as an NPI in this environment: The only interpretation I get for (24b) is one in which the claim referred to describes the literal act of lifting a finger.[11] On the basis of these and related

[11] Here and throughout my characterization of the NPI facts is somewhat different from the presentation in C&P (2014) and elsewhere in that I do not make any claims about the acceptability status of sentences like (28b), which for C&P would seem to be both unacceptable

observations (including the behavior of NPIs embedded in non-CNRPs, discussed further below), the class of NPIs can be divided into two categories, strict and non-strict.[12] Strict NPIs are those whose NPI-hood does not survive when they are separated by some significant syntactic boundary from the expression that creates the necessary downward entailing context. In (28b) this significant syntactic boundary may be the edge of a complex noun phrase, and it is more generally understood to be a tensed clausal boundary. The class of strict NPIs includes many idiomatic items such as *lift a finger*, *diddly (squat)*, and *budge an inch*. The complement class of non-strict NPIs includes elements like the *anything* in (24a), which shows that non-strict NPIs appear to survive being separated by a tensed clause boundary from their c-commanding negative.

With this syntactic distinction between strict and non-strict NPIs in place, I return to C&P's (2014) discussion of CNRPs. The following pairs of facts show that strict and non-strict NPIs behave differently in (non-)CNRPs:

CNRPs:

(25a) I did**n't**/did **not** expect that John would do <u>anything</u> (to help).

(25b) I did**n't**/did **not** expect that John would <u>lift a finger</u> (to help).

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and ungrammatical. This difference in presentation appears to have no direct bearing on the present summary's faithfulness to C&P's theoretical conclusions.

[12] This syntactic notion of strict vs. non-strict NPIs is different the semantic categories referring to strength and weakness in Zwart (1998), and the classes of strict and non-strict NC languages in Giannakidou (2000, 2011). C&P (2014: 86–89) discuss how their two NPI types relate to the strict vs. non-strict NPI division as well as Zwart's categories. They assert that unary NEG NPIs are equivalent to strict and strong NPIs, and reversals are equivalent to non-strict or weak NPIs.

Non-CNRPs:

(26a) I did**n't**/did **not** claim that John would do <u>anything</u> (to help).

(26b) I did**n't**/did **not** claim that John would lift a finger (to help).

Consider first the behavior of non-strict *anything* in (25a) and (26a). The two expected CNRP readings are available for (25a), which can mean either that it is not the case that I expected John to do *something* to help (¬expect, do), or that I expected John to do *nothing* to help (expect, ¬do). Furthermore, as expected, for the non-CNRP in (25a) only one reading is available, in which the negation takes highest scope over the matrix verb (¬claim, do). If the negation could be associated with the lower clause, then the sentence could have a meaning under which I claimed that John would do nothing, but in my judgment this is not a possible reading of (25a).

The strict NPI *lift a finger* behaves differently from the non-strict NPI in both the CNRP and the non-CNRP sentences. Unlike (25a), for me sentence (25b) (on the strict NPI interpretation of *lift a finger*) is unambiguous, and the only available reading is the one in which the negation takes lowest scope within the matrix CNRP predicate (expect, ¬do). However, the idiomatic reading associated with the strict NPI *lift a finger* in (25b) disappears below the non-CNR verb *claim* in (26b), which for me can only mean that it is not the case that I claimed that John would perform the act of lifting a finger in order to help.[13]

[13] My presentation of the facts with respect to the varying (un)available interpretations in (29) and (30) is distinct from C&P's (2014) mode of presentation (cf. C&P 2014: 81–82). C&P focus on a particular set of NPI types which they call the "JACK class", which includes items like *jack(shit)* and *diddly(squat)*. I focus on examples with the strict NPI *lift a finger* because it is idiomatic under its NPI reading, but can also be interpreted literally (though perhaps requiring a very

To illustrate some of the basic components of C&P's theory, I now discuss one way in which the theory in C&P (2014) can account for the facts I have described in (25) and (26). Recall that C&P (2014) adopt and extend Postal's (2005) model of NPIs as either unary (single NEG) or reversal (two NEG) structures. Recall further that *any X* NPIs can be either unary NEG or reversal structures. I propose that the two readings for (25a) represent the instantiation of Postal's (2005) two distinct NPI structures under the CNRP predicate, one in which a unary NEG scopes above the embedded clause (expect, ¬do), and one in which a reversal structure is embedded in an independently negated matrix clause. The two structures are illustrated here:[14,15]

(27) 'I did**n't** expect that John would do <u>anything</u>': **Unary NEG (expect, ¬ do)**

I didNEG_1 expect that John would [<[[NEG_1 SOME] thing]>$_k$ do [[NEG_1 SOME] thing]$_k$]

---

peculiar context for pragmatic felicity). This allows me to avoid any discussion of acceptability, which is highly variable in casual observations of these construction types (see, e.g., C&P 2014:148).

[14] Like C&P (2014), I set aside how 'do support' fits into this model of NPIs. For further discussion of English 'do support' and its relationship to negation see, for example, Pollock (1989) and Kroch (1994).

[15] The following structure, in which a distinct NEG is externally merged in the matrix clause, is also possible:

(i) I did NEG_2 expect that John would do [[NEG_1 some] thing]$_4$

Unlike in (27), this structure contains no NEG raising. It would thus have the following spell out pattern and DN interpretation:

(ii) I did**n't** expect that John would do **nothing**.
'It is not the case that I expected that John would do nothing.'
= I expected John to do something.

(28) 'I did**n't** expect that John would do <u>anything</u>': **Reversal (¬ expect, do)**

I did NEG_3 expect John would $<[NEG_1\ [NEG_2$ SOME] thing$]>_k$ [do NEG_1 [NEG_2 SOME] thing$]_k$]

Before discussing (27) and (28), a few things must be clarified. C&P assume that quantifiers always have at least two occurrences in a syntactic representation: a base position and a scope position. Scope positions are clause-adjoined positions (May 1985). They also assume that the highest occurrence (the scope position) of a quantifier is invariably unpronounced, as indicated by angled brackets (<>).

C&P (2014) develop a constrained system of rules to describe the differences between the underlying representations they posit and the morphophonological realities of NPI constructions. Their system contains two primary components. The first is a simple mapping rule that changes SOME to *any* in NPI contexts like the ones in (27) and (28) (C&P 2014: 21).[16] The second is a theory of "NEG deletion" under which certain elements delete negative morphology in a clause prior to phonological spell-out. NEG deletion requires a syntactic configuration in which the NEG deleter c-commands the NEG it deletes. It may be either "Lexical" or "General" (p. 70), but general NEG deletion is most relevant here. C&P formulate the condition on General NEG deletion as follows (p. 72, their example (11)):

[16] The same rule deletes abstract SOME in non-NPI contexts with no NEG raising, generating sentences like 'John ate nothing', in which the underlying structure of the object is also [NEG SOME [thing]].

(29) *The General NEG Deletion Condition*

If C = (A, NEG_1, …, NEG_n) is a NEG deletion chain and A is a general NEG deleter, then A defines a function that is nonincreasing with respect to the origin position of each NEG in C.

This definition formalizes the observation that, despite their apparent lack of negative morphology, many NPIs cannot appear in upward entailing environments. The head of a NEG deletion chain contributes the minimally nonincreasing (i.e. not upward entailing) environment. Under (33), all NEGs in the c-command domain of the nonincreasing NEG deleter are deleted, forming part of the NEG deletion chain.

With these assumptions about quantifier movement, SOME to *any* mapping, and NEG deletion in place, I return to the structures in (27) and (28). In (27), the unary NEG NPI [NEG some [thing]] is merged as the object of the embedded verb *do*, and the NEG separates from its host and raises to a position right adjacent to the finite auxiliary in the matrix clause, where it is pronounced. Because of NEG raising, the lower occurrence of NEG_1 is unpronounced. This is generally assumed to be the case in syntactic movement, with the exceptions of resumption (which I discuss further in Chapter 4), and covert movement. The SOME to *any* mapping rule also applies, yielding the form *anything* in object position. The structure yields a meaning in which the negation scopes within the CNRP, denoting an affirmative expectation that John would do nothing. The higher occurrence of NEG_1 is thus deleted at the LF interface, and the NEG is interpreted in its scope position at the edge of the embedded clause.

While (27) contains only one NEG, my representation of (28) contains three. The highest NEG (NEG_3) is merged in the matrix clause, independent of the NPI. Like in (27), the NPI is merged as an object of the verb *do*, but unlike in (27) the NPI is a reversal, containing two NEGs (NEG_1 and NEG_2). From its c-commanding position in the matrix clause, [NEG_3 expect] serves as the General NEG deleter for the lower two NEGs in the embedded clause, yielding the following three-membered General NEG deletion chain: ([NEG_3 expect], NEG_1, NEG_2). This configuration deletes the morphophonological features of both NEGs in the reversal NPI.

Reversal NPIs are double negations: The two NEGs cancel each other out, yielding a non-negative indefinite 'some' reading. Like the unary NEG NPI in (27), the reversal NPI in (28) also scopes within the embedded clause, but because the negations cancel, the clause is not negated. The composed structure yields the alternative CNRP interpretation in which the negation scopes above the matrix verb, denoting a negative expectation about John doing something.

Recall now that in the CNRP with the strict NPI *lift a finger* the negation scopes below the matrix clause, and 'I didn't expect that John would lift a finger to help' can only mean I expected him to do nothing. C&P (2014) assert that NPIs like *lift a finger* and *drink a drop* have only unary NEG structures (p. 21). The derivation for (25b) proceeds as in (27), with the single NEG raising away from its host to the position right adjacent to the auxiliary:[17]

[17] One problem for this structure is that the size of the idiom chunk 'lift a finger' includes the verb, and is hence larger than the NPI structure C&P (2014) propose. I set this problem aside here.

(30) 'I did**n't** expect that John would lift a finger': **Unary NEG (expect, ¬ lift)**

I didNEG_1 expect that John would [<[NEG_1 a finger]>$_k$ [lift [NEG_1 a finger]$_k$]]

Because of NEG raising, the lower occurrence of NEG_1 in (30) goes unpronounced, yielding the correct surface structure, and also the correct meaning in which the negation scopes above the embedded clause. The fact that there is no alternative high scope reading associated with the strict NPI under the CNRP confirms C&P's assertion that *lift a finger* type NPIs are invariably associated with a unary NEG structure. C&P's model thus successfully applies to my judgments. The two potential underlying structures (unary and reversal) for *any X* NPIs yield the two possible CNRP readings, while the single possible (unary) structure for *lift a finger* yields only one.

C&P's system also successfully accounts for the non-CNRP example in (26b). It is only with unary NEG structures that a NEG raises from the lower clause into the matrix clause. So if non-CNRPs like *claim* block syntactic NEG raising, then the C&P's system makes the following prediction: Only the high scope NEG/reversal analysis for *anything* should be possible, and the strict NPI *lift a finger* should not be licit. This prediction is borne out: In my judgment, the sentence 'I didn't claim that John would do anything' can only mean that it is not the case that I claimed John would do something.[18] Crucially, it cannot mean that I claimed he would do nothing. Concurrently, the phrase *lift a finger* cannot be an NPI within the non-CNRP, and the interpretation is literal.

My judgments of NPIs embedded in CNRP and non-CNRP predicates elucidate and support Postal (2005) and C&P's conception of NPIs. I henceforth adopt their model

[18] Paul Postal (p.c.) has an additional high scope reading equivalent to 'there is nothing that I claimed he would do', which is truth conditionally distinct from the reversal reading. I do not share this judgment. I discuss this issue in Chapter 3 (fn. 33).

in assuming that English NPIs (i) are inherently negative, having at least one negation in their lexical representation, (ii) have two possible underlying structures, unary NEG and reversal, and (iii) that NEGs may raise from unary NEG NPIs, yielding surface strings like 'John didn't do anything'.

There is one crucial aspect of C&P's (2014) model that I have yet to discuss, that of polyadic quantification. I turn to this in the next section.

4. Negative Concord as Polyadic Quantification

In Chapter 2 I defined NC as the marking of a single negative meaning by two or more negative elements in a sentence. I showed how English NC can be marked by one negative marker plus (at least) one negative constituent, or by two (or more) negative constituents and no negative marker, but not by two negative markers. This section describes an account of NC with two or more negative constituents and no negative marker.

In their semantic approach to Negative Concord, De Swart and Sag (2002) employ the notion of polyadic quantification to model French NC as the iteration of monadic quantifiers scoping under a single negation. To illustrate, consider the following French sentence:

(31) **Personne ne** mange **rien**.
nobody neg eats nothing
'Nobody eats anything.'

This sentence contains the negative constituents *personne* 'nobody' and *rien* 'nothing', which De Swart and Sag take to be negative (antiadditive) quantifiers.[19] The authors propose the following semantic representation for a sentence like (31):

(31a) $NO^{HUMANxTHINGy}$ (EAT)

(31b) $\neg\exists x\exists y$ Eat (x,y)

Under this approach, the two antiadditive quantifiers form a single antiadditive, resumptive polyadic quantifier over the pair (*x*,*y*). The result is a pair list reading under which it is not the case that there exists some (*x*,*y*) pair such that *x* ate *y*.

Pair list readings are similarly available for multiple *wh*-questions such as 'who ate what', which contains two quantificational *wh*-phrases. On the basis of such readings, May (1989) observes that resumptive quantifiers like the one in (31b), or the ones present in multiple *wh*-questions, are constructed from individual quantifiers that are alike. For (31b) the likeness resides in the quantifiers' shared negativity and the fact that both have an existential quantifier. For multiple *wh*-questions the likeness resides in a shared *wh*-ness.

4.1 Determiner sharing

C&P (2014) apply De Swart and Sag's (2002) conception of NC as polyadic quantification to English sentences that contain two or more clausemate negative constituents. Under Postal's (2005) theory of NPIs as inherently negative, the theory of

[19] De Swart and Sag (2002) do not provide an account of the role of the negative marker in sentences like (41).

polyadic quantification extends to NPI constructions not standardly considered to instantiate NC. Consider the following:

(32) **Nobody** ate <u>anything</u>.

C&P observe that sentences like (32) have a polyadic reading under which it is not the case that there exists some pair (*x*,*y*) such that *x* ate *y*, which would be represented exactly as in French (31). Under C&P's system, in which *anything* is lexically ambiguous between a unary NEG and a reversal structure, the question arises as to which type of NPI is instantiated in sentences like (32). C&P (2014) assert that polyadic interpretations for NPI constructions like (32) contain unary NEG NPIs.[20] The unary NEG structure of (32) is as follows (adapted from their (20), p. 55):

(33) $[<[[NEG_e\ SOME_f]\ body]_1>\ [<[[NEG_e\ SOME_f]\ thing]_2>\ [DP_1\ ate\ DP_2]]]$

Some notational conventions and theoretical assumptions must be clarified. The [NEG SOME] determiners contained in the representation for *nobody* and *anything* contain identical subscripts ($[NEG_e\ SOME_f]$). This notation schematizes C&P's assumption that when negative elements participate in polyadic quantification, their determiners are shared. Under determiner sharing, the same determiner is merged in two distinct places in the syntactic structure. In (33) the same NEG (NEG_e) and the same SOME ($SOME_f$) are

[20] They also say a reversal analysis is possible, but I do not share the relevant judgments. I set this issue aside.

merged as the determiner for the noun *body* and the noun *thing*, yielding the structure in (33) in which DP_1 and DP_2 share a determiner.

Given that one possible spell-out for the structure in (33) is 'nobody ate anything', another question is how the surface morphology of a single underlying (shared) determiner could be realized as both *no* and *any*. To answer, C&P propose the following rule (ex. (27) p. 57):

(34) "*The Standard English Negative Concord Reduction Principle*

Let DP_1, DP_2, …, DP_n be a maximum sequence of $n > 1$ DP occurrences in scope position (in a single clause) sharing a D = [NEG SOME], where DP_1 c-commands each of DP_2, …, DP_n. And for all i, $1 \leq i \leq n$, let D_i be the copy of D in DP_i and let NEG_i be the NEG of D_i. For each occurrence of DP_i ($i \neq 1$), NEG_i is deleted."

This rule states that in sentences containing shared [NEG SOME] determiners (hence a polyadic interpretation), the highest (c-commanding) negative constituent in the sequence of negative constituents is the only one whose NEG is not deleted. All lower NEGs are deleted, with the highest NEG in the sentence representing the head of a NEG deletion chain. Additionally, the SOME to *any* mapping rule must also apply to only those elements whose NEGs have been deleted.[21] In the sentence initial negative constituent, the abstract SOME deletes (C&P 2014: 21). The rule in (34), in combination with C&P's SOME to *any* mappings, thus yields sentences with any number of unary NEG NPIs appearing below a negative constituent (e.g. 'nobody watched any game in any bar at any

[21] SOME/*some* is a positive polarity item, which cannot spell out in the immediate scope of negation (Sczabolsci 2004).

time'). It also correctly fails to generate sentences with NPI morphology in subject position (e.g. 'anybody ate anything'). In sum, in C&P (2014), sentences like (32), which contain a negative constituent and an NPI, are underlyingly NC constructions.

5. Summary and Conclusion

In this chapter I have discussed the theoretical groundwork needed for modeling English NPI, NC, and DN constructions simultaneously under the model in Collins and Postal (2014). Observations regarding the surface distribution of NPI constructions (as in Zwarts 1998) are explained via Postal's (2005) unary NEG NPI structure. This explanation was extended to cover the distributions and (my) interpretations of strict and non-strict NPIs embedded under (non-)CNRPs. Lastly, I showed how sentences with a negative constituent and an NPI are modeled as NC constructions with polyadic quantification in C&P (2014).

In Chapter 4 I begin the process of applying the model in Postal (2005) and C&P (2014) to English NC, NPI, and DN constructions. I focus specifically on constructions that involve negative objects, leaving negative subjects for Chapter 5.

Chapter 4

Negative Objects

0. Introduction

The question of how to model Negative Concord (NC) has long been a source of debate among generative grammarians. NC constructions are puzzling because they appear to violate the principle of compositionality. Under compositionality, a sentence's meaning reflects the meanings of its parts and the way they are combined. If a sentence has two or more negative elements, then why do those elements sometimes contribute only a single semantic negation?

Previous authors have approached the compositionality puzzle of NC as an agreement phenomenon. Haegeman and Zanuttini (1996) argue that negative constituents like *nobody* and *nothing* are quantifiers that must reside in the specifier position of a negative phrase (NegP) at some point in the derivation, in a specifier-head agreement configuration. Under their approach, a single semantic negation is factored out of multiple negations residing in the same syntactic position relative to the negative head, a mechanism the authors call "neg factorization". More recently, Zeijlstra (2004) has proposed that NC instantiates syntactic agreement between negative constituents with a formal, uninterpretable negative feature that agrees with a semantically interpretable null negative head. Under this approach, the principle of compositionality is observed in that negative constituents participating in NC do not themselves introduce a semantic negation. Zeijlstra's Agree approach is adopted in other recent models of NC, including

Haegeman & Lohndal (2010), Wallage (2012), Biberauer & Zeijlstra (2012), and Puskás (2012).

Recall now the other linguistic puzzle discussed in Chapter 3, that of the varying distributions of negative polarity items (NPIs), and their apparent sensitivity to the semantic property of downward monotonicity. In Chapter 3 we saw that Postal's (2005) model of unary NEG NPI constructions, in which the negation is introduced by the NPI and may raise in the syntax, explains this sensitivity. Under Postal's (and Collins and Postal's (2014)) view, unary NEG NPIs appear to require a downward entailing context because they themselves introduce that context.

In Chapter 3 we also saw that English NPI constructions and NC constructions often appear in identical environments, and have the same meaning. In this chapter I propose and test the hypothesis that English NC constructions are structurally analogous to unary NEG NPI constructions as modeled by Postal (2005) and Collins and Postal (2014). This hypothesis leads to a novel approach to modeling certain cases of English NC as syntactic movement. Like Agree approaches to NC, this movement approach to English NC observes compositionality. A further benefit of the movement approach is that it also fits into a broader framework that simultaneously accounts for the distributions of NPIs.

1. Object NC

1.1 NC and unary NEG structures

Recall the following simple NC construction (example (16) in Chapter 2):

(1) I do**n't** know **nothing** about that.
I know nothing about that. (= 'I don't know anything about that.')
(AAPCAppE; SKCTC-LP)

In applying C&P's system to NC constructions like (1), the first issue to address is whether (1) contains a unary NEG or a reversal constituent. I assume that such constituents have a unary NEG structure for three reasons: First, in C&P's system, unary NEG constituents spell out as *no* X constituents when the NEG does not raise (e.g. 'I ate nothing'), but reversals do not. In other words, only unary NEG structures take the form of a negative quantifier in C&P.

Second, reversals have an affirmative semantics, with the meaning SOME X, while the semantics of unary NEG constituents is negative. The following example (previously (15) in Chapter 2) shows that NC constituents like *nothing* may but need not be preceded by a negative marker:

(2) You may have to buy your insurance or something, because there'll be **no money** there to pay your bills with if there's **no union fund** a-going in to the hospital fund. (AAPCAppE; SKCTC-LP)

As discussed in Chapter 2, examples (1) and (2) are from the same AAPCAppE speaker. Example (1) contains a negative constituent preceded by a negative marker, but in example (2) the negative constituents have no preceding negative clause-mate. If the negative constituents in (2) were reversals, then the sentence would mean that you have to buy insurance because there will be (some) money there to pay the bills with if there's (some) money from the union fund going towards the hospital, an affirmative sentence. But this is not what it means. Like C&P's unary NEG constituents, and unlike reversals,

the morphologically negative constituents in (2) each contribute a single semantic negation. This supports the assumption that they are unary NEG constituents and not reversals.

A third reason to assume negative constituents in English NC have unary NEG structure is that they allow for exceptive attachment, as illustrated by the following example from Wolfram and Christian (1976):

(3) Was**n't nothing** but acorns on the ground.
'There was nothing but acorns on the ground.'

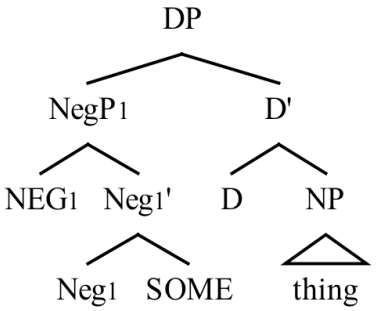
In Chapter 2 I discussed how only unary NEG NPIs allow for the attachment of exceptive phrases, while reversals do not. The fact that the negative constituent *nothing* in (3) allows for the attachment of *but acorns* thus further supports the assumption that negative constituents in English NC have the endpoint quantifier semantics of a unary NEG constituent.

In sum, the form of negative constituents in English NC share the non-NEG-raised morphological form of C&P's unary NEG constituents, they share their inherently and independently negative meaning, and unlike reversals, they allow exceptive attachment. On the basis of these facts, I henceforth assume that negative constituents have unary NEG and not reversal structure:

1.2 The structure of *nothing*

Consider sentence (1), which contains the negative constituent *nothing* in object position. Following and adapting C&P (2014), I assume that the internal structure of the negative DP *nothing* can be modeled roughly as follows:

(4) The internal structure of *nothing*:



This structure employs the standard term NegP (Pollock 1989; Zanuttini 1991, 1997) as opposed to C&P's term 'Negative Merge Phrase' (NMP).[22] Like C&P (2014), I follow Haegeman (1995, 2000) and Haegeman and Zanuttini (2000) in assuming that the syntactic projections of negative heads must have a filled specifier, a configurational requirement that they call The Neg Criterion. I further assume a one-to-one

[22] I employ this standard terminology in place of NMP because, in its merge position, the phrase does more than simply introduce negative morphology. It introduces a polarity reversing negative operator (NEG1), which contributes to the semantics of the clause.

