

THERE AND BACK AGAIN:

AN ADVERB'S TALE

by

John Hartley Blackham

A thesis submitted to the faculty of
The University of Utah
in partial fulfillment of the requirements for the degree of

Master of Arts

Department of Linguistics

The University of Utah

August 2017

Copyright © John Hartley Blackham 2017

All Rights Reserved

The University of Utah Graduate School

STATEMENT OF THESIS APPROVAL

The thesis of John Hartley Blackham

has been approved by the following supervisory committee members:

Benjamin Slade, Chair 12/05/2016
Date Approved

Edward Rubin, Member 12/05/2016
Date Approved

Aniko Csirmaz, Member 12/05/2016
Date Approved

and by Patricia Hanna, Chair/Dean of

the Department/College/School of Linguistics

and by David B. Kieda, Dean of The Graduate School.

ABSTRACT

This thesis summarizes decades of debate on the nature of the restitutive/repetitive ambiguity of English *again*, critically examines previous research testing hypotheses concerning the diachronic and future development of *again*, in particular investigating predictions made utilizing the theoretical Visibility Parameter that *again* is following a trajectory of losing its restitutive semantic sense. This thesis especially builds on the corpus-based diachronic research of *again* performed by Beck et al. and Gergel and Beck, which found evidence for the decline and loss of restitutive and counterdirectional *again*. Finally, this thesis produces an original corpus study with the aim of (a) confirming the findings of previous studies, and (b) making a plausible case for the adverb *back* and *re-* verbforms as candidates for influencing the decline of restitutive and counterdirectional readings of *again*. I conclude by suggesting future research into the nature of counterdirectional adverbs, the formal definition of counterdirectionality, and the nature of counterdirectionality's apparent privileged relationship with the Visibility Parameter.

TABLE OF CONTENTS

ABSTRACT.....	iii
ACKNOWLEDGEMENTS.....	vi
Chapters	
1. THE NATURE OF THE REPETITIVE/RESTITUTIVE AMBIGUITY	1
1.1 Analyzing the Ambiguity.....	3
1.2 Cross-linguistic Evidence in Favor of the Structural Analysis.....	7
1.2.1 A Survey of 18 Languages	8
1.2.2 Mandarin <i>You</i> , ‘Again’	11
1.2.3 Summary	21
1.3 Major Evidence in Favor of the Lexical Analysis	22
1.4 Conclusion	25
2. A DIACHRONIC ANALYSIS OF <i>AGAIN</i>	27
2.1 The Visibility Parameter.....	27
2.2 Restitutive/Repetitive Ambiguity	30
2.3 Delving Deeper	34
3. A QUALITATIVE ANALYSIS OF <i>AGAIN</i> AND ITS POTENTIAL COMPETITORS.....	39
3.1 A History of <i>Again</i>	39
3.2 Proposal: Restitutive <i>Re-</i> and Counterdirectional <i>Back</i>	42
3.2.1 A Restitutive Analysis of <i>Re-</i>	42
3.2.2 <i>Back</i> as a Primarily Counterdirectional Adverb.....	44
3.3 Counterdirectional vs. Restitutive <i>Again</i>	46
3.3.1 Other Issues	51
3.4 Predictions and Hypotheses of the Present Study.....	54
4. ORIGINAL STUDY.....	55
4.1 Methodology.....	55

4.1.1 Methodological Divergences from Previous Studies.....	56
4.1.1.1 Classifying the Various <i>Agains</i>	58
4.1.2 Assembling a New Corpus.....	66
4.1.3 Processing the Data.....	67
4.2 The Data.....	68
4.3 Analysis.....	77
5. CONCLUSION.....	81
APPENDIX: ADDENDUM TO GERGEL AND BECK (2015).....	86
BIBLIOGRAPHY.....	90

ACKNOWLEDGEMENTS

I would like to thank Ben Slade for the extensive work he's put into this thesis with me, for encouraging me, guiding me to good sources, and overall making this thesis possible. I'd also like to thank Aniko and Ed for their feedback and for dedicating their time. My wife's patience and support, of course, made writing the thesis bearable, so thanks are in order in that regard. J.R.R. Tolkien's diminutive Bilbo inspired the title of this and a variety of similar works, so I offer some thanks by doing my best to include him in the explanatory examples. Finally, thanks to Anna Deakins for that tip-off about the *Cambridge Grammar*!

CHAPTER 1

THE NATURE OF THE REPETITIVE/RESTITUTIVE AMBIGUITY

The adverb *again* has undergone a great deal of change since it first appeared in early English. Much has been written in recent years on the syntax, semantics, and diachronic progress of the English adverb *again* and its cross-linguistic parallels. The subject proves interesting for a number of reasons, not the least of which is that while repetition is ostensibly the primary function of the word, unlike other repetition adverbs, *again* enjoys a strange ability to produce ambiguity by repetition and restitution. There has been much debate over the nature of this ambiguity, whether it is structural or lexical in nature. The purpose of this thesis is to review literature concerning the diachronic development of *again*, evidences of the loss or diminution of certain readings of *again*, and the historical corpus studies performed to test predictions concerning the trajectory of change of *again*, and finally this thesis will produce a new historical corpus study with the aim of testing open questions set forth by previous researchers about the development of *again*.

To begin with, we must discuss the basics of the repetitive/restitutive ambiguity of *again*, illustrated below:

- (1) John turned on the radio again.
 - a. John turned on the radio, and he had done that before. (repetitive)

b. John turned on the radio, and the radio had been on before. (restitutive)

A context for:

(1a): John turned on the radio on Tuesday. On Thursday, he turned the radio on a second time.

(1b): The radio was on in the morning, but Mary switched it off. When John arrived in the afternoon, he wanted to listen to some music, so he turned the radio on again.

While both readings are available today, the contexts in which the restitutive reading are found have become limited compared to the far more free availability of restitutive *again* in Early and Late Modern English. But before we can enter into discussion of the historical trajectory—and possible future implications of this trajectory—it will be necessary to explain and discuss exactly what causes this ambiguity. Two major ideas have been proposed.

One line of thought is to treat the different readings of (1a) and (1b) as a lexical or meaning postulate ambiguity, where *again* possesses two distinct meanings (Fabricus-Hansen 1983, 2001). Another line of thought argues for a structural analysis, where the different readings of *again* are derived from their placement in the syntax—*again* may attach at a higher point in the syntax to take scope over the whole VP (repetition of the VP) or at a lower point so as to take scope only over the result state of the VP (restitution of a prior state) (Von Stechow 1995, 1996; Beck 2005; Patel-Grosz and Beck 2014; Gergel and Beck 2015; Xu 2016).

This chapter will summarize previous research on these two analyses and show how historical English data provide evidence that vindicates both analyses, preparatory to

entering into a discussion of diachronic studies showing a loss of the restitutive reading.

1.1 Analyzing the Ambiguity

Here I will briefly summarize the two main competing analyses for the ambiguity, starting with the structural analysis, following von Stechow (1995, 1996), and then moving on to the lexical analyses, following Fabricius-Hansen (2001).

The structural analysis of the restitutive/repetitive ambiguity of *again* is based on scope: rather than assume there exist multiple lexical entries for *again* denoting repetition and restoration, we assume only one *again*, indicating repetition, achieves two different readings by taking a higher or lower scope position in the syntax, where the higher scope gives us a repetition over the entire event of the VP and the lower scope gives us a repetition over only the result state of the VP and thus a restitutive reading. Taking a resultative construction to illustrate the view, I will borrow from Beck (2005, ex. 5):

- (2) Thorin hammered the metal flat again.
- a. Thorin hammered the metal flat, and that had happened before (repetitive)
 - b. Thorin hammered the metal flat, and the metal had been flat before (restitutive)

The structural analysis presented by von Stechow (1995, 1996) resolves an apparent semantic issue with this sentence, where *hammered*, a transitive verb, is seeking an argument but is only able to combine instead with the small clause ('the metal' has been raised to bind PRO):

- (3) a. Thorin hammered the metal flat.
- b. [[the metal] [1[_{VP} Thorin [v' t1 [v' hammered [_{SC} PRO1 flat]]]]]] (Beck 2005,

ex. 13–15')

In this way, we avoid having to assume there exist multiple semantic entries for *again*; all that is needed is a single definition.

$$\begin{aligned}
 (8) \text{ [[again]]}(P_{\langle i, t \rangle})(e) &= 1 \text{ iff } P(e) \ \& \ \exists e' [e' < e \ \& \ P(e')] \\
 &= 0 \text{ iff } \sim P \ \underline{\subseteq} \ \& \ \exists e' [e' < e \ \& \ P(e')] \\
 &\text{undefined otherwise} \quad (\text{Beck 2005, ex. 16})
 \end{aligned}$$

This single *again* is then able to effect different readings based on where it appears in the LF: the higher scope, over the entire event, will effect a repetitive reading, while the lower scope, over only the result state of the event, will effect a restitutive reading.

This analysis can also be applied to ambiguous readings of simple transitive verbs that lack quite so clear of a resultative construction as (3). To illustrate this, consider (9).

(9) Fjorleif opened the door again.

The same ambiguity is available in (9): the door may have been open before, or Fjorleif may have opened the door previously. But where is the overt result state in the syntax that would allow the structural scope analysis above? Von Stechow, Beck, and others provide the answer: through syntactic decomposition. We assume that the accomplishment verb *open* is decomposed to a phonologically null CAUSE+BECOME verb plus the adjective *open* (Von Stechow 1995, 1996; Beck 2005), thus permitting the same analysis described for (3). It is worth noting here, though it will be explored in greater detail in subsequent sections, that this account was initially conceived as a defense of a purely structural account of the repetitive/restitutive ambiguity of the German *wieder*, ‘again,’ which ambiguity was structurally derived through syntactic

decomposition (von Stechow 1996).

The lexical analysis, on the other hand, argues that the ambiguity arises from the notion of multiple meanings of *again*, namely a counterdirectionality in addition to repetition. The counterdirectional sense then results in a ‘restitutive’ interpretation:

(10) The hot air balloon sank and sank. Then it rose again.

In (2), there was no a previous event of the balloon rising (though this can be indirectly inferred by its flying in the first place), and so *again* here is licensed as a reversal of *sank* in the previous clause (following Beck 2005; Fabricius-Hansen 2001).

There are, therefore, two distinct semantic entries for *again*:

- (11) a. $[[\text{again}_1]](P_{\langle i, \triangleright \rangle})(e) = 1$ iff $P(e) \ \& \ \exists e' [e' < e * P(e')]$
 $= 0$ iff $\sim P(e) \ \& \ \exists e' [e' < e * P(e')]$
 undefined otherwise.
- b. $[[\text{again}_2]](P_{\langle i, \triangleright \rangle})(e) = 1$ iff $P(e) \ \& \ \exists e' [e' < e \ \& \ P_c(e') \ \& \ \text{res}_{P_c}(e') = \text{pre}_P(e)]$
 $= 0$ iff $\sim P(e) \ \& \ \exists e' [e' < e \ \& \ P_c(e') \ \& \ \text{res}_{P_c}(e') = \text{pre}_P(e)]$
 undefined otherwise. (Beck 2005, ex. 35)

A crude paraphrase, for the sake of simplicity, might summarize (11a): ‘true if there has been an event of this sort in the past’ (repetitive); (11b): ‘true if there has been an event of the opposite sort in the past’ (counterdirectional/restitutive). The presupposition is that in the previous event, an ‘opposite’ or ‘counterdirectional’ predicate P_c of P exists, and ‘the result state res_{P_c} of which is the starting point, or prestate pre_P , for the new event’ (Beck 2005). For our hot air balloon, we could say that (2) is true

because the sinking of the balloon produced a result state, which is the starting point for the opposite motion of ‘rose again.’ The lexical analysis, rather than relying on the syntax to effect different readings of the same adverb, relies on the presence of a counterdirectional predicate which yields a result state, which in turn provides a starting point for a new event. The advantages of such an analysis are syntactic simplicity: there is no need to concern ourselves with syntactic decomposition, scope, or anything of the sort. But how well does this analysis explain the data?

For the sake of thoroughness, I will summarize two studies that will serve as representative of the body of work supporting the structural analysis, and then I will discuss a significant example of evidence which apparently contradicts the structural analysis and provides substantial report for the lexical analysis, demonstrating the validity of each and how they interact to explain the data, preparatory for a discussion diachronic analyses of this ambiguity in English and German in Chapter 2, and setting the stage for the historical studies, central to this thesis, concerning the development of *again*.

1.2 Cross-linguistic Evidence in Favor of The Structural Analysis

One of the great advantages of this analysis of repetitive/restitutive *again* is the abundance of cross-linguistic evidence that supports it. Indeed, von Stechow’s initial structural analysis was primarily centered upon German *wieder*, ‘again,’ which possesses a very similar restitutive/repetitive ambiguity which is analyzed in the same manner described above (von Stechow 1996). Because the analysis of *wieder* is quite similar, I will not replicate it here, but I will instead summarize several important studies that have

shown this analysis to be useful across a wide variety of languages and language families.

1.2.1 A Survey of 18 Languages

In Beck's 2005 semantic analysis of *again* and decomposition adverbs like it, a survey was conducted to test the availability of this ambiguity across a variety of languages, including ASL, German, Hungarian, Japanese, Khmer, Korean, Mandarin, Bahasa Indonesia, French, Hebrew, Hindi/Urdu, Inuktitut, Kannada, Lingala, Serbian/Croatian, Spanish, and Tagalog. Crucial to this study was the observation that the ambiguities of the repetitive/restitutive sort are not equally available cross-linguistically. This is particularly clear in the case of goal PP constructions such as the following, borrowed again from Beck (2005, ex. 4, 4'):

- (12) Bilbo walked to the hall again.
- a. Bilbo walked to the hall, and he had done that before (repetitive)
 - b. Bilbo walked into the hall, and he had been there before (restitutive)

The ambiguity illustrated in (10), where a restitutive reading is possible when the goal PP is combined with *again*, is only observed in languages that allow resultative constructions of the sort shown in (2). When such constructions are not permitted, the only possible reading of goal PP constructions combined with *again* is repetitive (Beck 2005, Snyder 2001). Beck argues that this variation in availability stems from a parameter of grammar, termed the Complex Predicate Parameter. This parameter, in the context of this problem, has the effect of dividing languages into those that accept resultatives (which are complex predicates) and those that do not, following Snyder, who in turn argued on the basis of child language acquisition data that this setting was related

to the language's capacity to productively compound roots (2001, 1995). Principle (R), aforementioned, will only be available in a given language if its Complex Predicate Parameter setting is positive (Beck & Snyder 2001). Lacking (R), resultative structures will be impossible in that language. This is seen comparing English (an (R+) language) to Spanish (an (R-) language) in the following example, following Beck (2005, ex. 44):

- (13) Thorin hammered the metal flat. (resultative available)
 Thorin golpeó el metal (*plano). (resultative unavailable)
 Thorin beat the metal (*flat).

Consequently, in the Spanish equivalent (and the equivalent in any language with a negative (R) parameter) of (10), no restitutive reading should be possible. To test this hypothesis, Beck (2005, ex. 57) presented informants with the following two sentences:

- (14) a. Balin opened the door again. (accomplishment)
 b. Balin walked to the village again. (goal-PP construction)

Beck sought to test restitutive availability in the aforementioned languages, providing a 'story' context for each reading making informal but explicit interpretations for repetitive and restitutive readings. Both 'story' contexts were presented for both sentences to each informant, and the data were compiled on the basis of the acceptability of each. The results did provide good support for Beck's hypothesis, which I will reproduce here.