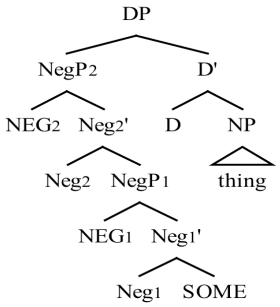
correspondence between negative operators (semantic negations) and NegPs. In other words, every semantic negation entails the presence of a NegP.[23]

1.3 NC with *-n't*

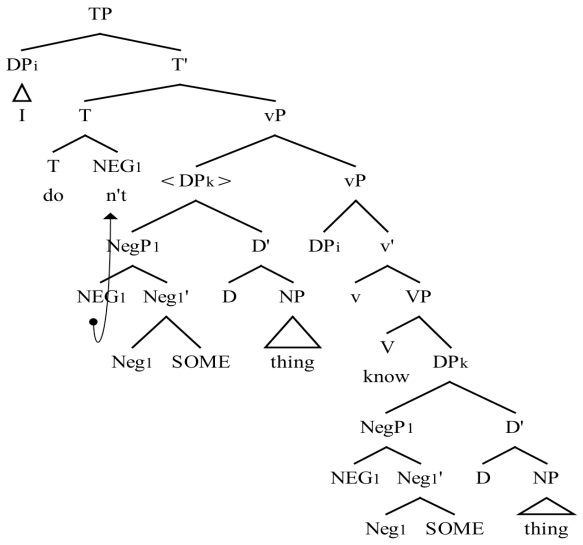
Having spelled out my assumptions regarding the internal structure of the negative DP *nothing*, I now illustrate the structure of the entire sentence. Adopting and adapting C&P (2014), I propose that the NEG raises as a head from the specifier of $NegP_1$ and adjoins to T, with the following structure:

[23] Note that under this hypothesis, the structure of a reversal NPI would have to be as follows:

(i) Structure of a reversal NPI:



(5) NC structure for 'I do**n't** know **nothing** (about that)':



There are several things to note about (5). First, the structure contains two occurrences of the same negative DP, DP_k. I adopt the definition in Collins and Stabler (2015) and Collins (2015b), in which occurrences of a syntactic object (a lexical item or an XP) are created by the general operation Merge, which comprises external and internal merge. The lowest occurrence is the base position of the negative constituent *nothing*, where it is externally merged as object of the verb *know*. I assume that the unary NEG constituent moves to the edge of vP, where it scopes over the lexical semantic contents of the proposition. Following C&P (2014), I assume the DP is unpronounced in its scope position (as indicated by < >).

After vP adjunction of negative DP_k, NEG_1 raises as a head and adjoins to T, forming a complex T+NEG_1 head. In this head-adjoined position, NEG_1 is both syntactically and phonologically attached to the element in T and spells out as *-n't*. One difference between the structure in (5) and the structures provided in C&P (2014)

involves the position of the raised negative marker (cf. C&P p. 26, example (37)). In C&P's analysis, this element does not head-adjoin, but rather it raises from the specifier of the negative DP to the specifier of a clausal Negative Marker Phrase (NMP), which resides in a fixed position between TP and VP. C&P do not take into account the differences in distribution between the clitic negative marker *-n't* and the non-clitic *not*, both of which appear in unary NEG NPI and (as shown below) NC constructions. Previous research shows that *-n't* and *not* display distinct syntactic behaviors (e.g. Pollock 1989; Zwicky and Pullum 1983; Zanuttini 2001). Furthermore, in the AAPCAppE sub-corpus employed for this dissertation research, both *-n't* and *not* occur in object NC, but only *-n't* appears with negative subjects. I assume that *n't* spells out a head, and *not* a specifier XP.[24]

C&P (2014) argue that movement of the negative marker is only possible from scope positions (p. 46, example (4)). In structure (5), movement of the NEG from within the DP's scope position at the edge of vP observes Rizzi's (1990) Relativized Minimality, in that the negative head crosses no other syntactic heads on its way to T. As such, this movement from the scope position is strictly local, in conformity with other instances of syntactic head movement.

Under the analysis in (5), the only difference between the surface string in (1) and the string 'I don't know anything' concerns the morphophonological realization of the negative constituent in its base position. Recall that for C&P (2014), *any* is the overt realization of abstract SOME, derived by a series of phonological mapping rules. The derivation in (5) is actually simpler than the one that produces the NPI *anything* in the

[24] I will directly adopt C&P's analysis of NEG_1 movement for NC with *not*. This distinction plays a role in my Chapter 5 account of negative inversion structures such as 'Didn't nobody eat', which appear only with *-n't*, and not *not*.

sense that the SOME to *any* mapping is not involved. C&P explain the fact that in a sentence like 'I don't know anything' the lower NEG is unpronounced because, in conformity with other instances of syntactic movement, the element is generally silent in its base and intermediate positions, and the moved element is pronounced only in its highest position (except for in covert movement, which has the opposite pattern). But why does the negation in (5) spell out in both its origin and its host positions?

To explain why the negative is pronounced in two places, I pursue a suggestion made by Chris Collins (p.c.) in which the lower or second pronounced negative element is a resumptive element. This analysis aligns English NC constructions like (1) with Collins et al.'s (2015) analysis of NPI constructions in Ewe. To illustrate, consider the following Ewe example (from Collins et al. 2015: (ex) 44):

(6) 'Kofi didn't see anybody' (Ewe)

Kofí	mé-	kpɔ́	ame	- áɖé	-ké	o
	NEG_1	see	person	- SOME	-cNEG_1	NEG_2

The SOME C&P (2014) assume in the underlying structures for *anything* and *nothing* is realized overtly in Ewe (as *-áɖé*). Setting aside the presence of bipartite negation in (6) (see the sentence-final NEG_2), NEG_1 is pronounced in both its origin and its host positions. Collins et al. (2015) assert that the lower (or second) pronounced NEG is a resumptive NEG, and that this resumption is akin to the resumption we see in English sentences like 'He is the kind of guy who I wonder if he will ever get married' (Collins et al. 2015: 12). They argue that in cases of pronoun resumption, the fact that the higher and

lower occurrences have distinct forms is consistent with a resumption analysis of the two pronounced NEGs in (5), which also have different forms (*mé* and *ké*). In English (1), NEG also has two different forms (*n't* and *no-*).

My analysis of English NC as the instantiation of a unary NEG NPI, with syntactic NEG_1 raising and pronunciation of a resumptive negation thus aligns with Collins et al.'s (2015) analysis of *ke*-NPIs in Ewe. I formulate the resumptive negation aspect of my analysis as follows:

(7) **The NC as Resumption Hypothesis**: In English NC constructions with the forms *n't/not* and *no-*, the two negative elements are morphological reflexes of the same underlying negation, merged within NegP1, and the *no* form resumes *-n't/not*.

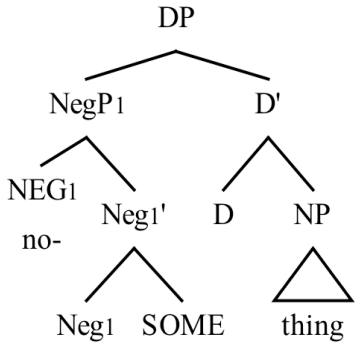
Under this hypothesis, one difference between English NC and *ke*-NPI constructions in Ewe is that Ewe has bipartite negation, while contemporary English does not. Another difference is that in Ewe, the preverbal negative marker is obligatory, while the English post auxiliary negative marker is not. I return to NC as resumption in section 1.6.

1.4 The spell-out position of *no-*

In the previous section I asserted that in NC constructions like 'I don't know nothing about that', the two negative elements are occurrences of the same NEG spelled out in two different places. I further proposed that the negative marker *-n't* spells out a head adjoined to T. However, I have not yet stated the precise spell-out position of the lower, resumptive NEG. Given the internal structure of the negative DP in (4), there are

two possible spell-out positions for this element: the head of NegP1, and its specifier. I suggest that the element *no-* spells out the specifier of NegP1. This refines the diagram in (4) slightly as follows:

(8)



The structure in (8) allows for modification of the NP by adverbials such as the one contained in the following statement, made by the character Ronny Cammareri in the (1987) film Moonstruck:

(9) I ai**n't no freakin monument** to justice.

In this sentence, *freakin* intervenes between *no-* and the NP. It may reside in the head of D, as a determiner, or it may be adjoined in an adverbial position to the NP. I set aside such issues.

1.5 NC with *not*

The following examples show that like *-n't*, the marker *not* participates in NC with negative objects:

(10) It's just **not no good situation**.
(AAPCAppE: SKCTC-TH)

(11) They's **not no mills**.
'There are no mills.'[25]
(AAPCAppE: SKCTC-GH)

(12) I'm **not** going down to eat **no dinner** today.
(AAPCAppE: SKCTC-DN)

(13) He would **not** go play **no kind of card games** or **nothing** like that.
(AAPCAppE: DOHPII-MCo)

(14) Me and you might **not** get **no UMWA money check**.
(AAPCAppE: SKCTC-ML)

(15) We are **not** a-going in there **no more**.
(AAPCAppE: SKCTC-DN)

In all of these sentences, *not* participates in NC with at least one other negative element, which can be either a negative DP (as in (10) through (14)) or a negative adverb (as in (15)). I previously alluded to my adoption of C&P's (2014) Negative Merge Phrase (NMP) as a landing site for the marker *not*, which I assume raises as a specifier XP and

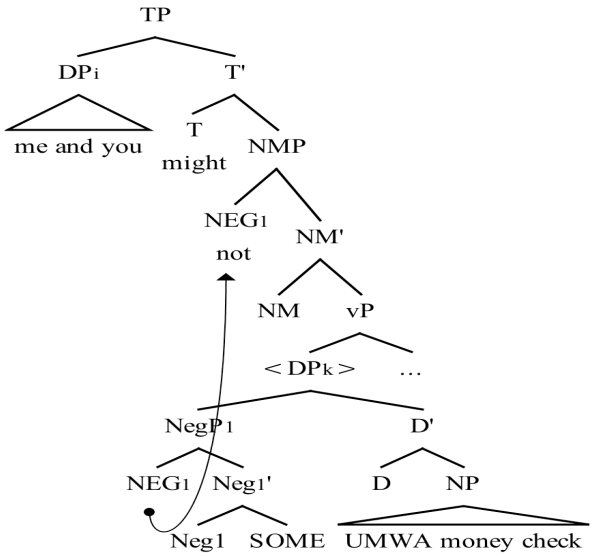
[25] See Wolfram & Christian (1976), Montgomery (2006), and Tortora (2006) for discussion of existential *they* in Appalachian.

not a head.[26] Under the assumption that negative DPs contain a NegP that introduces the negative operator, I cannot adopt the hypothesis that the landing site for the marker *not* is another NegP, because this would incorrectly yield a DN interpretation. C&P's (2014) NMP provides a landing site for the negative marker without introducing a semantic negation, so I assume it projects in NC sentences with *not*, and employ the examples in (10) through (15) to determine the relative syntactic position for NMP.

Examples (10) through (15) show that *not* appears before lexical verbs. It also follows modals (as in (14) and (15)) and copula *be* (as in (10) through (12) and (15)). Example (10) shows that the adverb *just* can intervene between the negative marker and the copula. I therefore assume that the NMP dominates vP and is dominated by TP. Illustrating with (14), the relevant structure would be as follows:

[26] Unlike the Cinque's (1999) view of adverbial projections, in which adverbs reside in the specifier of phrases whose heads have semantic content, the head of C&P's (2014) NMP is semantically vacuous.

(16) Structure for 'Me and you might **not** get **no UMWA money check**'



The structure in (16) shows the position of the NMP between TP and vP, which is the same position for NMP proposed by C&P (2014: 26). Like in the *-n't* structure in (5), the negative DP (DPk) raises from its external merge position as a VP object to the edge of vP, its scope position, where it is unpronounced (as indicated by < >). Unlike (5), however, the negative element that raises from the DP's scope position is not just the head but rather the entire specifier XP. The NEG movement in structure (16) is thus an instance of XP movement, and not head movement from a specifier position.[27] On the basis of the structure in (16), I assume that, in its position in the specifier of NMP, NEG_1 invariably spells out as *not*.

[27] C&P (2014:18) note that this movement violates Ross's (1967 [1986: 127]) condition on left branch extraction, but they do not discuss the issue.

1.6 Resumptive Negation

Returning to the topic of NEG resumption, recall the following example from Chapter 2 (example (5)):

(17) I **didn't** have **no lice**, and I **didn't** have <u>any itch</u>.
'I didn't have any lice, and I didn't have any itch.
(AAPCAppE: SKCTC-EA)

This example illustrates a pattern of intra-speaker variation in which unary NEG constituents may appear either as *no*-X or as *any*-X forms. I have proposed that the two sentences in (17) have the same structure, akin to the structure in (5). In both cases, the NEG raises from the unary NEG constituent and spells out as *-n't*. The difference between the two sentences is that in the *any itch* sentence the NEG deletes and in the *no lice* sentence it does not. This raises the question of why the NEG deletes only variably. In order to address the question of variable NEG deletion, let us first consider Collins' (2015c) constraint on the spell-out of occurrences.

Collins (2015c: p. 2, ex. 5) formulates the following constraint:

(18) "Spell-Out of Occurrences

If (a) X and Y are two occurrences of a single syntactic object (SO), and

(b) X-commands Y, and

(c) only one occurrence of SO is spelled-out,

then X is spelled-out and Y is not."

Condition (18) states that if only one of two occurrences of a syntactic object is spelled out, then the higher and not the lower occurrence must be spelled out. The condition is general in that it applies to multiple occurrences of any SO, not just NEGs.

Both sentences in (17) have two occurrences of NEG_1, as illustrated here:

(19a) I didNEG_1 have [NEG_1 SOME lice] = I did**n't** have **no lice**

(19b) I didNEG_1 have [NEG_1 SOME itch] = I did**n't** have <u>any itch</u>

In both (19a) and (19b), the higher occurrence of NEG_1 is spelled out as *–n't*. However, clause (c) in the Spell-Out of Occurrences condition (18) specifies that it only applies when one occurrence is spelled out. The *no lice* sentence (19a), in which both occurrences of NEG_1 are spelled out, does not meet the conditions for (18), but the *any itch* sentence (19b) does. Condition (18) therefore yields the *any itch* pattern for the structure in (19b), instead of a pattern in which only the lower NEG_1 spells out ('I had no itch').

Collins (2015c) further asserts that Englishes that exhibit sentences of the *no lice* type and those that exhibit only the *any itch* type have distinct constraints on the spell out of NEG occurrences. In *any itch* Englishes, only one NEG may spell out, and in *no lice* Englishes, all NEGs must spell out. However, (17) shows that speakers exhibit both types of behavior.

To account for this behavior, I assume that variation between NC and NPI morphology results from optional post-syntactic NEG_1 deletion. In addition to the

constraint on spell-out of occurrences, I assume only the following constraint on the spell out of NEGs (adapted from Collins 2015c, ex. (15)):

(20) If a NEG_1 has multiple occurrences, only one is spelled out.

Condition (20) yields the *any itch* pattern, and rules out the *no lice* pattern. I propose that this PF constraint characterizes the apparent socio-historical change whereby there was a single step replacement of negative constituents by NPIs. As discussed in Chapter 2, this change—which was not syntactic—was sociolinguistically motivated (Nevalainen 1998, 2006). Under this approach, variation between negative constituents and NPIs results from the constraint in (20) being switched on and off: In *any itch* sentences the constraint is active and in *no lice* sentences it is not. When the constraint in (20) is active, then so is the general spell-out constraint in (18), which explains why the higher and not the lower occurrence of the NEG_1 is spelled out. (See Chapter 7 for further comment on the implications of this hypothesis.)

2. NC with multiple negative constituents

Thus far I have discussed sentences containing a negative marker and only a single negative object. In this section I tackle slightly more complex cases containing multiple negative constituents.

2.1 Polyadic quantification and determiner sharing

The following example contains two negative constituents and a negated auxiliary:

(21) So they do**n't nobody** cheat me out of **nothing**.
'So nobody cheats me out of anything.'
(AAPCAppE: SKCTC-EA)

Example (21) has two negative constituents, *nobody* and *nothing*. Recall from Chapter 3 (section 3.2) C&P's (2014) assertion that sentences with two or more unary NEG constituents appearing in concord with one another (e.g. 'nobody ate anything') instantiate unary NEG constituents in polyadic quantification structures with determiner sharing. Under the hypothesis that English NC involves unary NEG constituents, following C&P (2014) I predict that (20) also has a polyadic interpretation, with roughly the following meaning:

(22) ¬∃x∃y CHEAT ME OUT OF (x,y)

These semantics assert that there is no (*x*,*y*) pair, *x* a human and *y* a thing, such that *x* cheats me out of *y*. Under C&P's model, I would further assume (21) to be an instance of determiner sharing, with roughly the following structure:

(23) They do NEG_e [$_{vP}$<[[NEG_e $SOME_f$] body]$_J$> [<[[NEG_e $SOME_f$] thing]$_K$> [$_{vP}$ DP_J cheat me out of DP_K]]]

In this structure (adapted from C&P p. 56), the negative subject and negative object are both unary NEG constituents merged within vP, and they raise to its edge to mark their scope. From their equivalent scope positions they form the polyadic structure roughly sketched in (22). (See C&P (2014: 53–54) for the detailed semantics of this structure.) C&P (2014:58) further suggest that for NC cases like (21/23), the negative marker raises from the highest negative DP right adjacent to the auxiliary. Under C&P's (2014) system the three negative elements on the surface in (21) are occurrences of the same NEG, NEG_e. This representation thus correctly predicts the NC interpretation for (21).

2.2 Two problems with determiner sharing

Despite the fact that C&P's analysis of polyadic quantification structures involving shared determiners correctly predicts the NC interpretation for sentences like (21), there are two reasons why I will not adopt it straightforwardly. Both of these reasons pertain to determiner sharing. The first reason is theoretical: It is unclear how two distinct negative constituents might syntactically share a determiner in a binary branching structure.[28]

The second is empirical. To understand the problem, consider the following sentences:

(24) Ai**n't** bringing **none of that** down here to put **nobody** to work with.
(AAPCAppE; SKCTC-TH)

[28] C&P (2014:52) make the non-standard suggestion that this is possible under the hypothesis that a single [NEG SOME] determiner is merged in two different places in the syntactic structure. Paul Postal (p.c.) notes that arguing against determiner sharing on the assumption that binary branching must be maintained is an argument from orthodoxy, and that the fact that determiner sharing is incompatible with binary branching could instead be an argument against the Single Mother Condition (Sampson 1975).

(25) There was**n't no gravity** or <u>anything</u> on that.
(AAPCAppE; SKCTC-PB)

(26) But we did**n't** have to join **no unions** or <u>any of that kind of organizations</u> or <u>anything</u> for a year.
(AAPCAppE; DOHPII-JB)

Each of these sentences includes *-n't* and two or more unary NEG constituents. Like (21), sentence (24) contains two morphologically negative constituents in a concord relation with the negative marker. However, (24) and (25) contain a blend of negative constituents and NPIs in concord.

Recall now from Chapter 3 that for C&P (2014), sentences like 'nobody ate anything' are realized as such (and not as 'nobody ate nothing') under a principle they call "The Standard English Negative Concord Reduction Principle" (p. 57), repeated here:

(27) "*The Standard English Negative Concord Reduction Principle*

Let DP_1, DP_2, …, DP_n be a maximum sequence of $n > 1$ DP occurrences in scope position (in a single clause) sharing a D = [NEG SOME], where DP_1 c-commands each of DP_2, …, DP_n. And for all i, $1 \leq i \leq n$, let D_i be the copy of D in DP_i and let NEG_i be the NEG of D_i. For each occurrence of DP_i ($i \neq 1$), NEG_i is deleted."

This rule states that in shared determiner structures, the highest NEG is the only one that is not deleted. The general idea is that NEG deletion in polyadic structures with a shared determiner applies in a downward direction, whereby the NEGs in the c-command

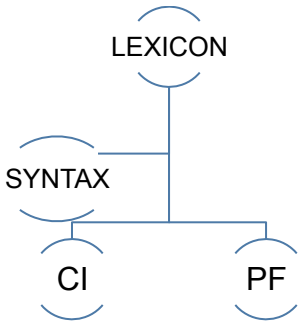
domain of the highest DP in the shared determiner structure are deleted. In (24) none of the NEGs are deleted, so the reduction principle in (27) does not apply. The sentence in (24), however, contains both the negative constituent *no gravity* and the unary NEG NPI *anything* in a concord relation. In this case, one might say the principle in (27) applies to delete only the lower unary NEG constituent. The same statement applies to the NC construction in (25), which contains two NPIs below the negative constituent.

Recall now my hypothesis that intra-speaker variation between negative constituents and NPIs is represents variable application of a post-syntactic NEG_1 deletion rule. When active, rule (20) applies to multiple occurrences of the same NEG_1. Under determiner sharing, if rule (20) applies, all NEGs except the first one should delete because all NEGs in the polyadic structure are occurrences of the same NEG. Therefore, I cannot simultaneously adopt C&P's (2014) determiner sharing and appeal to variable activation of rule (20) to explain mixed polyadic structures like (25) and (26). In the next section I propose a modification to determiner sharing that solves these problems.

2.3 A modification for polyadic NC structures

I propose a modification to C&P's (2014) polyadic quantification structure in (23) that preserves standard assumptions about binary branching and accounts for the variability in (24) through (26). My proposal builds on the notion of grammar as modular (Chomsky 1995). In a modular grammar, syntactic objects (e.g. phases; Chomsky 2001, 2008) are derived then sent to separate modules for interpretation. The syntax mediates between the lexicon and the CI and PF interfaces, and there is no direct interaction between the latter. The following figure illustrates.

Figure 1. Modular Grammar



I propose that all NEGs in unary NEG DPs are lexically marked with the index 1, a lexical marking of their unary NEGhood, and that this index resides on all levels of the $NegP_1$ phrase within that negative constituent. Like C&P (2014: 54), I also assume that indices are visible to the interpretive modules. I formulate this proposal as follows:[29]

(28) **The unary NEG index hypothesis**: The NEG of unary NEG constituents is lexically marked with the index 1, with the representation [NEG_1 SOME X]. This index is part of the constituent's lexical entry, and it is visible to the interpretive modules.

Under this hypothesis, the structure for a sentence like (21) is modified slightly from (23) as follows:

[29] I assume the same principle of lexical marking applies to reversal NEGs, which have the structure [$_{NegP2}$ NEG_2 [$_{NegP1}$ NEG_1 SOME]].

(29) They do NEG_1 [$_{vP}$<[[NEG_1 SOME] body]$_J$> [<[[NEG_1 SOME] thing]$_K$> [$_{vP}$ DP_J cheat me out of DP_K]]]

Structures (23) and (29) reflect the same assumptions regarding negative DPs raising to scope positions and NEG raising from the DP to its auxiliary-adjoined position, where it spells out as *-n't*.[30] The only difference between (23) and (29) is in the indices within the negative determiners. The NEGs in (29) contain the same index 1, but unlike in (23), this is not because the DPs share a determiner. Rather, the shared index is part of the lexical marking of unary NEGhood within the DP, as asserted by the hypothesis in (28).

In a manner akin to my proposal for NC in terms of the interpretation of identical [neg] features as part of a chain (Blanchette 2013a), I propose that the identical indices on the NEGs in polyadic structures like (29) indicate to the CI interface that they should be interpreted together, as part of the same negation (NEG_1). Following Blanchette (2013a), I assume that phase-based derivations (Chomsky 2000, 2008) block the NC interpretation of DN sentences like the following:

(30) **Nobody** painted [$_{DP}$ the house with **no windows**].

Complex DPs like 'the house with no windows' are phases, which, once derived, are sent to the interpretive interfaces. The unary NEG_1 constituent *no windows* in (30) is thus

[30] Collins et al. (2015) suggest that in Ewe, this is across the board movement, which crosses all of the negative DPs in the structure. I set aside for future research a comparison of Ewe ke-NPI constructions and English NC constructions, and leave open the possibility that polyadic cases of English NC involve across the board movement, as hypothesized by Collins at al. for Ewe.

interpreted in a different phase than the matrix subject [NEG_1 SOME body], correctly yielding the DN interpretation.

2.3.1 The semantics of NC as polyadic quantification

Under the hypothesis in (28), I can now adapt the semantic formula for the interpretation of such structures proposed in C&P (2014: 54) (which C&P adapt from May (1989: 406)) as follows:

(31) In a syntactic structure [DP_{i1} [DP_{i2} [DP_{in} S]]], where DP_{i1}, DP_{i2}, …, DP_{in} are each modified by a $NegP_1$ and DP = [NEG_1 SOME NP]:

(i) $||[DP_{i1}\ [DP_{i2}\ldots[DP_{in}\ S]]]|| = ||NEG_1\ SOME||(P)(Q)$

(ii) [NEG_1 SOME] = The unary NEG determiner structure contained in each DP

(iii) $P = \lambda s[||NP_{i1}||](s_1) \wedge \ldots \wedge [[NP_{in}]](s_n)]$

(iv) $Q = \lambda s[||S||^g]$, where g assigns $i_1, i_2, \ldots,$ the values $s_1, s_2, \ldots, s_n$

The statement in (31i) asserts that in a sentence containing multiple negative DPs modified by a $NegP_1$, the semantic value of a single [NEG_1 SOME] operates over the proposition generated by that sentence.[31,32] The definition in (ii) illustrates the assumption

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[31] C&P (2014: 26, 54) provide the following semantics for [NEG SOME]:

(i) $||NEG\ SOME|| = ||NEG||\ (||SOME||)$
$= (\lambda X \lambda P \lambda Q\ \neg[X(P)(Q)])\ (\lambda P \lambda Q\ [\exists x\ (P(x) \wedge (Q(x))])$
$= \lambda P \lambda Q\ \neg[\exists x\ (P(x) \wedge (Q(x))]$

Under these semantics, [NEG SOME] determiners combine with NPs (which are predicative) to form generalized quantifiers, as follows (cf. C&P 2014: 26):

(ii) $||nobody|| = ||[[NEG\ SOME]\ body||$
$= (\lambda P \lambda Q\ \neg[\exists x\ (P(x) \wedge (Q(x))])\ (\lambda x.\ x \text{ is a person})$

that the unary NEG determiner contained in each DP has the structure [NEG_1 SOME]. The definitions of P and Q in (iii) and (iv) generate the polyadic interpretation of the NPs contained in each negative DP. In (iii), the notation s is employed as a variable denoting ordered pairs of individuals (n-tuples). P is a function that conjoins these ordered pairs at the NP level. The definition in (iv) asserts that Q applies the assignment function g, where g assigns a value to each individual in the conjoined groups generated by P.

Adapting C&P's (2014:55) derivation for 'no boy loves no girl' I arrive at the following calculus:

(32) They do NEG_1 $[_{vP}$<[[NEG_1 $SOME_1$] body]$_J$> [<[[NEG_1 $SOME_1$] thing]$_K$> $[_{vP}$ DP_J cheat me out of DP_K]]] = 1 iff:

(i) $(\lambda P \lambda Q \neg[\exists s\ (P(s) \wedge Q(s))])\ (\lambda s\ [||person||(s_1) \wedge ||thing||(s_2))\ (\lambda s\ [||S||g])$, where g assigns J, K the values s_1 and s_2 (i.e. (30iv) applies)

(ii) iff $\neg[\exists s\ (||person||(s_1) \wedge ||thing||\ (s_2) \wedge ||S||^g)]$, where g assigns J, K the values s_1 and s_2

(iii) iff it is not true that there is an s = <x,y> such that x is a person, y is a thing, and x cheats me out of y

(iv) iff there is no <x,y> such that x is a person, y is a thing, and x cheats me out of y

---

$= \lambda Q \neg[\exists x\ ((x \text{ is a person} \wedge Q(x))]$

[32] C&P (2014) note that this formula is not strictly compositional in that the composed value of each individual NEG containing DP is not calculated in relation to S. I believe this problem is not unique to C&P, however, and is present in all polyadic quantification approaches to NC (cf. De Swart and Sag 2002), as well as in Haegeman and Zanuttini's (1996) mechanism of Neg factorization.

The nature of the variable in the semantics for the unary NEG determiner [NEG SOME] given in (i) ((λPλQ ¬[∃s (P(s) ∧ Q(s))]) is distinct from the variable employed in [NEG SOME] determiners in non-polyadic NPI constructions. We see in (i) that the variable is s, whereas in the non-polyadic cases it is x (see fn. 7). The s variable is employed in (i) to denote n-tuples of individuals, formed as in (31iii), and assigned an ordered value as in (30iv).

The derivation in (32) is essentially identical to the derivation for 'no boy loves no girl' that C&P (2014:55) provide. That the derivations proceed identically illustrates that the modification I have proposed, which replaces determiner sharing with the simultaneous interpretation of unary [NEG_1 SOME] determiners as a single unary NEG, has no bearing on the semantic calculation for polyadic quantification structures.

2.3.2 Mixed polyadic structures

I now turn to a discussion of the spell-out patterns of unary NEG constituents in polyadic structures. I previously showed that the various negative constituents in these examples may spell out with negative morphology or with NPI morphology, and that the order in which the resulting elements occur varies. The highest constituent participating in the polyadic reading may spell out as a negative constituent (as in (24)) or as an NPI (as in (26)), and the same is true for the lowest. I repeat (24) here as (33):

(33) There was**n't no gravity** or <u>anything</u> on that.
(AAPCAppE; SKCTC-PB)

This example contains the phrase [no gravity or anything], in which an NPI and a negative constituent are adjoined by *or*. Consider now the following example, which also contains two constituents adjoined by *or*:

(35) And did**n't** smell a thing or see **nothing**.
(AAPCAppE: SKCTC-MM)

Example (35) contains the strict NPI *a thing*, which for C&P (2014) must be analyzed as a unary NEG structure with a raised NEG, and also the negative constituent *nothing*. Both constituents participate in NC with the negative marker *-n't*: The sentence means that the person the speaker is talking about neither smelled nor saw a thing.[33]

Collins et al. (2015) assume that NEG raising in Ewe polyadic structures proceeds across the board. The fact that sentence (35) involves a coordinate structure indicates that ATB movement is the correct approach for these cases: If a NEG moves from one conjunct, then it must move from both (Ross 1967). NPIs like *a thing* appear to be lexically marked for NEG deletion (cf. **no a thing*), so it is possible that in sentence (35) the constraint on deletion of multiple occurrences of the same NEG does not apply.

Sentence (33) is also a coordinated structure, but in this case there is a deleted NEG_1 in *anything*. I propose that the NEG_1 deletion in (33) occurs because of the NEG deletion constraint in (19), which is active only in the second but not in the first conjunct. This deletion applies at PF, after across the board raising of NEG_1.

[33] Greg Johnson (p.c.) warns that the phrase 'or see nothing' may be a parenthetical, but the audio file confirms that the intonation pattern is not that of a parenthetical.

2.4 Conclusion to section 2

In this section I showed how English sentences with multiple negative constituents in an NC relation can be modeled as instances of polyadic quantification. As an alternative to C&P's notion of determiner sharing in these structures, I proposed the unary NEG index hypothesis, in which NEGs in the same phase sharing the index 1 are interpreted as a single negation. I showed how this modification makes the polyadic approach compatible with a variable post-syntactic NEG_1 deletion explanation for intra-sentential variation between negative and NPI morphology.

In the next section, I turn to a discussion of negative objects in Long Distance Double Negation.

3. Long Distance Double Negation

Consider the following example of Long Distance DN (previously example (2) in Chapter 2):

(36) John did**n'**t paint [the house [with **no windows**]].

In (36) the two negatives cannot partake in an NC relation because they are separated by a phase boundary, and the sentence can only mean that it is not the case that John painted the house that has no windows. Using Ross's (1986) terminology, the noun phrase 'the house with no windows' constitutes a complex NP, out of which an NC relation is impossible.

3.1 Blanchette's (2013a) approach to modeling Long Distance DN

Blanchette (2013a) models Long Distance DN and NC constructions with a similar surface structure by appealing to syntactic chain formation of [NEG] features, called The [NEG] Chain. This mechanism of chain formation is constrained by Chomsky's (2001) Phase Impenetrability Condition (PIC). To illustrate, consider, the following sentence, which is ambiguous between an NC and Long Distance DN interpretation (adapted from Coles-White (2004)):

(37) I did**n't** feed the baby with **no bottle**.

NC: 'I did**n't** use a bottle to feed the baby.' (I used a spoon.)

DN: 'I did**n't** feed the baby that did**n't** have a bottle.' (I fed the other baby, the one that DID have a bottle.)

Ambiguities like the one in (37) indicate the existence of two possible underlying structures, roughly modeled as follows:

(38a) I did**n't** [$_{VP}$ feed [$_{DP}$ the baby] [$_{PP}$ with **no bottle**]]

(38b) I did**n't** [$_{VP}$ feed [$_{DP}$ the baby [$_{PP}$ with **no bottle**]]]

In the structure in (38a) the negative constituent is embedded within a PP adjoined directly to the verb phrase, but (38b) contains a complex noun phrase object, and the PP-embedded negative constituent is adjoined within that noun phrase.

Following Ross (1986), Blanchette (2013a) asserts that the structural complexity introduced by the complex noun phrase in (38b) represents a syntactic boundary across

which [NEG] Chain formation, a mechanism devised to explain NC, cannot occur. This blocking of [NEG] Chain formation yields the DN reading for (37). Under Blanchette's model, in both (38a) and (38b) the [NEG] feature introduced by the negative marker on the auxiliary spreads throughout all of the heads in the verb's extended projection (Grimshaw 2000), forming a [NEG] Chain consisting of [NEG] features whose head is on the negative marker and whose foot is on the verb. Phases are syntactic objects that are propositional (such as *v*P), and/or introduce force (CP), and they are subject to the PIC, which stipulates that only the head and specifier of a phase are visible phase-externally (Chomsky 2001). The [NEG] feature introduced by *no bottle* in (38a) is visible to, and thus forms part of, the [NEG] Chain, yielding the NC interpretation. In (38b), the edge of the complex propositional DP represents a phase boundary, across which the [NEG] Chain cannot extend. The [NEG] feature introduced by the complex DP-embedded negative constituent in (38b) is interpreted independently, yielding DN.

3.2 Applying C&P (2014) to Long Distance DN

While Blanchette's (2013a) model accounts for facts like (37), it does not address the overlapping distributions of NC and NPI constructions. As shown above, NC and NPI constructions appear in identical conditions. I also showed how the model in C&P (2014), which accounts for a wide range of facts concerning the distribution of English NPIs, also applies to English NC, assuming no NEG deletion is required in the "NC code".

Let us assume that the phrase *no bottle* in both structures in (38) represents a negative constituent with a unary NEG. Sentences with NEG raising involve a structure

in which the negative marker in the matrix clause spells out an occurrence of the NEG introduced by the unary NEG NPI in the embedded clause. I extend this hypothesis to account for the NC interpretation in (38a), as follows:

(39a) I did NEG_1 [$_{v}$P <[NEG_1 SOME bottle]>[$_{VP}$ feed [$_{DP}$ the baby] [$_{PP}$ with [NEG_1 SOME bottle]]]]

In (39a), NEG_1 raises from the vP-attached scope position to a position right adjacent to the auxiliary, and the two negative elements realized in the surface morphology are instances of the same NEG, NEG_1. This structure accounts for the NC interpretation of (37).

C&P's (2014) system also correctly predicts that the structure in (38b) cannot be NC, given that NEG raising should not be able to cross the syntactic boundary presented by the complex DP, which is both a scope island and an island for NEG raising. I thus assume that the two negative elements in the surface structure represent two distinct underlying NEGs:

(39b) I did NEG_3 [$_{vP}$ feed [$_{DP}$ the baby [$_{PP}$ with [NEG_1 SOME bottle]]]]

This structure captures the DN interpretation of (38) in that there are two distinct semantic negations, NEG_3 and NEG_1. The higher NEG is a verbal (or propositional) negation, and the lower NEG_1 is merged as the determiner of an object DP within a complex DP. There is no syntactic NEG raising out of the complex DP, and the structure does not produce any violations.

3.3 Conclusion to section 3

In this section I applied C&P's (2014) model of NPI constructions to Long Distance DN. I showed how their theory accounts for both the NC and DN readings of sentences like (37), under the assumption that both structures contain a unary NEG constituent. I also discussed the distinct account in Blanchette (2013a), which models the same set of facts via appeal to the formation of a chain of [NEG] features. Given that the empirical coverage provided by Blanchette's model does not extend to English NPI constructions, the broader empirical coverage of the C&P model, which appeals to NEG raising, is superior in terms of its ability to account for a wider range of facts concerning NC, NPI, and DN constructions.

In the next section I show that the patterns of NEG raising across clause boundaries that C&P observe for unary NEG NPIs are largely the same for AAPCAppE NC constructions.

4. CNRPs and clause boundaries

In this section I address the relationship of clause boundaries to NC in the context of C&P (2014). The AAPCAppE data I have observed present further support for the hypothesis that English NC with a negative marker and a negative constituent involves syntactic NEG raising from a unary NEG_I constituent. There are two factors that are relevant to whether NC (or unary NEG NPI) interpretations can occur across clause boundaries. The first is whether the clause boundary is the complement of a CNRP, and the second is whether the clause boundary embeds a finite or non-finite clause.

The hypothesis that English NC involves unary NEG structures with resumptive negation makes a prediction for whether or not NC should be able to occur across various clause boundary types: If a unary NEG NPI interpretation is possible, then an NC interpretation should also be possible. This section uses data from the AAPCAppE to show that this prediction is largely borne out. I begin in section 4.1 by contrasting the behavior of negative constituents embedded in finite clauses under NEG-raising and non-NEG raising verbs. I proceed in section 4.2 to show that NC is always possible across non-finite clause boundaries.

4.1 Finite clause boundaries

4.1.1 Finite clause boundaries with CNRPs

In chapter 3 I discussed how finite clause boundaries with NEG raising verbs allow both reversal and unary NEG structures. The following AAPCAppE examples illustrate two cases of NC occurring across a finite clause boundary under the NEG raising verb *reckon*:

(40) I do**n't** reckon there was **no federal men** back then. (It was just the county officers up here.)
(AAPCAppE: AOHP-ASU-TP)

(41) I do**n't** reckon they manufactured it **no more** where they could do it. (AAPCAppE; AOHP-ASU-SJ-MsJ)

I place the verb *reckon* in the class of NEG raising verbs due to its semantic similarity to verbs such as *think* and *believe*. In (40) and (41) the negative marker in the matrix clause

is separated from a negative constituent by a tensed clause boundary, but in both cases NC occurs.

The context following (40) confirms that the unary NEG analysis is the correct one. If both a unary NEG and a reversal reading were possible for (40), then we should have the following two possible interpretations:

(42a) I reckon/think there were **no federal men**.

(42b) **It is not the case** that I reckon/think there was some federal men.

The interpretation in (42a) corresponds to the unary NEG analysis where the negative constituent scopes within the embedded clause. The interpretation in (42b) is the hypothetical reversal interpretation, with the binary NEG constituent residing in the embedded clause and with a separate, verbal negation in the matrix clause. The two structures would be as follows:

(43a) I do NEG_1 reckon $[_{CP}<[NEG_1\ SOME_1$ federal men$]_k>\ [_{TP}$ there $[_{vP}$ was $DP_k]]]$

(43b) I do NEG_3 reckon $[_{CP}<[NEG_2\ [NEG_1\ SOME_1$ federal men$]_k>\ [_{TP}$ there $[_{vP}$ was $DP_k]]]]$

The sentence in (40) is followed by the statement ‘it was just the county officers up there’. This statement is compatible with the unary NEG interpretation in (42a) and the structure in (43a), true in a world in which there were no federal men present. The continuation statement confirms this reality in that it states that there were only county officers, implicating the non-presence of federal men.

Example (41) also supports the hypothesis that these cases involve low scoping, unary NEG NPIs. This example also contains the NEG raising verb *reckon*, followed by a tensed clause containing the negative constituent *no more*. The presence of a NEG raising verb indicates the sentence should be ambiguous. The correct paraphrases may be something like the following:

(44a) I think/reckon they do**n't** manufacture it anymore.
'I think/reckon that it is not the case that they manufacture it anymore.'

(44b) I do**n't** think/reckon they manufactured it any/some more.
'It is not the case that I think they manufactured it anymore.'

In (44a), the speaker thinks there was a point in time after which no more manufacturing took place. In (44b), the speaker does not have the thought that there was a point in time after which some manufacturing took place. The speaker provides some relevant context prior to the statement in (41), which I quote here (from AAPCAppE; AOHP-ASU-SJ-MsJ):

(45) Well the only fertilizer they used back then was just the litter from their barn and stables, because they didn't buy it, they didn't have it. Well in fact I do**n't** reckon they manufactured it **no more** where they could do it.

The statements preceding the NC sentence in question indicate that the *it* (not) being manufactured was fertilizer. They describe a world in which people did not use fertilizer because they could not obtain it, and the reason they could not obtain it is that there was no more being manufactured. This indicates that the low scope, unary NEG interpretation

is also the correct interpretation for this NC construction. I propose that the following structure captures the relevant aspects:

(46) I do NEG_1 reckon [$_{CP}$ <[NEG_1 SOME more]$_k$> [$_{TP}$ they [$_{vP}$ manufactured it [NEG_1 SOME more]$_k$]]

In (46) the negative adverb raises to its scope position at the edge of the embedded finite clause, just under the NEG raising verb *reckon*. Like in (43a), the negative marker that appears in the matrix clause on the surface is base generated on the negative adverb merged in the lower clause.

The following is yet another AAPCAppE example of NC occurring across a tensed clause boundary under a NEG raising verb. In this example, the verb is *believe*:

(47) They had a sirens, but I do**n't** believe they had **no light**.
(AAPCAppE-DOHPII-JB)

This sentence is uttered in response to an interviewer's question about whether there were lights on a particular kind of car. The dialogue reads as follows (from AAPCAppE-DOHPII-JB):

(48) Interviewer: Would they have a light that flashed or something?

Speaker: A what?

Interviewer: Uh did they have a light flashing on it or <u>anything</u>?

Speaker: I do**n't** think so. They had a sirens, but I do**n't** believe they had **no light**.

The fact that the interviewer uses the terms *something* and *anything* interchangeably indicates that *anything* in the question is likely a reversal. Setting this aside, example (47/48) also supports a unary NEG interpretation for this instance of NC across a tensed clause boundary under a NEG raising verb. The speaker's response involves a contradiction. Specifically, the speaker states 'they had a sirens', and this statement is followed by 'but', which is followed by the NC construction with the NEG raising verb *believe*. The NC construction contradicts a statement about the presence of a light, and not a statement about the speaker's thoughts about the presence of a light. In other words, the NC construction does not contradict the sentence 'I think they had a sirens'. This fact supports the hypothesis that the low scope interpretation of the negation in (47/48) is the correct analysis. I thus assert that this represents yet another AAPCAppE example of a unary NEG negative constituent entering into NC across a finite clause boundary embedded below a NEG raising verb.

The following examples illustrate that *any X* NPIs also appear in finite complements of NEG raising verbs:

(49) I do**n't** believe they had <u>any girls</u>.
(AAPCAppE: AOHP-ASU-WS)

(50) I do**n't** believe there's <u>anything</u> left at Wilder now.
(AAPCAppE: DOHPII-AKC)

(51) I do**n't** think that hit[=it] could have <u>ever</u> made <u>any inroads</u> in Harlan County at all.
(AAPCAppE; SKCTC-GC)

(52) I **don't** think they should allow anybody to go into our schools but the American students.
(AAPCAppE; AOHP-ASU-MMH-WH)

As discussed in Chapter 3, C&P (2014) hypothesize that these sentences are ambiguous between a unary NEG NPI and a reversal interpretation. My purpose in including the sentences in (49) through (52) here is twofold. First, these sentences further illustrate the apparent interchangeability of NC and unary NEG NPI constructions, showing that both negative constituents and NPIs can appear in finite complements of NEG raising verbs. Second, in conjunction with my discussion of the NC examples in (40), (41), and (47/48), they illustrate a prediction my hypothesis makes about the interpretation of sentences with NEG raising verbs and finite complements. The prediction is that when these sentences have an NPI in the complement, they should be ambiguous between the high and the low scope reading, but when they appear with a negative constituent they should be unambiguous, and have only the low scope reading. My discussion of the contexts surrounding (40), (41), and (47/48) provides some initial evidence that this prediction may be borne out. The prediction should also be tested via experimental means, work I set aside for future research.

The primary purpose of this subsection has been to show that like strict NPI constructions, English NC constructions are possible across finite clause boundaries in the complements of NEG raising verbs, in support of the hypothesis that English NC involves unary NEG constituents and syntactic NEG_I raising. In the next subsection I examine the behavior of negative constituents embedded in finite clauses that are complements to non-NEG raising verbs.

4.1.2 Finite clause boundaries with non-CNRPs

I begin with the following two examples, both of which contain a negative constituent embedded in a finite clausal complement under a non-NEG raising verb. Each example is preceded by some context. In each case, the context shows that the interpretation for the example sentence is DN, and not NC. (Example (52) is (23) from Chapter 2.)

(52) Regarding appendicitis, and the fact that it was a treatable disease that killed many people:
Yeah that's killed a many a one, and they did**n't** know it was **nothing**.
(AAPCAppE: AOHP-ASU-SJ)

(53) **Never** did get in touch. I do**n't** know why she **never** did.
(AAPCAppE-DOHPII-MC)

Both of these examples contain a finite complement embedded below the non-NEG raising verb *know*. Example (52) contains the negative constituent *nothing* as an object in the embedded clause and the negative marker *-n't* in the matrix clause. The context for this sentence shows that each of these two negative elements makes an independent contribution to interpretation. The speaker is lamenting the fact that despite the treatability of appendicitis, many people died from it because they did not know it was treatable. The sentence 'they didn't know it was nothing' means that it is not the case that they knew it was nothing, where the term *nothing* means 'not something that people needed to die from'. This is a DN interpretation, similar to the long distance DN discussed above. I propose to model it similarly, as follows:

(54) They did NEG_3 [$_{vP}$ know [$_{CP}$ [$_{TP}$ it [$_{vP}$ <[NEG_1 SOME thing]$_k$> [$_{vP}$ was [NEG_1 SOME thing]$_k$]]]

In this structure there are two distinct NEGs, NEG_3 and NEG_1, each of which contributes to interpretation. Due to C&P's (2014) Evenness Condition on NEG deletion (see chapter 3), despite the presence of a potential NEG deleter in the higher clause, the lower, NEG_1 cannot delete, and both NEGs are spelled out. Note that in (54) there is no syntactic NEG raising out of the tensed clausal complement to the non-NEG raising verb *know*. Therefore, there are no syntactic movement violations in the structure, and the sentence is correctly generated as a DN.

Example (53) also contains a negative constituent embedded under a finite clause that is complement to the non-NEG raising verb, which is preceded by a negative marker. In this case, the embedded negative constituent is the adverb *never*. The preceding context sentence ('never did get in touch') indicates that the *never* in the sentence 'I don't know why she never did' should be interpreted independently of the negative marker, resulting in DN. The negative adverb thus makes an independent contribution, as does the negative marker. I propose the following structure for (53):

(55) I do NEG_3 [$_{vP}$ know [$_{CP}$ why she [$_{vP}$ [NEG_1 ever] [$_{vP}$ did]]]

Abstracting away from the lexical semantics of the negative adverb, (55) represents two distinct NEGs, NEG_3 and NEG_1, merged in distinct clauses and separated by a tensed clause boundary. In this structure there are no syntactic movement violations because the

NEG in the lower clause does not raise past the tensed clause embedded under the non-NEG raising verb *know*. Once again, the DN reading is accounted for.

The following represent two additional AAPCAppE examples of DN across a tensed clause boundary with a non-NEG raising matrix verb:

(56) I just ca**n't** grasp how times have changed from **nothing** into everything.
(AAPCAppE-DOHPII-RC)

(57) She did**n't** realize that both sides did some damage that they had **no business** doing.
(AAPCAppE; SKCTC-CJ)

Assuming that *grasp* and *realize* are non-NEG raising, both of these sentences have negative constituents embedded in tensed clauses under non-NEG raising verbs. The phrase 'from nothing into everything' in (56) indicates that 'nothing' in that sentence is a negative universal endpoint quantifier with a unary NEG structure. This negative constituent is interpreted independently of the negative marker above the matrix verb, attached to *can*. The constituent *no business* in (57) is also interpreted independently from the higher negative marker. In (57) the negatives are separated by two tensed clause boundaries. In both (56) and (57), a DN (and not an NC) interpretation results.