(15) (Beck 2005, ex. 59)

Language	Number of consultants	(R)	Restitutive reading w/ lexical accomplishment	Restitutive reading w/ goal-PP construction
ASL	(3)	+	ok	ok
English		+	ok	ok
German		+	ok	ok
Hungarian	(5)	+	(* (1 acc.)	% (3 acc, 1 ?, 1 rej.)
Japanese	(7)	(+)	% (4 acc., 3 rej.)	% (4 acc., 3 rej.)
Khmer	(1)	+	ok	ok
Korean	(5)	+	(ok) (1 ?)	ok
Mandarin	(3)	+	% (1 acc., 2 ??)	ok
Bahasa Indonesia	(1)	–	ok	*
French	(3)	–	(ok) (1 rej.)	*
Hebrew	(5)	–	ok	*
Hindi/Urdu	(5)	–	% (3 acc., 2 rej.)	*
Inuktitut	(3)	–	*	*
Kannada	(2)	–	ok	*
Lingala	(1)	–	*	*
Serbian/Croatian	(5)	–	% (2 acc., 3 rej.)	*
Spanish	(7)	–	ok	*
Tagalog	(3)	–	ok	*

The languages that were determined to have a negative setting for parameter (R) without exception judged restitutive readings with a goal-PP construction to be wholly ungrammatical. There was some inconsistency with the (R+) languages Japanese and Hungarian. As for the Japanese, Beck noted that there was a great deal of individual speaker variation concerning whether resultatives were acceptable or not, and this inconsistency, in fact, proves to be entirely consistent with the results, where the split on acceptability was perfectly reflected in both the resultative and goal-PP restitutive readings. Beck explains the Hungarian discrepancy as the result of two different dialects of Hungarian were represented among the informants. But crucially, the hypothesis was confirmed that in (R–) languages—where resultatives were not acceptable—goal-PP restitutive readings were not available. And herein lies the strong evidence in favor of a structural, as opposed to a lexical, analysis: lexical analyses of the restitutive ambiguity rely on different lexical entries, as well as a predicate of events that permit a reading of the adverb *again* that results in a counterdirectionality (Beck 2005). The explicit ‘story’ contexts provided the predicate of events necessary for such a reading, so according to the lexical analysis, there should be no reason for a restitutive reading to be unavailable for goal-PP constructions in any language. However, the structural analysis expects the availability to vary based on the parametric settings of parameters that are sensitive to the syntax of the language.

1.2.2 Mandarin *You*, ‘Again’

The facts of Mandarin restitutive *you*, ‘again,’ however, seem to provide difficulties for a structural analysis of the restitutive/repetitive ambiguity. Arguably the

most key element of the structural analysis is the scope of *again*, and highly salient here is the word order, as exemplified in von Stechow's (1996) simplified example demonstrating the effect of word order on the availability of readings of German *wieder*, 'again':

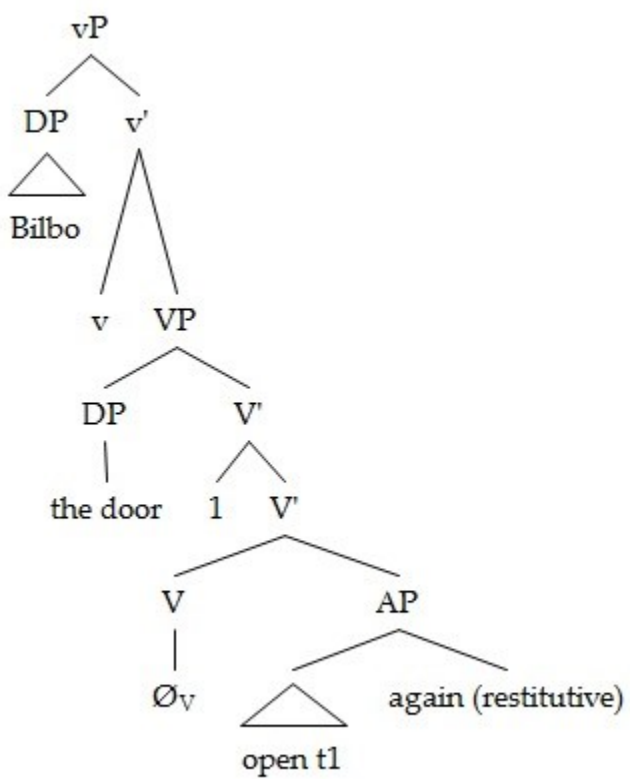
- (16) a. Ali Baba Sesam **wieder** öffnete. (restitutive/repetitive)
 Subj. Obj. again opened.
- b. Ali Baba **wieder** Sesam öffnete. (repetitive)
 Subj. again Obj. opened.
- 'Ali Baba opened Sesame again.' (Von Stechow 1996, ex. 1-1)

Here we see that when *wieder* follows the definite direct object, the ambiguity surfaces, whereas only the repetitive reading is available when *again* precedes the same definite direct object. This is similarly seen in the English when *again* occurs preverbally rather than postverbally:

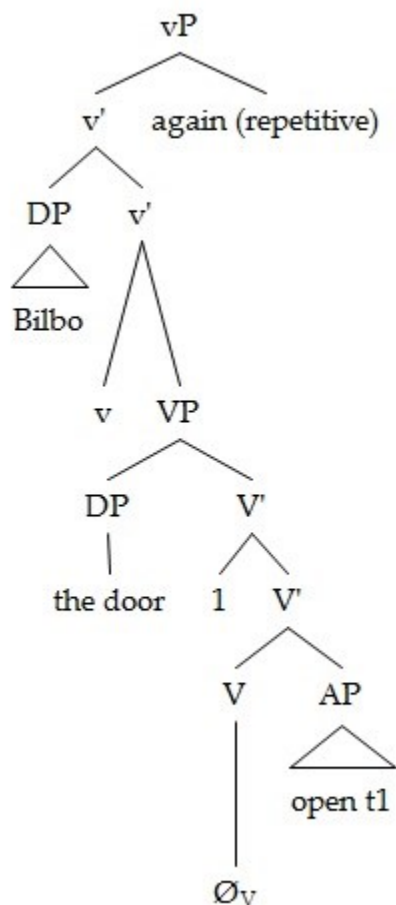
- (17) a. Bilbo opened the door **again**. (repetitive/restitutive)
 b. Bilbo **again** opened the door. (repetitive)

This very basic observation greatly supports the structural analysis—*again* in (8b), for example, adjoins at a higher position in the syntax, necessarily taking scope over the entire VP, and *again* in (8a) could be either right-adjoined at a high position in the syntax, granting the repetitive reading, or it could be adjoined lower, taking scope only over the result state *open*, granting a restitutive reading—while the lexical analysis struggles to explain how and why the word order should make unavailable one of the readings. This is shown in the following trees, which employ the simplified structure utilized in Beck et al. (2009, ex. 15):

(17') a.



b.



Xu (2016) summarizes another structural effect of *again*, that there exists at least one third reading in addition to the repetitive and restitutive readings hitherto explored, dividing the restitutive readings into *low* and *high* readings. Xu uses a sentence with an overt result state predicate to demonstrate this, with LFs showing the standard restitutive and repetitive readings (adapted from Xu 2016, ex. 9):

(18) Bilbo painted the door green again. (repetitive/restitutive)

a. [the door 1 [[vP Bilbo [v [VP t1 paint [AP PRO1 green]]]] again]] (rep)

a. [the door 1 [vP Bilbo [v [VP t1 paint [AP PRO1 green] again]]]] (rest)

Xu argues for a third possible reading following Nissenbaum (2006), who argued that

in addition to the high vP adjunction site (yielding the repetitive reading) and the low AP adjunction site (yielding the low restitutive reading), the VP itself is a viable adjunction site, yielding a high restitutive reading. The high restitutive reading can be informally paraphrased like so:

- (19) Bilbo painted the door green again. (high restitutive)
- a. The door was green before.
 - b. Someone other than Bilbo—say, Gloin—painted the wall green before.
- (following Xu 2016, ex. 20)

- (20) Sally painted the wall white again.
- a. The wall was white before.
 - b. Someone other than Sally—say, Bill—painted the wall white before.

The low restitutive reading would hold that Bilbo had painted the door green before, the door was no longer green, and Bilbo restored the door to its former state of being green; the high restitutive reading does not require that Bilbo necessarily be the one to have caused the door to become green in the first place. This is again solid evidence in favor of the structural analysis that proponents of a lexical analysis would be hard pressed to account for.

But all of this neat, tidy evidence appears to unravel when presented with the facts of Chinese word order, where the distribution of adverbs like *again* is limited different from the English or German distribution.

- (21) a. Zhangsan **you** da-kai le men.
 Zhangsan **again** hit-open Asp door.
 ‘Zhangsan opened the door again.’

b. *Zhangsan da-kai le **you** men.

Zhangsan hit-open Asp **again** door. (Xu 2016, ex. 26, 27)

Xu asserts that the full three-way ambiguity is available in Mandarin, and that the syntax—which, like English, is head-initial—will not permit a postverbal *you*, ‘again.’ This seems highly problematic for our structural account, which predicts that an adverb that adjoins high enough to occur preverbally should not be able to give a felicitous restitutive/repetitive ambiguity because it can only have scope over the entire verb phrase. Could it be that the ambiguity is lexical after all?

No, Xu assures us. The explanation for this apparent discrepancy does in fact lie in the structure. To explain why, he provides a table showing the interaction of *you*, ‘again,’ and another scope-bearing item, in this case an indefinite object. Xu presented native Mandarin speakers with scenarios for the six resulting logical possibilities and provided judgments in favor or against the felicity of each possibility:

(22) Scope interaction between *again* and an indefinite object in Mandarin

Low restitutive reading	$\exists > \textit{you}$ ‘again’	$\# \textit{you}$ ‘again’ $> \exists$
High restitutive reading	$\exists > \textit{you}$ ‘again’	\textit{you} ‘again’ $> \exists$
Repetitive reading	$\exists > \textit{you}$ ‘again’	\textit{you} ‘again’ $> \exists$

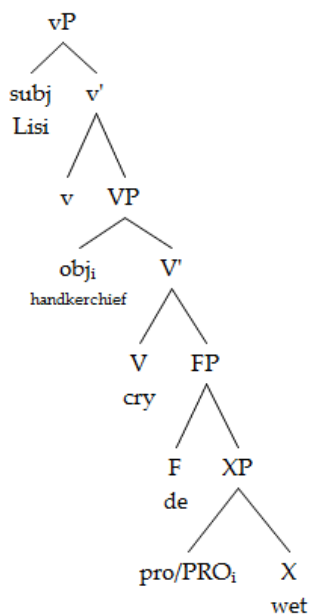
(Xu 2016, Table 2-2)

What this study revealed was that the indefinite object may take wide scope over *you* ‘again,’ but *you* was not felicitous taking wide scope over the indefinite object. Xu argues: lexical analyses of the repetitive/restitutive ambiguity would predict that syntactic structure should not impact the availability of repetitive or restitutive readings; lexical analyses are therefore unable to account for the structurally-sensitive availability of the

low restitutive reading. The solution to this puzzle that Xu finds is that *you* ‘again’ undergoes overt movement in Mandarin Chinese and is then reconstructed at LF.

Following Ernst (2004), Xu assumes that when the semantic rules give adverbs their interpretations and do not interact infelicitously when they move to other positions, these adverbs are then licensed in their base positions. Based on empirical data of Mandarin *de*-resultative constructions and *ba*-constructions, Xu concludes that on the basis of the Ernst assumption, *you* is able to adjoin to lower projections XP and VP. For example, it may adjoin to XP, which here denotes a state:

- (23) ?Lisi ku de na-ge shoujuan shi le.
 Lisi cry de that-CL handkerchief wet Asp.
 Lisi cried that handkerchief wet.



- (24) ?Lisi ku de na-ge shoujuan **you** shi le.
 Lisi cry de that-CL handkerchief **again** wet Asp.

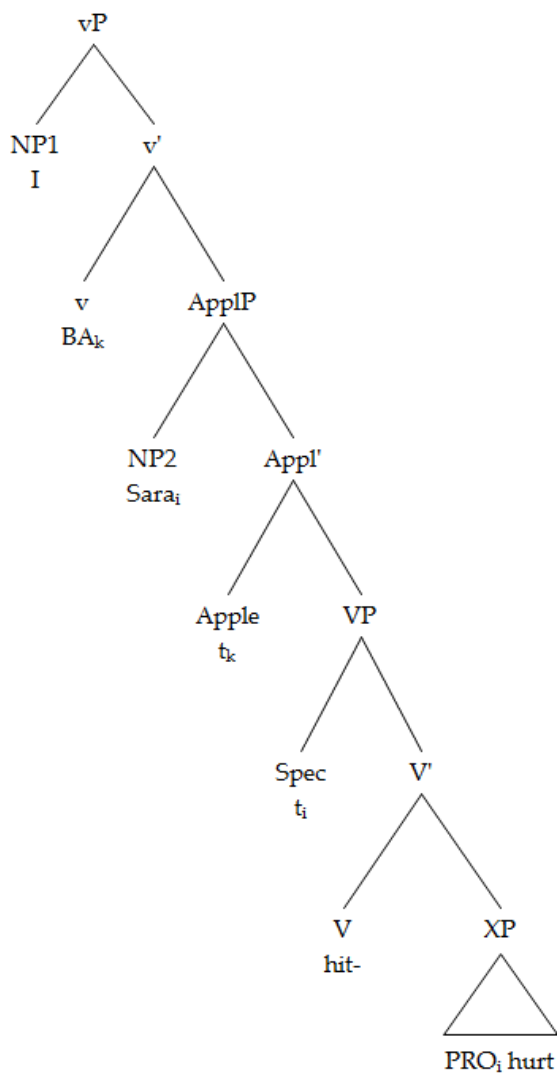
‘Lisi cried that handkerchief wet again.’¹ (Xu 2016, ex. 43)

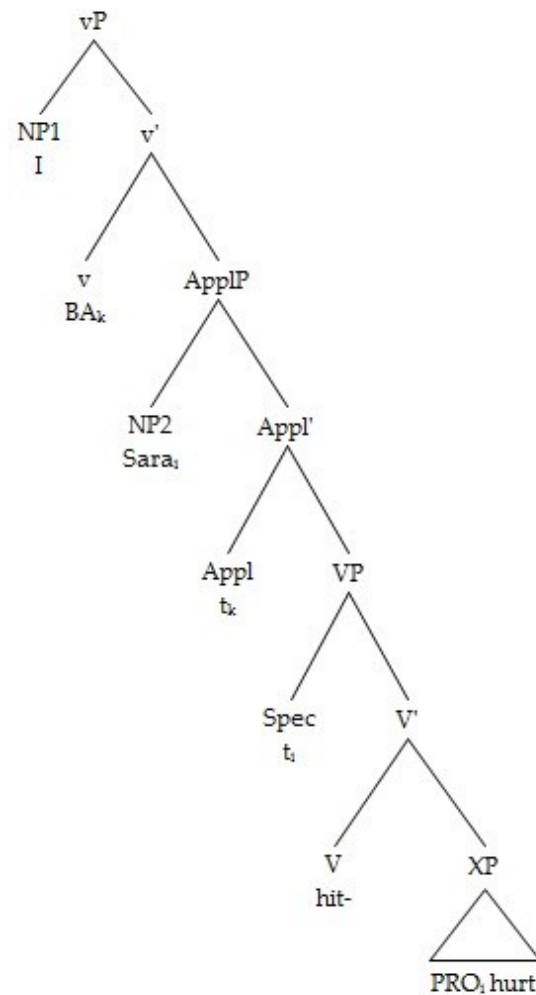
In sentences like (18), Xu shows that *you*, which appears between ‘handkerchief’ and ‘wet,’ must necessarily attach to the XP or else risk effecting an unacceptable word order.

Similarly, Xu shows that *you* must attach to the VP for the sake of linear word order in *ba*- constructions, where *you* may occur either before *ba* or intervening between *band* the NP:

¹ By way of explanation: Xu (2016) clarifies the behavior of *de* as follows: in Mandarin *de*-resultative constructions, “particle *de* is base-generated in the head position of the functional projection, and incorporates to V. Then V-*de* as a whole undergoes V-to-v movement.”

- (25) Wo ba Sara da-shang le.
 I BA Sara hit-hurt Asp.
 'I hit Sara.'





- (26) Wo ba Sara **you** da-shang le.
 I BA Sara **again** hit-hurt Asp.
 ‘I hit Sara again.’ (Xu 2016, ex. 44–46)

This allows the scope effects on the availability of low restitutive *you* ‘again’ to be explained readily. Xu then suggests that the fact of the limited distribution of *you* in bare sentences, where it must occur preverbally, is the result of a PF restriction of Mandarin. This is demonstrated by the following example:

- (27) Zhangsan you da-kai le men.
 Zhangsan again hit-open Asp door.
 ‘Zhangsan opened the door again.’

Xu gives the PF of this sentence as (23):

- (28) [IP . . . 1[_{VP} Zhangsan v 2[_{VP} the-door 1 hit [_{FP} F 3[_{XP} PRO₁ open]]]]]
 (Xu 2016, ex. 47)

You ‘again’ may adjoin at 1, 2, or 3. Adjunction at 1 yields a repetitive reading; adjunction at 2 yields a high restitutive reading; adjunction at 3 yields a low restitutive reading (again, Mandarin prohibits the postverbal position). The PF restriction will require a ‘last resort’ overt movement to the requisite preverbal position, but the interpretation of the base position of *you* ‘again’ holds constant regardless.

With all these assumptions in place, and vetting them through empirical analysis, Xu demonstrates how this apparent challenge to the structural analysis of the repetitive/restitutive analysis ultimately proves to be further evidence in its favor, while enriching this analysis with the third, high restitutive reading.

1.2.3 Summary

In this section, we have explored the evidence in favor of a structural analysis of the repetitive/restitutive ambiguity. Cross-linguistic data from Beck (2005) demonstrated a strong correspondence to the parametric setting of (R)—the ability for a language to effect resultatives in a specific way—and the ability to derive a restitutive reading from goal-PP constructions, while an analysis of Mandarin *you* ‘again’ by Xu (2016) postulated a mechanism of overt movement and LF reconstruction, while showing that

further interactions of *again* adverbs with scope may effect a three-way rather than two-way ambiguity.

1.3 Major Evidence in Favor of the Lexical Analysis

Ultimately, however, there exists data that any structural analysis cannot account for, data that attest to the existence of a distinct interpretation for *again* which could not reasonably be argued to be the result of a modified result state of a predicate. This becomes much clearer when looking at directional predicates, where the verb implies motion in one direction and *again* serves, in a following predicate, to establish a reversal of the direction in the first predicate (hence the designation ‘counterdirectional *again*’).

Patel-Grosz and Beck (2014) highlight, using a historical English example, how modified result states are not satisfactory in deriving the differing meanings of *again* in some contexts, simplified for the sake of the discussion:

- (29) a. Middle English / Early Modern English: I talked **again** to them.
 Present-day English: ‘I answered them. / I talked back to them.’
 b. ME/EModE: She wrote **again** to him.
 PDE: ‘She wrote back to him.’

(Patel-Grosz and Beck 2014, ex. 25)

Neither *write* nor *talk* can be decomposed into a result state in a way that could yield a structural ambiguity of the sort we would hope to find according to the structural analysis—the result of *write* could only be decomposed to mean something like ‘did something to cause a written text to exist,’ and *talk* has no possible felicitous result state (???I caused words to become spoken to them). And yet a nonrepetitive meaning is

historically attested to in English, indicating at least a one-time ambiguity that the lexical account does not struggle to account for but that the structural account decidedly does. Consequently, the facts appear to point to a joint structural/lexical analysis of the ambiguity of *again*: there exists a structural ambiguity, resulting in repetitive and restitutive readings, as well as a lexical ambiguity, resulting in an additional counterdirectional meaning.

This evidence is not relegated to historical data. Patel-Grosz and Beck (2014) continue the discussion with an analysis of *pacho* in Kutchi Gujarati, an Indo-Aryan language whose speakers are largely concentrated in Gujarat, India. In general activity predicates, *pacho* performs essentially the same repetitive as English *again*:

- (30) a. Valji **pacho** nachyo.
 Valji again danced
 ‘Valji danced again.’
- b. John Bhuj-ma **pacho** che.
 John Bhuj-in again is
 ‘John is in Bhuj again.’ (Patel-Grosz and Beck 2014, ex. 30, 31)

As in historical English, however, there exist nonrepetitive readings for *pacho*:

- (31) a. Valji **pachi** baiman-ne phone kari *counterdirectional*
 Valji again woman-acc phone did
- b. Valji baiman-ne **pachi** phone kari *repetitive*
 Valji woman-acc again phone did

Lit.: ‘Valji phoned the woman again.’ (Patel-Grosz and Beck 2014, ex 34)

In (19a), a repetitive reading is impossible; in (19b), a counterdirectional reading

is impossible. Further data show that restitutive readings are also possible:

(32) **paacho** Valji Maya-ne kagar lakhyo. *rest. or ctrdir.*

again Valji Maha-Dat letter wrote

‘Valji wrote another letter for Maya.’

(= he brought one back into existence)

‘Valji wrote a letter to Maya in return.’

(= he replied to a letter from Maya)

(33) Valji **paacho** Maya-ne kagar lakhyo. *ctrdir. only*

Valji again Maya-Dat letter wrote

‘Valji wrote a letter to Maya in return.’

(= he replied to a letter from Maya) (Patel-Grosz and Beck 2014, ex. 39,

40)

The fact that it is possible for the structure of a sentence to eliminate the restitutive sense but preserve the counterdirectional sense indicates that restitutive and counterdirectional senses must exist distinctly—that is, the one is not identical to or interchangeable with the other. This will be a crucial point in the upcoming historical studies in Chapter 3. Yet further data show when predicates with result states but not necessarily directionality combine with *pacho*, ‘again,’ in Kutchi Gujarati (e.g., *Pacho john cake banavyo*, ‘John baked a cake again’), restitutive readings are available while counterdirectional readings are not (Patel-Grosz and Beck, 2014). Patel-Grosz and Beck reported many circumstances where the restitutive/counterdirectional readings are indistinguishable, but crucially, distinct repetitive, restitutive, and counterdirectional readings of *again* are fully available in Kutchi Gujarati. The authors argue, therefore, that

the existence of a distinct counterdirectional reading demonstrates that there must necessarily be two lexical entries for *pacho*, ‘again,’ corresponding to the respective repetitive and counterdirectional entries outlined in (2); likewise, the existence of a distinct restitutive reading necessarily indicates the presence of the structural ambiguity outlined in section 1.2 above.

The Kutchi Gujarati data demonstrate that it is not only possible but necessary for both structural and lexical analyses for *again* to function simultaneously and non-exclusively in a language. In Kutchi Gujarati, both are active in the modern language. In English, both counterdirectional and repetitive *again* were previously active in Middle English and Early Modern English, strongly supporting the validity of both lexical and structural analyses for the English of that era, but evidently, Patel-Grosz and Beck argue, only the structural ambiguity seems to exist in Present-day English.

1.4 Conclusion

This chapter has summarized the puzzle surrounding the repetitive/restitutive ambiguity of *again* cross-linguistically, and has outlined a compelling solution: both structural and lexical analyses apply to two different ambiguities that *again* historically presented. Further, the data in Kutchi Gujarati require both analyses to explain its data; the structural and lexical accounts ambiguous *again* accurately and simultaneously predict the patterns discussed, but only when working in tandem. This does not negate the data supporting the structural analyses alone, but merely shows that there exist languages where both analyses appear to apply. English, historically, was one such language in its earlier history but in its present form, only the structural ambiguity appears to be active.

Why is that the case? What happened to eliminate the second lexical *again* in English?

Chapters 2–4 will endeavor to answer these questions, as well as summarize and test the prediction based in the structural account described above that even the structural ambiguity yet extant in English may be on its way out.

CHAPTER 2

A DIACHRONIC ANALYSIS OF *AGAIN*

Before we enter into historical corpus data exploring the shift in availability of lexical versus structural ambiguity of *again*, it will be productive to explore the Visibility Parameter as means of describing some of the diachronic changes we will be exploring here and in Chapter 3. I will then summarize three diachronic analyses of repetitive/restitutive/counterdirectional *again*, preparatory to explaining the aim and purpose of my contributions to the discussion.

2.1 The Visibility Parameter

There arises a difficulty with the structural analysis when considering adverbs that ought to be semantically similar, if not identical, but which do not permit the same repetitive/restitutive ambiguity. In English, this can be illustrated with the adverb *repeatedly*, an example taken from Beck (2005, ex. 25):

- (34) a. Gandalf painted the door red repeatedly.
 b. Gandalf's painting the door caused it to come to be red repeatedly.

 (Impossible, as this would require some strange situation where the act of painting the door red once somehow caused the door to attain the state of being red multiple times; besides, Bilbo's door is green.)

This difficulty arises because, although both adverbs ought to be communicating the same repetitive element, unlike *again*, *repeatedly* is unable to access the result state of either a complex predicate or a decomposition structure (Beck 2005): no matter how many times Gandalf paints the door red, (33a) and (33b) are only able to refer to the event of painting the door, not the end result state of the door being red. The number of English adverbials capable of accessing such a result state is limited (Stechow 1995, 1996; Rapp and Stechow 1999, Beck 2005). Why is it, then, that apparently some verbs are able to see into the structure of the event and target the result state while others cannot? The answer proffered by Rapp and Stechow (1999) is their Visibility Parameter, which I will paraphrase here, following Beck (2005, ex. 29):

(35) The Visibility Parameter (Rapp and Stechow 1999):

A decomposition adverb can/cannot attach to a phrase with a phonetically empty head.

Or, in other words, the result state of a decomposition structure can be either visible or invisible to a given adverb. This is assumed by Rapp and Stechow to be a lexical property of the adverb itself. For adverbs where the setting of this Visibility Parameter is ‘can,’ ambiguities of the repetitive/restitutive sort are possible.

Beck (2005) further stipulates that this parameter has, in fact, three settings, based on the observation that ‘all adverbs can access full-fledged syntactic phrases [= independent syntactic phrases]; some adverbs can in addition find the result state in a complex predicate construction ...; a subset of those can even look inside a decomposition.’ This tripartite configuration is summarized thusly:

(36) The visibility parameter for adverbs:

- An adverb can modify
- (i) only independent syntactic phrases
 - (ii) any phrase with a phonetically overt head
 - (iii) any phrase (Beck 2005, ex. 33)

Beck further stipulates, indicated by the rarity of (ii) and (iii), that the default setting of this parameter is (i).

Gergel and Beck (2015, ex. 12) provide the following helpful illustration of this parameter, to make it as explicit as possible:

- (37)
- a. Leo [_{VP} started to [_{VP} sing the Marseillaise]]
 - b. Leo jumped up.
Leo [_{VP} jumped [_{XP} __ up]]
 - c. Leo rose.
Leo [_{VP} \emptyset_V [_{AP} __ risen]]

For (36a), both VPs, being independent, overt phrases, should be able to be modified by adverbs in most normal circumstances. An adverb with the setting of (i) would only be able to modify phrases of this kind. For the phrase (36b), the independent VP phrase is modifiable as in (36a), but the phrase XP, shown in the LF, is not independent, being a constituent in a complex predicate (based on the definitions of complex predicates hitherto assumed, i.e., predicate with a result state), and so could only be modified by an adverb with a setting of (ii) or (iii). Finally, (36c), assuming the decomposition analysis of von Stechow (1996) also hitherto assumed in this paper, the phonetically null ' \emptyset ' CAUSE+BECOME is what produces the result state 'risen,' and for this to be modified by an adverb, its setting would have to be (iii), also called a

decomposition adverb.

But a very interesting observation is made: this parametric setting is not necessarily constant, diachronically, for a given adverb. Historical corpus analyses have demonstrated that it is possible for an adverb's setting to switch from (iii) to (ii) or (ii) to (i); it has not been observed for this shift to work in the reverse (Beck et al. 2009, Gergel and Beck 2015). The following study by Beck et al. (2009) endeavors to explain a shift in the availability of restitutive/repetitive *again* in terms of the Visibility Parameter.

2.2 Restitutive/Repetitive Ambiguity: 19th Century English to Present-day English

The essential thrust of Beck et al. (2009) is that *again* is, and for some time has been, undergoing a significant shift in its usage. The study examines usage patterns of *again* in Late Modern English (19th century) and compares them to those in Present-day English.

The data were procured from two corpora the authors assembled, the Late Modern English corpus gathered from historical texts stored in the Gutenberg Archive and the Late Modern English Prose corpus; their Present-day English corpus consisted of written texts composed after 1990. For both corpora, it was determined that the genre of material be limited to letters, interviews, emails, and other personal correspondences to attempt to capture the most authentic language possible. Each corpus drew from the same number of speakers.

The use of *again* was documented and the number of restitutive *again*s were recorder for each speaker. The criteria for determining a restitutive *again* was as follows: a token was classified 'plausibly restitutive' when the context failed to support a

repetitive reading or actively supported a restitutive reading. One example of this is with counterdirectional predicates such as *light up* and *sink*:

- (38) ... a gleam of affectionate pleasure lighted it up for an instance, and straight it sunk again. (Beck et al. 2009, ex. 43a)

The authors note when these predicates ‘co-occur, and it seems extremely likely that the use of *sunk again* is justified by the reference to the original situation before the lighting up occurred.’ A different sort of example is seen in the following example:

- (39) The first time of going over I shall mark the passages which puzzle me, and then return to them again. (Beck et al. 2009, ex. 43b)

In this case, the repetitive reading is clearly unavailable because of the context defined by ‘the first time of going over,’ demonstrably proving that no prior event of going over was intended in the reading, and so ‘return to them again’ is necessarily restitutive.

The data for the two corpora are reproduced from Beck et al. (2009) below:

(39) (Beck et al. 2009, Table 1)

Historical *again*s

Speaker	# of <i>again</i> s	# of rest. <i>again</i> s	% of rest. <i>again</i> s
Borrow	49	6	12.2
Bryant	45	13	28.9
Byron	102	14	13.7
Darwin	74	6	8.1
Davis	59	16	27.1
Dufferin	72	28	38.9
Duff-Gordon	45	3	6.7
Edgeworth	91	20	22.0
Green	15	4	26.7
Lee	53	7	13.2
Macaulay	63	7	11.1
Mitchell	44	7	15.9
Munro	88	26	28.4
Scott	41	16	39.0
Twain	174	42	24.1
Total	1015 (avg. 67.7)	214 (avg. 14.3)	21.1 (avg.)

The authors also noted patterns of what sort of predicates were used, specifically taking note which LEXICAL ACCOMPLISHMENT/ACHIEVEMENT predicates (hereafter LA predicates) are combined with restitutive *again*:

(40) LA predicates used with EModE restitutive *again* (Beck et al. 2009)

Appear, ascend, awaken, become, change, close, come convert, cure, descend, disappear, emerge, faint, find, get, go, join, leave, lose, make, mount, open, raise, reach, recommence, recover, retrace, return, revive, rise, rouse, shroud, shut, sink, sprout, start, wake

The data for the Present-day English corpus are as follows:

(41) (Beck et al. 2009, Table 3)

Modern *agains*

Speaker	# of <i>agains</i>	# of rest. <i>agains</i>	% of rest. <i>agains</i>
Barker	25	5	20
Cone	32	4	12.5
Dale	45	4	8.9
Easton	169	30	17.8
Hatten	27	3	11.1
Kleid	44	7	15.9
Lenhart	61	3	4.9
Lyle	85	19	22.3
Mabbet	84	6	7.1
Mann	100	3	3.0
McConnell	42	1	2.3
Ransom	145	29	20.0
Roberts	44	14	31.8
Symes	53	2	3.8
Wade	39	3	7.7
Total	995 (avg. 66.3)	133 (avg. 8.9)	12.6 (avg.)

(42) LA predicates used with PDE with restitutive *again*

begin, come, cover, fill, find, grow, open, plant, release, rise, start, wet

The authors note that a small number of these LA are used with great frequency, the most frequent being: *start*, used 13 times; *come*, used 6; and *grow*, used 5.