Given the relative rarity of DN constructions, the examples occurring in spontaneous speech are predictably few. Nevertheless, I propose, on the basis of these data, that finite clauses embedded under non-NEG raising verbs block NC. I formalize this constraint as follows:

(58) **NC Clause Boundary Constraint**: Finite embedded clauses under non-NEG raising verbs block NC. Unless a finite clause is embedded under a NEG-raising verb, NC cannot occur across its highest edge.

A preliminary search of AAPCAppE data reveals that this constraint holds.[34] Under (58),

[34] In chapter 2 I discussed how C&P's (2014) argument that Classical NEG Raising is subject to island constraints constitutes a large part of their argument in support of syntactic NEG raising. I further illustrated how their two different NPI types account for the differences in locality constraints on strict- and non-strict NPIs, which for them correspond to unary NEG and reversal structures respectively. However, my chapter 2 discussion involved some oversimplification of the facts. Specifically, for cases where an NPI appears within a clause that is complement to a non-NEG raising verb, (C&P:47,83) assert that there should be both a unary NEG and a reversal interpretation. To illustrate, consider:

(i) I did**n't** claim that John stole anything.

This sentence contains the matrix non-NEG raising verb *claim* and a finite embedded clause. According to C&P, sentence (i) should thus have the following two possible structures (cf. C&P 2014:89):

(ii) I did NEG_1 <[NEG_1 SOME thing]$_5$> [$_{VP}$ claim [$_{CP}$ that John [$_{VP}$ stole DP_5]]
(iii) I did NEG_1 [$_{VP}$ claim [$_{CP}$ that John <[NEG_2 NEG_3 SOME thing]> [$_{VP}$ stole DP_4]]]

These two structures yield meanings that are truth-conditionally distinct because of the position of the existential quantifier contributed by SOME relative to the verb. The relevant orders are as follows:

(ii') not > some > say
(iii') not > say > some

In a scenario in which I reported to a police officer that John stole something, but I didn't tell the officer what John stole, reading (iii/iii') is true and reading (ii/ii') is false. (I thank Sam Al Khatib for providing the relevant context.) This is one place where my judgments differ from those reported in C&P (2014). For me, there is no reading of (i) under which I told a cop that John stole something. This means that for me, only the unary NEG structure in (ii/ii') is possible. My judgment that sentences like (i) can only have a unary NEG structure finds a parallel in the AAPCAppE data in that when negative constituents appear in across tensed clause boundaries under non-NEG raising verbs, DN and not NC results. This fact, in conjunction with my judgment of (i), supports the hypothesis that NC involves syntactic NEG-raising from unary NEG constituents. I set this issue aside here.

NEG raising across a tensed clause boundary in the complement of a non-NEG raising verb yields a grammatical violation.

Before discussing non-finite clause boundaries, let us consider how *any X* NPIs behave in finite complements of non-NEG raising verbs. Recall that under C&P's (2014) proposal, *any X* NPIs may have either unary NEG or reversal structures. Consider the following examples:

(59) They did**n't** care whether they spoke any English or **not**. (In fact they'd be glad if they did**n't**, because they couldn't communicate.)
(AAPCAppE-DOHPII-RC)

(60) For the schools out here, I do**n't** know whether it affected them in any way or **not**.
(AAPCAppE: AOHP-ASU-WS)

In both (59) and (60), an *any* X NPI is embedded in the finite complement of a non-NEG raising verb (*care* and *know*), and *-n't* marks the matrix clause. There are two possible structures for these sentences, one in which the NPI is a unary NEG structure and the matrix negation has raised from the NPI in the lower clause, and one in which the NPI is a reversal NEG and no inter-clausal movement has occurred. Focusing on (59), the reversal interpretation can be paraphrased as follows:

(61) They did**n't** care whether they spoke (some) English (or not).

Example (61) shows that that substituting the DP '(some) English' for the NPI yields a sentence that is both acceptable and logically equivalent to (59). The fact that the sentence is tagged with *or not* supports the reversal analysis of the NPI. This tag applies

to reverse the polarity of the embedded sentence, which is affirmative under the reversal analysis, with the meaning 'they spoke some English'. I therefore conclude that sentence (59) contains a reversal NPI in the embedded clause. The same conclusion applies to the NPI in (60), which is also tagged with *or not*.

The examples in (59) through (62) support the conclusion that AAPCAppE examples of NPIs in finite complements of non-NEG raising verbs have a reversal structure. The following four examples, which also contain *any* X NPIs in finite complements of non-NEG raising verbs, further support this conclusion:

(63) I **don't** know whether you heard anything about it or **not**, or knowed anything about it.
'I don't' know whether you heard something about it or not, or knew something about it.'
(AAPCAppE; AOHP-ASU-MS)

(64) I do**n't** know that that had anything to do with it.
'I don't know that that had something to do with it.'
(AAPCAppE: DOHPII-AKC)

(65) (In response to interviewer's question: "Did they have automatics?")
They was**n't no automatics** then that I knowed anything about.
'There weren't any automatics then that I knew (something) about.'
(AAPCAppE; SKCTC-GD)

(66) They did**n't** care whether the people done anything for you or **not**.
'They didn't care whether the people did something for you or not.'
(AAPCAppE; SKCTC-MM)

Each of these examples contains the NPI *anything* embedded in a finite clause below a non-NEG raising verb, and in each case, the sentence can be paraphrased by replacing the NPI with *something*. The fact that these constituents spell out as *anything* and not *nothing*

in these contexts supports the hypothesis that they are reversals and not unary NEG constituents. Furthermore, the examples in (63) and (66) contain the tag *or not* attached to the clause containing the NPI, indicating that the sentence is affirmative.

In sum, two general observations support the hypothesis that some AAPCAppE NC constructions involve syntactic raising of a NEG from a unary NEG constituent. First, when negative constituents appear in finite complements of non-NEG raising verbs, DN (and not NC) results. Second, the *any* X NPIs appearing in these same conditions can be analyzed as reversal (and not unary NEG) structures, which involve no syntactic NEG raising across a finite clause boundary. In the next subsection, I observe how NPIs and negative constituents behave in non-finite complement clauses.

4.2 Non-finite clause boundaries

C&P (2014) show that both unary NEG and reversal NPI types are possible in non-finite complements of NEG raising and non-NEG raising verbs. Given that unary NEG NPIs are possible in such environments, the hypothesis that NC involves syntactic raising of NEG_1 from a unary NEG constituent predicts that NC is possible across non-finite clause boundaries. The following sentences illustrate that this prediction is borne out:

(67) I ai**n't** able to do **nothing**.
(AAPCAppE: AOHP-ASU-MMG-JG)

(68) Well people back then did**n't** know how to have **nothing**.
(AAPCAppE: AOHP-ASU-MMH-EH)

(69) He **never** got to walk under my shade tree **no more**.
(AAPCAppE: SKCTC-EA)

(70) Ai**n't** bringing **none of that** down here to put **nobody** to work with.
(AAPCAppE; SKCTC-TH)

(71) He was having a hard time himself at learning it, so he did**n't** try to teach us **none**.
(AAPCAppE-DOHPII-MC)

(72) But they do**n't** try to save **nothing** on that building material.
(AAPCAppE: AOHP-ASU-MMH-WH)

(73) You the one that should said something, because I was**n't** going to say **nothing** about seeing him again.
(AAPCAppE: DOHPII-AF)

(74) And they did**n't** encourage us to vote for this one or for that one or **nobody**.
(AAPCAppE-DOHPII-DE)

The examples in (67) through (74) are all NC, and the negative elements are separated by a non-finite clause boundary. Taking the example in (68), which contains the non-NEG raising matrix verb *know*, the analysis in C&P would assign the following structure to this sentence:

(75) Well people back then did NEG_1 [$_{vP}$ <[NEG_1 SOME thing]>know [$_{CP}$ how to have [NEG_1 SOME thing]

Structure (75) shows that when NC occurs across a non-finite clause boundary, the unary NEG NPI raises across the lower clause boundary to its scope position, which is higher than the matrix verb. As predicted by a syntactic NEG_1 movement approach to English

NC, in these examples NC behaves just like C&P's (2014) unary NEG NPIs when separated from the higher negative marker across a non-finite clause boundary.

5. Reversals in the AAPCAppE

This section illustrates some common reversal contexts, and shows that in the AAPCAppE, *any* X NPIs (and not *no* X constituents) are employed in these contexts, as predicted. C&P (2014:30) provide the following sentences as prototypical reversal-containing structures (their (3a–c)):

(72) At most half the class knows any physics.

(73) Everybody who steals any candy will get caught.

(74) If you steal any candy, you will be caught.

In each example, the *any* determiner can be replaced with the term *some*. For example, (72) can be restated as 'at most half the class knows some physics'. In (72) the non-negative quantifier phrase *at most half the class* serves as the NEG deleter for the reversal NEGs, in (73) it is the universal quantifier *everybody*, and in (74) the conditional provides the necessary environment for NEG deletion.

My search of the ~420,000 word AAPCAppE subcorpus yielded no instances of *any* X NPIs embedded in prototypical reversal contexts like the one in (72) (in the restriction of a universal *every X* quantifier) or the one in (73) (with an *at most X* quantifier.) However, I did find *any X* NPIs embedded in conditionals and in

interrogatives, which are also environments where *any* X NPIs appear as reversals. The following are some examples:

(80) I do**n't** know if I've got <u>any wisdom</u> or **not**.
(AAPCAppE; DOHPII-RC)

(81) And she told me that if people mean to think the German people had <u>any love</u> for the Americans, well they did **not**.
(AAPCAppE; AOHP-ASU-MMH-WH)

(82) Have you ever tasted <u>any quinine</u>?
(AAPCAppE; AOHP-ASU-MMH-WH)

(83) Can you think of <u>anything else</u>, honey?
(AAPCAppE; AOHP-ASU-LW)

The examples in (80) through (83) are clear cases of reversal constructions. The conditional in (80) is in the complement of the non-NEG raising verb *know*. Replacing the NPI *any wisdom* with the phrase *some wisdom* yields a statement truth-conditionally equivalent to (80), indicating that the reversal interpretation is the correct one. Similarly, replacing *any love* in (81) with *some love* yields a statement truth conditionally equivalent to the one below the conditional, but replacing it with *no love* yields the opposite meaning. The same is the case for the interrogatives in (82) and (83), which pattern with the reversal in (75).

In sum, *any* X NPIs are required for the non-negative reversal reading. While *no X* constituents are also possible in these same contexts, their presence yields a distinct meaning (as shown in (77) and (78)). The use of *any* X NPIs in reversal contexts, and the concurrent lack of *no* X negative constituents in these same contexts presents further

support not only for the hypothesis that NC instantiates syntactic NEG raising and (in some cases) polyadic quantification with unary NEG constituents, but also for the existence of C&P's two NPI types. Though our AAPCAppE speakers make use of both *any* X and *no* X forms, only the former type can be used as reversals.

6. Comparison of the unary NEG and Agree approaches to NC

The approach to modeling English NC I have proposed in this chapter is distinct from the Agree approach to NC proposed by Zeijlstra (2004). In this section I briefly contrast the two approaches, and argue that the NEG raising approach is superior because it accounts uniformly for a broader range of facts.

Zeijlstra (2004) argues that UG offers the following two possibilities: (i) DN languages, and (ii) NC languages. He models NC as the instantiation of syntactic Agree between a negative element with an uninterpretable feature [uneg] and a null negative operator with interpretable [ineg]. Under this approach, the NC structure for a sentence like 'John didn't do nothing' would be as follows:

(84) John did [$_{\text{NegP}}$ ¬$_{[i\text{NEG}]}$ [$_{\text{Neg}'}$ n't$_{[\sout{u\text{NEG}}]}$ [$_{\text{vP}}$ do nothing$_{[\sout{u\text{NEG}}]}$]]]

Such structures instantiate Multiple Agree, in which more than one uninterpretable feature can be valued by the same element. In this case, the single [ineg] feature on the abstract negative operator values the [uneg] introduced by the negative marker and the negative constituent. Zeijlstra argues that in NC languages, all negative elements, including markers and constituents, are lexically endowed with an uninterpretable [uneg]

feature. In DN languages, there is no [uneg], and each negative element contributes a semantic negation.

I now extend the Agree approach to some AAPCAppE data. Under Zeijlstra's (2004) theory, the AAPCAppE represents an NC language. However, the speakers in the AAPCAppE also use DN. Recall the following two examples from the same speaker (presented in Chapter 2 as (22) and (23)):

(85) NC: We used to pick a lot of Balm of Gilead buds up here, but they got so cheap now you ca**n't** make **nothing** [by selling them]. (AAPCAppE: AOHP-ASU-SJ)

(86) DN (Regarding appendicitis, and the fact that it was a treatable disease that killed many people): Yeah that's killed a many a one, and they did**n't** know it was **nothing**. (AAPCAppE: AOHP-ASU-SJ)

Under the Agree approach, the structure for the NC sentence in (85) would be as above in (84). For the DN sentence in (86), the Agree approach would have to state that each negative element agrees with a distinct null operator with [ineg] to generate the DN reading. The structures for (85) and (86) respectively would be roughly as follows:

(87) You can[$_{\text{NegP}}$ ¬$_{[i\text{NEG}]}$ [$_{\text{Neg}'}$ n't$_{[\sout{u\text{NEG}}]}$ [$_{\text{vP}}$ make nothing$_{[\sout{u\text{NEG}}]}$]]]

(88) They did[$_{\text{NegP}}$ ¬$_{[i\text{NEG}]}$ [$_{\text{Neg}'}$ n't$_{[\sout{u\text{NEG}}]}$ [$_{\text{vP}}$ know [$_{\text{CP}}$ it [$_{\text{NegP}}$ ¬$_{[i\text{NEG}]}$ [$_{\text{vP}}$ was nothing$_{[\sout{u\text{NEG}}]}$]]]]]]

The difference between these structures is that in the DN construction, each clause contains its own negative operator with [ineg], and each negative element in the structure

agrees with one of those [inegs]. This is distinct from the NC structure, in which both elements agree with the same [ineg].

Under the Zeijlstra's (2004) Agree approach, DN languages cannot generate NC interpretations for sentences like (85) because their negative elements all have interpretable negations, and Agree is impossible. Furthermore, the structure for a DN sentence like (86) would have to be different from structure (88). No Agree relation would occur, and each negation would be introduced somewhere inside the verb phrase. In other words, the Agree approach posits two different structures for the same DN sentence. This makes it less elegant than the NEG raising approach, which posits only one structure for those sentences. Furthermore, whether or not they use NC, English speakers readily interpret sentences like (85), and object NC constructions in general, as NC and not DN (as shown in Coles-White 2004 and in Chapter 6 of this dissertation). This fact is not predicted by the separation of NC and DN grammars. I thus conclude that the NEG raising approach is superior to the Agree approach in accounting for the coexistence of NC and DN constructions. The fact that the NEG raising approach also accounts for the identical semantic and syntactic behaviors of Object NC and some NPI constructions further supports this conclusion.

7. Conclusion and look ahead

In this chapter I proposed that English NC proper instantiates syntactic movement from a unary NEG constituent (in the sense of Postal (2005) and Collins and Postal (2014)), with resumptive negation. This hypothesis aligned English NC with the analysis of *ke*-NPIs in Ewe put forth in Collins et al. (2015). Under this analysis, the problem that

NC constructions apparently pose for the principle of compositionality is solved, in that only a single negation is present in the sentence's underlying representation. I further proposed the unary NEG index hypothesis as a modification to C&P's (2014) structure for polyadic quantification structures. This modification allowed me to account for variability in spell-out of the unary NEG phrase as either a *no* or an *any X* constituent. I explained morphological variability in NC and NPI constructions by appeal to variable application of a post-syntactic NEG_1 deletion rule.

All of the sentence types discussed in this chapter involved NPIs and negative constituents appearing as structural objects. In Chapter 5, I turn my focus to sentences with negative subjects.

Chapter 5

Negative Subjects

0. Introduction

Negative objects in English NC constructions behave like strict NPIs, and in Chapter 4 I analyzed them as unary NEG DPs with syntactic NEG raising and polyadic quantification *à la* Collins and Postal (2014). Chapter 4 thus provides a unified theory of English NPI and Object NC constructions. In this chapter, I continue to augment this theory by turning my focus to negative subjects.

The aim of this chapter is to observe the range of patterns in English sentences with a negative subject and a negative marker, and to construct a model that captures their syntactic and semantic properties.

1. The phenomena

NC constructions with negative subjects can be divided into two broad types, defined in terms of the position of a negative subject relative to a negated auxiliary. This section illustrates and describes each type.

1.1 Popular Negative Inversion (PNI)

The first type I illustrate here is one in which a negative constituent subject immediately follows a negated auxiliary or modal. This type has been observed and described by Labov (1968), Wolfram and Fasold (1974), Wolfram and Christian (1976),

Green (2001, 2011, 2014), Montgomery (2004), Montgomery and Hall (2004), and others whose analyses I discuss below. The following examples illustrate:

(1) Did**n't nobody** live in there then.[35]
'Nobody lived in there then.'
(AAPCAppE: DOHP-ASU-WC)

(2) So they **don't nobody** cheat me out of **nothing**.
'So nobody cheats me out of anything.'
(AAPCAppE: SKCTC-EA)

(3) There was**n't no slaughter pens** at that time.
'There were no slaughter pens at that time.'
(AAPCAppE: AOHP-ASU-CKN)

(4) Was**n't nothing** much she could say.
'There was nothing much (that) she could say.'
(AAPCAppE: SKCTC-GH)

(5) Ai**n't nobody** here but just little children.
'There is nobody here except little children.'
(AAPCAppE: SKCTC-DN)

In each example a negative subject appears immediately following a negated auxiliary, the defining property of a construction type I henceforth call Popular Negative Inversion

[35] This example co-occurs in this same speaker file with the following sentence, which has only the negative subject *nobody*, and no negated auxiliary:

(i) **Nobody** lived past the house.
(AAPCAppE: DOHP-ASU-WC)

Following Green (2011), I assume the shift between these variant forms does not necessarily indicate a shift in grammars. Green states the position as follows (p. 125):

> "Moving from negative concord to single negation does not necessarily mean that [speakers] are shifting to a "standard" variety, and moving from single negation to negative concord does not mean that they are shifting from one dialect to another."

(PNI).[36,37] While the sentences in (1) through (5) all contain the prototypical PNI pattern, they differ in a number of ways. For example, contrasting (1) and (2), a negative object may appear in a concord relation with the negative subject and auxiliary (2), but no negative object is required (1). There is also a contrast between the examples in (1) and (2) on the one hand, and (3) through (5) on the other. Note that the prose translations for (1) and (2) include a negative constituent in matrix subject position, while the prose translation for (2) through (5) are phrased as existential statements. Labov et al. (1968) were the first to describe and categorize PNI constructions as either existential or non-existential. The examples also show that PNI constructions may or may not contain a pronominal subject immediately preceding the negated auxiliary.

The example in (5) shows that exceptives attach to at least some PNI constructions, in the typical unary NEG NC/NPI pattern (see Chapters 3 and 4). Lastly, the negative marker in each example is *-n't*, and not *not*. All of the PNI examples in our ~420,000 word AAPCAppE subcorpus contained the marker *-n't*, and none contained *not*.

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[36] Green (2014) describes patterns in African American English (AAE). There may be some crucial distinctions across Green's AAE patterns and the patterns found in the AAPCAppE and in other descriptions of Appalachian Speech (e.g. Wolfram and Christian 1976; Montgomery and Hall 2004). Green (2014:122) claims that sentences like (2), with the pronoun *they* preceding the negated auxiliary, are not allowed in AAE, while sentences like (1) with no *they* are possible. I focus solely on the variation found in the AAPCAppE data, setting aside a comparison of Green's AAE judgments and AAPCAppE data.

[37] The term 'negative inversion' has also been used to describe these construction types (e.g. Sells et al. 1996; Foreman 1999). The term 'negative inversion' is also used to describe the following construction type, in which a fronted negative constituent appears to require the inversion of a modal or auxiliary over a non-negative subject (e.g. Horn 1989 [2001]; Collins and Postal 2014; a.o.):

(i) Under **no circumstances** would I ever hitchhike.
(cf. *Under **no circumstances** I would ever hitchhike.)

1.2 Subject Negative Concord

The other broad type of NC construction with a negative subject contains a negative constituent in canonical subject position, immediately preceding a negated auxiliary, modal, or copula. For simplicity, I call this construction type Subject NC. This type has also been observed by many authors, including Labov (1968), Wolfram and Fasold (1974), Wolfram and Christian (1976), Smith (2001), and Green (2011), who includes detailed observations of Subject NC in child language. Green (2014) notes that from a theoretical perspective, Subject NC has received significantly less attention in the literature than PNI. The following examples illustrate Subject NC:[38]

(6) **Nobody** did**n't** know the difference though (or at least they **never** said **nothing**).
'Nobody knew the different though (or at least they never said anything).'
(AAPCAppE: SKCTC-EA)

(7) **Nobody** did**n't** touch that but her.
Nobody touched that except her.
(AAPCAppE: SKCTC-FM)

(8) And till today I can work enough arithmetic that **nobody** ca**n't** cheat me out of **nothing**.
'And until today I can do enough arithmetic so that nobody can cheat me out of anything.'
(AAPCAppE: SKCTC-EA)

(9) **Nobody** would**n't** live in it on account of all those people getting killed in there and everything.
'Nobody would live in it on account of all those people getting killed in there and everything.'
(AAPCAppE: DOHPII-JB)

[38] Unlike the PNI constructions illustrated in the previous subsection, none of the prose translations for the Subject NC constructions in (6) through (10) involve existential statements. The Subject NC constructions can all be translated using a declarative statement with a single negative element: the negative subject in canonical subject position.

(10) And he got lost, probably **nobody** could**n't** find him.
And he got lost, probably nobody could find him.
(AAPCAppE: SKCTC-DN)

These examples show that both auxiliaries and modals are possible in Subject Examples (1) and (2) contain the auxiliary *do*, while (8) through (10) each contain a different modal. Example (8) shows that the negative constituent and negative marker may enter into NC with an additional, lower negative constituent, but the remainder of the examples show that this configuration is not necessary, and that the negative subject and negated auxiliary can be the only negative elements. Like in PNI, all of these examples (and all of the Subject NC examples in the ~420,000 word subcorpus) contain the marker *-n't*, and not *not*. The ratio of *not* to *-n't* in this sub-corpus is small: 956 tokens of *not* and 4,701 tokens of *-n't*. Nevertheless, that *not* occurs nearly a thousand times in the corpus, but it never occurs in Subject NC or PNI, is significant. Unlike in PNI, Subject NC never contains a pronominal form (e.g. *there*) preceding the first negative element in the string.

2. Previous Analyses of Popular Negative Inversion (PNI)

2.1 Two different structures for two types of PNI

Sells et al. (1996) provide an Optimality Theoretic approach to the syntax of PNI. They argue that Labov's (1968) two types of PNI constructions reflect two distinct syntactic configurations. The following rough sketches illustrate their structures for existential and non-existential PNI constructions, respectively (from Sells et al. 1996: 606):

(11) [$_{IP}$ *Ain't* [$_{NP}$ *nothing* [$_{CP}$ *happening*]]]. (existential)

(12) [$_{IP}$ *Can't* [$_{VP}$ [$_{NP}$ *nobody*] [$_{V'}$ *tag you then*]]]. (non-existential)

Neither of these structures involves syntactic movement. In the existential structure in (11), the negative subject heads a complex noun phrase that takes a clausal complement, realized as the predicate *happening*, and the matrix clause consists of an IP and its complex noun phrase complement. In the non-existential structure, the negative constituent is a VP-internal subject. In both cases, the canonical subject position in spec,IP, which must typically be filled in English sentences under the well-known EPP, is empty.

Applying the tools of Optimality Theory (Prince & Smolensky 1993), Sells et al. (1996) argue that in grammars that generate PNI, the EPP (or the "FillSpec" constraint) is violable relative to a set of other constraints that are satisfied by the structures in (11) and (12), and relative to another possible structure with more phrasal projections, in which more constraints are violated. I set aside the details of their analysis.

2.2 PNI and scope

Unlike Sells et al. (1996), Foreman's (1999) analysis of PNI assigns the same structure to both existential and non-existential PNI. His logic builds on the observation that, unlike some non-inverted sentences with a quantificational subject and a negative marker, PNI is unambiguous. To understand this observation, consider the following:

(13) Everybody did**n't** watch (the game).

In (13), there are two scope bearing elements: the universal quantifier *everybody* and the negation marked by *didn't*. The presence of two scope-bearing elements yields two possible interpretations, logically represented as follows:

(14) ∀x [Person (x) ➔ ¬ Watch the game (x)] (= Nobody watched the game.)

(15) ¬ ∀x [Person (x) ➔ Watch the game (x)] (= Not everybody watched the game.)

In (14) the universal quantifier takes wide scope, and the sentence means that nobody watched the game. In (15) the negation takes wide scope, and the sentence means that not everybody watched the game.

Now consider the following PNI:

(16) Did**n't** everybody watch the game.
'Not everybody watched the game.'

Foreman (1999) observes that despite the fact that it appears to be composed of the same elements as the ambiguous sentence in (13), (16) is unambiguous. The only possible interpretation for (16) is the one represented in (15), in which the negation takes wide scope.

On the basis of the observation that PNI is unambiguous, Foreman (1999) proposes that its syntax is characterized by the raising of the negated auxiliary over the quantificational subject, with the purpose of marking the wide scope of negation. This semantically motivated syntactic raising applies in both existential and non-existential PNI, derived via the same syntactic means. He hypothesizes that there are two clausal

negative phrases, and that in PNI the negated auxiliary moves from the lower to the higher one, crossing the intervening subject, as follows:

(17) [$_{NegP2}$ [$_{Neg2}$ *Didn't*$_i$] [$_{AgrS\text{-}P}$ *everybody* [$_{NegP1}$ [$_{Neg1}$ t$_i$] [$_{VP}$ *watch the game*]]]].

Foreman does not state whether he believes this movement is obligatory for the wide scope negation reading.

Returning to the AAPCAppE data, consider now the following examples, all of which contain the universal quantifier *everybody* and a negated auxiliary:

(18) And you're the one called me Aunt Tote. Everybody ai**n't** called me Aunt Tote. […] Everybody did**n't** call me that.
'And you're the one who called me Aunt Tote. Not everybody called me Aunt Tote. Not everybody/nobody called me that.'
(AAPCAppE; SKCTC-CJ)

(19) And we did**n't** have telephones. Everybody did**n't** have telephones in their house. (And if you had to have a doctor, you had to go bang on the doctor's door.)
'And we didn't have telephones. Not everybody/nobody had telephones in their house.'
(AAPCAppE; DOHPII-CC-JC)

(20) And of course everybody did**n't** vote Republicans. (I **never** did.)
'And of course not everybody/nobody voted Republican.'
(AAPCAppE; SKCTC-BL)

(21) Course everybody did**n't** have automobiles to jump in and ride. (We'd walk it.)
'Of course not everybody/nobody had automobiles to jump in and ride.'
(AAPCAppE; DOHPII-CC-JC)

Tortora (2014) warns that we cannot draw generalizations about meaning for potentially ambiguous structures using corpus data, as they do not provide information about the

speaker's *intended* meaning. Thus, the meanings of the four examples in (18)–(21) are ambiguous in that it remains unclear which structure (wide or narrow scope negation) the speaker intended.

Greg Johnson, a linguist from Appalachia, observes that the sentences in (18) through (21) are ambiguous between the *not everybody* and the *nobody* reading. However, Johnson prefers the *not everybody* reading for (18) and (20), in which negation takes wide scope. Paul Reed, also a linguist from Appalachia, observes that for him only the wide scope negation *not everybody* reading is available. Reed states that in order to get the *nobody* reading, he requires a PNI NC construction (e.g. 'didn't nobody have telephones') or a single negative in subject position ('nobody had phones'). In sum, when universal quantifier subjects appear before negated auxiliaries, the negation can take wide scope, and for some speakers the wide scope negation reading may be obligatory. This indicates that although PNI constructions with a universal subject may be unambiguous, the negated auxiliary does not need to appear before the universal subject for the wide scope negation reading to occur.

2.3 PNI Subjects

Foreman (1999) illustrates a range of possible subject types in PNI. Example (16) shows that the universal quantifier *everybody*, which is not negative, is a possible PNI subject. Examples (1) through (5) all contain morphologically negative subjects (*nobody* and *nothing*). However, Foreman's work shows that the subject in PNI does not have to be morphologically negative, and that PNI constructions are not necessarily NC constructions.

In Foreman's (1999) description of West Texas English, possible PNI subjects include negative constituents, universal quantifiers, NPIs, quantifiers with the determiner *many* (e.g. *many people*, *very many people*), and *more than XP* quantifiers such as *more than three people*:

(22) Did**n't** anybody watch the game.
'Nobody watched the game.'

(23) Did**n't** (very) many people watch the game.
'Not very many people watched the game.'

(24) Did**n't** more than five people watch the game.
'Not more than five people watched the game.'

Foreman also observes that referential subjects are not acceptable in PNI constructions. He reports the following judgments:

(25) *Didn't Jack watch the game.
(cf. Jack didn't watch the game.)

(26) *Didn't I watch the game.
(cf. I didn't watch the game.)

(27) *Didn't the teachers watch the game.
(cf. The teachers didn't watch the game.)

Blanchette (2013b) and Matyiku (2015) add *some X* and *few X* to the list of impossible PNI subjects. They report the following judgments:

(28) *Didn't some people watch the game.
(cf. Some people didn't watch the game.)

(29) *Didn't few people watch the game.
(cf. Few people didn't watch the game.)

Green (2014: 130–131) reports the following additional judgments regarding possible and impossible PNI subjects. (She characterizes the impossible subject example as infelicitous (#), and I maintain her characterization):

(30) Did**n't** but a few people watch the game.
'Only a few people watched the game.'

(31) Did**n't** all the students watch the game.
'Not all the students watched the game.'

(32) #Did**n't not all the people** show up.

Example (30) shows that although *few X* quantifiers are generally not possible as PNI subjects, *a few X* quantifiers are, but only if they are embedded in an exceptive. Example (31) shows that in addition to universal *every X* constituents, universal *all X* subjects are also allowed. Green takes the infelicity of (32), with *not all the people*, to indicate that subjects that are only weakly quantificational are not possible in PNI.[39]

Green (2014) further observes that "referential" subjects are possible in PNI if they include a negative marker. She provides the following example (p. 131, ex. (29)):

[39] Myler (To Appear) and Chris Collins (p.c.) point out that PNI examples with the subject *many people* and those with numerals such as *five people* are problematic for Green's account of PNI subjects as necessarily strongly quantificational. Both Collins and Myler point out that *many X* quantifiers are only weakly quantificational, and Myler points out that numerals have no place on the quantificational scale.

(33) Speaker A: Many old fraternity guys showed up for homecoming. I think even Vince Jackson was there.
Speaker B: No, did**n't no Vince Jackson** show up!
Reading 1: No one by the name of Vince Jackson showed up.
Reading 2: The one-and-only Vince Jackson did not show up.

Green's reading 2 indicates that in (33), *no Vince Jackson* may be interpreted referentially in the context provided by Speaker A. The negative marker on the NP Vince Jackson is required, however, and we can also deduce from her discussion that the following PNI should be impossible:

(34) *Did**n't** Vince Jackson show up.

I discuss Green's approach to modeling PNI in the next subsection, which addresses Subject NC. Summarizing the literature, bare referential NPs, bare *few X* constituents, *some X* constituents, and *not all X* constituents are impossible as PNI subjects. Possible PNI subjects include morphologically negative constituents (e.g. *nothing*, *no Vince Jackson*), NPIs, universal quantifiers, and *many X* quantifiers.

Building on Foreman's (1999) observation regarding the unambiguous nature of some PNI constructions, Matyiku (2015) observes that a range of subjects that are impossible in PNI are those that would not give rise to ambiguity in a non-inverted structure. To illustrate, consider:

(35) Few people did**n't** watch the game.
Paraphrase 1: 'There are few people who did not watch the game.'
(= Many people watched.)
Paraphrase 2: 'It is not the case that few people watched the game.'
(= Many people watched.)

The paraphrases in (35) show that reversing the surface scope of the negation and the phrase *few people* yields two sentences with the same truth conditions. Matyiku's Optimality Theoretic account of PNI appeals in part to a modified version of Fox's (2000) principle of Scope Economy, a constraint on phrasal movement asserting that movement of one quantificational phrase over another is grammatical only if it is disambiguating. Under Matyiku's analysis, PNI involves movement of a negative operator over a quantificational subject, and this movement results in the overt marking of the wide scope of negation.

Recall now the observation (Wolfram and Fasold (1974), Wolfram and Christian (1976), Foreman (1999)) that PNI constructions may contain negative (and NPI) subjects, as in example (1), repeated here as (36).

(36) Did**n't nobody** live in there then.
'Nobody lived in there then.'
(AAPCAppE: DOHP-ASU-WC)

When the subject of PNI is morphologically negative, the interpretation is NC. This means that the negative morphology on the subject and the negative marker both mark the same negation. This is problematic for movement as disambiguating accounts of PNI. If the structure of (36) is such that a negative operator moves over the quantificational subject *nobody*, then it is unclear how this movement could be construed as disambiguating, given that both elements mark the same negation. In the context of Collins & Postal's (2014) theory of NPIs, and in any theory of NPIs (or "negative

concord items") that assumes their inherent negativity (e.g. Watanabe 2004), the same problem arises.

2.4 Transitive Expletive Constructions

Zanuttini and Bernstein (2014; henceforth Z&B) analyze a sentence type they call the Transitive Expletive Construction (TEC). TECs are characterized by a sentence initial pronoun (*they* or *there*) followed by a negated auxiliary or modal, which is itself followed by a quantificational subject that is usually, though not necessarily, negative. The following examples from Z&B (which they take from Montgomery and Hall (2004) and Shearer (1998)) illustrate the TEC type:

(37) There ca**n't nobody** ride him. (Montgomery and Hall 2004)
'Nobody can ride him.'

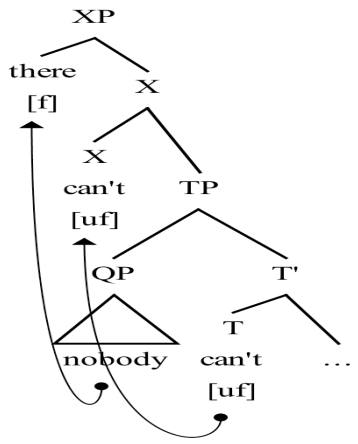
(38) They ca**n't** many people say that. (Shearer 1998)
'Not many people can say that.'

Z&B point out that Appalachian English PNI and TECs have similar properties. The only difference between TECs and other PNI constructions lies in the presence (or absence) of the pronoun preceding the negated auxiliary or modal. They thus analyze TECs in Appalachian English as a special case of PNI. Following Foreman (1999) and Matyiku (2013a,b), they assume that PNI and TECs are derived by semantically motivated movement of a negated auxiliary over the quantificational subject.

To distinguish the inversion in TECs (and PNIs in general) from subject auxiliary inversion in questions, Z&B (2014) propose in PNIs (and TECs) the negated auxiliary moves to a position higher than TP, but that it does not cross out of the "IP domain" and

into the "CP domain", the domain into which auxiliaries move in interrogatives. Z&B further assert that the pronoun of TECs is the spell-out of a subset of features of the quantificational subject, which internally merges into the specifier of the phrase headed by the moved negated auxiliary. They argue that this movement obtains via a probe-goal relation (*à la* Chomsky 2001, 2008), where some uninterpretable formal feature on the negated auxiliary or modal probes the quantificational subject, attracting only a subset of its features. The following sketch illustrates (adapted from Z&B's example (52) on p. 165):[40]

(39) Z&B's (2014) structure for TECs:



Z&B do not name the category that serves as a landing site for both the modal and the feature of the quantificational associate that raises to its specifier, stating only that it must be within the "IP-domain". The structure in (39) illustrates Z&B's assumption that the

[40] Z&B (2014:168) suggest that the moved feature may be a deictic feature, a person feature, or a D-feature of the associated quantificational subject.

formal feature ([uf], where 'u' stands for uninterpretable) that induces movement of the feature(s) of the quantificational associate to its specifier position is merged on the negated auxiliary itself. As such, it must be the case that for some reason this uninterpretable feature is not satisfied in its base position in T by the quantificational phrase in spec,TP. In other words, only once the semantically motivated (or semantically constrained) movement of the negated auxiliary to the head of XP has occurred does this element then probe the specifier of TP, inducing the raising of a subset of its features.

The structure in (39) thus illustrates Z&B's analysis of TECs as a subset of PNI constructions, in which a formal feature on the raised negated auxiliary induces raising of a feature or set of features on the quantifier into the specifier of TP. In that raised position, the moved feature or set of features spells out as expletive *they* (Tortora 2006) or *there*.

2.5 Summary

This section showed that PNI constructions can be divided into two subtypes, existential and non-existential, but that more recent work has modeled these two subtypes as having the same underlying structure (e.g. Foreman 1999). I further discussed the property of some PNI constructions first noted by Foreman in which, unlike their non-inverted counterparts, they seem to mark their scope overtly. Summarizing the literature, PNI has restrictions on possible subjects, and while PNI is not always NC, morphologically negative subjects are always possible. Zanuttini and Bernstein's (2014) recent account analyzes Transitive Expletive Constructions as a subset of PNI

constructions in which a feature of the quantificational subject raises out of the specifier of TP and into a higher position, where it spells out as *they* or *there*.

3. Background on Subject NC

As described in section 1, Subject NC has a negative constituent in canonical subject position that is immediately followed by a negated auxiliary or modal. The following example is (10) repeated:

(40) And he got lost, probably **nobody** could**n't** find him.
And he got lost, probably nobody could find him.
(AAPCAppE: SKCTC-DN)

3.1 Usage patterns

In her quantitative, comparative study of English NC (which focuses on NC in the geographically isolated community of Buckie), Smith (2001:123) shows that Object NC constructions like the ones I discussed in Chapters 3 and 4 are far more common in usage than both PNI and Subject NC. Tortora (2007) extends this observation to note the following uni-directional entailment: If a speaker uses Subject NC and PNI, then that speaker uses Object NC. Tortora observes that speakers of Appalachian English (Wolfram & Christian 1976) and African American English (Green 2002, 2011) use both Object and Subject NC, but that New York English speakers (Wolfram & Fasold 1974) use only Object NC, and they do not use Subject NC. Smith's (2001) data concur, showing that the American English spoken in Inwood, New York has only the Object NC

pattern, and it does not have Subject NC or PNI. In sum, both PNI and Subject NC are far less common in usage than Object NC.

3.2 An apparent ambiguity

Green (2014) notes that while PNI has received some attention in the literature (e.g. Martin 1992; Weldon 1994; Sells et al. 1996; Foreman 1999), Subject NC has received considerably less attention, perhaps due to its relative rarity. In her discussion of "force, focus, and negation in African American English", which provides a syntactic account of PNI that appeals to a negative focus feature, she makes a unique observation about a potential difference in meaning between PNI and Subject NC. To understand her observation, let us consider the following Subject NC example, and the two possible meanings Green provides (p. 127, ex. (21))

(41) **Nobody** do**n't** ride that bus.
meaning 1: No one (at all) rides that bus.
meaning 2: Not very many people ride that bus.

Meaning 1 is what Green calls the "absolute negation" reading, and meaning 2 is what she calls the "weak negation" reading. Note that both meanings involve only a single negation, and the meanings in 1 and 2 are both NC interpretations of the string in (41).

Green provides the following context for the "weak negation" reading in (41) (p. 127, ex. 22):

(42a) **Nobody** do**n't** ride Bus #201—just three people who live in the country. Most of the students in this class ride Bus #99.

Example (42a) shows that in the "weak negation" reading, the semantic negation apparently fails to exclude all members of the set in the quantifier's restriction (which in this case would be the set of people). This meaning is in contrast with the "strong negation" meaning 1, under which no one rode the bus. Strong negation is equivalent to logical negation. In the context of our Chapter 3 discussion of Zwarts' (1998) three types of downward entailingness, Green's strong negation is antiadditivity.

Green (2014: 127) also discusses the following potential PNI alternative to (42a):

(42b) Don't nobody ride bus number 201—just three people who live in the country.
Most of the students in this class ride bus number 99.

Green notes that her analysis predicts (42b) to be infelicitous, and leaves investigation of whether that prediction is borne out for future research.

I present the following AAPCAppE Subject NC example in context to show that in the AAPCAppE, "strong" or anti-additive (and also antimorphic) readings of Subject NC constructions may be possible:

(43) People didn't like the way he had the house built. He built an old ranch type house was about half open. **Nobody** did**n't** like it that way.
'People didn't like the way he had the house built. He built an old ranch type house that was about half open. Nobody liked it that way.'
(AAPCAppE: SKCTC-MM)

The context preceding the Subject NC construction in this example indicates that 'nobody didn't like it' may mean that people, in general, did not like it (keeping in mind Tortora's

(2014) warning regarding drawing generalizations about speaker intention from potentially ambiguous corpus data). If 'nobody liked it' is the correct interpretation of the Subject NC construction in (43), then this serves as an example of Green's "strong negation" reading in the sense that all individuals in the quantifier's restriction are excluded from liking the manner in which the house was built.

I have found no evidence to support the existence of the "weak" negation reading of Subject NC in the AAPCAppE. However, the following example from Zanuttini and Bernstein (2014: 162; (47c)), which they attribute to their fieldwork in Appalachia, is similar to Green's (2014) example (42a):

(44) **Nobody** did**n't** come, just me and her here. (Zanuttini & Bernstein 2014)

The tag 'just me and her here' in (44) shows that this Subject NC construction may be true in a world in which not all people are excluded from the set of people who came, which would be Green's (2014) "weak negation" reading. I return to a discussion of example (44) below.

Green (2014) models her hypothesized meaning difference between PNI and Subject NC by appeal to movement of the negated auxiliary over the negative subject. This movement is motivated as a way of focusing negation. Her proposed structures for Subject NC and PNI are as follows:

(45) Green's (2014) structure for Subject NC (p. 127, ex. (23)):

$[_{TP}$ nobody$_1$ $[_{T'}$ don't$_2$]] $[_{NegP}$ $[_{Neg'}$ ~~do+n't$_2$~~]]$[_{VP}$ ~~nobody~~$_1$ $[_{V'}$ ride that bus]]

(46) Green's (2014) structure for PNI (p. 126, ex. (18)):

[$_{FocusP}$ [$_{Foc'}$[*NegFoc*]DON'T_2]][$_{TP}$ NOBODY$_1$ [$_{T'}$ ~~don't$_2$~~]] [$_{NegP}$ [$_{Neg'}$ ~~do+n't$_2$~~]][$_{VP}$ ~~nobody~~$_1$ [$_{V'}$ ride that bus]]

The structure in (45) shows Green's assumption that the negative subject is in its canonical spec,TP position in Subject NC. The PNI structure in (46) shows that the negated auxiliary raises over the subject in spec,TP to the head of a Focus Phrase (FocP). This movement, she asserts, is induced by a [*NegFoc*] feature on the head of FocP, and yields the "strong" or logical negation reading of PNI.

Recall now that the strong negation reading is also possible for Subject NC, which Green asserts is ambiguous between a "strong" and a "weak" negation reading. Under Green's analysis of Subject NC and PNI, two important questions remain open. First, if movement of the negated auxiliary as in (46) signals the strong negation reading of PNI, how is the strong negation reading induced in the structure in (45), where the auxiliary remains in the head of TP? Second, if Subject NC constructions are ambiguous in the manner that Green describes, then what gives rise to this ambiguity? In other words, how might Subject NC constructions sometimes end up meaning something other than what they say? In my section 4.2 discussion of Subject NC I attempt to answer these questions.

3.3 A semantic ambiguity

In this subsection I add a personal observation about Subject NC, and its relation to Object NC: Absent of any context, I interpret sentences with a negative marker and a

negative object as NC constructions, and sentences with a negative marker and a negative subject as DN constructions. I illustrate these judgments here:

(47) John did**n't** eat **nothing**.
My context-free interpretation: John ate nothing. (NC)

(48) **Nobody** did**n't** eat.
My context-free interpretation: Everybody ate. (DN)

I report the interpretations in (47) and (48) as a native English speaker who does not use NC in her daily speech, and I have informally observed that other English speakers that are not NC users share these context-free interpretations. Coles-White's (2004) experimental results show that children who do and do not use NC also share the judgment in (47). In Chapter 6 I report the results of a quantitative experimental study that shows that the judgments in (47) and (48) may represent a larger population of adult English speakers. For now, it suffices to note that they exist. The main thrust of the observation is this: For (at least some) English speakers who do not use NC, Object NC is interpreted correctly free of context, but Subject NC is not, and for some speakers, sentences with a negative subject and negated auxiliary are interpreted out of the blue as DN and not NC. The context-free nature of these interpretations indicates that this observation pertains to the syntax and semantics, and not the pragmatics, of these construction types.

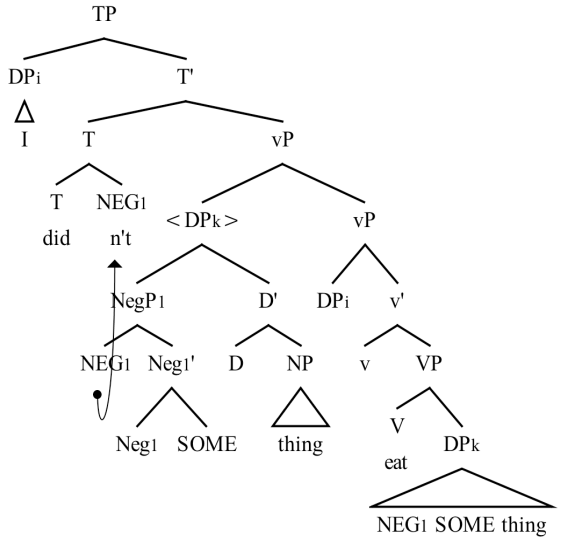
4. Applying C&P (2014) to PNI

I begin this section by illustrating and discussing a derivation for PNI that integrates C&P's (2014) notion of NEG raising from unary NEG constituents. I then show how this analysis correctly predicts the distribution subjects in PNI.

4.1 A syntactic derivation for PNI

In Chapter 4 I proposed that NC constructions are the instantiation of a unary NEG DP (*à la* Postal (2005) and Collins and Postal (2014)) of the form [NEG_1 SOME X]. In sentences like 'I didn't eat nothing', NEG_1 raises and adjoins to T, and both occurrences of NEG_1 are spelled out. The structure is as follows:

(47) Structure of 'I didn't eat nothing':



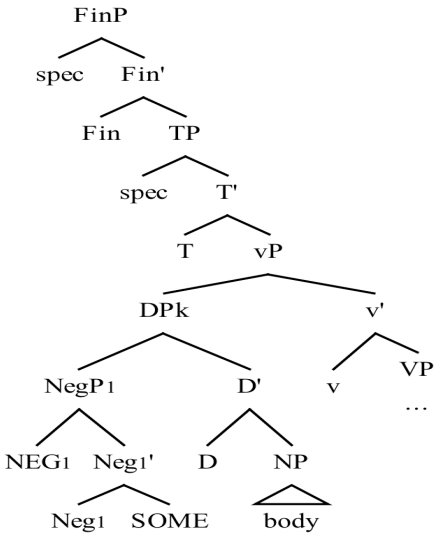
Structure (47) shows that when externally merged in object position, unary NEG1 DPs raise to the edge of vP. The angled brackets (< >) indicate that they remain unpronounced in their scope position.