The finding was clear: restitutive *again* is used far less frequently in Present-day English (12.6% avg. of all *agains*) than it was in the 19th century (21.1% avg. of all *agains*), indicating an overall decline in its use over time. Further, Early Modern English restitutive *again* was evidently more available for LA predicates than at present, dropping from 28.5% of all Early Modern English restitutive *agains* to 25.6% of all Present-day English *agains*, which does not seem like a great decline until compared to the decline of restitutive *again* in sum: overall drop in restitutive *again* was 38%, while the drop in

restitutive *again* with LA predicates declined by 45%. And more obviously, 14 of 15 historical sources make use of restitutive *again* with LA predicates compared to 10 of 15 modern sources. The number of available predicates has also declined, seen in (39) and (41), from 37 to 12.

Based on the evidence, the authors conclude that the Visibility Parameter is best able to account for this decline, more especially among LA predicates than broadly: namely, that the parametric setting for Early Modern English was (iii), necessary to access the decomposition result state of an LA predicate, while it is shifting toward the setting of (ii) in Present-day English. This analysis would explain simply the trends seen, and predict further decline of restitutive *again* with LA predicates. This, in turn, strengthens the viability of the structural analysis outlined above.

The other consequence of this analyses is not lost on the authors: if indeed we expect a decline to continue along the path from (iii) to (ii), then comparing yet earlier English data should yield stronger evidence of the setting (iii) compared to Early Modern English data.

2.3 Delving Deeper: Early Modern English *Again* Compared in Gergel and Beck (2015)

In a recent study by Gergel and Beck (2015), an undertaking exactly of the sort described in the preceding paragraph, data of correspondences from Early Modern English—texts composed from the 15th to the 17th centuries—were analyzed and compared to the extant Late Modern English data above in a manner that methodologically mirrored Beck et al. (2009) in as many aspects as possible so as to function as a follow-up to that study.

The Early Modern English data were extracted from the Parsed Corpus of Early English Correspondence, using Corpus Search computer software. Fifteen individual authors were identified and tokens were extracted exclusively from their personal letters (the corpus also includes letters composed by the authors' family members, servants, as well as letters addressed to them), in keeping with the methodology of Beck et al. (2009). The total number of *agains* was lower than in the Late Modern English authors produced, but nevertheless yielded enough data to observe patterns.

This study innovated from the Beck et al. (2009) study in one very small but very significant way: rather than identifying the number of restitutive *agains*, Gergel and Beck (2015) identify the number of restitutive/counterdirectional *agains*. This is methodologically identical to Beck et al. (2009), as evidenced by a counterdirectional example used as an example of 'plausibly restitutive' as in (4) above, but significant in acknowledging the potential for a lexical analysis of the ambiguity to emerge as valid. The authors note the awkwardness of continuing to class both readings into a single category but stress the need to do so for the sake of 'not prejudg[ing] the issue' of whether a structural or a lexical analysis is more viable, or if indeed a hybrid analysis is warranted by the data (Gergel and Beck 2015). This will be an issue of great import later, when I perform a follow-up study of my own on the basis of the findings revealed here.

As the purpose of this study was to compare Early Modern English data to Late Modern English (19th century) data, I will not repeat the Late Modern English data already given, as there were no changes in the data, and will only produce the Early Modern English findings.

(43) (Gergel and Beck 2015, Table 7)

Early Modern English *agains*

Speaker	# of <i>agains</i>	# of rest. <i>agains</i>	% of rest. <i>agains</i>
Bacon (16 th)	21	11	52.3
Chamberlain (17 th)	33	15	45.5
Conway (17 th)	23	16	69.6
Cromwell (16 th)	21	8	36.3
Dudley (16 th)	38	14	36.8
Gardiner (16 th)	21	10	47.6
Holles (17 th)	40	17	42.5
Knyvett (17 th)	42	18	42.8
More, H (17 th)	19	6	31.5
More, T (16 th)	31	12	38.7
Osborne (17 th)	73	27	34.2
Paston, J II (15 th)	73	27	34.2
Paston, K (17 th)	33	9	27.2
Pepys (17 th)	21	5	23.8
Wyatt (16 th)	22	10	45.5
Total	477 (avg. 31.8)	198 (avg. 13.3)	41.5% (avg.)

Leaping to the bottom line, we find a highly significant difference between the Early Modern English rate of restitutive/counterdirectional *again* (41.5%) and the Late Modern English rate (21.1%). Additionally, a number of predicates permit restitutive/counterdirectional readings that did not permit the same in the modern English data, including *answer*, *hear*, *write*, and *talk*, which in the data carried clear counterdirectional meanings, e.g.:

(44) (PDE) Bilbo received a letter from Balin. Bilbo promptly wrote him
(back/*again).

(45) (EModE paraphrased) Bilbo received a letter from Balin. Bilbo promptly
wrote him (back/again).

Further, the authors also concluded that the meanings were more plausibly

counterdirectional rather than restitutive senses, where in some cases (e.g., *talk*) it was very difficult indeed to argue for a result state that could be restored. In other cases (e.g., *write*), a result state was possible but did not capture the plain, intuitive reading of counterdirectionality:

(46) Change of state, but plausible result state not helpful:

a. Darcy wrote to Lizzy

= Darcy's writing caused a message to Lizzy to come into existence.

She wrote him again.

≠ Her writing caused a message to him to once more come into existence. (Gergel and Beck 2015, ex. 30)

The authors leave open the question of formal semantics capturing this counterdirectionality and continue on the assumption that one is possible, but conclude that the reversal of direction cannot be derived structurally. Consequently, it seems clear from the data that in Early Modern English, there did in fact exist a lexical entry for *again* denoting counterdirectionality separate from another, distinct lexical entry for repetitive *again*, from which could be derived restitutive and repetitive interpretations. Consequently, it seems that historically, both structural and lexical analyses were active, while diachronic shifts since Early Modern English have seen the loss of counterdirectional *again* (which the authors state is lost by the Late Modern English era) and the optionality/decline of restitutive *again* in Present-day English. The Visibility Parameter setting for repetitive/restitutive *again*, then, was in Early Modern English at (iii), but has shifted closer to (ii) in recent years. Its setting for counterdirectional *again*, a distinct lexical entry, is not readily known, which, as will be discussed in Chapter 4, is a

potentially very problematic issue for these diachronic studies.

The authors then conclude by asking several questions for future research: ‘How does counterdirectional adverbial *again* develop from the preposition [*against*]? ... How is counterdirectional *again* lost? How and why does PDE lose setting (iii) for *again*?’

These are questions I investigate in Chapters 3–4, with my primary focus on how counterdirectional *again* is lost and restitutive *again* diminished.

CHAPTER 3

QUALITATIVE ANALYSIS OF *AGAIN* AND ITS POTENTIAL COMPETITORS

In Beck et al. (2009), it was suggested that the nonrepetitive readings of *again* could plausibly have been displaced by other, semantically-related adverbials or verbforms—*back* and *re-* were specifically mentioned—and Gergel and Beck (2015) left several open questions about the diachronic development of *again*. This chapter will introduce and motivate my original corpus-based work on the subject, modeled after Beck et al. (2009) and Gergel and Beck (2015), investigating several of these unanswered issues concerning the apparent loss of counterdirectional *again*. In 3.1, I delve into a history of the adverb *again* to highlight certain patterns and aspects of its development that will prove important to future discussion and highlight the viability of *re-* and *back* as potential rivals. In 3.2, I will summarize analyses of *back* and *re-* and propose that these may in fact have both displaced different readings of *again* to varying degrees. In 3.3, I will attempt to contribute additional information to the data from Beck et al. (2009) and Gergel and Beck (2015). In 3.4, I will introduce my study and present my findings.

3.1 A History of *Again*

A qualitative analysis of *again* would be beneficial to this study. *Again* is a very old English word indeed, dating back to the earliest Anglo-Saxon. A very early form was

ongean, itself a combination of the Germanic prefix *on-*, which combined with stems to assign them adverbial force (OED, ‘*on-*’), and *gean*, an adjectival element with a strong directional sense, indicating the quickness or shortness of a route or path:

(47) De ða **genran** wegas cuðan ðara siðfato.

‘He knew the quickest way’ (*Epistola Alexandri*, circa 1000, cited in OED, ‘*gain*, *adj.*’)

One early application of *ongean* was as a preposition indicating counterdirectionality, noted by Gergel and Beck (2015) and recorded by the Oxford English Dictionary to be the Old English ancestor of modern English *against*. Its status as a preposition, as well as the counterdirectionality implied by its early forms, indicate that its repetitive meaning was a later development.

By the Middle English / Early Modern English era explored in Gergel and Beck (2015), *ongean* has at least two descendants: the preposition *against* and the adverb *again*. The directional sense of both *against* and *again* is preserved, but by this time, the repetitive sense, with its setting of (iii) in the Visibility Parameter, permitting the repetitive/restitutive ambiguity, had also appeared.

Given the prepositional/directional nature of *again* in its etymology and development, the counterdirectional sense should come as no surprise. What is less clear is how the repetitive sense emerged. Future research may productively query into the connection between Old English *eft*, ‘again,’ (~800–1600) and *again*. There are some very interesting parallels: *eft* contained a repetitive/restitutive ambiguous meaning, much like modern English *again* (Gergel et al. 2016), but also a separate lexical counterdirectional meaning (OED, ‘*eft*, *adv.*’). Like *again*, *eft* originated from a

counterdirectional lexeme, the adverb and adjective *aft*, which carried a sense of ‘back’ or ‘from behind’ (OED, ‘*aft*, adv. and adj.’), which over time acquired a repetitive lexical entry, which apparently had a setting of (iii) on the Visibility Parameter. Gergel et al. (2016) conducted a pilot study on the interaction of Old English *eft*, ‘again,’ and *again* during the period in which *eft* declined, in hopes of discovering a Jespersen-like cyclical effect where *again* may have taken over the function of *eft*, but the results were inconclusive: a degree of interaction was noted, though co-occurrence was rare, and the evidence suggests that *eft* had less of an impact on *again* than *again* had on *eft*, in that the early counterdirectional/restitutive senses of *again* appear to coincide with the loss of counterdirectional/restitutive readings in *eft*. So the appearance of the repetitive sense of *again* remains mysterious, but the facts of *eft* provide further evidence of a striking pattern of counterdirectional adverbs tending to acquire repetitive senses with a parametric setting of (iii). We will return to this point in the conclusion of the study.

In any event, the loss of the counterdirectional and the decline of the repetitive senses of *again* may yet be able to be connected to some correlation with the rise of other competitors. In Beck (2009), several potential competitors were mentioned, namely adverbial *back* and the *re-* prefix. However, there exists a fundamental difference between the meanings of *back* and *re-* verbforms which, I argue, may have affected independently different senses of *again*, if indeed a correlation can be found between the rise of the one and the loss of the other, namely: I argue that *re-* should properly be seen as competing with restitutive *again*, based on an analysis by Marantz (2007), while the etymology and semantics of *back* suggest that if it were a competitor with senses of *again*, it would have primarily competed with the counterdirectional sense.

3.2 Proposal: Restitutive *Re-* and Counterdirectional *Back*

We are now prepared to discuss what will be a major point of my analysis: a proposed asymmetry between *back* and *re-* verbforms.

3.2.1 A Restitutive Analysis of *Re-*

To begin with, we ought to be clear what we are talking about when we talk about *re-* verbforms. The history of *re-* as a productive affix in English is somewhat complicated because it was borrowed from French and Latin together with a sizable vocabulary of Latinate verbs that carried over into English with the *re-* prefix intact and are not analyzable as a distinct constituent from the verb root.

For example, the verb *reduce* in English is attested to as early as the 14th or 15th century, utilizing the Latinate *re-* prefix combined with *ducere* ‘to lead’ (OED, ‘re- (prefix),’ ‘reduce’). The Oxford dictionary records the first meaning of the Latin *re-* as a sense of counterdirectionality, going back. Hence the earlier sense of *reducere* in Latin is easy to derive: ‘to lead or bring back, to withdraw, to retire, to draw back’ (OED, ‘reduce’). However, the verb *ducere* is not attested to in English as a Latin borrowing, forcing *reduce* to function in English essentially as a simple verb with no functional morphology (allowing for eventual combinations such as ‘re-reduce’).

At some point, however, the verbal prefix *re-* itself was borrowed as a productive prefix in English sometime as early as the 13th century and began, probably around the 17th century, its now-familiar pattern of attaching to Anglo-Saxon verb roots. Our analysis of *re-* must refer only to this more recent, productive use of the affix rather than Latinate borrowings. It may seem redundant to make this fact explicit, but it will be

crucial to our later analysis of the corpora data.

While the precise reading of *re-* has been debated, whatever its early meanings, it has been argued convincingly that *re-* as currently used is properly restitutive in nature, noted by Beck et al. (2009), Marantz (2007), and Williams (2006). The argumentation for this analysis is as follows: while some have argued that *re-* prefixing a verb indicates a second iteration of that verb's action (Lieber 2004), this is not borne out by the evidence, as shown in Marantz' contextual example where a simple repetitive reading is not possible (a–c serve to establish a sequence of statements that build upon one another rather than serve as contrastive examples):

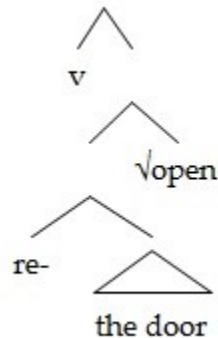
- (48) 'I re-opened the door'
- a. The door exists in a house that was just built, and it was installed in an open position; it has never been opened.
 - b. I closed the door but then re-opened it.
 - c. I have opened the door for the first time; there was no prior event of the door being opened. (Marantz 2007, ex. 2c–e)

Further, *re-* cannot be attached to simple activity predicates—one cannot *re-smile, *re-eat, or *re-speak.

Marantz (2007) analyzes *re-* as a construction within the vP that targets constituents that exist within the verb phrase, following previous analyses by Horn (1980). The argument is then made that, just as restitutive *again* targets the result state of a verb, so does *re-*, causing a repetition or renewal of that result state, but via a process where it 'targets a DP undergoing a change of state, where the target endpoint of the change may be named by the DP itself [e.g., *an open door*]'. He proposes the following

syntactic tree to demonstrate this, utilizing a somewhat specialized notation:

(49) (Marantz notes that ‘the root names the end state’; Marantz 2007, ex. 39a)



Marantz also notes that a great deal of analysis and stipulation is necessary to account for the distribution of *re-*, which is fairly beyond the scope of this study²; suffice it to say that strong arguments have been made analyzing modern *re-* as effecting restitutive reading, although its etymology indicates a historical counterdirectional meaning, not unlike *again* in English. Consequently, we will proceed with the assumption that *re-* as a prefix confers a primarily restitutive sense to the verb it modifies.

3.2.2 *Back* as a Primarily Counterdirectional Adverb

Ultimately, the etymology of *back* (adverb) has many parallels with *again* as explored above. *Back* derives from the Old English/Germanic noun *baec*, the meaning of which remains, at its most basic, virtually unchanged in Present-day English: the physical back or spinal side of an animal or a human being. As with *again*, *baec* received adverbial force with the addition of the prefix *on-* which later evolved into *aback*. Given

² For further reference, in a recent paper, Csirmaz and Slade (2016) address apparent difficulties, in particular those regarding the distribution of *re-* verbforms.

semantic analysis of *back again*, but it seems that the counterdirectional and restitutive meanings interact:

(53)

- a. Counterdirectional *back again*: ‘restoring the direction/goal of the movement to a previous space’
- b. Restitutive *back again*: ‘returning [going in the opposite direction] to a prior state or form’

If this is the case, then it would be interesting to consider how and if the frequency of *back again* coincides with the loss of counterdirectional *again*, as it could be argued that this co-occurrence may have contributed to that loss as *again* came to rely on the support of *back* to effect counterdirectionality and in turn encompassed more exclusively restitution and repetition.

In any event, I will continue on the assumption that *back* contains a strong counterdirectional sense which may well be related to the loss of counterdirectional *again*.

3.3 Counterdirectional vs. Restitutive *Again*

I have thus far proposed that *re-* and *back*, two potential competitors for the restitutive/counterdirectional senses of *again*, may have in fact targeted specific readings of *again*, namely *re-* the restitutive and *back* the counterdirectional.