Recall now the following PNI, (previously example (1)):

(48) Did**n't nobody** live in there then.
'Nobody lived in there then.'
(AAPCAppE: DOHP-ASU-WC)

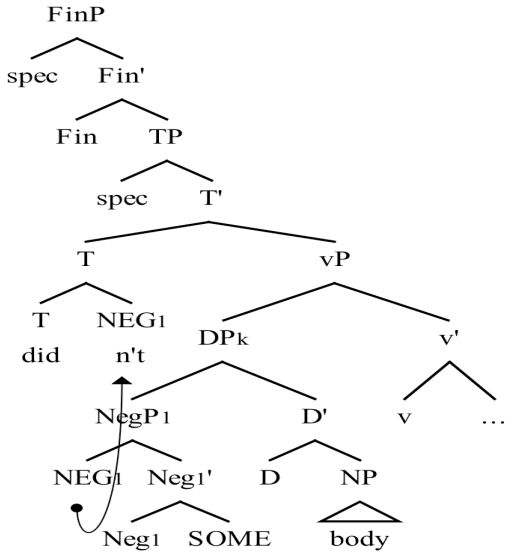
Like the sentence 'I didn't eat nothing', sentence (48) is NC, with a single negative constituent and *didn't*. Following the analysis of NC I proposed in Chapter 4, and illustrated in the structure in (47), I propose that following external merge, the sentence in (48) looks like this:

(49) External merge structure for 'didn't nobody live there'



In this structure, the subject *nobody* is a unary NEG constituent merged in its scope position, the specifier of vP. In chapter 4 I proposed that when the negative marker spells out as *-n't* (and not *not*), NEG_1 raising occurs as head adjunction. Following this analysis, the next step in the derivation for (47) would proceed as follows:

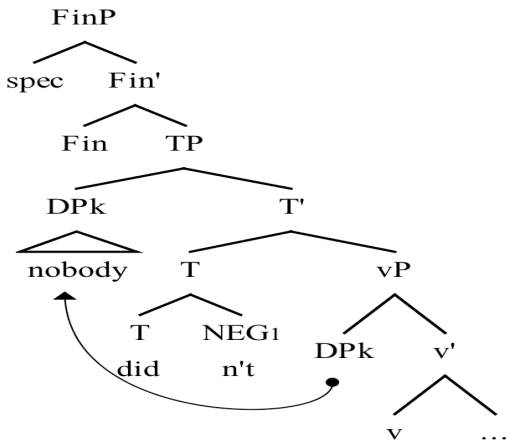
(50) NEG_1 adjunction to T:



Structure (50) shows NEG_1 raising to adjoin to T, forming the complex head [T,NEG_1], which spells out as *didn't*. Note that, under the assumption that the *no-* morphology on *nobody* is resumptive, the structure in (50) derives the correct surface order for 'didn't nobody live there' because the negated auxiliary precedes the negative subject. However, the well-known English EPP property is not satisfied in (50) in that the specifier of TP is not filled. As opposed to assuming the EPP is relatively violable in grammars that generate PNI (as in Sells et al. 1996) I assume, following Z&B (2014), that the negative

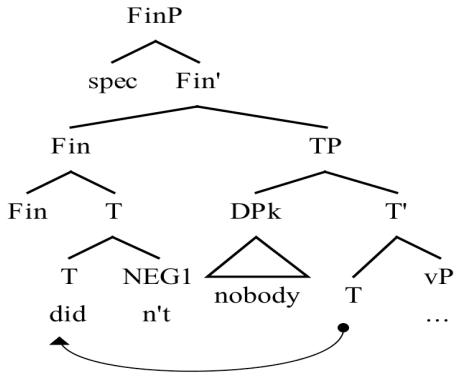
subject raises to spec,TP, as follows (abstracting away, now, from the internal structure of the negative DP for expository purposes):

(51) DP raises to spec,TP to satisfy EPP:



Assuming the subject raises to spec,TP in PNI, the negated auxiliary must undergo further raising to yield the correct surface order. I thus follow Z&B (2014) and Green (2014) in assuming that in PNI, the complex [T,NEG] head undergoes further raising. Following Green, I assume it raises to a position in the CP domain, which I take to be to the head of FinP, a position linked to both tense and mood (Rizzi 1997. The next step in the derivation is as follows:

(52)

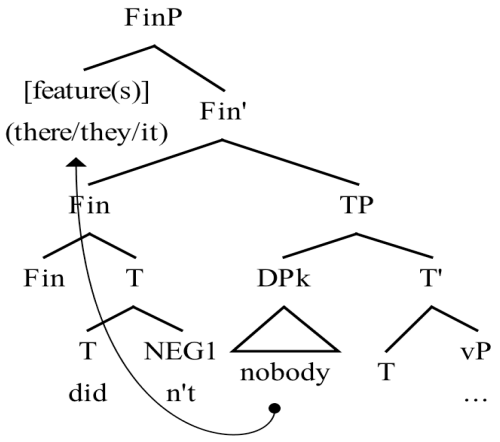


In (52) T adjoins to Fin forming the complex head [Fin,T,Neg_1]. That it is head and not XP movement explains why, in the AAPCAppE data I have observed, PNI (and Subject NC) contains only *–n't* and not *not*. In Chapter 4 I analyzed *not* in object NC as the spell out of Spec,NMP. Under the derivation for PNI shown above, PNI constructions with *not* should be impossible, as a specifier XP should not be able to adjoin to the head of Fin, or to a complex head formed by [Fin,T].[41]

I follow Z&B in assuming that in TECs, the pronoun spells out a subset of the features of the negative quantifier that have raised to a higher specifier position. I can now assume that this position is spec,FinP, with the following structure:

[41] Green (2014) asserts that such inversion structures may be marginally available with *not* in her variety of African American English, but they require a particular intonation.

(53) Movement of features from NP to spec,FinP:



Following Z&B (2014) I cannot state precisely which feature or set of features is moved from the quantificational DP to spec,FinP, and I await further research on this matter.

In sum, this derivation for PNI builds on the hypothesis that some NC constructions involve syntactic NEG_1 raising from a unary NEG DP. The Fin head attracts the complex [T,NEG_1] head, formed by NEG_1 raising, which then raises over the negative subject in in spec,TP. Features from the negative quantifier may raise to spec,FinP and spell out as an expletive pronoun *à la* Z&B (2014), deriving a TEC. Under this analysis, all morphologically negative constituents capable of participating in NC as objects are predicted to be possible subjects of PNI constructions, a prediction that is borne out. This analysis correctly predicts that NPI subjects should be possible in PNI, with the SOME to *any* mapping rule applying at PF just as it does in Object NC.

4.2 PNI subjects as negative quantifiers[42]

I now turn to a discussion of morphologically non-negative subjects in PNI. Foreman (1999:11) observes that PNI constructions have a semantic variant in which the marker *not* appears in sentence initial position. The following examples are Foreman's (29a–f):

(54) a. **Not many people** went to the party.

b. Did**n't** many people go to the party.

c. **Not everybody** finished their homework.

d. Did**n't** everybody finish their homework.

e. **Not more than three people** will be allowed in at a time.

f. Wo**n't** more than three people be allowed in at a time.

These facts show that PNI constructions have a semantic variant that contains a negative DP in subject position. Example (54d) contains the universal subject *everybody*, and it can be equivalently stated as a non-PNI construction with the subject *not everybody*. On the basis of this pattern, I propose the following hypothesis (originally framed as a generalization in Collins and Blanchette (2013)):

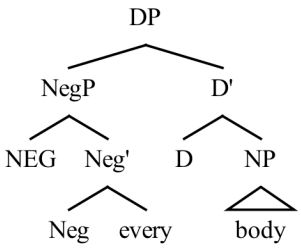
(55) In PNI, the subject is a negative quantifier.

[42] This section draws heavily from the analysis in Collins and Blanchette (2013).

Under (55), PNI subjects must be negative. In (54b,d,f), however, the subject does not appear to be morphologically negative. I propose that such cases the derivation proceeds precisely as illustrated in the previous subsection for the NC (and NPI) cases of PNI. The only difference is in the internal structure of the negative subject DP, which yields the distinct (non-negative) spell out patterns for the subjects in (54b,d,f).

To illustrate, consider the case of the universal quantifier in (54d). I propose that this constituent has the following structure:

(56)



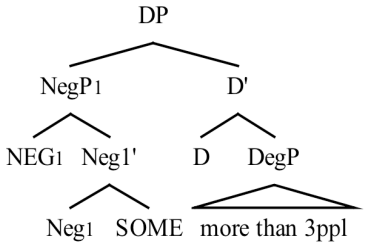
The derivation proceeds as above, with NEG raising, subsequent raising of the subject to spec,TP, and head movement of [T,NEG] to Fin. The same analysis applies to the sentence in (54b), replacing the term *every* with *many*.

Given that, unlike in NC PNI constructions, NEG does not spell out as resumptive negation on with the subjects *every X* and *many X*, the structure in (56) is informative regarding constraints on the spell-out of that resumptive NEG_1. There are two options for deriving the correct spellout patterns for PNI with *every X* and *many X*. One is to assert that only NEG_1 spells out as resumptive *no-,* and without the index 1, plain NEG heads like the one in (56), which have undergone raising, will always spell out with zero

morphology. This option requires that the index be visible at PF. The other option is to posit a rule stating that when NEG does not precede abstract SOME (i.e., when it precedes *every* or *many*), it must be unpronounced. Both of these options specifically target the PF component. Setting the issue aside, it suffices to note that the structure in (56) provides options to derive the correct surface patterns.

For (54f), which contains the subject *more than three people* I propose the following structure:

(57)



This analysis accurately captures the interpretation for (54f), and it also predicts two possible PF variants, in which either *no* or *any* spells out prior to the Degree Phrase. This prediction seems to be correct, as illustrated by the following sentences (adapted from Foreman (1999)):

(58a) Wo**n't no more than three people** be allowed in at a time.

(58b) Wo**n't** <u>any more than three people</u> be allowed in at a time.

I now explain how the subject structure I have illustrated in this section predicts the distribution of possible and impossible subjects in PNI. Under (55), if a phrase cannot be modified by a negation as in (56) and (57), then it should not be a possible PNI subject. To show how this prediction is borne out, I apply Foreman's (1999) test, as follows:

(59) a. *Didn't Jack/Vince Jackson watch the game.

b. *Not Jack/Vince Jackson watched the game.

c. *Didn't I watch the game.

d. *Not I watched the game.

e. *Didn't the teachers watch the game.

f. *Not the teachers watched the game.

g. *Didn't few people watch the game.

h. *Not few people watched the game.

i. *Didn't not all people watch the game.

j. *Not not all people watched the game.

The examples in (59) show that if a noun phrase cannot form a constituent with *not*, then that noun phrase cannot take part in PNI.[43] The reason for this is that non-negative constituents cannot serve as the origin position for the raised NEG. For example, since

[43] Paul Postal (p.c.) provides the following counter examples:

(i) I contacted not Bob, not Arthur, and not Louise.
(ii) Not Mary but Bill will speak first.

Example (i) is unacceptable to me. Example (ii) instantiates so-called contrastive negation, a pattern that is not compatible with PNI. I set these issues aside.

not few people is impossible, then the corresponding PNI construction in (59g) is also impossible. The distribution of subjects in (59) is thus straightforwardly predicted by the hypothesis that PNI involves NEG raising from a negative constituent subject.

The following examples (from Collins and Blanchette 2013) appear to present a problem for my analysis thus far:

(60) a. Did**n't no boys** watch the game.

b. Did**n't** <u>any boys</u> watch the game.

c. *Did**n't** some boys watch the game.

d. ***Not some boys** watched the game.

If it is the case that PNI requires a negative constituent subject, and if [NEG_1 SOME boys] is the underlying subject in (60a) and (60b), then it remains unclear why (60c) is ruled out. In Chapter 4 I discussed how, as part of C&P's system of SOME to *any* mappings, when a NEG_1 raises away from a negative DP containing SOME, SOME spells out as *any*. I further proposed a variable PF rule that constrains spell-out of multiple occurrences of the same NEG, arguing that the rule is not active in NC constructions. The fact in (60c) shows that SOME to *any* mapping when NEG precedes SOME is obligatory. This obligatory mapping may be related to the status of non-abstract *some* as a positive polarity element, which cannot occur in the immediate scope of negation (Sczabolsci 2004).

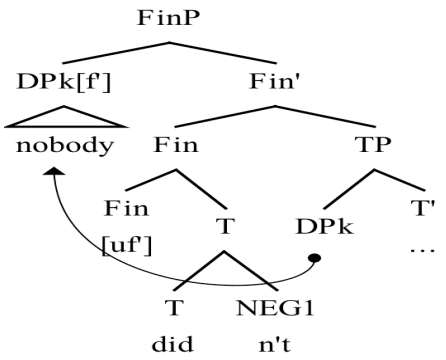
5. Syntax of Subject Negative Concord

In this section I provide an account of Subject NC that builds directly on the previous section's derivation for PNI. I begin with a derivation.

5.1 Syntactic structure of Subject NC

In section 4 we saw how PNI is derived by movement of the [T,Neg] head to Fin, forming the complex head [Fin,T,Neg]. I propose that Subject NC constructions are derived via movement of the entire unary NEG DP to spec,FinP. Following López (2009), I propose that phrasal movement to spec,FinP is A-bar movement, motivated by an uninterpretable f-bar feature [uf'], which acts as a probe. I propose that unary NEG_1 constituents are lexically endowed with an interpretable [f'] feature, making them a suitable goal for the probing of the [uf'] on the head of FinP. I further assert that English has two Fin heads, only one of which has [uf']. In Subject NC, the Fin head has [uf'], which is satisfied by the unary NEG_1 DP by raising of the entire constituent, as follows:

(61)



The configuration in (61) derives the correct surface order and interpretation for Green's (2014) "strong negation" reading of Subject NC, which, as noted previously, is the logical anti-additive negation reading.

There is a simpler alternative to the structure I have proposed for Subject NC. The structure I have proposed is derived from the structure of PNI. In the simpler alternative, there is no T to Fin movement, and the subject remains in spec,TP. This is in fact the structure that Green (2014) proposes for Subject NC, as illustrated in (45). There are two reasons for adopting the subject in spec,FinP analysis over this simpler alternative. The first pertains to the usage patterns that distinguish between PNI and Subject NC on the one hand, and Object NC on the other. As illustrated by Smith (2001) and Tortora (2007), there is a uni-directional entailment such that if an English has PNI and Subject NC, then it has Object NC, but not vice-versa. The structure in (61) explains this fact by asserting that Subject NC is derived from PNI, which involves NEG raising and subsequent T to Fin movement.

Tortora (2007) asserts that the implicational usage pattern in NC types with negative subjects is in fact more refined: Englishes with Subject NC have PNI, but PNI Englishes do not necessarily have Subject NC. If this is the case, then this implicational relationship is straightforwardly predicted by the syntax I have proposed. If Subject NC is derived from PNI structure, then if an English has Subject NC it must have PNI.

Further support for the high subject analysis of Subject NC is found in the separate but related phenomenon of singular concord, in which a plural subject occurs

with a verb carrying the suffix *–s*. The following example of singular concord in Appalachian English is from Tortora and Den Dikken (2010; ex. (6b)):

(62) The potatoes looks awful.

Tortora and Den Dikken (2010) propose that in Appalachian English, singular concord constructions like (62) result from the subject residing in a position above TP (which they call SubjP). They further note that the phenomena of singular concord and Subject NC cluster: If an English has singular concord then it has Subject NC. On this basis, they propose that in Appalachian English, Subject NC constructions employ the same high subject position that is active in singular concord constructions, a position that is higher than spec,TP. Assuming Tortora and Den Dikken's (2010) analysis of singular concord, this separate but related phenomenon provides further support for the hypothesis that the negative subject in Subject NC resides in a position that is higher than spec,TP.

5.2 Revisiting the "weak negation" reading

The following sentence from Z&B (2014) repeats (44):

(63) **Nobody** did**n't** come, just me and her here. (Z&B 2014)

In section 3.2 I discussed Green's (2014) observation that Subject NC constructions may mean something other than what they say. Example (62) says 'no person came', but in the context Z&B provide it appears to mean something like 'most people didn't come', or

perhaps ‘everyone except me and her didn’t come’, which is what Green calls the “weak negation” reading. Note now that the paraphrase ‘everyone except me and her didn’t come’ includes the exceptive phrase ‘except me and her’. In Chapter 3 I discussed the generalization that exceptive phrases only attach to sentences containing the semantics of universal endpoint quantifiers. I would like to consider the possibility that in the sentence in (62), the phrase ‘just me and her here’ is an exceptive. If this is so, then the reason the exceptive is compatible with the Subject NC sentence in (62) is that the unary NEG_1 constituent provides the semantics of a universal endpoint quantifier. Under this proposal, there is no “weak negation” reading in (62), only strong or antiadditive negation with exceptive attachment.[44]

The hypothesis that PNI subjects contribute the semantic negation predicts that exceptives will not always be compatible PNI. This hypothesis analyzes sentences like ‘didn’t everybody watch the game’ as involving NEG_1 raising from the negative subject [NEG every body]. If NEG does not undergo raising in this sentence, then the subject spells out as *not everybody*. Note now that the constituent *not everybody* is not a universal endpoint quantifier. Therefore, my derivation for the sentence ‘didn’t everybody watch the game’ predicts that exceptives should be incompatible with this sentence type, a prediction that appears to be borne out (e.g. ‘didn’t everybody [#except John] watch the game’). The same applies to the subject types [NEG many people] and [NEG more than five people], which also should not allow for exceptive attachment in PNI. Concurrently, when the PNI subject is a negative endpoint quantifier (as in (62)), I predict that exceptive attachment is possible. This analysis relies on my recasting of the ‘just…’

[44] A discussion of the syntax and semantics of exceptives is beyond the scope of this paper, but see the discussion in O’Neill (2011) and the references cited therein for an overview.

phrase in (62) as an exceptive, a recasting that is at this point only stipulated. Like Green (2014), I conclude that further research on this matter is needed.

5.3 A micro-parametric constraint on NEG-raising

I now return to the question of why, for speakers like me, the Subject NC surface pattern gives rise to a DN and not an NC interpretation.[45] To explain this, I adapt a condition on remnant movement for unary NEG constituents from Collins et al. (2015). As discussed in Chapter 4, Collins et al. (2015) propose that Ewe has unary NEG NPIs and resumptive negation. The authors note that in Ewe, *ke*-NPIs (which they analyze as unary NEG NPIs) can appear in subject position. The following Ewe example from Collins et al. (2015; example (44) on p. 7) illustrates:

(64) Ame-áɖéké mé-vá nyĕ-a*f*é-me o
person-any NEG-come 1SG-house-inside NEG
'Nobody came to my house.'
Lit.: 'Nobody/anybody didn't come to my house.'

Sentence (64) contains the *ke*-NPI *ame-áɖéké* 'any person' in subject position, immediately preceding a negative marker. This sentence type is thus the Ewe analogue to English Subject NC. Collins et al. (2015) propose that the single semantic negation of (64) is introduced via the unary NEG *ke*-NPI, and the negative marker that follows the NPI subject raises from the *ke*-NPI in its scope position. To explain the fact that (64) is

[45] This does not mean that speakers who get Subject NC cannot also get DN for strings with a negative subject preceding a negated auxiliary; surely a DN reading is available for them as well, in the appropriate context.

possible but in English ‘anybody didn’t come to my house’ is not, Collins et al. (2015:8) propose the following condition on NEG raising (their example (46)):

(65) The Remnant Raising Condition (Collins et al. 2015):
If M = [$_{DP}$ [<NEG> SOME] NP], then no occurrence of M c-commands an occurrence of NEG.

Condition (65) is a condition on representation. It states that in a structure in which a unary NEG DP has an unpronounced NEG (<NEG>), the DP cannot reside in a position from which it c-commands the raised NEG. The authors hypothesize that condition (65) applies in both English and Ewe. Since there is no NEG deletion in Ewe, the structure of M is [$_{DP}$ [NEG SOME] NP], and the structural description for the Remnant Raising Condition is not met.

Following a suggestion from Chris Collins (p.c.), I propose the following modification to the condition in (65):

(66) The Remnant Raising Condition (adapted from Collins et al. 2015):
If M = [$_{DP}$ [NEG SOME] NP], then no occurrence of M c-commands an occurrence of NEG.

Under this modification, it is no longer specified that NEG be unpronounced. The condition thus states that a unary NEG DP containing an occurrence of NEG cannot c-command another occurrence of that same NEG.

I propose that condition (66) applies in Englishes like mine but not in those that realize Subject NC. It is a microsyntactic condition that bars both PNI and Subject NC, which, under my analysis, involve a DP meeting the structural description of M c-commanding an occurrence of NEG. This is why speakers like me get a DN reading for sentences with the Subject NC surface pattern. The condition thus captures the exceptional behaviors of Subject NC and PNI, which Smith (2001) shows to be much less common in usage than Object NC.

5.4 Spell out patterns of Subject NC constituents

The structure I have proposed for Subject NC involves a unary NEG constituent in sentence-initial position. When unary NEG constituents reside in object positions, and when they occur as PNI subjects, they may spell out with the form *any* instead of *no-*. This is not the case for Subject NC, in which the unary NEG constituent spells out with *no-*.[46]

The structure I have proposed for Subject NC constructions provides a potential solution to this problem in that the unary NEG DP always appears in spec,FinP. I therefore propose the following PF rule that targets the specifier of Fin,P and spells out NEG_1 as *no-*:

[46] This observation does not hold for the Belfast English described in Henry (1995), in which NPIs are possible in subject position. She reports the following two possibilities (p. 29; see also Tortora and Den Dikken 2010):

(i) Any animals is**n't** coming.
(ii) Any animals is **not** coming.

Example (ii) contains the negative marker *not*, which occurs neither in Subject NC nor in PNI in the AAPCAppE subcorpus employed in this research. Another fact about Belfast English is that it does not seem to have PNI (Henry and Cottell 2007). I set these issues aside.

(67) $NEG_1 \rightarrow$ *no-* / $[_{FinP}$ ___

Under this rule, unlike in Object NC and PNI constructions, the *no-* is not resumptive, so there is no possibility for switching to *any-* forms in canonical subject position.

6. Conclusion and look ahead

In this chapter I extended C&P (2014) to account for two sentence types with negative subjects: PNI and Subject NC. The account I proposed follows Z&B's (2014) proposal for TECs, but it is distinct from other accounts in that the *–n't* in these structures is a raised occurrence of NEG_1 introduced by a unary NEG DP. This fact explains the NC interpretation of PNI and Subject NC when the subject is morphologically negative. I further explained restrictions on PNI subjects by hypothesizing that in these constructions the subject must be negative. Lastly, to explain the usage and interpretation patterns that set Subject NC and PNI apart from Object NC, I adapted a remnant raising condition, proposing that it operates at the microsyntactic level in English.

In the next chapter I present the results of an experimental study that supports the conclusion that a microsyntactic constraint distinguishes Object NC from Subject NC grammars. In this final chapter I articulate some predictions made by the model for NC put forth in this thesis, and I discuss how these predictions are borne out in the experimental data.

Chapter 6

An Experimental Study of English Sentences with Two Negatives

0. Introduction

Since the application of the technique of magnitude estimation to collect gradient acceptability judgments (Gurman et al. 1996), many authors have used the results of experiments in gradient acceptability to inform linguistic theory (see, e.g., Cowart 1997; Keller 2000; Featherston 2005; Sprouse 2008; Gibson & Fedorenko 2013; Gibson et al. 2013, and many others). The validity of this technique, in which speakers are asked to judge sentences on an open scale relative to a touchstone sentence, has been seriously questioned (Sprouse 2011). Nevertheless, data referring to a scale that are quantitatively substantial enough to be analyzed via parametric statistics have yielded many important insights. This chapter reports the results of an experimental study that uses gradient acceptability to examine differences between *unacceptable* sentence types. (See also, e.g., Staum and Sag (2008) and Squires (2014).)

Consider the following sentence:

(1) I did**n't** eat **nothing** for lunch.

Sentence (1) contains the negative marker *-n't* and the object *nothing*, and has two interpretations. One is the NC interpretation, which has a NPI semantic variant ('I didn't eat anything'), and the other is DN. The two interpretations are illustrated here:

(1a) NC: 'I ate **nothing**/did**n't** eat anything for lunch.'

(1b) DN: '**It is not the case** that I ate **nothing** for lunch.'
(=I ate something.)

In Chapter 2 I discussed how English NC is socially stigmatized. Even before Bishop Lowth's (1762) decree that "two negatives should equal a positive" (Horn 2010), English NC had already begun to undergo a process of social stigmatization (Nevalainen 1998, 2006). This heavy stigma persists in contemporary English, despite the fact that NC is used most North American Englishes (Wolfram & Fasold 1974). Unlike NC, however, the DN interpretation of a sentence like (1) requires a very specific pragmatic context, as shown here (small caps = contrastive stress):

(2a) Speaker A: You're hungry now because you ate **nothing** for lunch today.
Speaker B: I DID**n't** eat **nothing** for lunch. I had a sandwich.

(2b) Speaker A: I ate pizza for lunch.
Speaker B: #I DID**n't** eat **nothing** for lunch.

In (2a), Speaker A asserts that her interlocutor ate nothing for lunch, and Speaker B felicitously employs the DN to deny this assertion. Example (2b) shows that without a denial context, the DN is infelicitous. The same cannot be said for the NC interpretation in (1a), which is felicitous out of the blue.

Consider now the following sentence:

(3) **Nobody** did**n't** watch the game.

Like (1), example (3) also contains *-n't* and *nobody*. Also like (1), sentence (3) has two possible interpretations: an NC interpretation, in which nobody watched the game, and a DN interpretation, in which everybody watched. However, for English speakers like me, sentences like (3) do not require a denial context for the DN interpretation to be felicitous; while Object DN is infelicitous out of the blue, the DN interpretation of (3) is felicitous with no denial context.

In Chapter 4 I hypothesized that the NC interpretation of sentences like (1) is derived is derived in the same way as an NPI construction like 'I didn't eat anything'. Under this hypothesis, Object NC constructions involve syntactic raising of a negation introduced by the object DP, following the model of NPI constructions in Collins and Postal (2014). The minimal morphological difference between strings like 'I didn't eat nothing' and 'I didn't eat anything' thus reduces to a non-syntactic PF rule that derives the NPI surface pattern. Unlike Object NC, Subject NC was hypothesized to be ungrammatical for a subset of English speakers (including me) by appeal to a condition that bars configurations in which a negative DP c-commands an occurrence of its own NEG.

Setting aside PF variation (and PNI), the models of Object and Subject NC in Chapters 4 and 5 divide English speakers into two groups: those with Subject NC grammars and those with non-Subject NC grammars. This chapter provides quantitative

empirical support for this hypothesized distinction between Subject NC and non-Subject NC grammars. I begin in section 1 by describing the methodology for a gradient acceptability study of English sentences with two negatives. Section 2 reports and discusses the results of that study. In section 3 I present a follow-up study on sentences with a single negative. In section 4 I summarize and discuss the implications of the overall results of both studies in the context of the theory of NC put forth in this dissertation. Section 5 concludes.

1. Methodology

1.1 Research questions

The two negatives study I report in this section answers the following questions about English sentences with two negatives:

(i) Are sentences with a negative object more acceptable than sentences with a negative subject?

(ii) How does context type (NC vs. DN) impact sentence acceptability?

(iii) Is there an interaction between the syntactic position of the negative constituent and the context type (NC or DN)?

In Chapter 5 I hypothesized that my interpretation patterns and the usage patterns reported in Smith (2001) reflect a grammatical distinction between Object and Subject NC. Subject NC is grammatical only for a small subset of NC users, while Object NC is

grammatical for all NC users and also for non-NC users like me. Question (i) asks whether this subject-object asymmetry is reflected in acceptability judgments.

Chapter 4 analyzes object NC and NPI constructions as having the same syntax and semantics, placing the locus of variation at PF spell out. Under this hypothesis, NPI and NC constructions are equivalently generated in the same set of contexts. Question (ii) seeks to inform this hypothesis by asking whether NC or DN contexts are preferable overall, and question (iii) refines (ii) by asking whether preference for context type will vary depending on the syntactic position of the negative constituent.

1.2 Design and Items

To answer (i) through (iii), I asked native English speaking adults from various parts of the United States to rate the naturalness of sentences with two negatives using a Likert scale of one to seven. The survey included two training items, sixteen test items, and thirty-two fillers. Each item had a past tense auxiliary or modal negated with *-n't*, and a single negative constituent. The position of the negative constituent was systematically varied: Eight test items had a negative object, and eight had a negative subject.

Following the methodology in Keller (2000), participants were divided into two groups: the No-Context Group and the Context Group (see also Cowart 1997). The No-Context Group received their test items as single sentences with no preceding context. The examples in (4) and (5) illustrate:

Negative Object test item:

(4) He didn't take nobody on the trip.

Negative Subject test item:

(5) Nobody didn't help patients on that day.

All items contained a transitive verb and a prepositional phrase adjunct. The thirty-two fillers varied in terms of their relative acceptability and grammatical complexity. (Appendix A includes all test items and fillers.)

The Context Group received the same sixteen test items and the same thirty-two fillers as the No-Context Group. However, the Context Group also received a single sentence preceding the test item. This context sentence was intended to elicit either an NC or a DN interpretation. Of the eight negative object items, four were preceded by an NC context and four were preceded by a DN context, and the same was the case for the negative subject items. The Context Group was further split into two subgroups. If one group received a particular item in an NC context, then the other group received that same item in a DN context.

The following examples illustrate a negative object test item for the Context Group. Example (6) shows the NC context provided for one item (administered to one Context subgroup), and example (7) shows the DN context for that same item (administered to the other subgroup):

Context Group Object NC item:

(6) John went on vacation all alone.

He didn't take nobody on the trip.

Context Group Object DN item:

(7) Mary said John went on the trip alone, but Mary's wrong.

He didn't take nobody on the trip.

The denial context in (7), which employs implicit negation, makes the DN felicitous. Context type was systematically varied for both negative object and negative subject items, so that the context would shift the interpretation of each item in one direction or another.

1.3 Predictions

The hypothesis that some English speakers have Object NC but not Subject NC Grammars predicts that, though sentences with two negatives may be unacceptable overall due to their social stigma, gradient judgments should reveal a preference for sentences with a negative object over sentences with a negative subject. This is because, under the Chapter 4 hypothesis that NPI and Object NC constructions have the same underlying structure, items with a negative object are generated in the same way as their acceptable NPI counterparts. This is not the case for sentences with a negative subject, which I have proposed are ungrammatical in Englishes like mine for the same reason that sentences like 'anybody didn't eat' are. I thus predict an overall asymmetry in both the

context and no-context groups, with a preference for negative objects over negative subjects. An alternative hypothesis is that sentences with two negatives are unacceptable because they are ungrammatical. Under this hypothesis, there should be no difference in acceptability between sentences with a negative object and those with a negative subject.

Another prediction I make is that NC contexts will be preferred over DN contexts when the negative constituent is in object position. This is because Object NC is grammatical (though unacceptable), and it is the default, out of the blue interpretation for strings with a negated auxiliary and a negative object. However, given its two semantic negations and its reliance on context, Object DN has more processing complexity than Object NC, and should therefore be degraded. An alternative hypothesis is the one in Zeijlstra (2004), which proposes that UG has NC and DN grammars. This hypothesis predicts that either NC or DN contexts should be preferred overall, and that this preference should not vary with the position of the negative constituent.

1.4 Participants

Amazon's Mechanical Turk (AMT; Gibson et al. (2011)) was used to recruit and compensate participants.[47] AMT provided participants with a link to our survey on SurveyGizmo.com, a website that includes features such as question randomization and

[47] AMT grants access to a large pool of naïve speakers. As Gibson et al. (2011) argue, collecting judgments from naïve speakers removes some potential cognitive biases from the data (Wason 1960): Non-naïve speakers (e.g. linguists) may be biased towards particular theories of language and linguistic constructions, hence their own hypotheses about a grammar may bias their judgments.

logic for eliminating unqualified participants. Participants had to be Native English speakers who were over 18 and had grown up in the United States.[48]

Demographic surveys revealed that participants were from various regions of the U.S., and had varying levels of education (high school through graduate studies). It was also relevant to our hypothesis whether participants reported to being NC users or not. Informal observations show that NC users frequently do not report themselves as such, possibly because they are unaware of their NC use. Self-reporting is therefore not a reliable source for determining NC usage. Nevertheless, the only way to gather information on NC usage was to ask participants whether they used NC. After they completed the survey, participants were asked the following questions:

(8) Object NC usage question (administered following the experiment):

> Imagine a situation in which you have finished dinner, and you want to tell someone that dessert was not a part of your meal. Which of the following would you be more likely to say:
>
> (a) I didn't have no dessert.
>
> (b) I didn't have any dessert.
>
> (c) either (a) or (b)

[48] Following Burleigh (2013), once they were finished with the survey we provided participants with a unique verification code. When redirected to the Mechanical Turk interface, participants entered their unique code and received their payment. This, in combination with Mechanical Turk's worker ID numbering system, allowed us to ensure that each participant completed only one survey.

(9) Subject NC usage question (administered following the experiment):

> Imagine a situation in which you threw a party, but all the people you invited decided to do something else instead of attending your party. In that situation, would it be natural for you to say "Nobody didn't come to my party"?
>
> (a) Yes
>
> (b) No

The next section reports the results for the No-Context and Context groups in the two negatives experiments described above. Each subsection begins with a reporting of participant responses to questions (8) and (9).

2. Results

2.1 No-Context Group (n=60) results

One out of sixty participants in the No-Context Group reported to being an Object NC user (chose option (b) in question (8)), and four out of sixty responded "yes" to question (9), indicating that they were Subject NC users. The participant who reported to using Object NC was also one of the four reported Subject NC users. Our participants were thus primarily non-NC users, according to their reports.

The following table contains Mean acceptability ratings of the two negatives items for the No-Context Group:

Table 1: Mean (s.d.) acceptability scores for No-Context Group

	Negative Object	**Negative Subject**
Mean* (s.d)	3.53 (1.38)	2.90 (1.33)

(n=60); *p < .001

Recall that participants scored sentences on the basis of their naturalness on a scale of one to seven. The acceptability scores in Table 1 reflect average scores for each construction type. We see that mean acceptability for all item types was below the median (4), illustrating that in general, participants did not accept sentences with two negatives. Table 1 also shows that sentences with a negative object were more acceptable than sentences with a negative subject. A paired samples t-test revealed that this difference was significant ($t(59) = 4.59$, $p < .001$).

2.2 Context Group (n=101) results

Only one participant in the Context Group reported being an optional Object NC user (option (c) in question (8)), and one out of 101 participants responded "yes" to question (9), indicating Subject NC use. The Object NC user and the Subject NC user were not the same participant. Thus, as in the No-Context Group, almost all the participants in the Context Group reported themselves as non-NC users.

The following table includes the mean acceptability ratings for the Context Group in our two negatives study:

Table 2: Mean (s.d.) acceptability scores for Context Group (n=101)

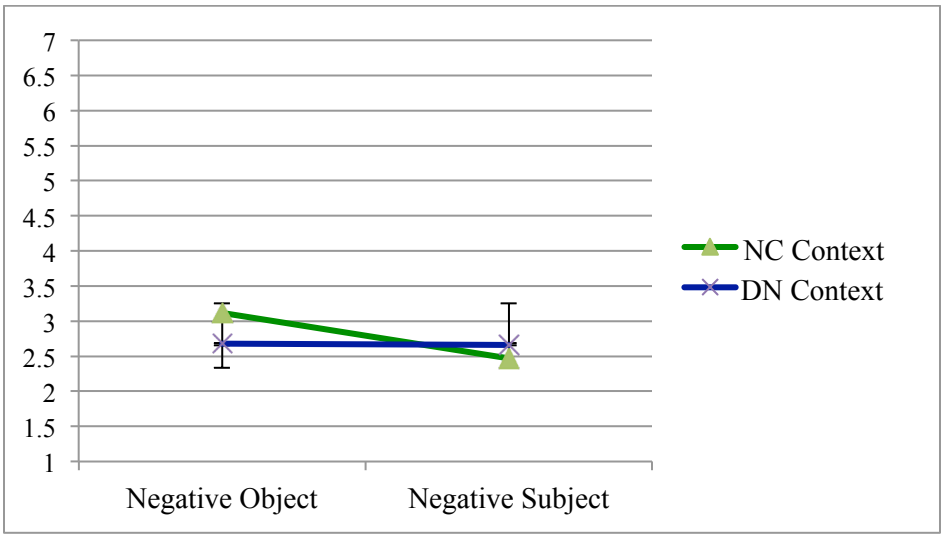
	Negative Object	**Negative Subject**
NC context	3.12 (1.27)	2.47 (1.13)
DN context	2.68 (1.14)	2.66 (1.15)
Overall	2.85 (1.28)	2.48 (1.13)

As in the No-Context group, items were unacceptable overall, with the mean acceptability rating below four for all types. A two (subject vs. object) by two (NC vs.

DN) ANOVA revealed a significant effect of the position of the negative constituent (object vs. subject) on acceptability ($F(1, 100) = 20.03$, $p = .001$). There was no significant effect of context (NC vs. DN) on acceptability ($F(1, 101) = 1.85$, n.s.). This result indicates that neither NC nor DN contexts had an independent effect on acceptability.

The following figure illustrates an interaction between the position of the negative constituent (object vs. subject) and context type (NC vs. DN):

Figure 1. Interaction between position of negative constituent and context



This interaction was highly significant ($F(1, 101) = 14.74$, $p < .001$). Figure 1 shows that context had an asymmetric effect on acceptability. NC contexts were preferred for items with a negative object, but not for items with a negative subject. This was not the case for DN contexts, which were equally unacceptable when the negative constituent was in subject position and when it was in object position.

2.3 Comparison of No-Context and Context Groups

To better understand the effect of context on acceptability for the two negatives items, mean acceptability ratings were compared across the No-Context and Context Groups. The preference for negative objects over negative subjects was unsurprisingly present in this cross-group comparison ($F(1, 158) = 29.78$, $p < .001$). Surprisingly, however, there was a significant effect of context (no-context vs. context) on acceptability ($F(1, 158) = 8.99$, $p < .01$, partial $eta^2 = .05$) in which items were more acceptable when presented *without a context*. I discuss possible reasons for this in section 4.

2.4 Summary of two negatives results

The two negatives study revealed two findings. First, there was an overall preference for the negative object items over the negative subject items in both the No-Context and the Context Groups. Second, the Context Group preferred NC contexts only for items with a negative object. In Section 4 I discuss the implications of these results for the hypothesis that participants have Object NC but not Subject NC grammars. First, I present the results of a follow-up study on the acceptability of sentences with a single negative.

3. Single Negative Study

The results of the two negatives study revealed a clear preference for negative objects over negative subjects. Under my proposal, this result reflects the grammatical distinction between Object NC and Subject NC. However, negation carries a heavy

processing load (Kluender & Gieselman 2013), and it is possible that participants preferred negative objects because items with a sentence-initial negative were more difficult to process. This section reports the results of a follow-up study aimed at testing the hypothesis that participants in the two negatives study preferred object negatives to subject negatives because negatives are harder to process in sentence-initial position.

3.1 Single negative methodology

As in the two negatives study, AMT was used to recruit and pay participants, and Survey Gizmo for survey design and administration. The same criteria for participation applied: Participants had to be adult native English speakers raised in the United States. The single negative items were nearly identical to the two negatives items. The only difference is that we removed the negated auxiliary, which required the use of a past tense lexical verb. The following is an example of an item that the No-Context Group received:

(10) He took nobody on the trip. (cf. He didn't take nobody on the trip.)

Like in the two negatives study, a Context Group judged the same items as a No-Context Group, but with a single context sentence preceding the item:

(11) John went on vacation all alone.
He took nobody on the trip.

Unlike the Context Group in the two negatives study, context types did not vary between NC and DN. This is because the items had only a single negative, so DN contexts did not apply.

Like the two negatives group, the single negative groups judged sixteen test items and thirty-two fillers. Of the sixteen test items, eight had a negative object and eight had a negative subject. All items are included in the Appendix.

3.2 Single negative results

Two participants reported to being Subject NC users, one participant reported optional use of Object NC, and one reported to being a Subject NC and optional Object NC user. Participant reports for the single negative study were thus similar to the two negatives participants.

The following table shows the mean acceptability scores for both the Context and No-Context Groups in the single negative study:

Table 3: Mean (s.d.) acceptability scores for No-Context (n = 101) and Context (n = 101) Groups

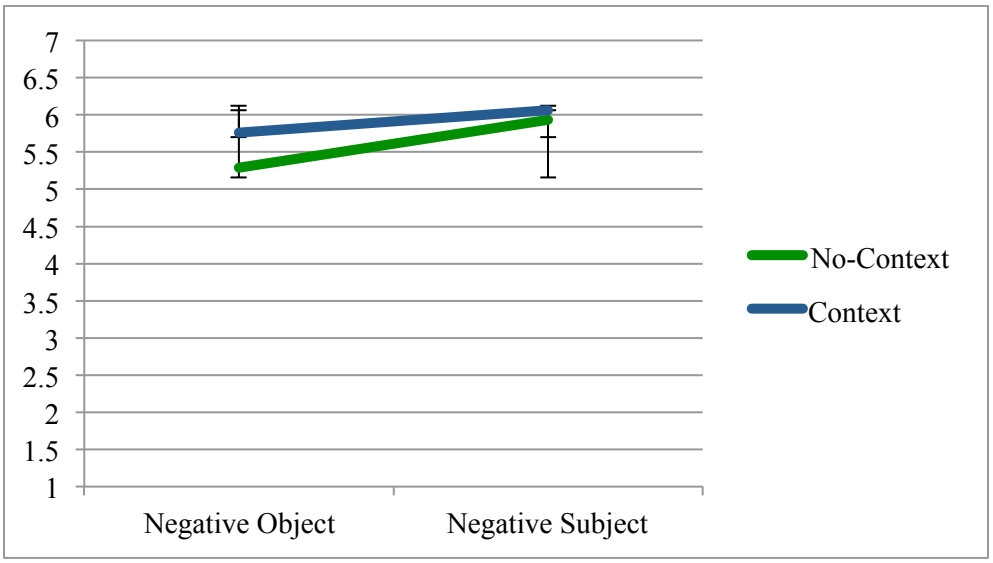
	Negative Object	**Negative Subject**
No-context	5.29 (.97)	5.93 (.85)
Context	5.76 (.95)	6.06 (.72)
Overall	5.52 (.98)	5.99 (.78)

The means in Table 3 reflect the fact that, unlike our two negatives items, participants found single negative items to be acceptable overall: Mean scores were greater than five for all item types. This result shows that removal of one negative (the negative marker) made the items acceptable.

A 2 (no-context vs. context) by 2 (subject vs. object) ANOVA revealed a significant effect of position of negative constituent (object vs. subject) on acceptability ($F(1, 200) = 100.65$, $p < .001$, partial eta^2 = .34). Overall, participants found negative subjects to be more natural than negative objects (see Table 3). This pattern directly opposes the one found for two negatives. There was also a significant effect of context (no-context vs. context) on acceptability ($F(1, 200) = 7.03$, $p < .01$, partial eta^2 = .03): Overall participants found items with a single negative more natural when presented with a context than without a context. This pattern is also the opposite of the one found in the two negatives study.

Lastly, the single negative results revealed a significant interaction between the position of the negative constituent **(**Ob vs. Sub) and context (no-context vs. context) ($F(1, 200) = 12.85$, $p < .001$; partial eta^2 = .06). The interaction is illustrated here:

Figure 2. Interaction between position of constituent and context (single negative)



This figure shows that context had an asymmetric effect on acceptability with respect to the syntactic position of the negative constituent. Context increased the acceptability of negative object items significantly more than negative subject items.

3.3 Summary of single negative results

In sum, results of our single negative study revealed three main findings. First, sentences with a single negative were acceptable overall, both with and without a context. Second, there was an overall preference for negative subjects over negative objects. Third, context increased acceptability for negative objects significantly more than negative subjects.

4. Summary and Discussion

The results reported in this chapter reflect a number of asymmetries in the acceptability of English sentences with two negatives and those with a single negative. In this section I summarize and discussion each significant finding in the context of the theories of NC, DN, and NPI constructions discussed in the previous chapters of this dissertation. I begin in section 4.1 with a discussion of the patterns in overall acceptability across the two studies. Section 4.2 discusses the effect of the syntactic position of the negative constituent. Section 4.3 focuses on the two negatives study, addressing the differing effects of NC and DN contexts on sentences with a negative object. In section 4.4 I discuss the overall effect of context across the two studies. Section 4.5 concludes.

4.1 Two negatives vs. one

The simplest observation one can make regarding the data reported above is that, for our reportedly (and primarily) non-NC using participants, sentences with two negatives are unacceptable (with overall means below the median of 4), and sentences with a single negative are acceptable (overall means above 5). Let us now consider this observation in the context of the sociolinguistic stigma against NC, as articulated clearly in Lowth's (1762) edict that in English, "two negatives should equal a positive" (Horn 2010). Recent theories of NC have indirectly extended this edict into grammatical models. For example, Zeijlstra (2004) asserts that languages are either DN or NC. Under Zeijlstra's (2004) theory, DN languages generate DN interpretations for sentences with two negatives, and NC languages generate NC interpretations for those same sentences. Let us entertain the hypothesis that our participants, under Zeijlstra's theory, have DN (or Lowthian) grammars. Under this hypothesis, we would expect DN contexts to increase overall acceptability for sentences with two negatives. However, this was not the case. In fact our data showed the reverse pattern: For some items, the NC context was preferred over the DN context. Theories such as the one in Zeijlstra (2004) therefore do not predict the interaction between syntactic position of the negative constituent and context type found in the two negatives study.

Why, then, did our participants find sentences with two negatives to be so unacceptable, and why did the removal of the negative marker improve overall acceptability? To answer these questions, there are two factors to consider. The first is the heavy sociolinguistic stigma associated with English NC. The subtext of Lowth's (1762) edict is that NC is socially unacceptable. This is of course not true in many social

contexts in contemporary English speaking society, in which NC use is the norm. Nevertheless, the social stigma associated with English NC clearly impacts acceptability judgments, even for speakers who use NC.

The second factor to consider is pragmatics. While English NC is sociolinguistically unacceptable, English DN is heavily pragmatically constrained. In order to be interpreted as DN, the two negatives items require a very particular denial context. In general, the use of DN in an out of the blue context induces violations of two Gricean maxims: that of quantity and that of manner (Grice 1975). Even when presented in DN contexts such as those provided for the Context Group, the fact that the alternative, a simple affirmative declarative, exists may degrade the acceptability of the DN construction. Consider again the following test item (7):

(7) Context: Mary said John went on the trip alone, but Mary's wrong.
Item: He didn't take nobody on the trip.

The context in (7) makes DN interpretation for the test item felicitous, but there are many other sentences that would also be felicitous in this context, including, for example: ‘he took his mom with him’. This sentence involves no negation, and it is clearer and more informative than the DN in (7). The degraded acceptability of two negatives sentences in DN contexts may thus be attributable to pragmatic constraints.

For the single negative sentences, which were acceptable overall, neither the sociolinguistic status of NC nor the pragmatic status of DN applies. It is thus reasonable to attribute the asymmetry in overall acceptability across our two negatives and single

negative experiments to sociolinguistic influences and pragmatic factors. Note that neither sociolinguistic nor pragmatic factors such as quantity and manner are grammatical in nature. Barbiers (2005, 2009) reminds us that sentence acceptability is subject to sociolinguistic and other influences that may or may not reflect grammatical phenomena. It seems therefore that English sentences with two negatives represent a clear case in which binary acceptability (i.e. acceptable vs. unacceptable), or even ternary acceptability (adding the category 'marginal') is not a useful measure. However, this does not mean that acceptability data cannot inform grammatical theories of such sentences. While binary (or ternary) acceptability may not be useful for this purpose, the results in this chapter study show that gradient acceptability data reveal interesting differences in subtypes of English sentences with two negatives, and these differences are syntactic in nature.

4.2 Syntactic Position of the Negative Constituent

Both the two negatives and single negative studies revealed an effect of the syntactic position of the negative constituent. In the two negatives study, participants in both the No-Context and Context groups found negative object items significantly more acceptable than items with a negative subject. This result is in direct opposition to the single negative study, in which both groups preferred negative subjects over negative objects. Setting aside the effect of context, consider how these patterns bear on the theory of NC put forth in Chapter 4 of this dissertation, namely, that Object NC constructions are structurally equivalent to Collins and Postal's (2014) unary NEG NPI constructions. Under this theory, the only difference between unary NEG NPI and Object NC

constructions pertains to the spell out (or lack thereof) of a resumptive negation. This is not the case for Subject NC constructions, which I hypothesized in Chapter 5 to be ungrammatical for a subset of English grammars in which the Remnant Raising Condition applies. This hypothesis predicts a preference for sentences with a negative object over sentences with a negative subject position, a prediction that is borne out in the two negatives results. These results thus support the hypothesis that Object NC and Subject NC have distinct grammatical statuses for our participants.