A major challenge to testing any hypotheses based on this proposal is that in the diachronic studies of *again* cited above, both restitutive and counterdirectional senses have been measured as if they were indistinct, a fact the authors have admitted to be

‘rather clumsy’ and ‘somewhat clunk[y]’ (Gergel et al. 2016, Gergel and Beck 2015, respectively). In Gergel and Beck (2015), the reasoning for this was ‘to not prejudice the issue’ of whether there existed a distinct counterdirectional lexical entry for *again* in the then-ongoing debate as to whether the varied readings of *again* could in fact all be described through structural analysis, though the conclusion of that study found that there did in fact, at least historically, exist multiple lexical entries, corroborating modern evidence of Kutchi Gujarati’s *pacho*, ‘again,’ where separate repetitive and counterdirectional lexical entries were attested to (Patel-Groz and Beck, [2014]). Further, it is argued that the truth conditions of counterdirectional and restitutive *again* are often indistinguishable:

- (54) nothing can ever persuade mee to enter the worlde again [...]
(Dorothy Osborne, 17th century; Gergel and Beck 2015, ex. 32)
- (55) Counterdirectional reading:
- a. [[PRO_{Osborne} [enter the world]]] again_{ctrdir}
 - b. $\lambda e: \exists e'[e' < e \ \& \ O. \text{leave_the_world}(e')]. O. \text{enter the world}(e)$
- (56) Restitutive reading:
- a. [[PRO_{Osborne} [[**null**]_v [[SC PRO_{Osborne} in the world] again_{rep}]]]
 - b. $\lambda e: \exists e'[e' < e \ \& \ O. \text{in_the_world}(e')]$ (Gergel and Beck 2015, ex. 33, 34)

In both cases, it is argued, the author had entered the world at least once before, and ‘nothing [could] persuade’ her to return to a state of coming to be in the world.

It is worth taking a moment to discuss this point, as it has bearing on a likely reason why counterdirectional *again* developed a second lexical repetitive/restitutive

again. The fact that both (54) and (55) are truth-conditionally indistinguishable is an example of what Beck (2012) described as constant entailments:

- (57) Variability in the meaning of an expression α between interpretation α' and α'' is promoted by the existence of contexts ϕ in which an occurrence of α under both interpretations α' and α'' lead to the same proposition ϕ' .

Gergel and Beck (2015) hypothesize that, because sentences like (54) and (55) entail one another, Early Modern English speakers reanalyzed (54) as (55), and that this is what gave birth to the repetitive lexical reading of *again*. We will return to this point in Chapter 5.

Because truth-conditionally indistinguishable counterdirectional and restitutive *again* occurred frequently, in neither Gergel and Beck (2015) nor in Gergel et al. (2016) were the counterdirectional/restitutive tokens broken down into their respective categories, but were counted as a single category.

However, I find this unsatisfying for a number of reasons. Restitution and counterdirectionality are quite different ideas and consequently, they ought to be distinguishable. There exists major differences between the two of them: counterdirectional *again* conveys a sense of reciprocity as well as, quite often, a sense of implied movement. Indeed, in Middle English and Early Modern English there can be found a great many tokens of counterdirectional *again* co-occurring with verbs of motion:

- (58) ... lest they should **turn again**, and rend me. (Joseph Glanville, 17th century)
- (59) He thrust it back, and it was **driven** to him **again**. (Glanville)
- (60) Vaspasyan to Rome then **went agayne** [...] (John Hardyng, 15th century)

(61) [...] for the whiche he **came** home **agayne** [...] (Hardyng)

(62) The duke Rollo of Denmarke [...] whome Alvrede [...] **drove** then **agayne** unto his navy [...] (Hardyng)

And so forth. In fact, out of a new corpus I assembled for this study (to be introduced and explained more fully in Chapter 4), I took three of my Early Modern English authors, including Glanville and Hardyng quoted above, and counted the first five plausibly counterdirectional (to borrow the phrase from Gergel and Beck [2015]) *again* tokens from each and compared them to the first five tokens of *back*, giving us 15 tokens of each. Of the 15 *again* tokens, 7 used verbs of motion ('drive,' 'turn,' 'go,' 'wend') and an additional 4 tokens used verb + preposition combinations adding strong directionality to the verb ('lend to' 'mete to'), giving a total of 11/15 tokens a strong sense of motion or directionality; of the 15 *back* tokens, 13/15 used verbs of motion. Restitutive *again* may or may not have a sense of directionality or motion, but it seems reasonable, extrapolating from the small sample of data shown here, that directionality and/or motion (in addition to other factors to be discussed later, such as context) may make a stronger cause for a plausible counterdirectional reading over a plausible restitutive reading.

Furthermore, even in plausibly counterdirectional predicates that do not have explicit movement or directionality, there can exist an asymmetry. In 'I sent her a letter, and she wrote me *again*,' to paraphrase a fairly common example from the Gergel and Beck corpora of historical correspondence, *again* has a clear counterdirectional and not a felicitous restitutive sense; there is no result state that *again* could modify to effect a restitutive reading with the same truth conditions as the counterdirectional reading.

Additionally, a similar problem can arise with repetitive and restitutive *again*: where a result state is accessible and there is ambiguity between a repetitive and restitutive reading, as in (1) ('John turned the radio on again'), it is true in both readings that there was a previous event/state of the radio being on, and both readings rely on that prior event/state being true. This, too, will be discussed in greater depth in Chapter 5. But from the perspective of methodology, it should be pointed out that previous studies did not note any difficulty in resolving repetitive/restitutive ambiguities, when presumably unresolvable ambiguities must have existed.

Finally, there do exist situations where the argument of truth-conditionally identical restitutive and counterdirectional readings appears to be valid, as in the Dorothy Osbourne example, repeated here:

(63) nothing can ever perswade mee to enter the worlde again [...]

However, even in these cases, context may help clarify if one reading may be considered more 'plausibly counterdirectional' than 'plausibly restitutive,' or vice-versa. Xu (2016), Beck et al. (2009), and Gergel and Beck (2015) provide lengthy paragraphs of context to illustrate the distinctness of each reading of *again*, often relying on context to make a given reading present itself more readily than the other (Patel-Grosz and Beck 2014, (38)), going so far as to classify some tokens as 'plausibly counterdirectional' so as to be able to analyze the visibility of the predicates attached (Gergel and Beck 2015). It seems that if it is possible to distinguish counterdirectionality from context and from the kind of predicate, then it should be possible to distinguish, in many cases, counterdirectional and restitutive *again* and measure them independently in separate categories. If this is possible, it should also be possible to compare the relative

frequencies of counterdirectional and restitutive *again* to the frequencies of *re-* verbforms and *back* adverbs from the Early Modern English era to the Late Modern English era and thus see more direct correlations, if any exist, between the two categories.

3.3.1 Other Issues

In addition, there were other methodological concerns with previous studies that I wish to remedy in the present study:

1. Previous studies, focused primarily on restitutive/repetitive ambiguities, did not exhaustively explain how other instances of *again* were treated. In the historical data, I observed at least two uses of *again* that were not treated in Beck et al. (2009), Gergel and Beck (2015), nor Gergel et al. (2016), which I have dubbed speech act/citation *agains* and quantifier *agains*. Speech act/citation *agains* are those that indicate a repetition of or a reemphasis on something that had been said before. This is fairly common in religious tracts, scripture, and other writings, where various scriptural citations or doctrinal points are repeated and prefaced with ‘again:’

‘So againe Wisd: 14.11. The word is used, and explained by another word, signifying a trap or snare, the very same that was used in the Psalmes [...]

‘So againe Mat: 18.7. It must needs be that offences come, which seems to refer to false doctrines and heresies [...]

‘So againe, 1 Cor. 8.9. Stumbling block to the weake, and v. 13. where the case is clearly the same that last we mentioned [...]

(Henry Hammond, 17th century, *Lampeter Corpus*).

Then there exist in the data a number of quantifier *agains*, which does not seem to modify any verb phrase in the regular sense, as in the phrase, ‘twice as many again’ to mean ‘twice as many,’ or ‘half again as many’ to mean ‘half as many’ (in fact, the quantifier *agains* may be broken down into two subcategories, which I will analyze later). Whether these instances occurred in corpora used in previous studies and how they were analyzed was not recorded. In my study, I will explain how I classify these *agains* and motivate that classification.

2. Beck et al. (2009) and Gergel and Beck (2015) both make use of Project Gutenberg to assemble a corpus of 19th century letters and journal entries, with the aim of capturing the most authentic use of language possible—that is, the language most representative of the authors’ natural, unaffected idiolects. A potential problem with using Project Gutenberg texts is that they are generally digitized books and regularly have extensive editorial notes or biographies written by different authors; if edition is not controlled for, these editorial notes may have been written decades after the death of the purported author. For example, the collection of Charles Darwin papers used in both Beck et al. (2009) and Gergel and Beck (2015) includes biographic and explanatory notes by his daughter as well as other notes and addenda added by a later editor and compiler of the texts; combining Darwin’s daughter’s and the editors’ contributions, the total amount of text not produced by Charles Darwin in the Gutenberg text file may even rival that which *was* produced by Darwin. The authors of previous studies made no mention of this fact, and using software alone to extract tokens may not have revealed the difference in authorship, as most corpus-searching software pulls

- limited context for every token. I therefore consider the possibility that not all the text analyzed was in fact produced by the purported author, which may have some impact on the findings. I will endeavor in this study to be more clear and precise about how I assembled my corpus to prevent interference of that sort.
3. While the choice of correspondence and journal writing as a genre was motivated, and the previous studies revealed that although individual usage varies, overall patterns held roughly the same within the eras represented, the possibility of a genre effect on the data ought to be considered. Certain genres may encourage, for example, more usage of *again* than others—take, for example, the religious tract from which the speech act/citation *agains* were cited in point 1 above, where 5/14 total *agains* fit into the speech act/citation category. Correspondence as a genre may carry with it a certain tendency to use counterdirectional *again* more often than other genres simply because correspondence itself is often a major theme of discourse, in particular in greetings and farewells of letters, where sentiments like, ‘Upon receiving your letter, I now write you again,’ were often expressed, potentially leading to an inflated showing of restitutive/counterdirectional *again* compared to other genres. Further, aiming to uncover the texts most authentic to the author’s idiolect could be problematic, as the idiosyncrasies of authors may be more prominent in their spontaneous written works—referring back to the Darwin letters and journals used in previous studies, Darwin shows a certain liking for specific words and phrases, in particular *look back*, which occurs some 15 times in the text (which may inflate the number of occurrences of *back*, which will be important in my study; see 3.4 below). My

study will aim to assemble a corpus of data drawing from a variety of different genres of text from each era.

3.4 Predictions and Hypotheses of the Present Study

In Chapter 4, I will describe how I went about testing hypotheses based on the information and proposals described above and what the results showed. My working hypothesis is that if indeed counterdirectional and restitutive *again* may be in many cases teased apart, and if *re-* carries a primarily restitutive meaning while *back* carries a primarily counterdirectional meaning, then it should be possible to measure a correlation, if such a correlation exists, between the increase in frequency of *back* and the loss of counterdirectional *again* and the increase in frequency of *re-* verbforms and the (more gradual, as-yet incomplete) loss of restitutive *again*. If a strong correlation can be found, it would suggest that these lexical objects may have overtaken these senses of *again* and replaced them. Considering that both *back* and *re-* came into use around the end of the Middle English and the beginning of the Early Modern English period, and that by the Early Modern English era counterdirectional *again* had, as is reported, vanished (Gergel and Beck 2015) and restitutive *again* had weakened, both *back* and *re-* hold strong potential as competitors.

CHAPTER 4

ORIGINAL STUDY

We may now commence a discussion of the corpus-based study of this paper. The central aim of this study was to (a) call attention to certain methodological concerns in previous studies to see if different results might come from a slightly modified approach, (b) attempt to differentiate counterdirectional and restitutive *again*, and (c) search for possible correlations between the loss/diminution of counterdirectional and restitutive *again* and the increase in frequency of several rivals.

In Section 4.1, I shall explain my methodology and approach; in 4.2, I shall present my findings; and in 4.3, I shall endeavor to analyze said findings.

4.1 Methodology

By and large, it was beneficial and efficient to employ similar methodology to the aforementioned studies of Beck and her colleagues, as this study is intended to expound upon their findings. To begin with, this study took the data of the Beck studies and added the extra data of the occurrences of *back* and *re-* verbforms, drawn from the same corpora. The purpose of this was essentially to serve as a standard against which my data could be compared, both with regard to frequencies of *again* in counterdirectional/restitutive vs. repetitive readings, which will be helpful in establishing

whether or not there is any genre effect. As I will later explain in detail, I assembled my corpus out of long works and short works of writing (as some genres of works only occur in short form [e.g., pamphlets, sermons] while others only occur in long form [e.g., novels, textbooks], and the writing styles of these genres may vary dramatically), while the length of work examined in previous studies fell in between my classifications of ‘long’ and ‘short,’ allowing a tripartite examination of the frequency of *back* and *re-*verbforms, compared between the short works examined in this study, the medium-length works examined previously, and the long works examined in this study. The purpose, again, is to glean data to provide insight as to whether *re-* or *back*, if either, might correlate with a loss of counterdirectional/restitutive *again*. Because of several difficulties with the corpora, as well as to avoid redundancy (most of the data were presented earlier), I shall relegate the addenda to Gergel and Beck’s data to Appendix I.

My own data were procured and analyzed in a manner mirroring very closely the methodology of the previous studies hitherto mentioned. However, as indicated by the list of concerns enumerated in 3.3 and 3.3.1 above, there were several areas where it seemed appropriate and necessary to go beyond Beck’s existing data.

4.1.1 Methodological Divergences from Previous Studies

The corpus used in Beck (2015) (Parse Corpus of Early English Correspondence) was in line, in terms of genre, with the Project Gutenberg corpus in 2009 and repeated in 2015: both corpora made exclusive use of correspondences and journals—the intent of which was to consider data that were closest to authentic, spontaneous speech. The data from both the PCEEC and Gutenberg corpora appeared internally consistent,

encountering roughly similar ratios of restitutive/counterdirectional and repetitive *again*, independent of authorship. However, the difficulties already explained led to the concern that there may be a genre effect inflating the rates of restitutive/counterdirectional *again*. While the defensible motive for selecting correspondence was for the sake of authenticity, I took a different approach: rather than attempting to zero in on the single most authentic, unfiltered writing possible so as to find representative samples, I thought to extrapolate from a great variety of styles, subjects, and registers a representative sample. I also sought to balance short works with long works to test whether the writing styles for short works may be different for writing style for long works. Further, though I ensured that when looking at a specific author that all text being analyzed was produced by that author, I was less concerned with individual authors than the time period in which the text was produced—hence the presence of anonymous authors in my corpus. By deliberately selecting from works of fiction, plays, histories, books on science, and religious pamphlets or writings, in addition to journals and correspondences, we are able to ensure that we have represented a wide variety of subjects and styles, from which we may extrapolate a more general, broad reflection of English from the eras studied.

Also, as mentioned earlier, several of the collections of journals or letters from the Project Gutenberg corpus have another major difficulty: separating the words of the actual author from the words of editors, historians, or biographers. The texts from Project Gutenberg are almost universally digitized books, but several of the texts selected by Beck et al. (2009) were published well after the author's death and filled with expository or historical text produced in connection with the printing of the book. This text may be authentic to the desired historical period and it may not—the biographical details of the

journal-keepers and letter-writers are well known, but those of their biographers, less so. It is entirely possible that the editorial notes were composed at a much later date, in a different period of the development of English, and may not be representative of the era studied. Another important consideration is the edition of the text: later editions may have been substantially modified from the original text set forth by the author to harmonize with later prescriptive standards of spelling and grammar. Finally, several of the letter-books evaluated by Beck et al. (2009) also included letters to the author, not only letters written *by* the author. Though, for the purpose of examining English as it was used in the era, this final problem is perhaps of lesser concern (if nothing else, these letters ought to be every bit as representative or not representative as those produced by the authors), it does call into question whether previous studies' data really did succeed in eliciting data exclusively from the intended author—again, this is less of a concern to me, but I highlight it as it may potentially be of concern to future users of Project Gutenberg for corpus selection. In any event, any texts I analyzed from Project Gutenberg—chosen to, again, parallel and have more closely comparable data to the previous Beck studies—I took care to ensure that my tokens were only selected from texts written by authors from the target era.