The fact that participants in the single negative study preferred negative subjects over negative objects also bears on the hypothesis that participants have Object NC grammars but not Subject NC grammars. Setting aside context, I synthesize participant preferences across experiment groups as follows:

Preferred Construction Types:

(12) He did**n't** take **nobody** on the trip.

(13) **No one** was going to that party alone.

Dispreferred Construction Types:

(14) He took **nobody** on the trip.

(15) **No one** was**n't** going to that party alone.

Let us contrast the sentences in (12) and (14) in the context of our analysis of NC and NPI constructions *à la* Collins and Postal (2014). Under this theory, the negative constituent is underlyingly of the form [NEG SOME body] in both sentences, and the

presence of the negated auxiliary in (12) reflects syntactic raising of the NEG from the unary NEG DP object. I thus explain the preference for (12) and the dispreference for (14) by proposing that participants prefer a NEG raised structure over a non-NEG raised structure, an explanation that provides further indirect support for Collins and Postal's theory of syntactic NEG raising.

The hypothesis that participants have Object NC but not Subject NC grammars predicts that the only the DN interpretation is available for the string in (15). The structure that generates the DN interpretation of (15) entails the presence of two distinct syntactic and semantic negations. Such DN structures are subject to pragmatic constraints, which explains why the structure would be dispreferred, and also why participants would prefer only a single negative in subject position. In sum, when the negative constituent appears in object position, participants prefer NEG raising. But when the negative constituent appears in subject position, NEG raising is ungrammatical, and participants prefer the string with a single negative.

4.3 The effect of Negative Concord contexts

The results of the two negatives study revealed a preference for NC contexts over DN contexts for sentences with a negative object, but not for those with a negative subject. This result is surprising under a theory like the one in Zeijlstra (2004), which asserts that languages generate either NC or DN, and unsurprising under my Chapter 4 theory that Object NC constructions involve the same syntactic structure as NPI constructions. If reportedly non-NC using participants generated DN structures for sentences with negative objects and negative subjects, then there would be no difference

in acceptability across these construction types, and participants would dislike them both equally. The fact that participants prefer NC contexts over DN contexts only when the negative constituent was in object position thus presents further support for the hypothesis that Object NC constructions are generated in the same way that NPI constructions are.

4.4 The overall effect of context

I now address the apparently anomalous result produced in the two negatives study, in which participants preferred sentences when presented without a context over sentences presented with a context. Because context generally aids in comprehension, acceptability ratings should improve when a context is provided (Cowart 1997). The results of the single negative study were in line with this general tendency in that participant ratings in the Context Group were higher overall than in the No-Context Group. Why, then, did acceptability decrease in the two negatives study when the items were presented in context? One possible answer pertains to processing complexity. Participants in the two negatives study were systematically presented with both NC and DN contexts for sentences with two negatives. When deciding how natural a given test item was, participants had to parse the test item with two negatives in relation to the context. This is a relatively complex task, particularly when half of the contexts elicited a structurally complex and pragmatically conditioned DN interpretation. As such, it is possible that the provision of a context in the two negatives study made comprehension more challenging, as opposed to facilitating it.

My appeal to a processing explanation for the asymmetric effect of context across the two studies may seem to be in direct contradiction to my grammatical account of the preference for Object NC, but it is not. The type of intersentential processing participants were asked to perform in the two negatives study was complex in that it forced participants to decide between an NC and a DN interpretation. This complexity is distinct from the complexity involved in parsing the sentence itself. Provision of a context made the two negatives items more difficult to understand because participants were forced to choose between NC and DN, but this forced choice was not present in the single negatives study.

5. Conclusion

This chapter presented the results of an experimental study designed to test the hypothesis that there is a grammatical distinction between Object and Subject NC. The use of gradient acceptability shows that acceptability judgments of English sentences with two negatives can be informative despite the sociolinguistic and pragmatic influences that may degrade them. Statistical analyses of the gradient data revealed a strong preference for Object NC, an unexpected result under theories that divide the world into DN language and NC languages, but an expected result under the theory of NC put forth in this dissertation.

These studies leave many questions remain open. For example, it remains to be seen how PNI constructions (see Chapter 5) fit into the acceptability patterns uncovered in the two studies reported here. These constructions present an additional problem in that they are string identical to otherwise acceptable interrogative yes/no questions (e.g.

'Didn't nobody eat?'). Furthermore, unlike Object NC and Subject NC, PNI does not appear to have a string-equivalent DN interpretation. Given these two confounding factors, the methodologies applied in the single and two negatives studies will likely not yield similarly reliable data for PNI. The question of how PNI patterns in relation to Object NC and Subject NC thus remains open.

Chapter 7

Conclusion

This thesis has extended the theory of NPI constructions in Postal (2005) and Collins and Postal (C&P 2014) to account for English NC and DN. My extension of C&P built on the assumption that negative constituents participating in NC are unary NEG phrases of the form [NEG_1 SOME X]. In Chapter 4 I analyzed two types of English NC with negative objects. One type roughly falls under Den Besten's (1986) description of NC proper, with a negative marker (*-n't* or *not*) and a single negative constituent object. In these constructions, the two negations are occurrences of the same NEG_1, and the negative morphology on the object is hypothesized to be resumptive, in a manner akin to Collins et al.'s (2015) analysis of *ke*-NPI constructions in Ewe.

I further showed in Chapter 4 how in *The Audio-Aligned and Parsed Corpus of Appalachian English* (AAPCAppE; Tortora et al., In Progress), speakers switch back and forth between NPI *any-* and negative *no-* morphology with unary NEG objects. I proposed that this intra-speaker variation is a post-syntactic phenomenon. Under this hypothesis, the NC code is the default, and NPI morphology is derived by an additional rule that deletes multiple occurrences of the same NEG_1. This variation is realized both inter- and intra-sententially, as illustrated by the following examples, repeated from Chapter 4 (examples (17) and (26)):

(1) I **didn't** have **no lice**, and I **didn't** have <u>any itch</u>.
'I didn't have any lice, and I didn't have any itch.
(AAPCAppE: SKCTC-EA)

(2) But we did**n't** have to join **no unions** or <u>any of that kind of organizations</u> or <u>anything</u> for a year.
(AAPCAppE; DOHPII-JB)

The hypothesis that (1) and (2) instantiate variable post-syntactic NEG_1 deletion leaves many questions open. For example, it remains to be discussed how such variation fits with theoretical analyses of cross-linguistic codeswitching and code-mixing (Lipski 1978, 1985; Dussias 1997, 1999, 2002; Mahootian and Santorini 1996, to name a few). It also remains to be discovered whether speakers necessarily have both patterns, and how and when the NPI pattern is acquired. The hypothesis that the NPI pattern is derived by an additional PF rule predicts that the NC pattern will appear in child speech before the NPI pattern, a prediction that Sano et al. (2009) show is borne in Japanese child language.

Chapter 4 also analyzed NC sentences with multiple negative constituents such as the following (example (3)):

(3) So they do**n't nobody** cheat me out of **nothing**.
'So nobody cheats me out of anything.'
(AAPCAppE: SKCTC-EA)

C&P (2014) make the novel proposal that sentences like 'nobody cheats me out of anything' have the structure of resumptive polyadic quantifiers scoping over systematically related pairs or n-tuples of variables, extending the analysis of NC as polyadic quantification in De Swart and Sag (2002). I adapted C&P's (2014) proposal to account for English NC constructions like (3). This adaptation adds to the growing body

of literature that analyzes NC as polyadic quantification, such as Iordăchiaoaia and Richter's (2015) recent paper on NC in Romanian.

Chapter 4 also used AAPCAppE data to show how the predictions made by the extension of C&P (2014) to English NC are borne out. Just like the unary NEG NPIs of C&P (2014), negative constituents and negative markers participate in NC within the same clause, across non-finite clause boundaries, and across finite clause boundaries that are complements to NEG-raising verbs. When the negative elements occur across finite clause boundaries with non-NEG raising matrix verbs, DN results. The fact that DN occurs in these particular conditions in the corpus data indicates that DN is not ungrammatical in Englishes that realize NC. The coexistence of NC and DN in corpus data is not predicted by theories like the one in Zeijlstra (2004), which divides the world into DN and NC languages.

Chapter 5 extended the analysis to sentences with negative subjects. Two construction types were discussed and analyzed. Popular Negative Inversion (PNI) and Subject NC are illustrated again here:

(4) Did**n't nobody** eat. (PNI)
'Nobody ate.'

(5) Did**n't** everybody eat. (PNI)
'Not everybody ate'

(6) **Nobody** did**n't** eat. (Subject NC)
'Nobody ate.'

Both PNI and Subject NC constructions were proposed to involve NEG raising from a DP subject, followed by further raising into the CP domain. Observing constraints on subject type in PNI, I extended a proposal that PNI subjects must be negative, despite the fact that they do not always have negative morphology (as in (5)). This proposal provides an alternative to recent accounts of PNI appealing to semantically-motivated, disambiguating movement, which run into problems when confronted with the fact that in sentences like (4), the negated auxiliary and negative constituent mark the same semantic negation (Matyiku 2013a,b, 2015). Lastly, to explain subject-object asymmetries in usage, and interpretation patterns that appear to exclude speakers such as myself from interpreting Subject NC, I adapted the Remnant Movement Condition in Collins et al. (2015), a condition on representation that states that a negative noun phrase from which a NEG has raised may not c-command that raised NEG. This condition rules out Subject NC in grammars like mine, and it is the same condition that rules out NPI subjects appearing before a negated auxiliary (e.g. 'anybody didn't eat').

Chapter 6 presented the results of an original experimental study that supports the proposals made in Chapters 4 and 5. This study adds to the growing body of literature that exploits the methodology of using gradient acceptability to inform theories of construction types that may be (un)acceptable for sociolinguistic or other non-grammatical reasons (e.g. Staum and Sag 2008, 2010; Squires 2014; O'Neill 2015). My results showed that speakers who do not accept NC nevertheless prefer Object NC to Subject NC, but show no preference for either Subject or Object DN. This study thus reveals the value of looking beyond mere binary acceptability in the realm of heavily socially stigmatized English NC. The data showed that speakers may have grammatical

knowledge of construction types that they do not accept. They also showed that acceptability judgments for English NC behave much like usage and acceptability patterns for English NPI constructions, in support of the hypothesis that these two English construction types have the same syntax.

The results in this thesis shed light on some longstanding theoretical and empirical issues, and raise some new questions as well. The fact that Postal's (2005) and Collins and Postal's (2014) theory of NPI constructions can be extended to account for English NC and DN lends support to their theory. This work thus opens the question of whether other theories of NPIs (e.g. Krifka 1995; Giannakidou 2002, 2011; Watanabe 2004) could also be extended to account for the data described in this thesis. The fact that AAPCAppE speakers switch back and forth between NC and NPI constructions both inter- and intra-sententially, as shown in Chapter 4, indicates that the structures are semantically and syntactically analogous. Comparative studies of English NC and NPI constructions like the one in this thesis may thus shed light on other theories of NPIs as well. Concurrently, theories of NC (e.g. Giannakidou 2000; Zeijlstra 2004; Haegeman and Lohndal 2010) might also be tested to see whether they extend to NPI constructions.

The post-syntactic NEG_1 deletion analysis I proposed for variation between NC and NPIs is distinct from syntactic explanations of intra-speaker variation (e.g. Kroch 1994). I proposed that the PF rule that generates the NPI pattern characterizes the historical replacement of negative constituents with NPIs, which was a non-syntactic and sociolinguistically motivated change (Nevalainen 1998, 2006). This analysis contradicts analyses of the diachronic shift away from NC in English as a shift in the interpretability of grammatical features (Wallage 2012, 2015). Such analyses assume the historical

"weakening" of negative markers (which results in a syntactic change, as illustrated by the Jespersen Cycle) and the gradual and virtual disappearance of NC with negative constituents from written texts to be part of the same grammatical change. Following Nevalainen's work, I have suggested an alternative in which the change in negative markers and the change in negative constituents can be viewed as two distinct phenomena, only one of which is syntactic. This work thus renews the question of whether the diachronic shift away from NC in written texts is grammatical in nature, and it indicates that a wholesale grammatical account of this change should not be taken as a given.

To conclude, I briefly discuss an implication of this work for the broader framework of Minimalist syntax. In his discussion of the syntactic operation Merge (X,Y) = {X,Y}, Collins (2015b:16) proposes that "there is no operation Agree in UG". (See also Seely (2014).) While I invoke Agree in my Chapter 5 derivations of PNI and Subject NC, the Agree operation is not central to my syntactic account of NC, which appeals instead to NEG raising and polyadic quantification. This approach to NC provides an alternative to the Agree approach to NC initiated in Zeijlstra (2004) and pursued in many other recent works (Haegeman and Lohndal 2010; Wallage 2012, 2015; Biberauer and Zeijlstra 2012; Puskás 2012), in which NC instantiates an Agree relation between a negative element and a null operator. In Chapter 4 I discussed how the Agree approach to English NC accounts less elegantly for the coexistence of NC and DN, and how it does not account for the identical distributions of NC and some NPI constructions. As such, this work constitutes a small contribution to the debate of whether Agree is a necessary part of UG. For the case of English NC, and perhaps for NC in general, I argue that it is not.

Appendix: Test Items and Fillers

A. Two Negatives Test Items

No-Context Group Items:

Item 1: He didn't take nobody on the trip.

Item 2: She wasn't inviting no one to the house.

Item 3: We couldn't find no clothes for school.

Item 4: They wouldn't watch no games at that stadium.

Item 5: He didn't buy nothing in that store.

Item 6: She wasn't calling none of them after work hours.

Item 7: We couldn't eat no vegetables with dinner.

Item 8: They wouldn't bring no snacks for us.

Item 9: Nobody didn't help patients on that day.

Item 10: No one wasn't going to that party alone.

Item 11: No girls couldn't solve the problem in class.

Item 12: No waiters wouldn't serve them at lunch time.

Item 13: None of them didn't climb that mountain yesterday.

Item 14: Nothing wasn't ready before the students arrived.

Item 15: No student couldn’t drive by the end.

Item 16: No kids wouldn't stay after school.

Context Group A:

Item 1 Context: John went on vacation all alone.

Item 1: He didn't take nobody on the trip.

Item 2 Context: Mary decided to stay in and watch a movie by herself.

Item 2: She wasn't inviting no one to the house.

Item 3 Context: Lisa and I had to go shopping yesterday.

Item 3: We couldn't find no clothes for school.

Item 4 Context: The fans said the football stadium is old and broken down.

Item 4: They wouldn't watch no games at that stadium.

Item 5 Context: Sam said he walked out of the store without spending money, but I know better.

Item 5: He didn't buy nothing in that store.

Item 6 Context: Jen was forbidden from calling clients after work hours, but she was doing it anyway.

Item 6: She wasn't calling none of them after work hours.

Item 7 Context: Every time we went to Lucy's house for dinner we had to eat vegetables.

Item 7: We couldn't eat no vegetables with dinner.

Item 8 Context: Someone said Jen and Luke are bringing snacks for everybody except us, but I disagree.

Item 8: They wouldn't bring no snacks for us.

Item 9 Context: The hospital was closed because of the storm.

Item 9: Nobody didn't help patients on that day.

Item 10 Context: Everyone going to the party was bringing a date.

Item 10: No one wasn't going to that party alone.

Item 11 Context: The problem was too hard for the students to solve.

Item 11: No girls couldn't solve the problem in class.

Item 12 Context: The customers sat down to order, but the waiters refused to notice them.

Item 12: No waiters wouldn't serve them at lunch time.

Item 13 Context: Everyone thought the mountain was too steep, but all of the climbers climbed it.

Item 13: None of them didn't climb that mountain yesterday.

Item 14 Context: The teacher worked all night to prepare the classroom for her students.

Item 14: Nothing wasn't ready before the students arrived.

Item 15 Context: The students in the driving course all practiced until they learned to drive.

Item 15: No student couldn’t drive by the end.

Item 16 Context: Tutors would be there after school for homework help, and all the kids needed help.

Item 16: No kids wouldn't stay after school.

Context Group B (context type reversed):

Item 1 Context: Mary said John went on the trip alone, but Mary's wrong.

Item 1: He didn't take nobody on the trip.

Item 2 Context: Meg usually ate at the house by herself, but this time was different.

Item 2: She wasn't inviting no one to the house.

Item 3 Context: We knew we absolutely had to find school clothes at the mall, and we did.

Item 3: We couldn't find no clothes for school.

Item 4 Context: Despite the fact that the fans were hoping to avoid that stadium, they would have to go there after all.

Item 4: They wouldn't watch no games at that stadium.

Item 5 Context: Sam went to Lisa's favorite store with her, but he just stood there while she shopped.

Item 5: He didn't buy nothing in that store.

Item 6 Context: Jen was finished with her client calls for the day.

Item 6: She wasn't calling none of them after work hours.

Item 7 Context: Last night the cafeteria was only serving meat, cheese, and pasta.

Item 7: We couldn't eat no vegetables with dinner.

Item 8 Context: Our friends decided they would bring snacks only for themselves.

Item 8: They wouldn't bring no snacks for us.

Item 9 Context: All the doctors treated patients at the hospital.

Item 9: Nobody didn't help patients on that day.

Item 10 Context: Everyone was going to that party without a date.

Item 10: No one wasn't going to that party alone.

Item 11 Context: All the girls were successful that day.

Item 11: No girls couldn't solve the problem in class.

Item 12 Context: All the waiters had to serve lunch to the owner's family.

Item 12: No waiters wouldn't serve them at lunch time.

Item 13 Context: All of the climbers got sick and had to stay in the clinic at the lodge.

Item 13: None of them didn't climb that mountain yesterday.

Item 14 Context: The teacher forgot to get the classroom ready for the first day.

Item 14: Nothing wasn't ready before the students arrived.

Item 15 Context: That driving course was so bad that all the students failed.

Item 15: No student couldn’t drive by the end.

Item 16 Context: The kids at that school all hated the after school program.

Item 16: No kids wouldn't stay after school.

B. Single Negative Items

Item 1 Context: John went on vacation all alone.

Item 1: He took nobody on the trip.

Item 2 Context: Mary decided to stay in and watch a movie by herself.

Item 2: She invited no one to the house.

Item 3 Context: Lisa and I had to go shopping yesterday.

Item 3: We found no clothes for school.

Item 4 Context: The fans said the football stadium is old and broken down.

Item 4: They watched no games at that stadium.

Item 5 Context: Sam went to Lisa's favorite store with her, but he just stood there while she shopped.

Item 5: He bought nothing in that store.

Item 6 Context: Jen was finished with her client calls for the day.

Item 6: She called none of them after work hours.

Item 7 Context: Last night the cafeteria was only serving meat, cheese, and pasta.

Item 7: We ate no vegetables with dinner.

Item 8 Context: Our friends decided they would bring snacks only for themselves.

Item 8: They brought no snacks for us.

Item 9 Context: The hospital was closed because of the storm.

Item 9: Nobody helped patients on that day.

Item 10 Context: Everyone going to the party was bringing a date.

Item 10: No one went to that party alone.

Item 11 Context: The problem was too hard for the students to solve.

Item 11: No girls solved the problem in class.

Item 12 Context: The customers sat down to order, but the waiters refused to notice them.

Item 12: No waiters served them at lunch time.

Item 13 Context: All of the climbers got sick and had to stay in the clinic at the lodge.

Item 13: None of them climbed that mountain yesterday.

Item 14 Context: The teacher forgot to get the classroom ready for the first day.

Item 14: Nothing was ready before the students arrived.

Item 15 Context: That driving course was so bad that all the students failed.

Item 15: No students drove by the end.

Item 16 Context: The kids at that school all hated the after school program.

Item 16: No kids stayed after school.

C. Fillers:

(Note: Filler contexts were only provided for the Context Group.)

Filler Context 1: Jack almost gave up looking for a date.

Filler Item 1: He finally found someone to go to the party with.

Filler Context 2: Amy went to the store this morning to buy groceries.

Filler Item 2: She bought milk because she needed more because her roommate drank it all.

Filler Context 3: Most of the people in our class eat pizza at least once a week.

Filler Item 3: Me and John both like to eat pizza on Friday nights after work.

Filler Context 4: The articles were all of different lengths.

Filler Item 4: The article that the reporter that the employer paid wrote was short.

Filler Context 5: Some people were going to the party by themselves, and some wanted company.

Filler Item 5: James would go to the party only if a lot of his friends would be there.

Filler Context 6: There was at least one adult watching all of the kids on the playground.

Filler Item 6: The tall woman watched the boy who was wearing the red hat while he played.

Filler Context 7: Jeff says it's false to state that some people lack love.

Filler Item 7: Everybody loves somebody, and some people love everybody.

Filler Context 8: There are a lot of things Jill loves about teaching, but there is one thing she hates.

Filler Item 8: What Jill hates is when her students arrive late.

Filler Context 9: Kim called May early this morning to find out when they could start working.

Filler Item 9: May told Kim that when she finished her breakfast that she would be ready to work.

Filler Context 10: Sometimes I sit and think about all of the things I do each day.

Filler Item 10: There are a lot of things that I wonder why I do them.

Filler Context 11: My parents called and said they may have to miss dinner tonight.

Filler Item 11: The problem is, is they missed their flight.

Filler Context 12: People do different things to relax on weekends.

Filler Item 12: Many people often go for walks on Saturdays.

Filler Context 13: Everyone who went to the potluck ate something different.

Filler Item 13: Ken the cookies ate.

Filler Context 14: The people at the dance party all got to dance.

Filler Item 14: At least one person danced with.

Filler Context 15: The kids in the yard keep doing different things.

Filler Item 15: Kate keeps running jumping spinning.

Filler Context 16: The witnesses all remember different things.

Filler Item 16: Lucy remembers which man stealing her purse yesterday.

Filler Context 17: Lucinda turned off the lights and lowered the shades before going to bed.

Filler Item 17: In the morning, Jack pulled the shades up.

Filler Context 18: Jacqueline is an avid reader.

Filler Item 18: She likes to read books she reads all the time.

Filler Context 19: Jason has visited almost all of the seven continents.

Filler Item 19: Him and Andy went to South America last summer.

Filler Context 20: The people who attended the banquet said the dinner was excellent.

Filler Item 20: The food that the chef that the woman hired cooked was delicious.

Filler Context 21: Pat eats ice cream every night after dinner.

Filler Item 21: Barbara will go to the football game if the weather is nice.

Filler Context 22: The reporter said that there would be traffic on the highway.

Filler Item 22: The small dog chased after the big dog who barked while he ran.

Filler Context 23: The couple ate a picnic lunch under the tree.

Filler Item 23: Only one person won the race, but everyone got a prize.

Filler Context 24: Rose is having a dinner party at her house this evening.

Filler Item 24: What teachers love is when all students submit their assignments on time.

Filler Context 25: Jeff told Amy he was worried when she boarded her flight.

Filler Item 25: Amy said to Jeff that when her flight landed that she would call him.

Filler Context 26: Valerie thinks that the agenda for the conference seems reasonable.

Filler Item 26: There is only one thing that Valerie wonders why it's on the agenda.

Filler Context 27: Even though Linda really liked the first school she saw, she continued touring different schools.

Filler Item 27: The point was, was that it was important to consider all the options.

Filler Context 28: The museum along the river is old and outdated.

Filler Item 28: Few tourists seldom visit that museum.

Filler Context 29: Everyone used a different mode of transportation to get to school.

Filler Item 29: Mary the bike rode.

Filler Context 30: The performance was one of the best they had seen in a long time.

Filler Item 30: The audience clapped for.

Filler Context 31: The train ride was long, so we had to keep ourselves entertained.

Filler Item 31: We read a book journal wrote.

Filler Context 32: The teachers expected that the field trip would be a long day for the students.

Filler Item 32: They ate their dinner tomorrow night when they will get home.

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