4.1.1.1 Classifying the Various *Agains*

The most difficult task in this study by far was distinguishing counterdirectional and restitutive *again*. In Beck et al. (2009) and Gergel and Beck (2015), which added the consideration of counterdirectional *again* to the methodology, restitutive and counterdirectional *again* are treated as a single category. The reasoning was initially, as

mentioned earlier, to avoid pre-judging the debate between a structural and a lexical analysis of the repetitive/restitutive ambiguity, but after and in the later Gergel et al. (2016) pilot study, the categories are still not separated despite a strong case having been made for the ability to reasonably (or ‘plausibly’) distinguish the restitutive and counterdirectional senses based on context.

After determining the existence of two lexical *agains* in historical English data, the authors continued to compound the two into a single category on the basis of there existing tokens where both readings are, from a certain semantic standpoint, indistinguishable. This is unsatisfying, however, for a number of reasons hitherto mentioned, but also for two additional reasons:

1. Without the proper context, the basic repetitive/restitutive senses are also indistinguishable (hence the ambiguity), and can also be truth-conditionally linked. For example, in a repetitive situation, where Bilbo has closed the door again, it is true both in the repetitive and in the restitutive reading that the door was previously in the state of being closed. Hence, there exist tokens where restitutive and repetitive meanings cannot be teased apart even with all the available context (see (63) below). Yet, even when such difficulties are attested to, the authors recorded no difficulty in distinguishing repetitive and restitutive senses.
2. Since the initial diachronic corpus studies conducted by Beck et al. (2009) were attempting to confirm a hypothesis regarding a trajectory shift of the Visibility Parameter setting for repetitive/restitutive *again* (from (iii) historically to a predicted future setting of (i)), it seems odd to compound

counterdirectional and restitutive *again* in a single category after having assumed that counterdirectional *again* is a distinct lexical entry from restitutive *again*—that is, they are distinct adverbs with, quite possible, different parametric settings. There is no evidence that I am aware of that the parametric setting for *again*_{ctrdir} has ever been anything other than (i), and so it would be counterproductive for any study evaluating diachronic data in search for confirmation of the Visibility Parameter shift hypothesis for *again*_{rep/rest} to include tokens of the separate lexical item *again*_{ctrdir}. It is therefore imperative to find some means of differentiating the two.

For the purpose of this study, which seeks to find evidence for an adverbial that might have displaced nonrepetitive *again*, I made an effort to separate counterdirectional and restitutive *again* into two categories on the basis of plausibility through context, so as to better compare to the relative counterdirectionality and/or restituteness of the adverb *back* and the *re-* verbforms, as I argue that each of these fit into separate and distinct categories: *back* as primarily counterdirectional and *re-* verbforms as primarily restitutive. Rather than revisit every decision made by Beck et al. (2015) to divide up the existing data, I did not attempt to tease apart the two categories in my addenda to that data but instead set about distinguishing the two categories from the beginning of recording my own data.

Occasionally, a clear counterdirectional *again* was easy to identify, making the compounding of both counterdirectional and restitutive into a single category all the more unsatisfying:

(64) [Pilate] ... sayde vnto them: I fynde in him no cause at all. Ye have a

custome that I shuld delyver you one lowsse at ester. Will ye that I lowse vnto you the kynge of ye Iewes. Then cryed they all *agayne* sayinge: Not him but Barrabas ... (Tyndale, New Testament)

(The meaning can only be counterdirectional, as Pilate is addressing the crowd assembled, not responding to them. There are only two speech acts: Pilate's, directed at the crowd, and the crowd's, directed back at Pilate. *Agayne* therefore has no plausible repetitive meaning of any sort, and no restitutive meaning would be felicitous.)

Another rationale for not attempting to distinguish the categories given by Gergel and Beck (2015) and Gergel et al. (2016) was the existence of tokens that are genuinely indistinguishable from a truth-conditional standpoint, and in attempting to tease apart the counterdirectional/restitutive senses, there were tokens that were indeed entirely indistinguishable, where context could not prove any help:

(65) 'After a few seconds he rushed up on deck in his flannels. ... he went below ... I saw him come out on deck again with a tool-chest and a lantern ...' (Stoker)

(In this instance, it is clear that there was a prior event of coming out onto the deck from below. The character returns under the deck, and emerges a second time. *Again* here may be read felicitously as restitutive, repetitive, and/or counterdirectional.)

My criteria for classifying a token as 'plausibly counterdirectional' or 'plausibly restitutive' was informed by the criteria used by Gergel and Beck (2015), again to help parallel the methodology in that study:

1. ‘either the event presupposed on the restitutive/counterdirectional reading is maximally salient,’
2. ‘it is clear from the context that the repetitive presupposition is not true’—thus far aiding in distinguishing from repetitive, but not distinguishing restitutive from counterdirectional—
3. ‘uses of *again* ... are plausibly seen as counterdirectional rather than as restitutive [when the usage is] suggestive of counterdirectional semantics,’ in other words, predicates like (a) *talk to them again* (b) *write to them again*, where the clearest modern translation would be (a') *reply to them* (b') *write back to them*, especially where there is no change of state for repetitive *again* to modify and yield a restitutive reading.

I build in particular upon the contextual criterion to attempt to tease apart restitutive and counterdirectional *again*s: I argue that contextual clues aid in forming a fair argument that an ambiguous *again* should be classified either restitutive or counterdirectional—for example, if the author very rarely used counterdirectional *again* (only about 5% of Stoker’s *again* tokens were clearly counterdirectional) or there were many similar tokens that were clearly repetitive—i.e., tokens where *again* modifies the same or a very similar verb but have no contextual evidence of a change of state or counterdirectionality—the reading could be called more ‘plausibly repetitive’ than ‘plausible restitutive’ or ‘plausibly counterdirectional.’ Nevertheless, there occurred tokens in both the Early Modern and Late Modern corpora that could not be classified with any confidence—these could be ambiguous between restitutive and counterdirectional, restitutive and repetitive, or even three-way ambiguous, as the Stoker

example above. These I left out of the calculations in a separate ‘ambiguous’ category.

In general, I worked under the assumption that ‘plausible’ counterdirectionality would be more strongly correlated with motion verbs, given the inherently more explicit and salient directionality of such verbs, but a major caveat must be observed: ‘plausibly counterdirectional’ is by definition not ‘certainly counterdirectional.’ Many of the ‘plausibly counterdirectional’ tokens likely remain, to some degree, ambiguous—which may, unfortunately, remain the case until such a time as a much clearer formal semantic definition of counterdirectionality is presented. The inherent limitation of a study without such a clear definition of counterdirectionality is that any attempt to separate counterdirectional *again* from restitutive *again* will carry with it a degree of uncertainty.

So much time has been dedicated to describing the process of teasing apart restitutive and counterdirectional *again* that it is worth at least noting the classification of repetitive *again*. The simplest explanation of how I classified repetitive *again* would be to return to the Beck et al. (2009) and Gergel and Beck (2015) criteria: if those criteria were not met by a given token of *again*, it was either a repetitive *again* or one of the following ‘special’ *agains* I will outline in the following paragraph. Some examples of these repetitive *agains*:

- (66) Here and there seemed mighty rifts in the mountains, through which, as the sun began to sink, we saw now and again the white gleam of falling water.
(Stoker)
- (67) To a person fond of natural history, such a day as this brings with it a deeper pleasure than he can ever hope to experience again. (Darwin)
- (68) Wilson chatted along for a while, and presently got Roxy’s fingerprints for

his collection ... labeled and dated them ... Two months later, on the third of September, he took this trio of finger marks again. He liked to have a ‘series.’
(Twain)

Finally, I will lay out how I analyzed what I call speech act/citation *agains* and quantifier *agains*. Since speech act/citation *agains* indicated a more broad sense of repetition—taking scope over the nonovertly stated speech act—it was a fairly simple matter of counting the meaning as repetitive, a sense of ‘I say or cite again the following . . .’ Quantifier *agains* are perhaps a little less straightforward. There occurred in the data forms of *again* that did not have reference to any event but rather dealt with quantity or size, as in the construction, ‘Some felt X, others felt Y, and *others again* felt Z,’ where *others again* roughly translates to ‘still others’; or, ‘Twenty, and twenty more *again*,’ where although the meaning is more or less repetitive in nature, it refers not to repetition of action but an addition of the specified quantity to the first quantity named—colloquially, ‘Twenty plus twenty more.’ Ultimately, these (somewhat archaic) instances of *again* seem fairly clearly repetitive in nature, though what they modify is not a verb. Since there was no verbal modification, I felt it wise to count these in a separate category from repetitive *again*, as they are not possible targets for competition by *back* and *re-*.

It is worth mentioning, however, that the explanations of both of these ‘special’ uses of *again* presented here are overly simplistic. In both cases, for example, there does seem to be an additional sense of emphasis, as if something unexpected is being presented. The Oxford English Dictionary differentiates the speech act/citation *again* as having a sense of ‘as with what has already been said,’ or ‘moreover’ (OED, ‘again’ 7a). The OED provides several examples highlighting this sense:

- (69) And againe, whome should I serve? (King James Bible, II Sam. 16:19, 1611)
- (70) And again it is a very affecting sense, which raises passion sooner and quicker than any other. (S. Patrick, *Witnesses Christianity*, 1703)

This sense is still in force today, cited by OED as recently as 2004.

As for the quantifier *again*, I have counted in a single category what the OED has separated into at least two categories: one that evidently serves only to express addition or subtraction equal to a specified quantity, which I will call ‘quantifier *again*₁’, and another to express ‘repeated contrast,’ synonymous with *still* and *yet*, which I will call ‘quantifier *again*₂’:

- (71) The grouse is about half as large again as a partridge (O. Goldsmith, *Hist. Earth*, 1774) quantifier *again*₁
- (72) I shall probably have paid at least as much again in call charges (*Punch* 23 Nov. 562/2, 1932) quantifier *again*₁
- (73) Some to absolute idealism, others to skepticism, others again to a new species of Spinosism (C. Hodge, *Biblical Repertory*, 1828) quantifier *again*₂
- (74) When it comes to your horning into this joint and aiming to gum the works for me ... well, that’s something else again (P. G. Wodehouse, *Hot Water*, 1932) quantifier *again*₂
- (OED, ‘again’ 8, 10)

For the purposes of this paper, I did not distinguish the two quantifier *agains*. In all cases of these ‘special’ (speech act/citation, quantifier) *agains*, there seems to be some

sense of emphasis, that there is something interesting or worth emphasizing in the new information *again* presents. This, as well as potential other senses of *again* extant in the eras under investigation, would certainly be a topic of interest to future research, as previous historical studies—which quite probably encountered tokens of these sorts—have not addressed them or what role, if any, they may play in the issue of the structural/lexical ambiguity of *again*.

Finally, for the sake of clarity, it is worth pointing out that the intent behind excluding ambiguous/non-verbal-targeting tokens was to procure data which is more comparable to that of the previous studies performed by Beck and her colleagues, as those studies did not mention how such tokens should be classified or if they were counted together with repetitive or restitutive/counterdirectional categories. While insisting that all tokens to be used in this study be clearly identified as restitutive, repetitive, or counterdirectional when there yet exists ambiguity is admittedly clunky and imperfect, such an artificial boundary is necessary to even begin to investigate the topics of interest to this study. It is hoped that future studies may yield clearer definitions of counterdirectionality and help clear away the ambiguities that persist in the present study.

4.1.2 Assembling a New Corpus

To ensure that each work would provide sufficient quantities of tokens, I selected from the Lampeter Corpus and Project Gutenberg (a) long works that contained at least 40 instances of *again* and (b) short works that contained no fewer than 10 instances of *again*. For date ranges, I limited my Early Modern English data from 1500–1700 and my Late Modern English data from 1800–1900, roughly matching the ranges set by Beck et

al. (2009) and (2015). Of note: the vast majority of my Early Modern English sources were from the 17th century, as productive *re-* verbforms did not appear at all in the earlier (16th and 17th century) Gergel and Beck (2015) data, which indicated that it was possible that *re-* verbforms of the sort we are interested in were too low in frequency in these earlier centuries to be of much use in comparing the increase of *re-* and *back with* declining restitutive/counterdirectional *again*.

Also of note: I included in my selection of long works for my Early Modern English data the William Tyndale translation of the New Testament for a number of reasons: firstly, although the source text is obviously not English, the translation was intended to be accessible to contemporary readers and, as most of this text was preserved and reused in the more well-known King James Version translation of the Bible, is among the most ubiquitous samples of Early Modern English. Tyndale performed an original translation (whereas the KJV consists roughly of 90% of the Tyndale text). However, because so much of the text of the three synoptic Gospels (Matthew, Mark, and Luke) is common to all three, only Luke was included of the synoptic Gospels in the analysis to avoid counting essentially the same data multiple times.

4.1.3 Processing the Data

Beck's parsed Early Modern English corpus was processed via the Corpus Search 2 software. All other data, which were retrieved either from Project Gutenberg or the Lampeter corpus, was processed via TextCrawler software. I only counted tokens drawn from the text actually generated by the original author (i.e. not editorial or biographical notes) to prevent non-period text from corrupting the results.

In determining the eligibility of *re-* verbforms for consideration, I relied on the Oxford English Dictionary's etymology of the word. As this study is only concerned with *re-* verbforms productively employed within English, I only counted those which the OED identified as being formed within English, whether or not the verb stem was of Latin or Anglo-Saxon origin. In all cases, all spelling variations attested to in the Oxford English Dictionary's historical entry for *back* and *again* were included in all queries.

4.2 The Data

The data will be arranged as follows: authors will be divided into two categories: long works and short works. The date of publication (or approximate date if exact date is unknown) will be included to the left of the author's name. The remaining data will be arranged first according to the pattern in Beck et al. (2009) and Gergel and Beck (2015) so as to make a direct comparison to the data in those studies, to better investigate whether there might be a genre effect (this includes collapsing restitutive and counterdirectional *again* into a single category). Then the data will be presented again, this time with counterdirectional and restitutive *again*s in separate categories, with an additional category for non-verb targeting *again*.

(75)

Early Modern English Data

Year	Author	# of backs	# of re-verbforms	# of <i>agains</i>	# of rest/ctrdir <i>agains</i>	% of rest/ctrdir <i>agains</i>
Long Works						
1536	Tyndale	21	6	193	126	65.3
1681	Glanvil	24	5	150	69	46
1678	Bunyan	93	8	172	76	44.2
1647	Bradford	29	13	126	71	56.3
1623	Shakespeare	18	1	48	18	37.5
	Total	185 (avg. 37)	33 (avg. 6.6)	689 (avg. 137.8)	360 (avg. 72)	49.9 (avg.)
Short Works						
1649	Gregory	6	0	17	6	35.3
1641	Anon ₁	1	0	10	6	60
1678	Anon ₂	3	0	13	11	84.6
1696	Pitt	0	0	10	5	50
1682	Settle	4	0	14	9	64.3
1644	Hammond	3	2	11	2	18.2
1668	Culpepper	1	7	10	5	50
1681	Anon ₃	0	2	18	16	88.9
1676	Guidott	1	3	9	1	11.1
	Total	19 (avg. 2.1)	14 (avg. 1.6)	112 (avg. 12.4)	61 (avg. 6.8)	54.4 (avg.)
	Average of averages (Long + Short works)	19.56	4.08	400.5	39.4	52.15

(76)

Late Modern English Data

Year	Author	# of <i>backs</i>	# of <i>re-verbforms</i>	# of <i>agains</i>	# of <i>rest/ctrdir agains</i>	% of <i>rest/ctrdir agains</i>
Long Works						
1897	Stoker	243	32	239	59	24.7
1847	Clayton	143	9	204	51	25
1867	Bulfinch	66	61	70	24	34.3
1845	Darwin	41	154	91	21	23.1
1893	Twin	47	10	69	24	34.8
	Total	540 (avg. 108)	266 (avg. 53.2)	689 (avg. 137.8)	176 (avg. 35.8)	28.4 (avg.)
Short Works						
1896	Barrie	10	3	12	2	16.7
1891	Conan Doyle	9	5	14	5	35.7
1844	Emerson	6	13	24	10	41.7
1876	Giles	10	6	11	4	36.4
1890	Kingsley	14	11	54	15	27.8
1891	Kipling	9	6	16	4	25
1832	Lincoln	8	2	30	6	20
1874	Smith	4	5	15	1	6.7
1897	Murray	9	12	15	5	33.3
	Total	79 (avg. 8.8)	81 (avg. 9)	191 (avg. 21.2)	52 (avg. 5.8)	27.03 (avg.)
	Average of averages (Long + Short works)	58.4	20.1	79.5	20.8	27.7

The first thing to note is the wide variety between individual authors in each category (e.g., some of the authors of long works used hundreds of tokens of *again* while others did not reach past fifty) and yet the average percentages of restitutive/counterdirectional were nearly identical in long vs. short works, indicating that there is no major effect of length of work on the overall trends and patterns observed. I will move forward, then, with an average of averages for restitutive/counterdirectional *again*: 48.5% in Early Modern English to 27.7% in Late Modern English.

Further, we may now compare the percentage of restitutive/counterdirectional

again frequencies between these data and that of Beck et al. (2009) and Gergel and Beck (2015):

(77)

	% rest/ctrdir <i>again</i> in Early Modern English	% rest/ctrdir <i>again</i> in Late Modern English	Net loss from EModE to LModE
Beck et al (2009), Gergel and Beck (2015)	42%	21%	-21%
Present study	52.15%	27.7%	-24.45%

Though in this study I do not endeavor to perform any detailed statistical analyses, it does initially appear that there is a significant difference in these percentages; however, what I wish to stress is the overall pattern: the rate of decline between the Early Modern and Late Modern stages of English appears to be similar between both studies. The difference in genre may indeed contribute something to the frequencies of restitutive/counterdirectional *again* in the respective historical periods, as it appears from these numbers. The difference may also be a diachronic one—as mentioned, my Early Modern English corpus was assembled from texts dating at the later end of the era examined by Gergel and Beck (2015), though this seems unlikely as my later data should be further along in our hypothetical trajectory of diachronic change and consequently any diachronic difference would be expected to show lower percentages of restitutive and counterdirectional in my Early Modern English data. Nevertheless, in terms of the overall pattern, the larger picture, we will move forward with the assumption that genre/subject matter does not show any major impact on the course of decline hitherto established in the literature.

Now we will look at the data with restitutive and counterdirectional separated into

different categories, as far as possible:

(78)

Early Modern English Data (rest/ctrdir divided)

Year	Author	# of backs	# of re-verbforms	# of <i>agains</i> ³	# of rest <i>agains</i>	% of rest <i>agains</i>	# of ctrdir <i>agains</i>	% of ctrdir <i>agains</i>	# of quantifier <i>agains</i>	% again/word count
Long Works										
1536	Tyndale	21	6	193	59	30.6	67	34.7	5	.14
1681	Glanvil	24	5	150	33	22	36	24	2	.17
1678	Bunyan	93	8	172	29	16.9	47	27.3	2	.05
1647	Bradford	29	13	126	32	25.4	39	30.9	5	.04
1623	Shakespeare	18	1	48	5	10.4	13	27.1	3	.13
	Total	185 (avg. 37)	33 (avg. 6.6)	689 (avg. 137.8)	158 (avg. 31.6)	21.1 (avg.)	202 (avg. 40.4)	27.7 (avg.)	3.4 (avg.)	
Short Works										
1649	Gregory	6	0	17	1	5.9	5	29.4	0	.11
1641	Anon ₁	1	0	10	0	0	6	60	0	9.53
1678	Anon ₂	3	0	13	6	46.1	5	38.5	0	.76
1696	Pitt	0	0	10	1	10	4	40	0	.02
1682	Settle	4	0	14	6	42	3	21.4	0	.03
1644	Hammond	3	2	11	0	0	2	18.2	2	.04
1668	Culpepper	1	7	10	3	30	2	20	0	.04
1681	Anon ₃	0	2	18	7	38.9	9	50	0	.15
1676	Guidott	1	3	9	1	11.1	0	0	1	.04
	Total	19 (avg. 2.1)	14 (avg. 1.6)	477 (avg. 31.8)	25 (avg. 2.7)	20.4 (avg.)	36 (avg. 4)	30.9 (avg.)	.333 (avg.)	.09
	Average of averages (Long + Short works)	19.55	4.1	84.8	17.15	20.75	22.2	29.3	1.87	.81%

³ Though I do not count the number of ambiguous tokens of *again* in these graphs (to be addressed on page 74), the percentage in each era was as follows:

Early Modern English: 6.5% ambiguous
 Late Modern English: 1.8% ambiguous

(79)

Late Modern English Data (rest/ctrdir divided)										
Year	Author	# of backs	# of re-verbforms	# of agains	# of rest agains	% of rest agains	# of ctrdir agains	% of ctrdir agains	# of quantifier agains	% again/word count
Long Works										
1897	Stoker	243	32	239	47	19.7	12	5	2	.14
1847	Clayton	143	9	204	33	16.2	18	8	2	.17
1867	Bulfinch	66	61	70	16	22.8	8	11.4	0	.05
1845	Darwin	41	154	91	11	12.1	10	11	8	.04
1893	Twin	47	10	69	19	27.5	5	7.2	1	.13
	Total	540 (avg. 108)	266 (avg. 53.2)	689 (avg. 137.8)	126 (avg. 25.2)	19.7 (avg.)	53 (avg. 10.6)	8.5 (avg.)	2.6 (avg.)	
Short Works										
1896	Barrie	10	3	12	2	16.7	0	0	0	.11
1891	Conan Doyle	9	5	14	4	28.6	2	14.3	0	9.53
1844	Emerson	6	13	24	7	29.2	3	12.5	1	.76
1876	Giles	10	6	11	2	18.2	2	18.8	3	.02
1890	Kingsley	14	11	54	12	22.2	3	5.5	1	.03
1891	Kipling	9	6	16	2	12.5	2	12.5	0	.04
1832	Lincoln	8	2	30	4	13.3	2	6.7	0	.04
1874	Smith	4	5	15	1	6.7	0	0	1	.15
1897	Murray	9	12	15	3	20	2	13.3	1	.04
	Total	79 (avg. 8.8)	81 (avg. 9)	191 (avg. 21.2)	37 (avg. 4.1)	18.6 (avg.)	16 (avg. 7.8)	9.3 (avg.)	.78 (avg.)	.09
	Average of averages (Large + Small works)	12.3	5.9	6.5	14.65	19.15	9.2	8.9	1.69	.81

Again, with the restitutive and counterdirectional categories divided, even with the wide disparities between individual authors, the averages between short and long works are quite similar, enough that a genre effect of length is unlikely.

It must be pointed out, however, that the data do not cover certain points, namely ambiguous cases (setting aside the aforementioned ambiguity inherent to any attempt, with current mechanisms, to separate restitutive and counterdirectional *again*). In attempting to follow the methodology of the previous studies by Beck and colleagues, which did not mark restitutive/repetitive ambiguities, ambiguous cases were not initially treated as points of major interest. Data on ambiguous cases were not recorded here in the level of detail needed for clear analysis. The total percentage of ambiguous cases was recorded, and is reported in the footnote to (76), but the cases were not broken down by the four categories: (repetitive, restitutive, counterdirectional), (repetitive, restitutive), (repetitive, counterdirectional), and (restitutive, counterdirectional). Future studies would

do well to investigate closer the frequency of each of these categories during both eras.

Again, I will compound the averages of short and long works into a single average of averages:

(80)

Early Modern English	rest.	20.9
	ctrdir.	29.3
Late Modern English	rest.	19.1
	ctrdir.	8.9

Quite interesting is the apparent presence of counterdirectional *again* in Late Modern English, where Gergel and Beck (2015) declared it was already extinct by this point. In the following examples, it is difficult to give the full context to explain why each is more plausibly counterdirectional, but I endeavor to do so:

(81)

- a. I fled from the place, and leaving the Count's room by the window, crawled *again* up the castle wall.

(Stoker; this example highlights the potentially subjective nature of previous studies' use of 'plausible' criteria: one must admit the possibility of a repetitive *again*, in that there was a previous event of crawling, but the directionality of the verb phrase of the previous paragraphs ['crawled down ... crawled again up'] and the motion of the verb combine to make the token at least as plausibly counterdirectional as it is plausibly repetitive.)

- b. The shovel fell from my hand across the box, and as I pulled it away the flange of the blade caught the edge of the lid which fell over *again*.

(Stoker; in this context, Jon had previously lifted the lid off Dracula's coffin and set it against the wall. He attempts to kill Dracula with his shovel, but Dracula's vampiric gaze freezes him, making him miss and instead hit the lid of the coffin, which falls over *again*. There was no previous event of the lid falling over, and it does not resume its former state of sealing the coffin; rather, it falls and simply hides the Count's face from Jon. The motion and directionality of the verb, as well as the context which makes clear that there is no repetitive reading possible, makes this token more plausibly counterdirectional.)

- c. I bought four horses and two mules ... [for] twenty-five pounds sterling, and at Copiapo I sold them *again* for twenty-three.

(Darwin; *sell again* is a phrase that was more common in the Early Modern English data, and I struggle to think of a real modern equivalent ['I sold them back/away, not necessarily to the same vendor'], where the 'direction' of possession is reversed through the act of selling. Further, any restitutive or repetitive sense would not capture the directionality of the ownership/selling: the animals pass from one owner to Darwin, and from Darwin to still another owner again.)

The difficulty in explaining the situation of each token should provide some idea as to how simply a single sentence of context for each token (as in the Early Modern English data of Beck et al. (2009) and Gergel and Beck (2015) utilizing data acquired via CorpusSearch software) may not be sufficient; it is also illustrative of the ambiguity inherent in any attempt to separate the categories on the basis of 'plausible'

counterdirectionality—again, an imperfect criteria until such a time as a clearer definition of counterdirectionality is proposed.

Nevertheless, the fact remains that in sorting the tokens of *again*, there did exist some—albeit, as the data show, far rarer than in earlier data—counterdirectional tokens. Given the fact that, as far as this author is aware, there have been no previous studies attempting to differentiate counterdirectional and restitutive *again* in English, this may motivate future research to refine our understanding of the status of counterdirectional *again* in the 19th century and even in the 20th and 21st centuries—could there still exist (presumably highly restricted) instances of counterdirectional *again* in PDE? Indeed, at least one instance of apparently counterdirectional *again* is documented as contemporary usage in *The Cambridge Grammar of the English Language*:

(82) The bird perched on the balcony rail and then flew away again.

(Huddleston and Pullum 2002)

This is an example of a token which, had it appeared in the Early or Late Modern English data I examine here, would have been classified as ‘plausibly counterdirectional,’ which I argue should open a debate into whether, indeed, counterdirectional *again* is extinct in Present-day English, to say nothing of Late Modern English.

Finally, we may directly compare the relevant data: the average frequencies of *back* and *re-* between the two eras:

(83)

Early Modern English		Late Modern English	
<i>re-</i> (short)	1.6	<i>re-</i> (short)	7
<i>re-</i> (Gergel and Beck)	0	<i>re-</i> (Beck et al)	46.2
<i>re-</i> (long)	6.6	<i>re-</i> (long)	33.2
<i>back</i> (short)	2.1	<i>back</i> (short)	8.8
<i>back</i> (Gergel and Beck)	4.1	<i>back</i> (Beck et al)	81.3
<i>back</i> (long)	37	<i>back</i> (long)	108

4.3 Analysis

Comparing the average percentage of change between *re-*, *back*, and restitutive/counterdirectional *again*s will, it is hoped, grant us some insight as to whether there exists some link between the rise of *back* and the loss of counterdirectional *again* and *re-* and the diminution of restitutive *again*. Because of the difficulty apparent in a lack of productive English *re-* tokens in Gergel and Beck's Early Modern English data, it will not be productive to include the *re-* data from that study in this average—the percentage cannot be calculated as it would require dividing by 0, and even if that were not the difficulty, the percentage leap from a frequency of, say, .01 to 46.2 (the frequency of *re-* in the Late Modern English data of Beck et al.) would be nearly 500,000%. Because, for whatever reason, *re-* did not occur in the Early Modern English Gergel and Beck data, it will have to be excluded.

A table compiling the end result of our work will be helpful:

(84)

Contender	Percent change (EmodE–LModE)
<i>Back</i>	1091%
<i>again</i> _{ctrdir}	-69.6%
<i>re-</i>	350%
<i>again</i> _{rest}	-7.7%

What we discover is that, in the data we are analyzing, the frequency of *re-* increased by an average of 350% between the Early Modern English era and the Late Modern English era, while the frequency of *back* increased during the same period by an average of 1091%; meanwhile, restitutive *again* has diminished by 7.7%, while counterdirectional *again* has diminished by 69.6%. We do see, then, a stronger increase in frequency of *back* associated with a more dramatic loss of counterdirectional *again*, and a more mild increase of *re-* verbforms does seem to correspond to a less dramatic loss of restitutive *again*, providing tentative support for our hypotheses.

The difficulty is, of course, that there was a great deal less consistency between authors in the use of *re-* and *back* relative to the proportionate use of repetitive, restitutive, and counterdirectional *again*. We were not comparing the overall frequency of *again*, but only the percentage of restitutive and counterdirectional tokens, but individual writers varied significantly in the frequency of use of *re-* and *back* in Beck et al. (2009), Gergel and Beck (2015), and this study. Future studies, in refining this line of inquiry, would need to procure works from each era that were very balanced in their overall frequency of *re-*, *back*, and *again*, a task that is arguably herculean in that it is currently next to impossible to determine what the appropriate ratio of all of these should be—this was the difficulty I encountered that necessitated my selection of sources that were not balanced with regard to these frequencies.

Also still murky is what might have occurred to cause *again* to acquire a repetitive lexical entry in the first place. As mentioned earlier, Gergel et al. (2016) conducted a pilot study evaluating whether there might not be a Jespersen⁴-style effect in the interaction between Anglo-Saxon *eft*, ‘again,’ and *again* in Middle English, but the extreme low frequency of co-occurrences of *eft* and *again* caused the results to be somewhat inconclusive. The study did show some connection between the restitutive/repetitive ambiguity of *eft* and the same ambiguity of *again*, where a decline in restitutive *eft* seems to correlate to the increase of restitutive *again* as it shifted from a prepositional lexical item in Old English to an adverb at the beginning of the Middle English period. It therefore must be noted that the high availability of restitutive/counterdirectional in our earlier data could signify that *again* was emerging as the dominant repetitive adverb and was benefiting from the decline of *eft*.

Returning to the Visibility Parameter, we recall that the setting of adverbs is assumed to default to (i); *again* historically, it is argued, had a parametric setting of (iii), but diachronic analysis has suggested it is in the process of shifting to (ii), and the prediction is that it will, in time, settle at (i). If our linkage between the increase of *re-* and the loss of restitutive *again* (or the shift in parametric setting from (ii) to (i)) is borne out by future research, it would be interesting to consider the ability of affixes to receive settings under the Visibility Parameter.

⁴ Jespersen’s Cycle refers to a process of historic language change, perhaps best illustrated with the historical French sentence, *jeo ne dis*, ‘I do not say.’ In time, the postverbal *pas*, ‘step,’ was added to support the negator *ne* but became a necessary element in negation: *je ne dis pas*, ‘I do not say.’ With time, *ne* became an unnecessary element in French negation entirely, while *pas* remained as the primary negator, in modern *je dis pas*, ‘I do not say.’ An element that was introduced to support a crucial element becomes itself crucial while the former crucial element becomes unnecessary.

In sum, the data currently available do indeed appear to confirm our hypothesis that the increase in frequency of *back* and *re-* is correlated to the loss of counterdirectional and restitutive *again*, respectively, albeit somewhat tentatively. More clearly, however, the data do show that restitutive and counterdirectional *again* decline at different rates, with counterdirectional *again* experiencing quite a dramatic decrease in frequency while restitutive *again* diminishes significantly, though not the same extent as counterdirectional *again*. It also is not completely clear why this may be the case. As will be discussed in Chapter 5, there appears to be some sort of special interaction with counterdirectional adverbs and the Visibility Parameter, wherein the counterdirectional adverb acquires a repetitive sense, which can then be divided into a simple repetitive and restitutive reading. These adverbs seem to have a limited life span, and tend to be replaced by other, similar adverbs that have undergone a similar process. The restitutive sense seems to outlast the counterdirectional sense, but both nonrepetitive senses do decline. This pattern deserves to be studied in far greater depth, and understanding it better might well further our understanding of the nature of counterdirectionality and the Visibility Parameter in general.

CHAPTER 5

CONCLUSION

The aim of this thesis was to push further the investigation and debate concerning the nature of the ambiguities of *again*, beginning with the question of whether the ambiguity is the result of multiple lexical entries for *again* or whether the multiple meanings are structurally derived from the scope of *again* over either the entire verbal event or the result state (relying on syntactic decomposition to derive result states from accomplishment predicates). Previous studies had, with the support of cross-linguistic and historical English data, suggested that both lexical and structural hypotheses were necessary to explain the apparent existence of not only restitutive and repetitive readings of *again* but also a third, counterdirectional reading. These studies demonstrated that counterdirectional *again* existed in Early Modern English, which cannot be derived structurally from repetitive *again*, and semantically conveyed a unique property (counterdirectionality) not present in the semantics of simple repetition; they further provided evidence for a diachronic trajectory which, if accurate, predicts a future loss of restitutive *again* as the parametric setting of *again* in the Visibility Parameter continues in its shift from (iii) in the direction of (i). However, previous studies had not attempted to differentiate, in corpus studies, the counterdirectional from the restitutive, consequently making quite difficult any potential study of how counterdirectional

readings might have been lost, historically, while restitutive readings are still attested to in present-day English; also frustrating in that counterdirectional *again*, assumed to be a separate lexical item from repetitive/restitutive *again*, does not appear to be following any trajectory of the Visibility Parameter as its setting never appears to have been anything other than (i), and so should not be included in the same category as restitutive *again* lest tokens of the separate lexical entry *again*_{ctrdir} be included as evidence for parametric shift in *again*_{rep/rest}.

The approach in this paper was to build on previous studies which had suggested that *back* and *re-* verbforms were likely candidates for having displaced/replaced counterdirectional and restitutive *again*. The major contribution of this paper in this regard was to view *back* and *re-* as fundamentally different, in that *back* conveys primarily a sense of counterdirectionality (~'in the direction of one's back'), while analyses of *re-* verbforms have made strong arguments in favor of a primarily restitutive sense of the prefix. The two can then be evaluated as each competing independently with the two distinct lexical entries of *again*, counterdirectional against counterdirectional and restitutive against restitutive.

The methodology mirrored as closely as possible the previous literature, primarily Beck et al. (2009), Gergel and Beck (2015), and Gergel et al. (2016), diverging with regards to concerns that arose from reviewing and attempting to replicate previous studies, including source selection, genre, and length, as well as processing data to permit separate analyses of counterdirectional and restitutive *again*. The results did, indeed, appear to favor a hypotheses where counterdirectional *back* increased in frequency dramatically while counterdirectional *again* correspondingly decreased in frequency,

while restitutive *re-* increased less dramatically and restitutive *again* likewise decreased less dramatically. Given that the average rates of increase/decrease found here are essentially extrapolations from three studies, resulting in less refined data than is ideal, I will have to conclude that my hypothesis has only been tentatively supported by the data.

Future research would do great service to the discussion by contributing a great deal more data on the frequencies of *back* and *re-* during the relevant periods, which would vastly increase our confidence in our tentative findings thus far. Further, it is still unclear precisely how the highly directionally-based adverb *ongean*, ‘again,’ first developed a repetitive sense in the first place and what role the Visibility Parameter serves in what Gergel et al. (2016) described as an apparent cycle of adverbials, wherein prepositions or adverbs indicating strong counterdirectionality tend to shift into primarily repetitive senses—what is it about counterdirectionality that favors diachronic development into repetition?

Gergel and Beck (2015) may have touched upon the solution to this with the discussion of constant entailments (see (56) above). They make the quite plausible argument that the presence of truth-conditionally unresolvable counterdirectional/restitutive ambiguities prompted speakers of Early Modern English to reanalyze counterdirectional *again* as restitutive *again*, which would explain the ‘recruitment’ of counterdirectional adverbs as repetitive adverbs, provided it can be shown that the same phenomenon exists with homophonous counterdirectional and restitutive adverbs in other languages, or with such adverbs in English prior to *again*. If this is the case, it may also be quite telling that there exists an ambiguity with repetitive and restitutive *again*, as well, as the hypothesis of reanalysis could likewise apply in that

circumstance, which could perhaps help clarify that semantic ambiguity itself is a major contributing factor to the Visibility Parameter shift of adverbs like *again*.

Some of the difficulty of investigating this question lies in the difficulty of formally defining counterdirectionality. The semantic definitions summarized thus far treat counterdirectionality as an opaque, unanalyzable function that simply reverses the direction of an action, but this does not really define what, precisely, counterdirectionality is. Is directionality, for example, an inherent part of a verb—for example, English *look* necessarily possesses directionality, and some thematic roles (e.g., *goal*) necessitate directionality—which syntactic decomposition could reveal as a phonetically null head available for counterdirectional adverbs to target? If so, counterdirectional adverbs would necessarily have a setting of (iii) in the Visibility Parameter.

Alternatively, perhaps directionality has nothing to do with decomposition, and counterdirectional adverbs have a parametric setting of (i). In either case, it is curious that counterdirectionals then transform into repetitives, and these repetitives then, according to the argumentation of Beck, Gergel, and their colleagues, shift along the Visibility Parameter diachronically until arriving at (i). It seems as if languages wherein Principle (R) and the Visibility Parameter apply, that there may be some markedness requirement or conspiracy that requires the existence of adverbs with a parametric setting of (iii), but because the default setting is (i), all adverbs with a setting of (iii) or (ii) are diachronically attracted to (i) and a new counterdirectional adverb is ‘recruited’ or ‘promoted’ from a preposition, and this new adverb in turn is eventually reanalyzed as a separate lexical entry with a repetitive sense and a parametric setting of (iii), starting the

cycle over again. In any event, given the rarity of adverbs with a parametric setting of (iii) or (ii) of the Visibility Parameter, it would be beneficial to understand more about what makes repetition and other decomposition adverbs (e.g., *almost*) privileged in that regard.

APPENDIX

ADDENDUM TO GERGEL AND BECK (2015)

A.1 Methodology

I began testing my hypothesis simply by adding frequencies of *back* and *re-*verbforms to the Early Modern English and Late Modern English data of Gergel and Beck (2015). For the Parsed Corpus of Early Modern English Correspondence, using CorpusSearch software, I used queries seeking for adverbial instances of *back*, accounting for the full variety of spelling variants in use in the era, based on the Oxford English Dictionary entry for *back (adv.)*, and following the observations in Marantz (2007), I searched for any verb beginning with *re** that also had an NP object (intransitive *re-*verbforms were generally Latin borrowings [e.g., *reconsider*]). Admittedly, this yielded many results that were Latin borrowings or likely Latin borrowings. Consequently, I needed a standard criterion for including or excluding tokens. Ultimately, my criterion was based on the data from the Oxford English Dictionary: if the etymology was listed as anything other than ‘formed within English,’ I did not count the token (e.g. *rejoice, require, restore, remain, receive, remit, reserve, report, remove*, etc.). After gathering the results from all authors, I simply added two new columns to Gergel and Beck’s (2015) data.

Gathering the same data for the Late Modern English (19th century) authors was more problematic because the corpus was assembled from nonparsed plain text from Project Gutenberg. Since it was not possible to search by lexical category or syntactic structure, I turned to TextCrawler software to simply retrieve all tokens of *back* or *re****, which yielded both the set of desired tokens as well as a set of false positives. I then excluded, token-by-token, any unwanted tokens. As before, I simply added two columns to the Beck et al. (2009) *Late Modern English Agains* data.

A.2 Results and Discussion

The resulting data was as follows (data stored at the following link:

<https://drive.google.com/drive/folders/0B5AbIn9dy7y3QzFvSURRVVB0Tk0>):

Early Modern English Data

Speaker	# of backs	# of re-verbforms	# of agains	# of rest. agains	% of rest. agains
Bacon (16 th)	2	0	21	11	52.3
Chamberlain (17 th)	17	0	33	15	45.5
Conway (17 th)	3	0	23	16	69.6
Cromwell (16 th)	2	0	21	8	36.3
Dudley (16 th)	5	0	38	14	36.8
Gardiner (16 th)	1	0	21	10	47.6
Holles (17 th)	14	0	40	17	42.5
Knyvett (17 th)	2	0	42	18	42.8
More, H (17 th)	2	0	19	6	31.5
More, T (16 th)	1	0	31	12	38.7
Osborne (17 th)	1	0	73	27	34.2
Paston, J II (15 th)	0	0	73	27	34.2
Paston, K (17 th)	3	0	33	9	27.2
Pepys (17 th)	7	0	21	5	23.8
Wyatt (16 th)	2	0	22	10	45.5
Total	62 (avg. 4.1)	0	477 (avg. 31.8)	198 (avg. 13.3)	41.5% (avg.)

Late Modern English Data					
Speaker	# of backs	# of re-verbforms	# of agains	# of rest. agains	% of rest. agains
Borrow	34	30	49	6	52.3
Bryant	14	16	45	13	45.5
Byron	52	43	102	14	69.6
Darwin	70	64	74	6	36.3
Davis	203	22	59	16	36.8
Dufferin	50	23	72	28	47.6
Duff-Gordon	111	18	45	3	42.5
Edgeworth	67	36	91	20	42.8
Green	81	20	15	4	31.5
Lee	92	46	53	7	38.7
Macaulay	77	131	63	7	34.2
Mitchell	34	23	44	7	34.2
Munro	79	37	88	25	27.2
Scott	102	101	41	16	23.8
Twain	153	83	174	42	45.5
Total	1219 (avg. 81.3)	693 (avg. 46.2)	477 (avg. 31.8)	198 (avg. 13.3)	41.5% (avg.)

As is clear from the data, *re-* verbforms did not appear at all in the Early Modern English data. This is not entirely surprising—from my own assembled corpus, it appears that *re-* was in very low frequency in the era—but it does seem to be a fluke that not even a single token could be found. I did, of course, encounter verbs with the prefix of *re-*, but none that were, as per my criteria, formed within English and not simply adoptions of French or Latin. This, therefore, is a major contributor to how tentative my results ultimately proved: the frequency of *re-* in the Beck et al. (2009) Late Modern English data appears to be slightly higher than that of the long works in my assembled corpus, but since the percent change from 0 is impossible to calculate—and indeed, even if it were calculated from 0.001, the percent change would be an irresponsibly (and vacuously) high number that would corrupt the data as an extreme outlier—the *re-* frequencies from these data had to be omitted from the results. Hence my suggesting in the conclusion that

future research would do well to further investigate frequencies of *re-* and *back* in the Late Modern and Early Modern periods.

BIBLIOGRAPHY

- BECK, SIGRID; and WILLIAM SNYDER. 2001. Complex predicates and goal PPs: Evidence for a semantic parameter. In: ANNA H.-J. DO; LAURA DOMINGUEZ; and AIMEE JOHANSEN (eds). *Proceedings of the 25th Boston University Conference on Language Development*. Somerville, MA: Cascadilla Press. 114–122.
- BECK, SIGRID; POLINA BEREZOVSKAYA; and KATJA PFLUGFELDER. 2009. The use of *again* in 19th-century English versus Present-Day English. *Syntax* 12:3, 193–214.
- BECK, SIGRID. 2005. There and back again: A semantic analysis. *Journal of Semantics* 22: 3–51.
- BECK, SIGRID. 2006. Focus on *again*. *Linguistics and Philosophy* 29:3, 277–314.
- CSIRMAZ, ANIKO; and BENJAMIN SLADE. 2016. Result states and repetitive adverbs. *Acta Linguistica Hungarica* 63:4, 1–13.
- ERNST, THOMAS. 2004. Principles of adverbial distribution in the lower clause. *Lingua* 114: 755–777.
- FABRICIUS-HANSEN, CATHRINE. 1983. Wieder ein *wieder*? Zur semantic von *wieder*. In BAEUERLE, RAINER; CHRISTOPH SCHWARZE; and ARNIM VON STECHOW (eds), *Meaning, Use and Interpretation of Language*. Berlin: De Gruyter, 97–120.
- FABRICIUS-HANSEN, CATHRINE. 2001. Wi(e)der and again(st). In FERY, CAROLINE; and WOLFGANG STERNEFELD (eds). *Audiatur Vox Sapientiae. A Festschrift for Arnim von Stechow*. 101–130.
- GERGEL, REMUS; and SIGRID BECK. 2015. Early Modern English *again*: A corpus study and semantic analysis. *English Language and Linguistics* 19:1: 27–47.
- GERGEL, REMUS; ANDREAS BLUMEL; and MARTIN KOPF. 2016. Another heavy road of decompositionality: Notes from a dying adverb. *Proceedings of the 39th Annual Penn Linguistics Conference* 22:1.
- HORN, LAWRENCE. 1980. Affixation and the unaccusative hypothesis. *Proceedings of the Chicago Linguistic Society* 16: 134-146.

- HUDDLESTON, RODNEY; and GEOGGREY K. PULLUM. 2002. *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press.
- SCHMIED, JOSEF; and EVA HERTEL. 1991. *Lampeter Corpus of Early Modern English*. <http://sable.ox.ac.uk/ota/>
- LIEBER, ROCHELLE. 2004. *Morphology and Lexical Semantics*. Cambridge: Cambridge University Press.
- MARANTZ, ALEC. 2007. 'Restitutive *re-* and the first phase syntax/semantics of the VP.' Paper presented at the University of Maryland, College Park, 20 April.
- NISSENBAUM, JON. 2006. Decomposing resultatives: Two kinds of restitutive readings with *again*. Poster presented at NELS37, University of Illinois, Urbana-Champaign, Oct. 13–15.
- PATEL-GROSZ, PRITTY; and SIGRID BECK. 2014. Revisiting *again*: The view from Kutchi Gujarati. *Proceedings of Sinn und Bedeutung 18*, 303–321.
- RAPP, IENE; and ARNIM VON STECHOW. 1999. *Fast* 'almost' and the visibility parameter for functional adverbs. *Journal of Semantics* 16: 149–204.
- SNYDER, WILLIAM. 1995. Language acquisition and language variation: The role of morphology. Doctoral dissertation, MIT. Distributed by MIT Working Papers in Linguistics, Cambridge, MA.
- SNYDER, WILLIAM. 2001. On the nature of syntactic variation: Evidence from complex predicates and complex word formation. *Language* 77: 324–352.
- VON STECHOW, ARNIM. 1995. Lexical decomposition in syntax. *Current Issues in Linguistic Theory: Lexical Knowledge in the Organization of Language*. Amsterdam, NL: John Benjamins Publishing Company.
- VON STECHOW, ARNIM. 1996. The different readings of *wieder* 'again': A structural account. *Journal of Semantics* 13: 87–138.
- WILLIAMS, EDWIN. 2006. *Telic too Late*. Harvard University talk handout, November, 2006.
- XU, TING. 2016. *Almost again: On the semantics and acquisition of decomposition adverbs*. *Doctoral Dissertations*. Paper 1034. University of Connecticut.